

# Malawi - All vaccination data

**Malawi Epidemiology and Intervention Research Unit**

Report generated on: November 18, 2025

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## Identification

### SURVEY ID NUMBER

MWI-MEIRU-VACCINATION-2002-v1

### TITLE

All vaccination data

### COUNTRY

| Name   | Country code |
|--------|--------------|
| Malawi | MWI          |

### STUDY TYPE

Sample Survey

### ABSTRACT

Vaccination histories have been collected on children aged under 5 repeatedly and in multiple studies in Karonga. This file includes a dataset which contains all data from all studies which has been harmonised and appended together, and one which has been processed further to show the 'best' record for each child.

### UNIT OF ANALYSIS

Individual

## Version

### VERSION DESCRIPTION

v1: Edited data, first version, for internal use only

### VERSION DATE

2020-07-21

## Producers and sponsors

### PRIMARY INVESTIGATORS

| Name                           | Affiliation                                                   |
|--------------------------------|---------------------------------------------------------------|
| Professor Amelia (Mia) Crampin | MEIRU, London School of Hygiene and Tropical Medicine (LSHTM) |

## Data collection

### DATA COLLECTION MODE

Face-to-face [f2f]

### DATA COLLECTORS

| Name                                               | Abbreviation |
|----------------------------------------------------|--------------|
| Malawi Epidemiology and Intervention Research Unit | MEIRU        |

## Access policy

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## ACCESS AUTHORITY

| Name                                               |
|----------------------------------------------------|
| Malawi Epidemiology and Intervention Research Unit |

## ARCHIVE WHERE STUDY IS ORIGINALLY STORED

MEIRU

## Metadata production

## DDI DOCUMENT ID

MWI-MEIRU-VACCINATION-2002-v1

## PRODUCERS

| Name                                               | Abbreviation | Affiliation     | Role                                                              |
|----------------------------------------------------|--------------|-----------------|-------------------------------------------------------------------|
| Malawi Epidemiology and Intervention Research Unit | MEIRU        |                 | Agency                                                            |
| Estelle McLean                                     | EM           | LSHTM and MEIRU | Production of the documentation used to create this DDI document. |
| Chifundo Kanjala                                   | CK           | MEIRU           | Data documentalist                                                |
| Jacky Saul                                         | JS           | LSHTM and MEIRU | Production of Data dictionaries                                   |
| Kieth Branson                                      | KB           | LSHTM and MEIRU | Production of Data dictionaries                                   |
| Joseph Kamanga                                     | JK           | MEIRU           | Metadata entry                                                    |
| Dominic Nzundah                                    | DN           | MEIRU           | Metadata entry and editing                                        |

## DATE OF METADATA PRODUCTION

2020-07-21

## DDI DOCUMENT VERSION

version 1 (July, 2020)

## Data Dictionary

| Data file                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Cases | Variables |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|-----------|
| <p><b>all_vaccination_records</b></p> <p>The do-file combine_vaccination_data first harmonises and appends all data sources which collected data on children's vaccination status in Karonga.</p> <p>The vaccinations included are the standard schedule for Malawi:</p> <p>BCG</p> <p>Diphtheria, Pertussis &amp; Tetanus (DPT) 1-3</p> <p>Hepatitis B &amp; H. influenzae type b (HH) 1-3</p> <p>Polio (P) 0-3</p> <p>Pneumococcal conjugate vaccine (PCV) 1-3</p> <p>Rotavirus (RV 1-2)</p> <p>Measles 1&amp;2</p> <p>The data sources for this dataset are:</p> <p>cen_individ : Initial baseline survey</p> <p>crs_bfup : Follow-up of babies following initial census</p> <p>crs_birth : Birth registrations</p> <p>crs_cenm : In-migration</p> <p>css_sei_all : Annual socio-economic survey</p> <p>gp_va : Verbal autopsy</p> <p>tmt_tmtv : Transmission of M. tb</p> <p>ves_vese : Vaccine effectiveness study</p> <p>There are some edits to the data as dates where the month is estimated as removed and any which fall before the birth date and the day is known to be estimated are changed to be 1 day after the DOB. Otherwise, beyond harmonising across the datasets, the data are appended together as collected and saved as all_vaccination_records.</p> <p>In the variable labels (S) indicates that the variable is unchanged from the original source and (D) indicates that it is a 'derived' variable, often using more than one source variable. For both types information on where the data come from and how they are processed is found in the 'Recoding and Derivation' section</p> | 62863 | 105       |
| <p><b>vacc_data_selected_BEST</b></p> <p>As there will be multiple records per child, the data are then reduced to have one line per child with the 'best' record for each vaccination, the criteria used to designate the best record are:</p> <p>Vaccination date recorded</p> <p>Vaccination date is not before birth date</p> <p>Vaccination date fits with normal Malawian vaccination schedule and other vaccines in the series</p> <p>The information on the vaccine was taken from the health record</p> <p>Where there are multiple records meeting these criteria the earliest record is taken. Where there are none then the criteria are relaxed gradually so for each person the best possible record is taken.</p> <p>As sometimes the vaccine is reported as received but no vaccine date is given the earliest interview date when it was reported as received is also included as part of the record.</p> <p>This 'best' dataset is saved as vacc_data_selected_BEST.</p> <p>In the variable labels (S) indicates that the variable is unchanged from the original source and (D) indicates that it is a 'derived' variable, often using more than one source variable. For both types information on where the data come from and how they are processed is found in the 'Recoding and Derivation' section</p>                                                                                                                                                                                                                                                                                     | 26039 | 242       |



**Data file: all\_vaccination\_records**

The do-file combine\_vaccination\_data first harmonises and appends all data sources which collected data on children's vaccination status in Karonga.

The vaccinations included are the standard schedule for Malawi:

BCG

Diphtheria, Pertussis & Tetanus (DPT) 1-3

Hepatitis B & H. influenzae type b (HH) 1-3

Polio (P) 0-3

Pneumococcal conjugate vaccine (PCV) 1-3

Rotavirus (RV 1-2)

Measles 1&2

The data sources for this dataset are:

cen\_individ : Initial baseline survey

crs\_bfup : Follow-up of babies following initial census

crs\_birth : Birth registrations

crs\_cenm : In-migration

css\_sei\_all : Annual socio-economic survey

gp\_va : Verbal autopsy

tmt\_tmtv : Transmission of M. tb

ves\_vese : Vaccine effectiveness study

There are some edits to the data as dates where the month is estimated as removed and any which fall before the birth date and the day is known to be estimated are changed to be 1 day after the DOB. Otherwise, beyond harmonising across the datasets, the data are appended together as collected and saved as all\_vaccination\_records.

In the variable labels (S) indicates that the variable is unchanged from the original source and (D) indicates that it is a 'derived' variable, often using more than one source variable. For both types information on where the data come from and how they are processed is found in the 'Recoding and Derivation' section

Cases: 62863

Variables: 105

**Variables**

| ID  | Name       | Label                                     | Question |
|-----|------------|-------------------------------------------|----------|
| V1  | ident      | Unique identifier (S)                     |          |
| V2  | intdate    | Interview date (D)                        |          |
| V3  | birth_date | Date of birth (D)                         |          |
| V4  | sex        | Sex (D)                                   |          |
| V5  | cardseen   | Whether health record seen (D)            |          |
| V6  | source     | Source of data (D)                        |          |
| V7  | bcgyn      | Had BCG vaccination (D)                   |          |
| V8  | bcgyr      | Year of BCG vaccination (D)               |          |
| V9  | bcgdate    | Date of BCG vaccination (D)               |          |
| V10 | bcgdayest  | Date of BCG vaccination is estimated (D)  |          |
| V11 | bcgvc      | Health centre of BCG vaccination (D)      |          |
| V12 | dpt1yn     | Had DPT1 vaccination (D)                  |          |
| V13 | dpt1yr     | Year of DPT1 vaccination (D)              |          |
| V14 | dpt1date   | Date of DPT1 vaccination (D)              |          |
| V15 | dpt1dayest | Date of DPT1 vaccination is estimated (D) |          |
| V16 | dpt1vc     | Health centre of DPT1 vaccination (D)     |          |
| V17 | dpt2yn     | Had DPT2 vaccination (D)                  |          |

| ID  | Name       | Label                                       | Question |
|-----|------------|---------------------------------------------|----------|
| V18 | dpt2yr     | Year of DPT2 vaccination (D)                |          |
| V19 | dpt2date   | Date of DPT2 vaccination (D)                |          |
| V20 | dpt2dayest | Date of DPT2 vaccination is estimated (D)   |          |
| V21 | dpt2vc     | Health centre of DPT2 vaccination (D)       |          |
| V22 | dpt3yn     | Had DPT3 vaccination (D)                    |          |
| V23 | dpt3yr     | Year of DPT3 vaccination (D)                |          |
| V24 | dpt3date   | Date of DPT3 vaccination (D)                |          |
| V25 | dpt3dayest | Date of DPT3 vaccination is estimated (D)   |          |
| V26 | dpt3vc     | Health centre of DPT3 vaccination (D)       |          |
| V27 | hh1yn      | Had HH1 vaccination (D)                     |          |
| V28 | hh1yr      | Year of HH1 vaccination (D)                 |          |
| V29 | hh1date    | Date of HH1 vaccination (D)                 |          |
| V30 | hh1dayest  | Date of HH1 vaccination is estimated (D)    |          |
| V31 | hh1vc      | Health centre of HH1 vaccination (D)        |          |
| V32 | hh2yn      | Had HH2 vaccination (D)                     |          |
| V33 | hh2yr      | Year of HH2 vaccination (D)                 |          |
| V34 | hh2date    | Date of HH2 vaccination (D)                 |          |
| V35 | hh2dayest  | Date of HH2 vaccination is estimated (D)    |          |
| V36 | hh2vc      | Health centre of HH2 vaccination (D)        |          |
| V37 | hh3yn      | Had HH3 vaccination (D)                     |          |
| V38 | hh3yr      | Year of HH3 vaccination (D)                 |          |
| V39 | hh3date    | Date of HH3 vaccination (D)                 |          |
| V40 | hh3dayest  | Date of HH3 vaccination is estimated (D)    |          |
| V41 | hh3vc      | Health centre of HH3 vaccination (D)        |          |
| V42 | p0yn       | Had polio0 vaccination (D)                  |          |
| V43 | p0yr       | Year of polio0 vaccination (D)              |          |
| V44 | p0date     | Date of polio0 vaccination (D)              |          |
| V45 | p0dayest   | Date of polio0 vaccination is estimated (D) |          |
| V46 | p0vc       | Health centre of polio0 vaccination (D)     |          |
| V47 | p1yn       | Had polio1 vaccination (D)                  |          |
| V48 | p1yr       | Year of polio1 vaccination (D)              |          |
| V49 | p1date     | Date of polio1 vaccination (D)              |          |
| V50 | p1dayest   | Date of polio1 vaccination is estimated (D) |          |
| V51 | p1vc       | Health centre of polio1 vaccination (D)     |          |
| V52 | p2yn       | Had polio2 vaccination (D)                  |          |
| V53 | p2yr       | Year of polio2 vaccination (D)              |          |
| V54 | p2date     | Date of polio2 vaccination (D)              |          |
| V55 | p2dayest   | Date of polio2 vaccination is estimated (D) |          |
| V56 | p2vc       | Health centre of polio2 vaccination (D)     |          |
| V57 | p3yn       | Had polio3 vaccination (D)                  |          |
| V58 | p3yr       | Year of polio3 vaccination (D)              |          |
| V59 | p3date     | Date of polio3 vaccination (D)              |          |
| V60 | p3dayest   | Date of polio3 vaccination is estimated (D) |          |
| V61 | p3vc       | Health centre of polio3 vaccination (D)     |          |
| V62 | pcv1yn     | Had PCV1 vaccination (D)                    |          |

| ID   | Name        | Label                                           | Question |
|------|-------------|-------------------------------------------------|----------|
| V63  | pcv1yr      | Year of PCV1 vaccination (D)                    |          |
| V64  | pcv1date    | Date of PCV1 vaccination (D)                    |          |
| V65  | pcv1dayest  | Date of PCV1 vaccination is estimated (D)       |          |
| V66  | pcv1vc      | Health centre of PCV1 vaccination (D)           |          |
| V67  | pcv2yn      | Had PCV2 vaccination (D)                        |          |
| V68  | pcv2yr      | Year of PCV2 vaccination (D)                    |          |
| V69  | pcv2date    | Date of PCV2 vaccination (D)                    |          |
| V70  | pcv2dayest  | Date of PCV2 vaccination is estimated (D)       |          |
| V71  | pcv2vc      | Health centre of PCV2 vaccination (D)           |          |
| V72  | pcv3yn      | Had PCV3 vaccination (D)                        |          |
| V73  | pcv3yr      | Year of PCV3 vaccination (D)                    |          |
| V74  | pcv3date    | Date of PCV3 vaccination (D)                    |          |
| V75  | pcv3dayest  | Date of PCV3 vaccination is estimated (D)       |          |
| V76  | pcv3vc      | Health centre of PCV3 vaccination (D)           |          |
| V77  | rv1yn       | Had rotavirus1 vaccination (D)                  |          |
| V78  | rv1yr       | Year of rotavirus1 vaccination (D)              |          |
| V79  | rv1date     | Date of rotavirus1 vaccination (D)              |          |
| V80  | rv1dayest   | Date of rotavirus1 vaccination is estimated (D) |          |
| V81  | rv1vc       | Health centre of rotavirus1 vaccination (D)     |          |
| V82  | rv2yn       | Had rotavirus2 vaccination (D)                  |          |
| V83  | rv2yr       | Year of rotavirus2 vaccination (D)              |          |
| V84  | rv2date     | Date of rotavirus2 vaccination (D)              |          |
| V85  | rv2dayest   | Date of rotavirus2 vaccination is estimated (D) |          |
| V86  | rv2vc       | Health centre of rotavirus2 vaccination (D)     |          |
| V87  | meas1yn     | Had measles1 vaccination (D)                    |          |
| V88  | meas1yr     | Year of measles1 vaccination (D)                |          |
| V89  | meas1date   | Date of measles1 vaccination (D)                |          |
| V90  | meas1dayest | Date of measles1 vaccination is estimated (D)   |          |
| V91  | meas1vc     | Health centre of measles1 vaccination (D)       |          |
| V92  | meas2yn     | Had measles2 vaccination (D)                    |          |
| V93  | meas2yr     | Year of measles2 vaccination (D)                |          |
| V94  | meas2date   | Date of measles2 vaccination (D)                |          |
| V95  | meas2dayest | Date of measles2 vaccination is estimated (D)   |          |
| V96  | meas2vc     | Health centre of measles2 vaccination (D)       |          |
| V97  | vitados     | Number of vitamin A doses (D)                   |          |
| V98  | vita1yn     | Had first vitamin A dose (D)                    |          |
| V99  | vita1yr     | Year of first vitamin A dose (D)                |          |
| V100 | vita1date   | Date of first vitamin A dose (D)                |          |
| V101 | vita1dayest | Date of first vitamin A dose is estimated (D)   |          |
| V102 | vita2yn     | Had second vitamin A dose (D)                   |          |
| V103 | vita2yr     | Year of second vitamin A dose (D)               |          |
| V104 | vita2date   | Date of second vitamin A dose (D)               |          |
| V105 | vita2dayest | Date of second vitamin A dose is estimated (D)  |          |

Total: 105

**Data file: vacc\_data\_selected\_BEST**

As there will be multiple records per child, the data are then reduced to have one line per child with the 'best' record for each vaccination, the criteria used to designate the best record are:

Vaccination date recorded

Vaccination date is not before birth date

Vaccination date fits with normal Malawian vaccination schedule and other vaccines in the series

The information on the vaccine was taken from the health record

Where there are multiple records meeting these criteria the earliest record is taken. Where there are none then the criteria are relaxed gradually so for each person the best possible record is taken.

As sometimes the vaccine is reported as received but no vaccine date is given the earliest interview date when it was reported as received is also included as part of the record.

This 'best' dataset is saved as vacc\_data\_selected\_BEST.

In the variable labels (S) indicates that the variable is unchanged from the original source and (D) indicates that it is a 'derived' variable, often using more than one source variable. For both types information on where the data come from and how they are processed is found in the 'Recoding and Derivation' section

Cases: 26039

Variables: 242

**Variables**

| ID   | Name          | Label                                              | Question |
|------|---------------|----------------------------------------------------|----------|
| V106 | ident         | Unique identifier (D)                              |          |
| V107 | birth_date    | Birth date (D)                                     |          |
| V108 | bcgintdate    | Interview date for BCG report (D)                  |          |
| V109 | bcgcardseen   | Whether health record seen for BCG report (D)      |          |
| V110 | bcgsource     | Source for BCG report (D)                          |          |
| V111 | bcgyn         | Had BCG vaccination (D)                            |          |
| V112 | bcgyr         | Year of BCG vaccination (D)                        |          |
| V113 | bcgdate       | Date of BCG vaccination (D)                        |          |
| V114 | bcgdayest     | Date of BCG vaccination is estimated (D)           |          |
| V115 | bcgvc         | Health centre of BCG vaccination (D)               |          |
| V116 | bcgBprob      | Problem with BCG date (missing or before DOB) (D)  |          |
| V117 | bcgSprob      | Problem with BCG date (schedule issue) (D)         |          |
| V118 | bcgfyintdate  | First interview date when reported had BCG (D)     |          |
| V119 | bcgkeep       | Completeness of kept BCG report (D)                |          |
| V120 | dpt1intdate   | Interview date for DPT1 report (D)                 |          |
| V121 | dpt1cardseen  | Whether health record seen for DPT1 report (D)     |          |
| V122 | dpt1source    | Source for DPT1 report (D)                         |          |
| V123 | dpt1yn        | Had DPT1 vaccination (D)                           |          |
| V124 | dpt1yr        | Year of DPT1 vaccination (D)                       |          |
| V125 | dpt1date      | Date of DPT1 vaccination (D)                       |          |
| V126 | dpt1dayest    | Date of DPT1 vaccination is estimated (D)          |          |
| V127 | dpt1vc        | Health centre of DPT1 vaccination (D)              |          |
| V128 | dpt1Bprob     | Problem with DPT1 date (missing or before DOB) (D) |          |
| V129 | dpt1Sprob     | Problem with DPT1 date (schedule issue) (D)        |          |
| V130 | dpt1fyintdate | First interview date when reported had DPT2 (D)    |          |
| V131 | dpt1keep      | Completeness of kept DPT1 report (D)               |          |

| ID   | Name          | Label                                              | Question |
|------|---------------|----------------------------------------------------|----------|
| V132 | dpt2intdate   | Interview date for DPT2 report (D)                 |          |
| V133 | dpt2cardseen  | Whether health record seen for DPT2 report (D)     |          |
| V134 | dpt2source    | Source for DPT2 report (D)                         |          |
| V135 | dpt2yn        | Had DPT2 vaccination (D)                           |          |
| V136 | dpt2yr        | Year of DPT2 vaccination (D)                       |          |
| V137 | dpt2date      | Date of DPT2 vaccination (D)                       |          |
| V138 | dpt2dayest    | Date of DPT2 vaccination is estimated (D)          |          |
| V139 | dpt2vc        | Health centre of DPT2 vaccination (D)              |          |
| V140 | dpt2Bprob     | Problem with DPT2 date (missing or before DOB) (D) |          |
| V141 | dpt2Sprob     | Problem with DPT2 date (schedule issue) (D)        |          |
| V142 | dpt2fyintdate | First interview date when reported had DPT3 (D)    |          |
| V143 | dpt2keep      | Completeness of kept DPT2 report (D)               |          |
| V144 | dpt3intdate   | Interview date for DPT3 report (D)                 |          |
| V145 | dpt3cardseen  | Whether health record seen for DPT3 report (D)     |          |
| V146 | dpt3source    | Source for DPT3 report (D)                         |          |
| V147 | dpt3yn        | Had DPT3 vaccination (D)                           |          |
| V148 | dpt3yr        | Year of DPT3 vaccination (D)                       |          |
| V149 | dpt3date      | Date of DPT3 vaccination (D)                       |          |
| V150 | dpt3dayest    | Date of DPT3 vaccination is estimated (D)          |          |
| V151 | dpt3vc        | Health centre of DPT3 vaccination (D)              |          |
| V152 | dpt3Bprob     | Problem with DPT3 date (missing or before DOB) (D) |          |
| V153 | dpt3Sprob     | Problem with DPT3 date (schedule issue) (D)        |          |
| V154 | dpt3fyintdate | First interview date when reported had DPT4 (D)    |          |
| V155 | dpt3keep      | Completeness of kept DPT3 report (D)               |          |
| V156 | hh1intdate    | Interview date for HH1 report (D)                  |          |
| V157 | hh1cardseen   | Whether health record seen for HH1 report (D)      |          |
| V158 | hh1source     | Source for HH1 report (D)                          |          |
| V159 | hh1yn         | Had HH1 vaccination (D)                            |          |
| V160 | hh1yr         | Year of HH1 vaccination (D)                        |          |
| V161 | hh1date       | Date of HH1 vaccination (D)                        |          |
| V162 | hh1dayest     | Date of HH1 vaccination is estimated (D)           |          |
| V163 | hh1vc         | Health centre of HH1 vaccination (D)               |          |
| V164 | hh1Bprob      | Problem with HH1 date (missing or before DOB) (D)  |          |
| V165 | hh1Sprob      | Problem with HH1 date (schedule issue) (D)         |          |
| V166 | hh1fyintdate  | First interview date when reported had HH2 (D)     |          |
| V167 | hh1keep       | Completeness of kept HH1 report (D)                |          |
| V168 | hh2intdate    | Interview date for HH2 report (D)                  |          |
| V169 | hh2cardseen   | Whether health record seen for HH2 report (D)      |          |
| V170 | hh2source     | Source for HH2 report (D)                          |          |
| V171 | hh2yn         | Had HH2 vaccination (D)                            |          |
| V172 | hh2yr         | Year of HH2 vaccination (D)                        |          |
| V173 | hh2date       | Date of HH2 vaccination (D)                        |          |
| V174 | hh2dayest     | Date of HH2 vaccination is estimated (D)           |          |
| V175 | hh2vc         | Health centre of HH2 vaccination (D)               |          |
| V176 | hh2Bprob      | Problem with HH2 date (missing or before DOB) (D)  |          |

| ID   | Name         | Label                                                | Question |
|------|--------------|------------------------------------------------------|----------|
| V177 | hh2Sprob     | Problem with HH2 date (schedule issue) (D)           |          |
| V178 | hh2fyintdate | First interview date when reported had HH3 (D)       |          |
| V179 | hh2keep      | Completeness of kept HH2 report (D)                  |          |
| V180 | hh3intdate   | Interview date for HH3 report (D)                    |          |
| V181 | hh3cardseen  | Whether health record seen for HH3 report (D)        |          |
| V182 | hh3source    | Source for HH3 report (D)                            |          |
| V183 | hh3yn        | Had HH3 vaccination (D)                              |          |
| V184 | hh3yr        | Year of HH3 vaccination (D)                          |          |
| V185 | hh3date      | Date of HH3 vaccination (D)                          |          |
| V186 | hh3dayest    | Date of HH3 vaccination is estimated (D)             |          |
| V187 | hh3vc        | Health centre of HH3 vaccination (D)                 |          |
| V188 | hh3Bprob     | Problem with HH3 date (missing or before DOB) (D)    |          |
| V189 | hh3Sprob     | Problem with HH3 date (schedule issue) (D)           |          |
| V190 | hh3fyintdate | First interview date when reported had HH4 (D)       |          |
| V191 | hh3keep      | Completeness of kept HH3 report (D)                  |          |
| V192 | p0intdate    | Interview date for polio0 report (D)                 |          |
| V193 | p0cardseen   | Whether health record seen for polio0 report (D)     |          |
| V194 | p0source     | Source for polio0 report (D)                         |          |
| V195 | p0yn         | Had polio0 vaccination (D)                           |          |
| V196 | p0yr         | Year of polio0 vaccination (D)                       |          |
| V197 | p0date       | Date of polio0 vaccination (D)                       |          |
| V198 | p0dayest     | Date of polio0 vaccination is estimated (D)          |          |
| V199 | p0vc         | Health centre of polio0 vaccination (D)              |          |
| V200 | p0Bprob      | Problem with polio0 date (missing or before DOB) (D) |          |
| V201 | p0Sprob      | Problem with polio0 date (schedule issue) (D)        |          |
| V202 | p0fyintdate  | First interview date when reported had polio1 (D)    |          |
| V203 | p0keep       | Completeness of kept polio0 report (D)               |          |
| V204 | p1intdate    | Interview date for polio1 report (D)                 |          |
| V205 | p1cardseen   | Whether health record seen for polio1 report (D)     |          |
| V206 | p1source     | Source for polio1 report (D)                         |          |
| V207 | p1yn         | Had polio1 vaccination (D)                           |          |
| V208 | p1yr         | Year of polio1 vaccination (D)                       |          |
| V209 | p1date       | Date of polio1 vaccination (D)                       |          |
| V210 | p1dayest     | Date of polio1 vaccination is estimated (D)          |          |
| V211 | p1vc         | Health centre of polio1 vaccination (D)              |          |
| V212 | p1Bprob      | Problem with polio1 date (missing or before DOB) (D) |          |
| V213 | p1Sprob      | Problem with polio1 date (schedule issue) (D)        |          |
| V214 | p1fyintdate  | First interview date when reported had polio2 (D)    |          |
| V215 | p1keep       | Completeness of kept polio1 report (D)               |          |
| V216 | p2intdate    | Interview date for polio2 report (D)                 |          |
| V217 | p2cardseen   | Whether health record seen for polio2 report (D)     |          |
| V218 | p2source     | Source for polio2 report (D)                         |          |
| V219 | p2yn         | Had polio2 vaccination (D)                           |          |
| V220 | p2yr         | Year of polio2 vaccination (D)                       |          |
| V221 | p2date       | Date of polio2 vaccination (D)                       |          |

| ID   | Name          | Label                                                | Question |
|------|---------------|------------------------------------------------------|----------|
| V222 | p2dayest      | Date of polio2 vaccination is estimated (D)          |          |
| V223 | p2vc          | Health centre of polio2 vaccination (D)              |          |
| V224 | p2Bprob       | Problem with polio2 date (missing or before DOB) (D) |          |
| V225 | p2Sprob       | Problem with polio2 date (schedule issue) (D)        |          |
| V226 | p2fyintdate   | First interview date when reported had polio3 (D)    |          |
| V227 | p2keep        | Completeness of kept polio2 report (D)               |          |
| V228 | p3intdate     | Interview date for polio3 report (D)                 |          |
| V229 | p3cardseen    | Whether health record seen for polio3 report (D)     |          |
| V230 | p3source      | Source for polio3 report (D)                         |          |
| V231 | p3yn          | Had polio3 vaccination (D)                           |          |
| V232 | p3yr          | Year of polio3 vaccination (D)                       |          |
| V233 | p3date        | Date of polio3 vaccination (D)                       |          |
| V234 | p3dayest      | Date of polio3 vaccination is estimated (D)          |          |
| V235 | p3vc          | Health centre of polio3 vaccination (D)              |          |
| V236 | p3Bprob       | Problem with polio3 date (missing or before DOB) (D) |          |
| V237 | p3Sprob       | Problem with polio3 date (schedule issue) (D)        |          |
| V238 | p3fyintdate   | First interview date when reported had polio4 (D)    |          |
| V239 | p3keep        | Completeness of kept polio3 report (D)               |          |
| V240 | pcv1intdate   | Interview date for PCV1 report (D)                   |          |
| V241 | pcv1cardseen  | Whether health record seen for PCV1 report (D)       |          |
| V242 | pcv1source    | Source for PCV1 report (D)                           |          |
| V243 | pcv1yn        | Had PCV1 vaccination (D)                             |          |
| V244 | pcv1yr        | Year of PCV1 vaccination (D)                         |          |
| V245 | pcv1date      | Date of PCV1 vaccination (D)                         |          |
| V246 | pcv1dayest    | Date of PCV1 vaccination is estimated (D)            |          |
| V247 | pcv1vc        | Health centre of PCV1 vaccination (D)                |          |
| V248 | pcv1Bprob     | Problem with PCV1 date (missing or before DOB) (D)   |          |
| V249 | pcv1Sprob     | Problem with PCV1 date (schedule issue) (D)          |          |
| V250 | pcv1fyintdate | First interview date when reported had PCV2 (D)      |          |
| V251 | pcv1keep      | Completeness of kept PCV1 report (D)                 |          |
| V252 | pcv2intdate   | Interview date for PCV2 report (D)                   |          |
| V253 | pcv2cardseen  | Whether health record seen for PCV2 report (D)       |          |
| V254 | pcv2source    | Source for PCV2 report (D)                           |          |
| V255 | pcv2yn        | Had PCV2 vaccination (D)                             |          |
| V256 | pcv2yr        | Year of PCV2 vaccination (D)                         |          |
| V257 | pcv2date      | Date of PCV2 vaccination (D)                         |          |
| V258 | pcv2dayest    | Date of PCV2 vaccination is estimated (D)            |          |
| V259 | pcv2vc        | Health centre of PCV2 vaccination (D)                |          |
| V260 | pcv2Bprob     | Problem with PCV2 date (missing or before DOB) (D)   |          |
| V261 | pcv2Sprob     | Problem with PCV2 date (schedule issue) (D)          |          |
| V262 | pcv2fyintdate | First interview date when reported had PCV3 (D)      |          |
| V263 | pcv2keep      | Completeness of kept PCV2 report (D)                 |          |
| V264 | pcv3intdate   | Interview date for PCV3 report (D)                   |          |
| V265 | pcv3cardseen  | Whether health record seen for PCV3 report (D)       |          |
| V266 | pcv3source    | Source for PCV3 report (D)                           |          |

| ID   | Name           | Label                                                  | Question |
|------|----------------|--------------------------------------------------------|----------|
| V267 | pcv3yn         | Had PCV3 vaccination (D)                               |          |
| V268 | pcv3yr         | Year of PCV3 vaccination (D)                           |          |
| V269 | pcv3date       | Date of PCV3 vaccination (D)                           |          |
| V270 | pcv3dayest     | Date of PCV3 vaccination is estimated (D)              |          |
| V271 | pcv3vc         | Health centre of PCV3 vaccination (D)                  |          |
| V272 | pcv3Bprob      | Problem with PCV3 date (missing or before DOB) (D)     |          |
| V273 | pcv3Sprob      | Problem with PCV3 date (schedule issue) (D)            |          |
| V274 | pcv3fyintdate  | First interview date when reported had PCV4 (D)        |          |
| V275 | pcv3keep       | Completeness of kept PCV3 report (D)                   |          |
| V276 | rv1intdate     | Interview date for RV1 report (D)                      |          |
| V277 | rv1cardseen    | Whether health record seen for RV1 report (D)          |          |
| V278 | rv1source      | Source for RV1 report (D)                              |          |
| V279 | rv1yn          | Had RV1 vaccination (D)                                |          |
| V280 | rv1yr          | Year of RV1 vaccination (D)                            |          |
| V281 | rv1date        | Date of RV1 vaccination (D)                            |          |
| V282 | rv1dayest      | Date of RV1 vaccination is estimated (D)               |          |
| V283 | rv1vc          | Health centre of RV1 vaccination (D)                   |          |
| V284 | rv1Bprob       | Problem with RV1 date (missing or before DOB) (D)      |          |
| V285 | rv1Sprob       | Problem with RV1 date (schedule issue) (D)             |          |
| V286 | rv1fyintdate   | First interview date when reported had RV2 (D)         |          |
| V287 | rv1keep        | Completeness of kept RV1 report (D)                    |          |
| V288 | rv2intdate     | Interview date for RV2 report (D)                      |          |
| V289 | rv2cardseen    | Whether health record seen for RV2 report (D)          |          |
| V290 | rv2source      | Source for RV2 report (D)                              |          |
| V291 | rv2yn          | Had RV2 vaccination (D)                                |          |
| V292 | rv2yr          | Year of RV2 vaccination (D)                            |          |
| V293 | rv2date        | Date of RV2 vaccination (D)                            |          |
| V294 | rv2dayest      | Date of RV2 vaccination is estimated (D)               |          |
| V295 | rv2vc          | Health centre of RV2 vaccination (D)                   |          |
| V296 | rv2Bprob       | Problem with RV2 date (missing or before DOB) (D)      |          |
| V297 | rv2Sprob       | Problem with RV2 date (schedule issue) (D)             |          |
| V298 | rv2fyintdate   | First interview date when reported had RV3 (D)         |          |
| V299 | rv2keep        | Completeness of kept RV2 report (D)                    |          |
| V300 | meas1intdate   | Interview date for measles1 report (D)                 |          |
| V301 | meas1cardseen  | Whether health record seen for measles1 report (D)     |          |
| V302 | meas1source    | Source for measles1 report (D)                         |          |
| V303 | meas1yn        | Had measles1 vaccination (D)                           |          |
| V304 | meas1yr        | Year of measles1 vaccination (D)                       |          |
| V305 | meas1date      | Date of measles1 vaccination (D)                       |          |
| V306 | meas1dayest    | Date of measles1 vaccination is estimated (D)          |          |
| V307 | meas1vc        | Health centre of measles1 vaccination (D)              |          |
| V308 | meas1Bprob     | Problem with measles1 date (missing or before DOB) (D) |          |
| V309 | meas1Sprob     | Problem with measles1 date (schedule issue) (D)        |          |
| V310 | meas1fyintdate | First interview date when reported had measles2 (D)    |          |
| V311 | meas1keep      | Completeness of kept measles1 report (D)               |          |

| ID   | Name           | Label                                                       | Question |
|------|----------------|-------------------------------------------------------------|----------|
| V312 | meas2intdate   | Interview date for measles2 report (D)                      |          |
| V313 | meas2cardseen  | Whether health record seen for measles2 report (D)          |          |
| V314 | meas2source    | Source for measles2 report (D)                              |          |
| V315 | meas2yn        | Had measles2 vaccination (D)                                |          |
| V316 | meas2yr        | Year of measles2 vaccination (D)                            |          |
| V317 | meas2date      | Date of measles2 vaccination (D)                            |          |
| V318 | meas2dayest    | Date of measles2 vaccination is estimated (D)               |          |
| V319 | meas2vc        | Health centre of measles2 vaccination (D)                   |          |
| V320 | meas2Bprob     | Problem with measles2 date (missing or before DOB) (D)      |          |
| V321 | meas2Sprob     | Problem with measles2 date (schedule issue) (D)             |          |
| V322 | meas2fyintdate | First interview date when reported had measles3 (D)         |          |
| V323 | meas2keep      | Completeness of kept measles2 report (D)                    |          |
| V324 | vita1intdate   | Interview date for 1st vitamin A report (D)                 |          |
| V325 | vita1cardseen  | Whether health record seen for 1st vitamin A report (D)     |          |
| V326 | vita1source    | Source for 1st vitamin A report (D)                         |          |
| V327 | vita1yn        | Had 1st vitamin A dose (D)                                  |          |
| V328 | vita1yr        | Year of 1st vitamin A dose (D)                              |          |
| V329 | vita1date      | Date of 1st vitamin A dose (D)                              |          |
| V330 | vita1dayest    | Date of 1st vitamin A dose is estimated (D)                 |          |
| V331 | vita1Bprob     | Problem with 1st vitamin A date (missing or before DOB) (D) |          |
| V332 | vita1Sprob     | Problem with 1st vitamin A date (schedule issue) (D)        |          |
| V333 | vita1fyintdate | First interview date when reported had 1st vitamin A (D)    |          |
| V334 | vita1keep      | Completeness of kept 1st vitamin A report (D)               |          |
| V335 | vita2intdate   | Interview date for 2nd vitamin A report (D)                 |          |
| V336 | vita2cardseen  | Whether health record seen for 2nd vitamin A report (D)     |          |
| V337 | vita2source    | Source for 2nd vitamin A report (D)                         |          |
| V338 | vita2yn        | Had 2nd vitamin A dose (D)                                  |          |
| V339 | vita2yr        | Year of 2nd vitamin A dose (D)                              |          |
| V340 | vita2date      | Date of 2nd vitamin A dose (D)                              |          |
| V341 | vita2dayest    | Date of 2nd vitamin A dose is estimated (D)                 |          |
| V342 | vita2Bprob     | Problem with 2nd vitamin A date (missing or before DOB) (D) |          |
| V343 | vita2Sprob     | Problem with 2nd vitamin A date (schedule issue) (D)        |          |
| V344 | vita2fyintdate | First interview date when reported had 2nd vitamin A (D)    |          |
| V345 | vita2keep      | Completeness of kept 2nd vitamin A report (D)               |          |
| V346 | nvac           | Number of vaccinations received (D)                         |          |
| V347 | nvacgp         | Grouped number of vaccinations received (D)                 |          |

Total: 242



**IDENT: Unique identifier (S)****Data file:** all\_vaccination\_records**Overview**

Valid: 62863    Invalid: 0  
 Type: Discrete    Width: 7    Range: -    Format: character

**Description**

DEFINITION  
 Unique identifier

**Imputation and derivation**

DERIVATION  
 variable: ident (table[s]: cen\_individ, crs\_bfup, crs\_birth, crs\_cenm, css\_sei\_all, gp\_va, tmt\_tmtv, ves\_vese)

**BCGDAYEST: Date of BCG vaccination is estimated (D)****Data file:** all\_vaccination\_records**Overview**

Valid: 33    Invalid: 62830  
 Type: Discrete    Decimal: 0    Width: 1    Range: 1 - 1    Format: Numeric

**Description**

DEFINITION  
 Date of BCG vaccination is estimated

**Imputation and derivation**

DERIVATION  
 variable: bgcdatex (table[s]: css\_sei\_all)

**INTDATE: Interview date (D)****Data file:** all\_vaccination\_records**Overview**

Valid: 62863  
 Type: Discrete    Width: 10    Range: -    Format: character

**Description**

DEFINITION  
 Interview date

## Imputation and derivation

### DERIVATION

variable: intdate (table[s]: cen\_individ, crs\_bfup, crs\_birth, crs\_cenm, css\_sei\_all, gp\_va, tmt\_tmtv, ves\_vese)

variable: consdate (table[s]: ves\_vese)

## BIRTH\_DATE: Date of birth (D)

Data file: all\_vaccination\_records

### Overview

Valid: 62863

Type: Discrete    Width: 10    Range: -    Format: character

### Description

### DEFINITION

Date of birth

## Imputation and derivation

### DERIVATION

variable: birth\_date (table[s]: gen\_identity\_clean [derived table])

## SEX: Sex (D)

Data file: all\_vaccination\_records

### Overview

Valid: 62863    Invalid: 0

Type: Discrete    Decimal: 0    Width: 1    Range: 0 - 9    Format: Numeric

### Questions and instructions

### CATEGORIES

| Value | Category | Cases |       |
|-------|----------|-------|-------|
| 0     | Male     | 31743 | 50.5% |
| 1     | Female   | 31120 | 49.5% |
| 8     | Unknown  | 0     | 0%    |
| 9     | Missing  | 0     |       |

### Description

### DEFINITION

Sex

## Imputation and derivation

### DERIVATION

variable: birth\_date (table[s]: gen\_identity\_clean [derived table])

## CARDSEEN: Whether health record seen (D)

Data file: all\_vaccination\_records

### Overview

Valid: 61357 Invalid: 1506

Type: Discrete Decimal: 0 Width: 1 Range: 0 - 9 Format: Numeric

### Questions and instructions

#### CATEGORIES

| Value   | Category       | Cases |       |
|---------|----------------|-------|-------|
| 0       | No             | 11009 | 17.9% |
| 1       | Yes            | 50348 | 82.1% |
| 7       | Not applicable | 0     | 0%    |
| 8       | Unknown        | 0     | 0%    |
| 9       | Missing        | 0     |       |
| Sysmiss |                | 1506  |       |

### Description

#### DEFINITION

Whether health record seen

## Imputation and derivation

### DERIVATION

variable: cardseen (table[s]: cen\_individ, css\_sei\_all, gp\_va, tmt\_tmtv, ves\_vese)

variable: hdoc (table[s]: crs\_bfup, crs\_birth)

variable: vhdoc (table[s]: gp\_va)

## SOURCE: Source of data (D)

Data file: all\_vaccination\_records

### Overview

Valid: 62863 Invalid: 0

Type: Discrete Decimal: 0 Width: 1 Range: 1 - 8 Format: Numeric

## Questions and instructions

### CATEGORIES

| Value | Category    | Cases |       |
|-------|-------------|-------|-------|
| 1     | crs_birth   | 8998  | 14.3% |
| 2     | cen_individ | 3781  | 6%    |
| 3     | crs_cenm    | 730   | 1.2%  |
| 4     | crs_bfup    | 1409  | 2.2%  |
| 5     | css_sei     | 38970 | 62%   |
| 6     | ves_vese    | 7194  | 11.4% |
| 7     | tmt_tmtv    | 1284  | 2%    |
| 8     | gp_va       | 497   | 0.8%  |

## Description

### DEFINITION

Source of data

## Imputation and derivation

### DERIVATION

the source variable is created during the processing of each table

## BCGYN: Had BCG vaccination (D)

**Data file:** all\_vaccination\_records

### Overview

Valid: 62413 Invalid: 450

Type: Discrete Decimal: 0 Width: 1 Range: 0 - 9 Format: Numeric

## Questions and instructions

### CATEGORIES

| Value   | Category       | Cases |       |
|---------|----------------|-------|-------|
| 0       | No             | 1181  | 1.9%  |
| 1       | Yes            | 61232 | 98.1% |
| 7       | Not applicable | 0     | 0%    |
| 8       | Unknown        | 0     | 0%    |
| 9       | Missing        | 0     |       |
| Sysmiss |                | 450   |       |

## Description

---

### DEFINITION

Had BCG vaccination

## Imputation and derivation

---

### DERIVATION

variable: bcgyn (table[s]: cen\_individ, crs\_bfup, crs\_birth, crs\_cenm, css\_sei\_all, gp\_va, tmt\_tmtv, ves\_vese)

---

## BCGYR: Year of BCG vaccination (D)

**Data file:** all\_vaccination\_records

### Overview

Valid: 45805    Invalid: 17058

Type: Continuous    Decimal: 0    Width: 4    Range: 1997 - 2020    Format: Numeric

## Description

---

### DEFINITION

Year of BCG vaccination

## Imputation and derivation

---

### DERIVATION

gen `vacc`yr=year(`vacc`date)

---

## BCGDATE: Date of BCG vaccination (D)

**Data file:** all\_vaccination\_records

### Overview

Valid: 45779

Type: Discrete    Width: 10    Range: -    Format: character

## Description

---

### DEFINITION

Date of BCG vaccination

## Imputation and derivation

---

### DERIVATION

variable: bcgdate (table[s]: cen\_individ, crs\_birth, crs\_cenm, css\_sei\_all, gp\_va, tmt\_tmtv, ves\_vese)

variable: bgcdate (table[s]: crs\_bfup)

variable: birth\_date (table[s]: gen\_identity\_clean [derived table])

Date is used as reported unless month is reported to be estimated (edited to be bank) or it is before date of birth and is recorded as estimated (edited to be one day after birth\_date).

## BCGVC: Health centre of BCG vaccination (D)

**Data file:** all\_vaccination\_records

### Overview

Valid: 59749 Invalid: 3114

Type: Continuous Decimal: 0 Width: 6 Range: 10000 - 999999 Format: Numeric

### Description

#### DEFINITION

Health centre of BCG vaccination

### Imputation and derivation

#### DERIVATION

variable: bcgvc (table[s]: crs\_individ, crs\_bfup, crs\_birth, crs\_cenm, css\_sei\_all, gp\_va, tmt\_tmtv, ves\_vese)

variable: vhc1 (table[s]: crs\_birth)

variable: vcentre (table[s]: crs\_cenm) variable: bcgvc (table[s]: crs\_individ, crs\_bfup, crs\_birth, crs\_cenm, css\_sei\_all, gp\_va, tmt\_tmtv, ves\_vese)

variable: vhc1 (table[s]: crs\_birth)

variable: vcentre (table[s]: crs\_cenm) variable: bcgvc (table[s]: crs\_individ, crs\_bfup, crs\_birth, crs\_cenm, css\_sei\_all, gp\_va, tmt\_tmtv, ves\_vese)

variable: vhc1 (table[s]: crs\_birth)

variable: vcentre (table[s]: crs\_cenm)

## DPT1YN: Had DPT1 vaccination (D)

**Data file:** all\_vaccination\_records

### Overview

Valid: 55915 Invalid: 6948

Type: Discrete Decimal: 0 Width: 1 Range: 0 - 9 Format: Numeric

### Questions and instructions

#### CATEGORIES

| Value   | Category       | Cases |       |
|---------|----------------|-------|-------|
| 0       | No             | 2022  | 3.6%  |
| 1       | Yes            | 53893 | 96.4% |
| 7       | Not applicable | 0     | 0%    |
| 8       | Unknown        | 0     | 0%    |
| 9       | Missing        | 0     |       |
| Sysmiss |                | 6948  |       |

## Description

---

### DEFINITION

Had DPT1 vaccination

## Imputation and derivation

---

### DERIVATION

variable: dpt1yn (table[s]: cen\_individ, crs\_bfup, crs\_birth, crs\_cenm)

variable: dpthh1yn (table[s]: css\_sei\_all, gp\_va, tmt\_tmtv, ves\_vese)

When variable is collected with DPT & HH together they are split:

```
foreach var in yn date datex vc {
```

```
  forvalues x=1/3 {
```

```
    gen dpt`x'`var'=dpthh`x'`var'
```

```
    gen hh`x'`var'=dpthh`x'`var'
```

```
    drop dpthh`x'`var'
```

```
  }
```

```
}
```

## DPT1YR: Year of DPT1 vaccination (D)

**Data file:** all\_vaccination\_records

### Overview

Valid: 38823    Invalid: 24040

Type: Continuous    Decimal: 0    Width: 4    Range: 1997 - 2020    Format: Numeric

## Description

---

### DEFINITION

Year of DPT1 vaccination

## Imputation and derivation

---

### DERIVATION

```
gen `vacc'yr=year(`vacc'date)
```

## DPT1DATE: Date of DPT1 vaccination (D)

**Data file:** all\_vaccination\_records

### Overview

Valid: 38807

Type: Discrete    Width: 10    Range: -    Format: character

## Description

---

## DEFINITION

Date of DPT1 vaccination

## Imputation and derivation

---

## DERIVATION

variable: dpt1date (table[s]: cen\_individ, crs\_bfup, crs\_birth, crs\_cenm)

variable: dpthh1date (table[s]: css\_sei\_all, gp\_va, tmt\_tmtv, ves\_vese)

When variable is collected with DPT & HH together they are split:

```
foreach var in yn date datex vc {
  forvalues x=1/3 {
    gen dpt`x'`var'=dpthh`x'`var'
    gen hh`x'`var'=dpthh`x'`var'
    drop dpthh`x'`var'
  }
}
```

Date is used as reported unless month is reported to be estimated (edited to be bank) or it is before date of birth and is recorded as estimated (edited to be one day after birth\_date).

---

## DPT1DAYEST: Date of DPT1 vaccination is estimated (D)

**Data file:** all\_vaccination\_records

### Overview

Valid: 20    Invalid: 62843

Type: Discrete    Decimal: 0    Width: 1    Range: 1 - 1    Format: Numeric

### Description

---

## DEFINITION

Date of DPT1 vaccination is estimated

## Imputation and derivation

---

## DERIVATION

variable: dpthh1datex (table[s]: css\_sei\_all, gp\_va, tmt\_tmtv, ves\_vese)

When variable is collected with DPT & HH together they are split:

```
foreach var in yn date datex vc {
  forvalues x=1/3 {
    gen dpt`x'`var'=dpthh`x'`var'
    gen hh`x'`var'=dpthh`x'`var'
    drop dpthh`x'`var'
  }
}
```

---

## DPT1VC: Health centre of DPT1 vaccination (D)

**Data file:** all\_vaccination\_records

## Overview

Valid: 52149 Invalid: 10714

Type: Continuous Decimal: 0 Width: 6 Range: 10000 - 999999 Format: Numeric

## Description

### DEFINITION

Health centre of DPT1 vaccination

## Imputation and derivation

### DERIVATION

variable: dpt1vc (table[s]: cen\_individ, crs\_bfup, crs\_birth, crs\_cenm)

variable: dpthh1vc (table[s]: css\_sei\_all)

variable: vhc2 (table[s]: crs\_birth, css\_sei\_all, gp\_va, tmt\_tmtv, ves\_vese)

variable: vcentre (table[s]: crs\_cenm)

When variable is collected with DPT &amp; HH together they are split:

foreach var in yn date datex vc {

forvalues x=1/3 {

gen dpt`x'`var'=dpthh`x'`var'

gen hh`x'`var'=dpthh`x'`var'

drop dpthh`x'`var'

}

}

## DPT2YN: Had DPT2 vaccination (D)

Data file: all\_vaccination\_records

## Overview

Valid: 54250 Invalid: 8613

Type: Discrete Decimal: 0 Width: 1 Range: 0 - 9 Format: Numeric

## Questions and instructions

### CATEGORIES

| Value   | Category       | Cases |       |
|---------|----------------|-------|-------|
| 0       | No             | 3005  | 5.5%  |
| 1       | Yes            | 51245 | 94.5% |
| 7       | Not applicable | 0     | 0%    |
| 8       | Unknown        | 0     | 0%    |
| 9       | Missing        | 0     |       |
| Sysmiss |                | 8613  |       |

## Description

### DEFINITION

Had DPT2 vaccination

## Imputation and derivation

---

### DERIVATION

variable: dpt2yn (table[s]: cen\_individ, crs\_bfup, crs\_birth, crs\_cenm)  
 variable: dpthh2yn (table[s]: css\_sei\_all, gp\_va, tmt\_tmtv, ves\_vese)

When variable is collected with DPT & HH together they are split:

```
foreach var in yn date datex vc {
  forvalues x=1/3 {
    gen dpt`x'`var'=dpthh`x'`var'
    gen hh`x'`var'=dpthh`x'`var'
    drop dpthh`x'`var'
  }
}
```

---

## DPT2YR: Year of DPT2 vaccination (D)

**Data file:** all\_vaccination\_records

### Overview

Valid: 36257    Invalid: 26606  
 Type: Continuous    Decimal: 0    Width: 4    Range: 1997 - 2020    Format: Numeric

### Description

---

#### DEFINITION

Year of DPT2 vaccination

## Imputation and derivation

---

### DERIVATION

```
gen `vacc'yr=year(`vacc'date)
```

---

## DPT2DATE: Date of DPT2 vaccination (D)

**Data file:** all\_vaccination\_records

### Overview

Valid: 36238  
 Type: Discrete    Width: 10    Range: -    Format: character

### Description

---

#### DEFINITION

Date of DPT2 vaccination

## Imputation and derivation

### DERIVATION

variable: dpt2date (table[s]: cen\_individ, crs\_bfup, crs\_birth, crs\_cenm)

variable: dpthh2date (table[s]: css\_sei\_all, gp\_va, tmt\_tmtv, ves\_vese)

When variable is collected with DPT & HH together they are split:

```
foreach var in yn date datex vc {
  forvalues x=1/3 {
    gen dpt`x'`var'=dpthh`x'`var'
    gen hh`x'`var'=dpthh`x'`var'
    drop dpthh`x'`var'
  }
}
```

Date is used as reported unless month is reported to be estimated (edited to be bank) or it is before date of birth and is recorded as estimated (edited to be one day after birth\_date).

## DPT2DAYEST: Date of DPT2 vaccination is estimated (D)

**Data file:** all\_vaccination\_records

### Overview

Valid: 16 Invalid: 62847

Type: Discrete Decimal: 0 Width: 1 Range: 1 - 1 Format: Numeric

### Description

#### DEFINITION

Date of DPT2 vaccination is estimated

## Imputation and derivation

### DERIVATION

variable: dpthh2datex (table[s]: css\_sei\_all, gp\_va, tmt\_tmtv, ves\_vese)

When variable is collected with DPT & HH together they are split:

```
foreach var in yn date datex vc {
  forvalues x=1/3 {
    gen dpt`x'`var'=dpthh`x'`var'
    gen hh`x'`var'=dpthh`x'`var'
    drop dpthh`x'`var'
  }
}
```

## DPT2VC: Health centre of DPT2 vaccination (D)

**Data file:** all\_vaccination\_records

### Overview

Valid: 49435 Invalid: 13428

Type: Continuous Decimal: 0 Width: 6 Range: 10000 - 999999 Format: Numeric

## Description

### DEFINITION

Health centre of DPT2 vaccination

## Imputation and derivation

### DERIVATION

variable: dpt2vc (table[s]: cen\_individ, crs\_bfup, crs\_birth, crs\_cenm)

variable: dpthh2vc (table[s]: css\_sei\_all)

variable: vhc3 (table[s]: crs\_birth, css\_sei\_all, gp\_va, tmt\_tmtv, ves\_vese)

variable: vcentre (table[s]: crs\_cenm)

When variable is collected with DPT & HH together they are split:

```
foreach var in yn date datex vc {
```

```
  forvalues x=1/3 {
```

```
    gen dpt`x'`var'=dpthh`x'`var'
```

```
    gen hh`x'`var'=dpthh`x'`var'
```

```
    drop dpthh`x'`var'
```

```
  }
```

```
}
```

## DPT3YN: Had DPT3 vaccination (D)

Data file: all\_vaccination\_records

### Overview

Valid: 53261 Invalid: 9602

Type: Discrete Decimal: 0 Width: 1 Range: 0 - 9 Format: Numeric

## Questions and instructions

### CATEGORIES

| Value   | Category       | Cases |       |
|---------|----------------|-------|-------|
| 0       | No             | 4384  | 8.2%  |
| 1       | Yes            | 48877 | 91.8% |
| 7       | Not applicable | 0     | 0%    |
| 8       | Unknown        | 0     | 0%    |
| 9       | Missing        | 0     |       |
| Sysmiss |                | 9602  |       |

## Description

### DEFINITION

Had DPT3 vaccination

## Imputation and derivation

---

### DERIVATION

variable: dpt3yn (table[s]: cen\_individ, crs\_bfup, crs\_birth, crs\_cenm)

variable: dpthh3yn (table[s]: css\_sei\_all, gp\_va, tmt\_tmtv, ves\_vese)

When variable is collected with DPT & HH together they are split:

```
foreach var in yn date datex vc {
  forvalues x=1/3 {
    gen dpt`x'`var'=dpthh`x'`var'
    gen hh`x'`var'=dpthh`x'`var'
    drop dpthh`x'`var'
  }
}
```

---

## DPT3YR: Year of DPT3 vaccination (D)

**Data file:** all\_vaccination\_records

### Overview

Valid: 33978    Invalid: 28885

Type: Continuous    Decimal: 0    Width: 4    Range: 1997 - 2023    Format: Numeric

### Description

---

#### DEFINITION

Year of DPT3 vaccination

## Imputation and derivation

---

### DERIVATION

```
gen `vacc'yr=year(`vacc'date)
```

---

## DPT3DATE: Date of DPT3 vaccination (D)

**Data file:** all\_vaccination\_records

### Overview

Valid: 33961

Type: Discrete    Width: 10    Range: -    Format: character

### Description

---

#### DEFINITION

Date of DPT3 vaccination

## Imputation and derivation

---

## DERIVATION

variable: dpt3date (table[s]: cen\_individ, crs\_bfup, crs\_birth, crs\_cenm)  
 variable: dpthh3date (table[s]: css\_sei\_all, gp\_va, tmt\_tmtv, ves\_vese)

When variable is collected with DPT & HH together they are split:

```
foreach var in yn date datex vc {
  forvalues x=1/3 {
    gen dpt`x'`var'=dpthh`x'`var'
    gen hh`x'`var'=dpthh`x'`var'
    drop dpthh`x'`var'
  }
}
```

Date is used as reported unless month is reported to be estimated (edited to be bank) or it is before date of birth and is recorded as estimated (edited to be one day after birth\_date).

## DPT3DAYEST: Date of DPT3 vaccination is estimated (D)

**Data file:** all\_vaccination\_records

### Overview

Valid: 12    Invalid: 62851

Type: Discrete    Decimal: 0    Width: 1    Range: 1 - 1    Format: Numeric

### Description

## DEFINITION

Date of DPT3 vaccination is estimated

### Imputation and derivation

## DERIVATION

variable: dpthh3datex (table[s]: css\_sei\_all, gp\_va, tmt\_tmtv, ves\_vese)

When variable is collected with DPT & HH together they are split:

```
foreach var in yn date datex vc {
  forvalues x=1/3 {
    gen dpt`x'`var'=dpthh`x'`var'
    gen hh`x'`var'=dpthh`x'`var'
    drop dpthh`x'`var'
  }
}
```

## DPT3VC: Health centre of DPT3 vaccination (D)

**Data file:** all\_vaccination\_records

### Overview

Valid: 47102    Invalid: 15761

Type: Continuous    Decimal: 0    Width: 6    Range: 10000 - 999999    Format: Numeric

## Description

### DEFINITION

Health centre of DPT3 vaccination

## Imputation and derivation

### DERIVATION

variable: dpt3vc (table[s]: cen\_individ, crs\_bfup, crs\_birth, crs\_cenm)

variable: dpthh3vc (table[s]: css\_sei\_all)

variable: vhc4 (table[s]: crs\_birth, css\_sei\_all, gp\_va, tmt\_tmtv, ves\_vese)

variable: vcentre (table[s]: crs\_cenm)

When variable is collected with DPT & HH together they are split:

```
foreach var in yn date datex vc {
```

```
  forvalues x=1/3 {
```

```
    gen dpt`x'`var'=dpthh`x'`var'
```

```
    gen hh`x'`var'=dpthh`x'`var'
```

```
    drop dpthh`x'`var'
```

```
  }
```

```
}
```

## HH1YN: Had HH1 vaccination (D)

Data file: all\_vaccination\_records

### Overview

Valid: 47862    Invalid: 15001

Type: Discrete    Decimal: 0    Width: 1    Range: 0 - 9    Format: Numeric

## Questions and instructions

### CATEGORIES

| Value   | Category       | Cases |       |
|---------|----------------|-------|-------|
| 0       | No             | 2022  | 4.2%  |
| 1       | Yes            | 45840 | 95.8% |
| 7       | Not applicable | 0     | 0%    |
| 8       | Unknown        | 0     | 0%    |
| 9       | Missing        | 0     |       |
| Sysmiss |                | 15001 |       |

## Description

### DEFINITION

Had HH1 vaccination

## Imputation and derivation

---

### DERIVATION

variable: hh1yn (table[s]: cen\_individ, crs\_bfup)  
 variable: dpthh1yn (table[s]: css\_sei\_all, gp\_va, tmt\_tmtv, ves\_vese)

When variable is collected with DPT & HH together they are split:

```
foreach var in yn date datex vc {
  forvalues x=1/3 {
    gen dpt`x'`var'=dpthh`x'`var'
    gen hh`x'`var'=dpthh`x'`var'
    drop dpthh`x'`var'
  }
}
```

---

## HH1YR: Year of HH1 vaccination (D)

**Data file:** all\_vaccination\_records

### Overview

Valid: 30682    Invalid: 32181  
 Type: Continuous    Decimal: 0    Width: 4    Range: 1997 - 2019    Format: Numeric

### Description

---

#### DEFINITION

Year of HH1 vaccination

## Imputation and derivation

---

### DERIVATION

```
gen `vacc'yr=year(`vacc'date)
```

---

## HH1DATE: Date of HH1 vaccination (D)

**Data file:** all\_vaccination\_records

### Overview

Valid: 30666    Invalid: 32197  
 Type: Continuous    Decimal: 0    Width: 5    Range: 13689 - 21788    Format: Numeric

### Description

---

#### DEFINITION

Date of HH1 vaccination

## Imputation and derivation

---

**DERIVATION**

variable: hh1date (table[s]: cen\_individ, crs\_bfup)

variable: dpthh1date (table[s]: css\_sei\_all, gp\_va, tmt\_tmtv, ves\_vese)

When variable is collected with DPT & HH together they are split:

```
foreach var in yn date datex vc {
```

```
  forvalues x=1/3 {
```

```
    gen dpt`x'`var'=dpthh`x'`var'
```

```
    gen hh`x'`var'=dpthh`x'`var'
```

```
    drop dpthh`x'`var'
```

```
  }
```

```
}
```

Date is used as reported unless month is reported to be estimated (edited to be bank) or it is before date of birth and is recorded as estimated (edited to be one day after birth\_date).

## **HH1DAYEST: Date of HH1 vaccination is estimated (D)**

**Data file:** all\_vaccination\_records

### **Overview**

Valid: 20    Invalid: 62843

Type: Discrete    Decimal: 0    Width: 1    Range: 1 - 1    Format: Numeric

### **Description**

**DEFINITION**

Date of HH1 vaccination is estimated

### **Imputation and derivation**

**DERIVATION**

variable: dpthh1datex (table[s]: css\_sei\_all, gp\_va, tmt\_tmtv, ves\_vese)

When variable is collected with DPT & HH together they are split:

```
foreach var in yn date datex vc {
```

```
  forvalues x=1/3 {
```

```
    gen dpt`x'`var'=dpthh`x'`var'
```

```
    gen hh`x'`var'=dpthh`x'`var'
```

```
    drop dpthh`x'`var'
```

```
  }
```

```
}
```

## **HH1VC: Health centre of HH1 vaccination (D)**

**Data file:** all\_vaccination\_records

### **Overview**

Valid: 44144    Invalid: 18719

Type: Continuous    Decimal: 0    Width: 6    Range: 10000 - 999999    Format: Numeric

## Description

### DEFINITION

Health centre of HH1 vaccination

## Imputation and derivation

### DERIVATION

variable: hh1vc (table[s]: cen\_individ, crs\_bfup)

variable: dpthh1vc (table[s]: css\_sei\_all)

variable: vhc2 (table[s]: css\_sei\_all, gp\_va, tmt\_tmtv, ves\_vese)

When variable is collected with DPT & HH together they are split:

```
foreach var in yn date datex vc {
  forvalues x=1/3 {
    gen dpt`x'`var'=dpthh`x'`var'
    gen hh`x'`var'=dpthh`x'`var'
    drop dpthh`x'`var'
  }
}
```

## HH2YN: Had HH2 vaccination (D)

Data file: all\_vaccination\_records

### Overview

Valid: 47674 Invalid: 15189

Type: Discrete Decimal: 0 Width: 1 Range: 0 - 9 Format: Numeric

## Questions and instructions

### CATEGORIES

| Value   | Category       | Cases |       |
|---------|----------------|-------|-------|
| 0       | No             | 3005  | 6.3%  |
| 1       | Yes            | 44669 | 93.7% |
| 7       | Not applicable | 0     | 0%    |
| 8       | Unknown        | 0     | 0%    |
| 9       | Missing        | 0     |       |
| Sysmiss |                | 15189 |       |

## Description

### DEFINITION

Had HH2 vaccination

## Imputation and derivation

---

### DERIVATION

variable: hh2yn (table[s]: cen\_individ, crs\_bfup)  
 variable: dpthh2yn (table[s]: css\_sei\_all, gp\_va, tmt\_tmtv, ves\_vese)

When variable is collected with DPT & HH together they are split:

```
foreach var in yn date datex vc {
  forvalues x=1/3 {
    gen dpt`x'`var'=dpthh`x'`var'
    gen hh`x'`var'=dpthh`x'`var'
    drop dpthh`x'`var'
  }
}
```

---

## HH2YR: Year of HH2 vaccination (D)

**Data file:** all\_vaccination\_records

### Overview

Valid: 29621    Invalid: 33242  
 Type: Continuous    Decimal: 0    Width: 4    Range: 1997 - 2019    Format: Numeric

### Description

---

#### DEFINITION

Year of HH2 vaccination

## Imputation and derivation

---

### DERIVATION

```
gen `vacc'yr=year(`vacc'date)
```

---

## HH2DATE: Date of HH2 vaccination (D)

**Data file:** all\_vaccination\_records

### Overview

Valid: 29602    Invalid: 33261  
 Type: Continuous    Decimal: 0    Width: 5    Range: 13787 - 21816    Format: Numeric

### Description

---

#### DEFINITION

Date of HH2 vaccination

## Imputation and derivation

---

**DERIVATION**

variable: hh2date (table[s]: cen\_individ, crs\_bfup)

variable: dpthh2date (table[s]: css\_sei\_all, gp\_va, tmt\_tmtv, ves\_vese)

When variable is collected with DPT & HH together they are split:

```
foreach var in yn date datex vc {
```

```
  forvalues x=1/3 {
```

```
    gen dpt`x'`var'=dpthh`x'`var'
```

```
    gen hh`x'`var'=dpthh`x'`var'
```

```
    drop dpthh`x'`var'
```

```
  }
```

```
}
```

Date is used as reported unless month is reported to be estimated (edited to be bank) or it is before date of birth and is recorded as estimated (edited to be one day after birth\_date).

## **HH2DAYEST: Date of HH2 vaccination is estimated (D)**

**Data file:** all\_vaccination\_records

### **Overview**

Valid: 16    Invalid: 62847

Type: Discrete    Decimal: 0    Width: 1    Range: 1 - 1    Format: Numeric

### **Description**

**DEFINITION**

Date of HH2 vaccination is estimated

### **Imputation and derivation**

**DERIVATION**

variable: dpthh2datex (table[s]: css\_sei\_all, gp\_va, tmt\_tmtv, ves\_vese)

When variable is collected with DPT & HH together they are split:

```
foreach var in yn date datex vc {
```

```
  forvalues x=1/3 {
```

```
    gen dpt`x'`var'=dpthh`x'`var'
```

```
    gen hh`x'`var'=dpthh`x'`var'
```

```
    drop dpthh`x'`var'
```

```
  }
```

```
}
```

## **HH2VC: Health centre of HH2 vaccination (D)**

**Data file:** all\_vaccination\_records

### **Overview**

Valid: 42890    Invalid: 19973

Type: Continuous    Decimal: 0    Width: 6    Range: 10000 - 999999    Format: Numeric

## Description

### DEFINITION

Health centre of HH2 vaccination

## Imputation and derivation

### DERIVATION

variable: hh2vc (table[s]: cen\_individ, crs\_bfup)

variable: dpthh2vc (table[s]: css\_sei\_all)

variable: vhc3 (table[s]: css\_sei\_all, gp\_va, tmt\_tmtv, ves\_vese)

When variable is collected with DPT & HH together they are split:

```
foreach var in yn date datex vc {
  forvalues x=1/3 {
    gen dpt`x'`var'=dpthh`x'`var'
    gen hh`x'`var'=dpthh`x'`var'
    drop dpthh`x'`var'
  }
}
```

## HH3YN: Had HH3 vaccination (D)

Data file: all\_vaccination\_records

### Overview

Valid: 47498 Invalid: 15365

Type: Discrete Decimal: 0 Width: 1 Range: 0 - 9 Format: Numeric

## Questions and instructions

### CATEGORIES

| Value   | Category       | Cases |       |
|---------|----------------|-------|-------|
| 0       | No             | 4384  | 9.2%  |
| 1       | Yes            | 43114 | 90.8% |
| 7       | Not applicable | 0     | 0%    |
| 8       | Unknown        | 0     | 0%    |
| 9       | Missing        | 0     |       |
| Sysmiss |                | 15365 |       |

## Description

### DEFINITION

Had HH3 vaccination

## Imputation and derivation

---

### DERIVATION

variable: hh3yn (table[s]: cen\_individ, crs\_bfup)  
 variable: dpthh3yn (table[s]: css\_sei\_all, gp\_va, tmt\_tmtv, ves\_vese)

When variable is collected with DPT & HH together they are split:

```
foreach var in yn date datex vc {
  forvalues x=1/3 {
    gen dpt`x'`var'=dpthh`x'`var'
    gen hh`x'`var'=dpthh`x'`var'
    drop dpthh`x'`var'
  }
}
```

---

## HH3YR: Year of HH3 vaccination (D)

Data file: all\_vaccination\_records

### Overview

Valid: 28155    Invalid: 34708  
 Type: Continuous    Decimal: 0    Width: 4    Range: 1997 - 2023    Format: Numeric

### Description

---

#### DEFINITION

Year of HH3 vaccination

## Imputation and derivation

---

### DERIVATION

```
gen `vacc'yr=year(`vacc'date)
```

---

## HH3DATE: Date of HH3 vaccination (D)

Data file: all\_vaccination\_records

### Overview

Valid: 28138    Invalid: 34725  
 Type: Continuous    Decimal: 0    Width: 5    Range: 13815 - 23095    Format: Numeric

### Description

---

#### DEFINITION

Date of HH3 vaccination

## Imputation and derivation

---

**DERIVATION**

variable: hh3date (table[s]: cen\_individ, crs\_bfup)

variable: dpthh3date (table[s]: css\_sei\_all, gp\_va, tmt\_tmtv, ves\_vese)

When variable is collected with DPT & HH together they are split:

```
foreach var in yn date datex vc {
```

```
  forvalues x=1/3 {
```

```
    gen dpt`x'`var'=dpthh`x'`var'
```

```
    gen hh`x'`var'=dpthh`x'`var'
```

```
    drop dpthh`x'`var'
```

```
  }
```

```
}
```

Date is used as reported unless month is reported to be estimated (edited to be bank) or it is before date of birth and is recorded as estimated (edited to be one day after birth\_date).

## **HH3DAYEST: Date of HH3 vaccination is estimated (D)**

**Data file:** all\_vaccination\_records

### **Overview**

Valid: 12    Invalid: 62851

Type: Discrete    Decimal: 0    Width: 1    Range: 1 - 1    Format: Numeric

### **Description**

**DEFINITION**

Date of HH3 vaccination is estimated

### **Imputation and derivation**

**DERIVATION**

variable: dpthh3datex (table[s]: css\_sei\_all, gp\_va, tmt\_tmtv, ves\_vese)

When variable is collected with DPT & HH together they are split:

```
foreach var in yn date datex vc {
```

```
  forvalues x=1/3 {
```

```
    gen dpt`x'`var'=dpthh`x'`var'
```

```
    gen hh`x'`var'=dpthh`x'`var'
```

```
    drop dpthh`x'`var'
```

```
  }
```

```
}
```

## **HH3VC: Health centre of HH3 vaccination (D)**

**Data file:** all\_vaccination\_records

### **Overview**

Valid: 41367    Invalid: 21496

Type: Continuous    Decimal: 0    Width: 6    Range: 10000 - 999999    Format: Numeric

## Description

### DEFINITION

Health centre of HH3 vaccination

## Imputation and derivation

### DERIVATION

variable: hh3vc (table[s]: cen\_individ, crs\_bfup)

variable: dpthh3vc (table[s]: css\_sei\_all)

variable: vhc4 (table[s]: css\_sei\_all, gp\_va, tmt\_tmtv, ves\_vese)

When variable is collected with DPT & HH together they are split:

```
foreach var in yn date datex vc {
  forvalues x=1/3 {
    gen dpt`x'`var'=dpthh`x'`var'
    gen hh`x'`var'=dpthh`x'`var'
    drop dpthh`x'`var'
  }
}
```

## P0YN: Had polio0 vaccination (D)

Data file: all\_vaccination\_records

### Overview

Valid: 57905 Invalid: 4958

Type: Discrete Decimal: 0 Width: 1 Range: 0 - 9 Format: Numeric

## Questions and instructions

### CATEGORIES

| Value   | Category       | Cases |       |
|---------|----------------|-------|-------|
| 0       | No             | 11073 | 19.1% |
| 1       | Yes            | 46832 | 80.9% |
| 7       | Not applicable | 0     | 0%    |
| 8       | Unknown        | 0     | 0%    |
| 9       | Missing        | 0     |       |
| Sysmiss |                | 4958  |       |

## Description

### DEFINITION

Had polio0 vaccination

## Imputation and derivation

---

### DERIVATION

variable: p0yn (table[s]: cen\_individ, crs\_bfup, crs\_birth, crs\_cenm, css\_sei\_all, gp\_va, tmt\_tmtv, ves\_vese)

---

## P0YR: Year of polio0 vaccination (D)

**Data file:** all\_vaccination\_records

### Overview

Valid: 31572    Invalid: 31291

Type: Continuous    Decimal: 0    Width: 4    Range: 1997 - 2020    Format: Numeric

### Description

---

#### DEFINITION

Year of polio0 vaccination

## Imputation and derivation

---

### DERIVATION

gen `vacc'yr=year(`vacc'date)

---

## P0DATE: Date of polio0 vaccination (D)

**Data file:** all\_vaccination\_records

### Overview

Valid: 31554

Type: Discrete    Width: 10    Range: -    Format: character

### Description

---

#### DEFINITION

Date of polio0 vaccination

## Imputation and derivation

---

### DERIVATION

variable: p0date (table[s]: cen\_individ, crs\_bfup, crs\_birth, crs\_cenm, css\_sei\_all, gp\_va, tmt\_tmtv, ves\_vese)

Date is used as reported unless month is reported to be estimated (edited to be bank) or it is before date of birth and is recorded as estimated (edited to be one day after birth\_date).

---

**P0DAYEST: Date of polio0 vaccination is estimated (D)****Data file:** all\_vaccination\_records**Overview**

Valid: 26    Invalid: 62837

Type: Discrete    Decimal: 0    Width: 1    Range: 1 - 1    Format: Numeric

**Description**

## DEFINITION

Date of polio0 vaccination is estimated

**Imputation and derivation**

## DERIVATION

variable: p0datex (table[s]: css\_sei\_all, gp\_va, tmt\_tmtv, ves\_vese)

**P0VC: Health centre of polio0 vaccination (D)****Data file:** all\_vaccination\_records**Overview**

Valid: 45708    Invalid: 17155

Type: Continuous    Decimal: 0    Width: 6    Range: 10000 - 999999    Format: Numeric

**Description**

## DEFINITION

Health centre of polio0 vaccination

**Imputation and derivation**

## DERIVATION

variable: p0vc (table[s]: cen\_individ, crs\_bfup, crs\_birth, crs\_cenm, css\_sei\_all, gp\_va, tmt\_tmtv, ves\_vese)

variable: vhc1 (table[s]: crs\_birth)

variable: vcentre (table[s]: crs\_cenm)

**P1YN: Had polio1 vaccination (D)****Data file:** all\_vaccination\_records**Overview**

Valid: 55803    Invalid: 7060

Type: Discrete    Decimal: 0    Width: 1    Range: 0 - 9    Format: Numeric

## Questions and instructions

### CATEGORIES

| Value   | Category       | Cases |     |
|---------|----------------|-------|-----|
| 0       | No             | 2213  | 4%  |
| 1       | Yes            | 53590 | 96% |
| 7       | Not applicable | 0     | 0%  |
| 8       | Unknown        | 0     | 0%  |
| 9       | Missing        | 0     |     |
| Sysmiss |                | 7060  |     |

### Description

#### DEFINITION

Had polio1 vaccination

### Imputation and derivation

#### DERIVATION

variable: p1yn (table[s]: cen\_individ, crs\_bfup, crs\_birth, crs\_cenm, css\_sei\_all, gp\_va, tmt\_tmtv, ves\_vese)

## P1YR: Year of polio1 vaccination (D)

Data file: all\_vaccination\_records

### Overview

Valid: 38549 Invalid: 24314

Type: Continuous Decimal: 0 Width: 4 Range: 1997 - 2020 Format: Numeric

### Description

#### DEFINITION

Year of polio1 vaccination

### Imputation and derivation

#### DERIVATION

gen `vacc'yr=year(`vacc'date)

## P1DATE: Date of polio1 vaccination (D)

Data file: all\_vaccination\_records

## Overview

Valid: 38532  
 Type: Discrete    Width: 10    Range: -    Format: character

## Description

### DEFINITION

Date of polio1 vaccination

## Imputation and derivation

### DERIVATION

variable: p1date (table[s]: cen\_individ, crs\_bfup, crs\_birth, crs\_cenm, css\_sei\_all, gp\_va, tmt\_tmtv, ves\_vese)

Date is used as reported unless month is reported to be estimated (edited to be bank) or it is before date of birth and is recorded as estimated (edited to be one day after birth\_date).

## P1DAYEST: Date of polio1 vaccination is estimated (D)

Data file: all\_vaccination\_records

## Overview

Valid: 16    Invalid: 62847  
 Type: Discrete    Decimal: 0    Width: 1    Range: 1 - 1    Format: Numeric

## Description

### DEFINITION

Date of polio1 vaccination is estimated

## Imputation and derivation

### DERIVATION

variable: p1datex (table[s]: css\_sei\_all, gp\_va, tmt\_tmtv, ves\_vese)

## P1VC: Health centre of polio1 vaccination (D)

Data file: all\_vaccination\_records

## Overview

Valid: 51870    Invalid: 10993  
 Type: Continuous    Decimal: 0    Width: 6    Range: 10000 - 999999    Format: Numeric

## Description

### DEFINITION

Health centre of polio1 vaccination

## Imputation and derivation

### DERIVATION

variable: p1vc (table[s]: cen\_individ, crs\_bfup, crs\_birth, crs\_cenm, css\_sei\_all, gp\_va, tmt\_tmtv, ves\_vese)

variable: vhc2 (table[s]: crs\_birth)

variable: vcentre (table[s]: crs\_cenm)

## P2YN: Had polio2 vaccination (D)

Data file: all\_vaccination\_records

### Overview

Valid: 54166 Invalid: 8697

Type: Discrete Decimal: 0 Width: 1 Range: 0 - 9 Format: Numeric

### Questions and instructions

#### CATEGORIES

| Value   | Category       | Cases |       |
|---------|----------------|-------|-------|
| 0       | No             | 3364  | 6.2%  |
| 1       | Yes            | 50802 | 93.8% |
| 7       | Not applicable | 0     | 0%    |
| 8       | Unknown        | 0     | 0%    |
| 9       | Missing        | 0     |       |
| Sysmiss |                | 8697  |       |

### Description

#### DEFINITION

Had polio2 vaccination

## Imputation and derivation

### DERIVATION

variable: p2yn (table[s]: cen\_individ, crs\_bfup, crs\_birth, crs\_cenm, css\_sei\_all, gp\_va, tmt\_tmtv, ves\_vese)

## P2YR: Year of polio2 vaccination (D)

Data file: all\_vaccination\_records

### Overview

Valid: 35854 Invalid: 27009

Type: Continuous Decimal: 0 Width: 4 Range: 1997 - 2020 Format: Numeric

## Description

---

### DEFINITION

Year of polio2 vaccination

## Imputation and derivation

---

### DERIVATION

gen `vacc'yr=year(`vacc'date)

---

## P2DATE: Date of polio2 vaccination (D)

**Data file:** all\_vaccination\_records

### Overview

Valid: 35835

Type: Discrete    Width: 10    Range: -    Format: character

## Description

---

### DEFINITION

Date of polio2 vaccination

## Imputation and derivation

---

### DERIVATION

variable: p2date (table[s]: cen\_individ, crs\_bfup, crs\_birth, crs\_cenm, css\_sei\_all, gp\_va, tmt\_tmtv, ves\_vese)

Date is used as reported unless month is reported to be estimated (edited to be bank) or it is before date of birth and is recorded as estimated (edited to be one day after birth\_date).

---

## P2DAYEST: Date of polio2 vaccination is estimated (D)

**Data file:** all\_vaccination\_records

### Overview

Valid: 14    Invalid: 62849

Type: Discrete    Decimal: 0    Width: 1    Range: 1 - 1    Format: Numeric

## Description

---

### DEFINITION

Date of polio2 vaccination is estimated

## Imputation and derivation

---

### DERIVATION

variable: p2datex (table[s]: css\_sei\_all, gp\_va, tmt\_tmtv, ves\_vese)

## P2VC: Health centre of polio2 vaccination (D)

**Data file:** all\_vaccination\_records

### Overview

Valid: 49027    Invalid: 13836

Type: Continuous    Decimal: 0    Width: 6    Range: 10000 - 999999    Format: Numeric

### Description

#### DEFINITION

Health centre of polio2 vaccination

### Imputation and derivation

#### DERIVATION

variable: p2vc (table[s]: cen\_individ, crs\_bfup, crs\_birth, crs\_cenm, css\_sei\_all, gp\_va, tmt\_tmtv, ves\_vese)

variable: vhc3 (table[s]: crs\_birth, css\_sei\_all, gp\_va, tmt\_tmtv, ves\_vese)

variable: vcentre (table[s]: crs\_cenm)

## P3YN: Had polio3 vaccination (D)

**Data file:** all\_vaccination\_records

### Overview

Valid: 53112    Invalid: 9751

Type: Discrete    Decimal: 0    Width: 1    Range: 0 - 9    Format: Numeric

### Questions and instructions

#### CATEGORIES

| Value   | Category       | Cases |       |
|---------|----------------|-------|-------|
| 0       | No             | 4999  | 9.4%  |
| 1       | Yes            | 48113 | 90.6% |
| 7       | Not applicable | 0     | 0%    |
| 8       | Unknown        | 0     | 0%    |
| 9       | Missing        | 0     |       |
| Sysmiss |                | 9751  |       |

### Description

#### DEFINITION

Had polio3 vaccination

## Imputation and derivation

---

### DERIVATION

variable: p3yn (table[s]: cen\_individ, crs\_bfup, crs\_birth, crs\_cenm, css\_sei\_all, gp\_va, tmt\_tmtv, ves\_vese)

---

## P3YR: Year of polio3 vaccination (D)

**Data file:** all\_vaccination\_records

### Overview

Valid: 33218    Invalid: 29645

Type: Continuous    Decimal: 0    Width: 4    Range: 1997 - 2020    Format: Numeric

### Description

---

#### DEFINITION

Year of polio3 vaccination

## Imputation and derivation

---

### DERIVATION

gen `vacc'yr=year(`vacc'date)

---

## P3DATE: Date of polio3 vaccination (D)

**Data file:** all\_vaccination\_records

### Overview

Valid: 33200

Type: Discrete    Width: 10    Range: -    Format: character

### Description

---

#### DEFINITION

Date of polio3 vaccination

## Imputation and derivation

---

### DERIVATION

variable: p3date (table[s]: cen\_individ, crs\_bfup, crs\_birth, crs\_cenm, css\_sei\_all, gp\_va, tmt\_tmtv, ves\_vese)

Date is used as reported unless month is reported to be estimated (edited to be bank) or it is before date of birth and is recorded as estimated (edited to be one day after birth\_date).

---

**P3DAYEST: Date of polio3 vaccination is estimated (D)****Data file:** all\_vaccination\_records**Overview**

Valid: 10    Invalid: 62853

Type: Discrete    Decimal: 0    Width: 1    Range: 1 - 1    Format: Numeric

**Description**

## DEFINITION

Date of polio3 vaccination is estimated

**Imputation and derivation**

## DERIVATION

variable: p3datex (table[s]: css\_sei\_all, gp\_va, tmt\_tmtv, ves\_vese)

**P3VC: Health centre of polio3 vaccination (D)****Data file:** all\_vaccination\_records**Overview**

Valid: 46374    Invalid: 16489

Type: Continuous    Decimal: 0    Width: 6    Range: 10000 - 999999    Format: Numeric

**Description**

## DEFINITION

Health centre of polio3 vaccination

**Imputation and derivation**

## DERIVATION

variable: p3vc (table[s]: cen\_individ, crs\_bfup, crs\_birth, crs\_cenm, css\_sei\_all, gp\_va, tmt\_tmtv, ves\_vese)

variable: vhc4 (table[s]: crs\_birth, css\_sei\_all, gp\_va, tmt\_tmtv, ves\_vese)

variable: vcentre (table[s]: crs\_cenm)

**PCV1YN: Had PCV1 vaccination (D)****Data file:** all\_vaccination\_records**Overview**

Valid: 33311    Invalid: 29552

Type: Discrete    Decimal: 0    Width: 1    Range: 0 - 9    Format: Numeric

## Questions and instructions

### CATEGORIES

| Value   | Category       | Cases |     |
|---------|----------------|-------|-----|
| 0       | No             | 9328  | 28% |
| 1       | Yes            | 23983 | 72% |
| 7       | Not applicable | 0     | 0%  |
| 8       | Unknown        | 0     | 0%  |
| 9       | Missing        | 0     |     |
| Sysmiss |                | 29552 |     |

### Description

#### DEFINITION

Had PCV1 vaccination

### Imputation and derivation

#### DERIVATION

variable: pcv1yn (table[s]: crs\_birth, css\_sei\_all, gp\_va, tmt\_tmtv, ves\_vese)

## PCV1YR: Year of PCV1 vaccination (D)

Data file: all\_vaccination\_records

### Overview

Valid: 17241 Invalid: 45622

Type: Continuous Decimal: 0 Width: 4 Range: 1900 - 2020 Format: Numeric

### Description

#### DEFINITION

Year of PCV1 vaccination

### Imputation and derivation

#### DERIVATION

gen `vacc'yr=year(`vacc'date)

## PCV1DATE: Date of PCV1 vaccination (D)

Data file: all\_vaccination\_records

## Overview

Valid: 17232  
 Type: Discrete    Width: 10    Range: -    Format: character

## Description

### DEFINITION

Date of PCV1 vaccination

## Imputation and derivation

### DERIVATION

variable: pcv1date (table[s]: crs\_birth, css\_sei\_all, gp\_va, tmt\_tmtv, ves\_vese)

Date is used as reported unless month is reported to be estimated (edited to be bank) or it is before date of birth and is recorded as estimated (edited to be one day after birth\_date).

## PCV1DAYEST: Date of PCV1 vaccination is estimated (D)

Data file: all\_vaccination\_records

## Overview

Valid: 6    Invalid: 62857  
 Type: Discrete    Decimal: 0    Width: 1    Range: 1 - 1    Format: Numeric

## Description

### DEFINITION

Date of PCV1 vaccination is estimated

## Imputation and derivation

### DERIVATION

variable: pcv1datex (table[s]: css\_sei\_all, gp\_va, tmt\_tmtv, ves\_vese)

## PCV1VC: Health centre of PCV1 vaccination (D)

Data file: all\_vaccination\_records

## Overview

Valid: 23248    Invalid: 39615  
 Type: Continuous    Decimal: 0    Width: 6    Range: 10000 - 999999    Format: Numeric

## Description

### DEFINITION

Health centre of PCV1 vaccination

## Imputation and derivation

### DERIVATION

variable: vhc2 (table[s]: crs\_birth, css\_sei\_all, gp\_va, tmt\_tmtv, ves\_vese)

## PCV2YN: Had PCV2 vaccination (D)

Data file: all\_vaccination\_records

### Overview

Valid: 32196 Invalid: 30667

Type: Discrete Decimal: 0 Width: 1 Range: 0 - 9 Format: Numeric

### Questions and instructions

### CATEGORIES

| Value   | Category       | Cases |       |
|---------|----------------|-------|-------|
| 0       | No             | 10257 | 31.9% |
| 1       | Yes            | 21939 | 68.1% |
| 7       | Not applicable | 0     | 0%    |
| 8       | Unknown        | 0     | 0%    |
| 9       | Missing        | 0     |       |
| Sysmiss |                | 30667 |       |

### Description

### DEFINITION

Had PCV2 vaccination

## Imputation and derivation

### DERIVATION

variable: pcv2yn (table[s]: crs\_birth, css\_sei\_all, gp\_va, tmt\_tmtv, ves\_vese)

## PCV2YR: Year of PCV2 vaccination (D)

Data file: all\_vaccination\_records

### Overview

Valid: 15237 Invalid: 47626

Type: Discrete Decimal: 0 Width: 4 Range: 2008 - 2020 Format: Numeric

## Description

---

### DEFINITION

Year of PCV2 vaccination

## Imputation and derivation

---

### DERIVATION

gen `vacc'yr=year(`vacc'date)

---

## PCV2DATE: Date of PCV2 vaccination (D)

**Data file:** all\_vaccination\_records

### Overview

Valid: 15227

Type: Discrete    Width: 10    Range: -    Format: character

## Description

---

### DEFINITION

Date of PCV2 vaccination

## Imputation and derivation

---

### DERIVATION

variable: pcv2date (table[s]: crs\_birth, css\_sei\_all, gp\_va, tmt\_tmtv, ves\_vese)

Date is used as reported unless month is reported to be estimated (edited to be bank) or it is before date of birth and is recorded as estimated (edited to be one day after birth\_date).

---

## PCV2DAYEST: Date of PCV2 vaccination is estimated (D)

**Data file:** all\_vaccination\_records

### Overview

Valid: 2    Invalid: 62861

Type: Discrete    Decimal: 0    Width: 1    Range: 1 - 1    Format: Numeric

## Description

---

### DEFINITION

Date of PCV2 vaccination is estimated

## Imputation and derivation

### DERIVATION

variable: pcv2datex (table[s]: css\_sei\_all, gp\_va, tmt\_tmtv, ves\_vese)

## PCV2VC: Health centre of PCV2 vaccination (D)

Data file: all\_vaccination\_records

### Overview

Valid: 21197 Invalid: 41666

Type: Continuous Decimal: 0 Width: 6 Range: 10000 - 999999 Format: Numeric

### Description

### DEFINITION

Health centre of PCV2 vaccination

## Imputation and derivation

### DERIVATION

variable: vhc3 (table[s]: crs\_birth, css\_sei\_all, gp\_va, tmt\_tmtv, ves\_vese)

## PCV3YN: Had PCV3 vaccination (D)

Data file: all\_vaccination\_records

### Overview

Valid: 31569 Invalid: 31294

Type: Discrete Decimal: 0 Width: 1 Range: 0 - 9 Format: Numeric

### Questions and instructions

### CATEGORIES

| Value   | Category       | Cases |       |
|---------|----------------|-------|-------|
| 0       | No             | 11623 | 36.8% |
| 1       | Yes            | 19946 | 63.2% |
| 7       | Not applicable | 0     | 0%    |
| 8       | Unknown        | 0     | 0%    |
| 9       | Missing        | 0     |       |
| Sysmiss |                | 31294 |       |

## Description

---

### DEFINITION

Had PCV3 vaccination

## Imputation and derivation

---

### DERIVATION

variable: pcv3yn (table[s]: crs\_birth, css\_sei\_all, gp\_va, tmt\_tmtv, ves\_vese)

---

## PCV3YR: Year of PCV3 vaccination (D)

**Data file:** all\_vaccination\_records

### Overview

Valid: 13266    Invalid: 49597

Type: Discrete    Decimal: 0    Width: 4    Range: 2002 - 2020    Format: Numeric

## Description

---

### DEFINITION

Year of PCV3 vaccination

## Imputation and derivation

---

### DERIVATION

gen `vacc`yr=year(`vacc`date)

---

## PCV3DATE: Date of PCV3 vaccination (D)

**Data file:** all\_vaccination\_records

### Overview

Valid: 13257

Type: Discrete    Width: 10    Range: -    Format: character

## Description

---

### DEFINITION

Date of PCV3 vaccination

## Imputation and derivation

---

### DERIVATION

variable: pcv3date (table[s]: crs\_birth, crs\_cenm, css\_sei\_all, gp\_va, tmt\_tmtv, ves\_vese)

Date is used as reported unless month is reported to be estimated (edited to be bank) or it is before date of birth and is

recorded as estimated (edited to be one day after birth\_date).

---

## PCV3DAYEST: Date of PCV3 vaccination is estimated (D)

**Data file:** all\_vaccination\_records

### Overview

Valid: 0    Invalid: 62863  
 Type: Discrete    Decimal: 0    Width: 1    Range: -    Format: Numeric

### Description

---

#### DEFINITION

Date of PCV3 vaccination is estimated

### Imputation and derivation

---

#### DERIVATION

variable: pcv3datex (table[s]: css\_sei\_all, gp\_va, tmt\_tmtv, ves\_vese)

---

## PCV3VC: Health centre of PCV3 vaccination (D)

**Data file:** all\_vaccination\_records

### Overview

Valid: 19254    Invalid: 43609  
 Type: Continuous    Decimal: 0    Width: 6    Range: 10000 - 999999    Format: Numeric

### Description

---

#### DEFINITION

Health centre of PCV3 vaccination

### Imputation and derivation

---

#### DERIVATION

variable: vhc4 (table[s]: crs\_birth, css\_sei\_all, gp\_va, tmt\_tmtv, ves\_vese)

---

## RV1YN: Had rotavirus1 vaccination (D)

**Data file:** all\_vaccination\_records

### Overview

Valid: 31889    Invalid: 30974  
 Type: Discrete    Decimal: 0    Width: 1    Range: 0 - 9    Format: Numeric

## Questions and instructions

### CATEGORIES

| Value   | Category       | Cases |       |
|---------|----------------|-------|-------|
| 0       | No             | 16024 | 50.2% |
| 1       | Yes            | 15865 | 49.8% |
| 7       | Not applicable | 0     | 0%    |
| 8       | Unknown        | 0     | 0%    |
| 9       | Missing        | 0     |       |
| Sysmiss |                | 30974 |       |

### Description

#### DEFINITION

Had rotavirus1 vaccination

### Imputation and derivation

#### DERIVATION

variable: rv1yn (table[s]: crs\_birth, crs\_cenm, css\_sei\_all, gp\_va, tmt\_tmtv, ves\_vese)

## RV1YR: Year of rotavirus1 vaccination (D)

Data file: all\_vaccination\_records

### Overview

Valid: 11087 Invalid: 51776

Type: Discrete Decimal: 0 Width: 4 Range: 2009 - 2020 Format: Numeric

### Description

#### DEFINITION

Year of rotavirus1 vaccination

### Imputation and derivation

#### DERIVATION

gen `vacc'yr=year(`vacc'date)

## RV1DATE: Date of rotavirus1 vaccination (D)

Data file: all\_vaccination\_records

## Overview

Valid: 11076

Type: Discrete    Width: 10    Range: -    Format: character

## Description

### DEFINITION

Date of rotavirus1 vaccination

## Imputation and derivation

### DERIVATION

variable: rv1date (table[s]: crs\_birth, crs\_cenm, css\_sei\_all, gp\_va, tmt\_tmtv, ves\_vese)

Date is used as reported unless month is reported to be estimated (edited to be bank) or it is before date of birth and is recorded as estimated (edited to be one day after birth\_date).

## RV1DAYEST: Date of rotavirus1 vaccination is estimated (D)

Data file: all\_vaccination\_records

## Overview

Valid: 4    Invalid: 62859

Type: Discrete    Decimal: 0    Width: 1    Range: 1 - 1    Format: Numeric

## Description

### DEFINITION

Date of rotavirus1 vaccination is estimated

## Imputation and derivation

### DERIVATION

variable: rv1datex (table[s]: css\_sei\_all, gp\_va, tmt\_tmtv, ves\_vese)

## RV1VC: Health centre of rotavirus1 vaccination (D)

Data file: all\_vaccination\_records

## Overview

Valid: 15372    Invalid: 47491

Type: Continuous    Decimal: 0    Width: 6    Range: 10000 - 999999    Format: Numeric

## Description

### DEFINITION

Health centre of rotavirus1 vaccination

## Imputation and derivation

### DERIVATION

variable: vhc2 (table[s]: crs\_birth, css\_sei\_all, gp\_va, tmt\_tmtv, ves\_vese)

## RV2YN: Had rotavirus2 vaccination (D)

Data file: all\_vaccination\_records

### Overview

Valid: 30855 Invalid: 32008

Type: Discrete Decimal: 0 Width: 1 Range: 0 - 9 Format: Numeric

### Questions and instructions

#### CATEGORIES

| Value   | Category       | Cases |       |
|---------|----------------|-------|-------|
| 0       | No             | 16923 | 54.8% |
| 1       | Yes            | 13932 | 45.2% |
| 7       | Not applicable | 0     | 0%    |
| 8       | Unknown        | 0     | 0%    |
| 9       | Missing        | 0     |       |
| Sysmiss |                | 32008 |       |

### Description

#### DEFINITION

Had rotavirus2 vaccination

## Imputation and derivation

### DERIVATION

variable: rv2yn (table[s]: crs\_birth, css\_sei\_all, gp\_va, tmt\_tmtv, ves\_vese)

## RV2YR: Year of rotavirus2 vaccination (D)

Data file: all\_vaccination\_records

### Overview

Valid: 9179 Invalid: 53684

Type: Discrete Decimal: 0 Width: 4 Range: 2009 - 2020 Format: Numeric

## Description

---

### DEFINITION

Year of rotavirus2 vaccination

## Imputation and derivation

---

### DERIVATION

gen `vacc'yr=year(`vacc'date)

---

## RV2DATE: Date of rotavirus2 vaccination (D)

**Data file:** all\_vaccination\_records

### Overview

Valid: 9167

Type: Discrete    Width: 10    Range: -    Format: character

## Description

---

### DEFINITION

Date of rotavirus2 vaccination

## Imputation and derivation

---

### DERIVATION

variable: rv2date (table[s]: crs\_birth, css\_sei\_all, gp\_va, tmt\_tmtv, ves\_vese)

Date is used as reported unless month is reported to be estimated (edited to be bank) or it is before date of birth and is recorded as estimated (edited to be one day after birth\_date).

---

## RV2DAYEST: Date of rotavirus2 vaccination is estimated (D)

**Data file:** all\_vaccination\_records

### Overview

Valid: 1    Invalid: 62862

Type: Discrete    Decimal: 0    Width: 1    Range: 1 - 1    Format: Numeric

## Description

---

### DEFINITION

Date of rotavirus2 vaccination is estimated

## Imputation and derivation

---

### DERIVATION

variable: rv2datex (table[s]: css\_sei\_all, gp\_va, tmt\_tmtv, ves\_vese)

## RV2VC: Health centre of rotavirus2 vaccination (D)

Data file: all\_vaccination\_records

### Overview

Valid: 13453 Invalid: 49410

Type: Continuous Decimal: 0 Width: 6 Range: 10000 - 999999 Format: Numeric

### Description

#### DEFINITION

Health centre of rotavirus2 vaccination

### Imputation and derivation

#### DERIVATION

variable: vhc3 (table[s]: crs\_birth, css\_sei\_all, gp\_va, tmt\_tmtv, ves\_vese)

## MEAS1YN: Had measles1 vaccination (D)

Data file: all\_vaccination\_records

### Overview

Valid: 51333 Invalid: 11530

Type: Discrete Decimal: 0 Width: 1 Range: 0 - 9 Format: Numeric

### Questions and instructions

#### CATEGORIES

| Value   | Category       | Cases |       |
|---------|----------------|-------|-------|
| 0       | No             | 9382  | 18.3% |
| 1       | Yes            | 41951 | 81.7% |
| 7       | Not applicable | 0     | 0%    |
| 8       | Unknown        | 0     | 0%    |
| 9       | Missing        | 0     |       |
| Sysmiss |                | 11530 |       |

### Description

#### DEFINITION

Had measles1 vaccination

## Imputation and derivation

---

### DERIVATION

variable: measyn (table[s]: cen\_individ, crs\_bfup, crs\_birth, crs\_cenm, css\_sei\_all, gp\_va, tmt\_tmtv, ves\_vese)

---

## MEAS1YR: Year of measles1 vaccination (D)

**Data file:** all\_vaccination\_records

### Overview

Valid: 27354    Invalid: 35509

Type: Continuous    Decimal: 0    Width: 4    Range: 1997 - 2020    Format: Numeric

### Description

---

#### DEFINITION

Year of measles1 vaccination

## Imputation and derivation

---

### DERIVATION

gen `vacc'yr=year(`vacc'date)

---

## MEAS1DATE: Date of measles1 vaccination (D)

**Data file:** all\_vaccination\_records

### Overview

Valid: 27327

Type: Discrete    Width: 10    Range: -    Format: character

### Description

---

#### DEFINITION

Date of measles1 vaccination

## Imputation and derivation

---

### DERIVATION

variable: measdate (table[s]: cen\_individ, crs\_bfup, crs\_birth, crs\_cenm, css\_sei\_all, gp\_va, tmt\_tmtv, ves\_vese)

Date is used as reported unless month is reported to be estimated (edited to be bank) or it is before date of birth and is recorded as estimated (edited to be one day after birth\_date).

---

**MEAS1DAYEST: Date of measles1 vaccination is estimated (D)****Data file:** all\_vaccination\_records**Overview**

Valid: 17    Invalid: 62846

Type: Discrete    Decimal: 0    Width: 1    Range: 1 - 1    Format: Numeric

**Description**

## DEFINITION

Date of measles1 vaccination is estimated

**Imputation and derivation**

## DERIVATION

variable: measdatex (table[s]: css\_sei\_all, gp\_va, tmt\_tmtv, ves\_vese)

**VITA1DATE: Date of first vitamin A dose (D)****Data file:** all\_vaccination\_records**Overview**

Valid: 20160

Type: Discrete    Width: 10    Range: -    Format: character

**Description**

## DEFINITION

Date of first vitamin A dose

**Imputation and derivation**

## DERIVATION

variable: vitadat1 (table[s]: crs\_birth, css\_sei\_all, gp\_va, tmt\_tmtv, ves\_vese)

gen `vacc'yr=year(`vacc'date)

**MEAS1VC: Health centre of measles1 vaccination (D)****Data file:** all\_vaccination\_records**Overview**

Valid: 40080    Invalid: 22783

Type: Continuous    Decimal: 0    Width: 6    Range: 10000 - 999999    Format: Numeric

## Description

### DEFINITION

Health centre of measles1 vaccination

## Imputation and derivation

### DERIVATION

variable: measvc (table[s]: cen\_individ, crs\_bfup, crs\_cenm, css\_sei\_all, gp\_va, tmt\_tmtv, ves\_vese)

variable: vhc5 (table[s]: crs\_birth, css\_sei\_all, gp\_va, tmt\_tmtv, ves\_vese)

variable: vcentre (table[s]: crs\_cenm)

## MEAS2YN: Had measles2 vaccination (D)

Data file: all\_vaccination\_records

### Overview

Valid: 2961 Invalid: 59902

Type: Discrete Decimal: 0 Width: 1 Range: 0 - 9 Format: Numeric

## Questions and instructions

### CATEGORIES

| Value   | Category       | Cases |       |
|---------|----------------|-------|-------|
| 0       | No             | 2142  | 72.3% |
| 1       | Yes            | 819   | 27.7% |
| 7       | Not applicable | 0     | 0%    |
| 8       | Unknown        | 0     | 0%    |
| 9       | Missing        | 0     |       |
| Sysmiss |                | 59902 |       |

## Description

### DEFINITION

Had measles2 vaccination

## Imputation and derivation

### DERIVATION

variable: meas2yn (table[s]: crs\_birth, crs\_cenm, css\_sei\_all, gp\_va, tmt\_tmtv, ves\_vese)

## MEAS2YR: Year of measles2 vaccination (D)

Data file: all\_vaccination\_records

## Overview

Valid: 419    Invalid: 62444  
 Type: Discrete    Decimal: 0    Width: 4    Range: 2012 - 2019    Format: Numeric

## Description

### DEFINITION

Year of measles2 vaccination

## Imputation and derivation

### DERIVATION

gen `vacc'yr=year(`vacc'date)

## MEAS2DATE: Date of measles2 vaccination (D)

**Data file:** all\_vaccination\_records

## Overview

Valid: 407  
 Type: Discrete    Width: 10    Range: -    Format: character

## Description

### DEFINITION

Date of measles2 vaccination

## Imputation and derivation

### DERIVATION

variable: meas2date (table[s]: crs\_birth, crs\_cenm, css\_sei\_all, gp\_va, tmt\_tmtv, ves\_vese)

Date is used as reported unless month is reported to be estimated (edited to be bank) or it is before date of birth and is recorded as estimated (edited to be one day after birth\_date).

## MEAS2DAYEST: Date of measles2 vaccination is estimated (D)

**Data file:** all\_vaccination\_records

## Overview

Valid: 3    Invalid: 62860  
 Type: Discrete    Decimal: 0    Width: 1    Range: 1 - 1    Format: Numeric

## Description

### DEFINITION

Date of measles2 vaccination is estimated

## Imputation and derivation

### DERIVATION

variable: meas2datex (table[s]: css\_sei\_all, gp\_va, tmt\_tmtv, ves\_vese)

## MEAS2VC: Health centre of measles2 vaccination (D)

Data file: all\_vaccination\_records

### Overview

Valid: 793 Invalid: 62070

Type: Continuous Decimal: 0 Width: 6 Range: 10000 - 120101 Format: Numeric

### Description

#### DEFINITION

Health centre of measles2 vaccination

## Imputation and derivation

### DERIVATION

variable: vhc6 (table[s]: crs\_birth, css\_sei\_all, gp\_va, tmt\_tmtv, ves\_vese)

## VITADOS: Number of vitamin A doses (D)

Data file: all\_vaccination\_records

### Overview

Valid: 47318 Invalid: 15545

Type: Discrete Decimal: 0 Width: 2 Range: 0 - 99 Format: Numeric

### Questions and instructions

#### CATEGORIES

| Value | Category |
|-------|----------|
| 98    | Unknown  |
| 99    | Missing  |

### Description

#### DEFINITION

Number of vitamin A doses

## Imputation and derivation

---

### DERIVATION

variable: vitados (table[s]: crs\_birth, css\_sei\_all, gp\_va, tmt\_tmtv, ves\_vese)

---

## VITA1YN: Had first vitamin A dose (D)

Data file: all\_vaccination\_records

### Overview

Valid: 62863    Invalid: 0  
 Type: Discrete    Decimal: 0    Width: 1    Range: 0 - 1    Format: Numeric

### Description

---

#### DEFINITION

Had first vitamin A dose

## Imputation and derivation

---

### DERIVATION

variable: vitados (table[s]: crs\_birth, css\_sei\_all, gp\_va, tmt\_tmtv, ves\_vese)

gen vita1yn=0 if vitados==0  
 replace vita1yn=1 if vitados>=1

---

## VITA1YR: Year of first vitamin A dose (D)

Data file: all\_vaccination\_records

### Overview

Valid: 21657    Invalid: 41206  
 Type: Discrete    Decimal: 0    Width: 4    Range: 2003 - 2020    Format: Numeric

### Description

---

#### DEFINITION

Year of first vitamin A dose

---

## VITA1DAYEST: Date of first vitamin A dose is estimated (D)

Data file: all\_vaccination\_records

### Overview

Valid: 16280    Invalid: 46583  
 Type: Discrete    Decimal: 0    Width: 1    Range: 1 - 1    Format: Numeric

## Description

---

### DEFINITION

Date of first vitamin A dose is estimated

## Imputation and derivation

---

### DERIVATION

variable: vitadat1x (table[s]: css\_sei\_all, gp\_va, tmt\_tmtv, ves\_vese)

Date is used as reported unless month is reported to be estimated (edited to be bank) or it is before date of birth and is recorded as estimated (edited to be one day after birth\_date).

---

## VITA2YN: Had second vitamin A dose (D)

Data file: all\_vaccination\_records

### Overview

Valid: 62863    Invalid: 0  
 Type: Discrete    Decimal: 0    Width: 1    Range: 0 - 1    Format: Numeric

## Description

---

### DEFINITION

Had second vitamin A dose

## Imputation and derivation

---

### DERIVATION

variable: vita1yn (table[s]: this dataset)

variable: vitados (table[s]: crs\_birth, css\_sei\_all, gp\_va, tmt\_tmtv, ves\_vese)

gen vita2yn=0 if vita1yn~.

replace vita2yn=1 if vitados>=2

---

## VITA2YR: Year of second vitamin A dose (D)

Data file: all\_vaccination\_records

### Overview

Valid: 11689    Invalid: 51174  
 Type: Discrete    Decimal: 0    Width: 4    Range: 2004 - 2019    Format: Numeric

## Description

---

### DEFINITION

Year of second vitamin A dose

## Imputation and derivation

---

### DERIVATION

gen `vacc'yr=year(`vacc'date)

---

## VITA2DATE: Date of second vitamin A dose (D)

**Data file:** all\_vaccination\_records

### Overview

Valid: 10598

Type: Discrete    Width: 10    Range: -    Format: character

### Description

---

### DEFINITION

Date of second vitamin A dose

## Imputation and derivation

---

### DERIVATION

variable: vitadat2 (table[s]: crs\_birth, css\_sei\_all, gp\_va, tmt\_tmtv, ves\_vese)

Date is used as reported unless month is reported to be estimated (edited to be bank) or it is before date of birth and is recorded as estimated (edited to be one day after birth\_date).

---

## VITA2DAYEST: Date of second vitamin A dose is estimated (D)

**Data file:** all\_vaccination\_records

### Overview

Valid: 2057    Invalid: 60806

Type: Discrete    Decimal: 0    Width: 1    Range: 1 - 1    Format: Numeric

### Description

---

### DEFINITION

Date of second vitamin A dose is estimated

## Imputation and derivation

---

### DERIVATION

variable: vitadat2x (table[s]: css\_sei\_all, gp\_va, tmt\_tmtv, ves\_vese)

---

**IDENT: Unique identifier (D)****Data file:** vacc\_data\_selected\_BEST**Overview**

Valid: 26039    Invalid: 0  
 Type: Discrete    Width: 7    Range: -    Format: character

**Description**

DEFINITION  
 Unique identifier

**Imputation and derivation**

DERIVATION  
 variable: ident (table[s]: all\_vaccination\_records [derived table])

**BIRTH\_DATE: Birth date (D)****Data file:** vacc\_data\_selected\_BEST**Overview**

Valid: 26039  
 Type: Discrete    Width: 10    Range: -    Format: character

**BCGINTDATE: Interview date for BCG report (D)****Data file:** vacc\_data\_selected\_BEST**Overview**

Valid: 25776  
 Type: Discrete    Width: 10    Range: -    Format: character

**Description**

DEFINITION  
 Interview date for BCG report

**Imputation and derivation**

DERIVATION  
 variable: intdate (table[s]: all\_vaccination\_records [derived table])

**BCGCARDSEEN: Whether health record seen for BCG report (D)****Data file:** vacc\_data\_selected\_BEST

## Overview

Valid: 25625    Invalid: 414  
 Type: Discrete    Decimal: 0    Width: 1    Range: 0 - 9    Format: Numeric

## Questions and instructions

### CATEGORIES

| Value   | Category       | Cases |       |
|---------|----------------|-------|-------|
| 0       | No             | 1434  | 5.6%  |
| 1       | Yes            | 24191 | 94.4% |
| 7       | Not applicable | 0     | 0%    |
| 8       | Unknown        | 0     | 0%    |
| 9       | Missing        | 0     |       |
| Sysmiss |                | 414   |       |

## Description

### DEFINITION

Whether health record seen for BCG report

## Imputation and derivation

### DERIVATION

variable: cardseen (table[s]: all\_vaccination\_records [derived table])

## BCGSOURCE: Source for BCG report (D)

Data file: vacc\_data\_selected\_BEST

## Overview

Valid: 25776    Invalid: 263  
 Type: Discrete    Decimal: 0    Width: 1    Range: 1 - 8    Format: Numeric

## Questions and instructions

### CATEGORIES

| Value | Category    | Cases |       |
|-------|-------------|-------|-------|
| 1     | crs_birth   | 8665  | 33.6% |
| 2     | cen_individ | 3636  | 14.1% |
| 3     | crs_cenm    | 684   | 2.7%  |
| 4     | crs_bfup    | 612   | 2.4%  |
| 5     | css_sei     | 10696 | 41.5% |
| 6     | ves_vese    | 1121  | 4.3%  |

|         |          |     |      |
|---------|----------|-----|------|
| 7       | tmt_tmtv | 106 | 0.4% |
| 8       | gp_va    | 256 | 1%   |
| Sysmiss |          | 263 |      |

## Description

### DEFINITION

Source for BCG report

## Imputation and derivation

### DERIVATION

variable: source (table[s]: all\_vaccination\_records [derived table])

## BCGYN: Had BCG vaccination (D)

Data file: vacc\_data\_selected\_BEST

### Overview

Valid: 25776 Invalid: 263

Type: Discrete Decimal: 0 Width: 1 Range: 0 - 9 Format: Numeric

## Questions and instructions

### CATEGORIES

| Value   | Category       | Cases |       |
|---------|----------------|-------|-------|
| 0       | No             | 302   | 1.2%  |
| 1       | Yes            | 25474 | 98.8% |
| 7       | Not applicable | 0     | 0%    |
| 8       | Unknown        | 0     | 0%    |
| 9       | Missing        | 0     |       |
| Sysmiss |                | 263   |       |

## Description

### DEFINITION

Had BCG vaccination

## Imputation and derivation

### DERIVATION

variable: bcgyn (table[s]: all\_vaccination\_records [derived table])

**BCGYR: Year of BCG vaccination (D)****Data file:** vacc\_data\_selected\_BEST**Overview**

Valid: 23158 Invalid: 2881

Type: Continuous Decimal: 0 Width: 4 Range: 1997 - 2020 Format: Numeric

**Description**

## DEFINITION

Year of BCG vaccination

**Imputation and derivation**

## DERIVATION

variable: bcgyr (table[s]: all\_vaccination\_records [derived table])

**BCGDATE: Date of BCG vaccination (D)****Data file:** vacc\_data\_selected\_BEST**Overview**

Valid: 23156

Type: Discrete Width: 10 Range: - Format: character

**Description**

## DEFINITION

Date of BCG vaccination

**Imputation and derivation**

## DERIVATION

variable: bcgdate (table[s]: all\_vaccination\_records [derived table])

**BCGDAYEST: Date of BCG vaccination is estimated (D)****Data file:** vacc\_data\_selected\_BEST**Overview**

Valid: 21 Invalid: 26018

Type: Discrete Decimal: 0 Width: 1 Range: 1 - 1 Format: Numeric

**Description**

## DEFINITION

Date of BCG vaccination is estimated

## Imputation and derivation

---

### DERIVATION

variable: bcgdayest (table[s]: all\_vaccination\_records [derived table])

---

## BCGVC: Health centre of BCG vaccination (D)

**Data file:** vacc\_data\_selected\_BEST

### Overview

Valid: 24958    Invalid: 1081

Type: Continuous    Decimal: 0    Width: 6    Range: 10000 - 999999    Format: Numeric

### Description

---

#### DEFINITION

Health centre of BCG vaccination

## Imputation and derivation

---

### DERIVATION

variable: bcgvc (table[s]: all\_vaccination\_records [derived table])

---

## BCGBPROB: Problem with BCG date (missing or before DOB) (D)

**Data file:** vacc\_data\_selected\_BEST

### Overview

Valid: 25776    Invalid: 263

Type: Discrete    Decimal: 0    Width: 1    Range: 0 - 1    Format: Numeric

### Description

---

#### DEFINITION

Problem with BCG date (missing or before DOB)

## Imputation and derivation

---

### DERIVATION

variable: bcgdate (table[s]: all\_vaccination\_records [derived table])

variable: birth\_date (table[s]: all\_vaccination\_records [derived table])

gen `vacc'Bprob=0

replace `vacc'Bprob=1 if (`vacc'date<birth\_date & `vacc'date~= . & birth\_date~= .) | (`vacc'date==. & `vacc'yn==1)

---

**BCGSPROB: Problem with BCG date (schedule issue) (D)****Data file:** vacc\_data\_selected\_BEST**Overview**

Valid: 25776    Invalid: 263  
 Type: Discrete    Decimal: 0    Width: 1    Range: 0 - 1    Format: Numeric

**Description**

## DEFINITION

Problem with BCG date (schedule issue)

**Imputation and derivation**

## DERIVATION

variable: bcgdate (table[s]: all\_vaccination\_records [derived table])  
 variable: birth\_date (table[s]: all\_vaccination\_records [derived table])

\*for BCG: problem if vacc date is more than 3 weeks after birthdate (supposed to be at birth)  
 if "`vacc'"=="bcg" replace `vacc'Sprob=1 if bcgdate-birth\_date>21 & bcgdate~= . & birth\_date~= .

**BCGFYINTDATE: First interview date when reported had BCG (D)****Data file:** vacc\_data\_selected\_BEST**Overview**

Valid: 25474  
 Type: Discrete    Width: 10    Range: -    Format: character

**Description**

## DEFINITION

First interview date when reported had BCG

**Imputation and derivation**

## DERIVATION

variable: bcgintdate (table[s]: all\_vaccination\_records [derived table])  
 variable: bcgyn (table[s]: all\_vaccination\_records [derived table])

**BCGKEEP: Completeness of kept BCG report (D)****Data file:** vacc\_data\_selected\_BEST**Overview**

Valid: 25776    Invalid: 263  
 Type: Discrete    Decimal: 0    Width: 1    Range: 1 - 9    Format: Numeric

## Questions and instructions

### CATEGORIES

| Value   | Category                                 | Cases |       |
|---------|------------------------------------------|-------|-------|
| 1       | vacc=y, date ok, card seen               | 14949 | 58%   |
| 2       | vacc=y, date NOT ok (S), card seen       | 7715  | 29.9% |
| 3       | vacc=y, date NOT ok (B), card seen       | 1324  | 5.1%  |
| 4       | vacc=y, date NOT ok (S&B), card seen     | 0     | 0%    |
| 5       | vacc=y, date ok, card NOT seen           | 98    | 0.4%  |
| 6       | vacc=y, date NOT ok (S), card NOT seen   | 68    | 0.3%  |
| 7       | vacc=y, date NOT ok (B), card NOT seen   | 1320  | 5.1%  |
| 8       | vacc=y, date NOT ok (S&B), card NOT seen | 0     | 0%    |
| 9       | last report of vacc=n                    | 302   | 1.2%  |
| Sysmiss |                                          | 263   |       |

### Description

#### DEFINITION

Completeness of kept BCG report

### Imputation and derivation

#### DERIVATION

variable: bcgkeep (table[s]: all\_vaccination\_records [derived table])

la def vacckep 1 "vacc=y, date ok, card seen" 2 "vacc=y, date NOT ok (S), card seen" 3 "vacc=y, date NOT ok (B), card seen" 4 "vacc=y, date NOT ok (S&B), card seen" 5 "vacc=y, date ok, card NOT seen" 6 "vacc=y, date NOT ok (S), card NOT seen" 7 "vacc=y, date NOT ok (B), card NOT seen" 8 "vacc=y, date NOT ok (S&B), card NOT seen" 9 "last report of vacc=n"

\*1. keep the first record where the vaccine=yes, birth-date problem=no, schedule problem=no and healthcard=seen

gen `vacc'keep=1 if order==1 & `vacc'yn==1 & `vacc'Bprob==0 & `vacc'Sprob==0 & card==1

bys ident: egen kept=max(`vacc'keep)

\*2. if no record identified: keep the first record where the vaccine=yes, birth-date problem=no, schedule problem=yes and healthcard=seen

replace `vacc'keep=2 if order==1 & `vacc'yn==1 & `vacc'Bprob==0 & `vacc'Sprob==1 & card==1 & kept==.

drop kept

bys ident: egen kept=max(`vacc'keep)

\*3. if no record identified: keep the first record where the vaccine=yes, birth-date problem=yes, schedule problem=no and healthcard=seen

replace `vacc'keep=3 if order==1 & `vacc'yn==1 & `vacc'Bprob==1 & `vacc'Sprob==0 & card==1 & kept==.

drop kept

bys ident: egen kept=max(`vacc'keep)

\*4. if no record identified: keep the first record where the vaccine=yes, birth-date problem=yes, schedule problem=yes and healthcard=seen

replace `vacc'keep=4 if order==1 & `vacc'yn==1 & `vacc'Bprob==1 & `vacc'Sprob==1 & card==1 & kept==.

drop kept

bys ident: egen kept=max(`vacc'keep)

\*5. if no record identified: keep the first record where the vaccine=yes, birth-date problem=no, schedule problem=no and healthcard=not seen

replace `vacc'keep=5 if order==1 & `vacc'yn==1 & `vacc'Bprob==0 & `vacc'Sprob==0 & card==2 & kept==.

drop kept

```

bys ident: egen kept=max(`vacc'keep)
*6. if no record identified: keep the first record where the vaccine=yes, birth-date problem=no, schedule problem=yes and
healthcard=not seen
replace `vacc'keep=6 if order==1 & `vacc'yn==1 & `vacc'Bprob==0 & `vacc'Sprob==1 & card==2 & kept==.
drop kept
bys ident: egen kept=max(`vacc'keep)
*7. if no record identified: keep the first record where the vaccine=yes, birth-date problem=yes, schedule problem=no and
healthcard=not seen
replace `vacc'keep=7 if order==1 & `vacc'yn==1 & `vacc'Bprob==1 & `vacc'Sprob==0 & card==2 & kept==.
drop kept
bys ident: egen kept=max(`vacc'keep)
*8. if no record identified: keep the first record where the vaccine=yes, birth-date problem=yes, schedule problem=yes and
healthcard=not seen
replace `vacc'keep=8 if order==1 & `vacc'yn==1 & `vacc'Bprob==1 & `vacc'Sprob==1 & card==2 & kept==.
drop kept
bys ident: egen kept=max(`vacc'keep)
*9. if no record identified: keep the LAST record where the vaccine is recorded as no (regardless whether healthcard seen or
not)
replace `vacc'keep=9 if Norder==Ntotal & `vacc'yn==0 & kept==.
la val `vacc'keep vacckep
drop kept

```

---

## DPT1INTDATE: Interview date for DPT1 report (D)

**Data file:** vacc\_data\_selected\_BEST

### Overview

Valid: 22559

Type: Discrete    Width: 10    Range: -    Format: character

### Description

#### DEFINITION

Interview date for DPT1 report

### Imputation and derivation

#### DERIVATION

variable: intdate (table[s]: all\_vaccination\_records [derived table])

---

## DPT1CARDSEEN: Whether health record seen for DPT1 report (D)

**Data file:** vacc\_data\_selected\_BEST

### Overview

Valid: 22385    Invalid: 3654

Type: Discrete    Decimal: 0    Width: 1    Range: 0 - 9    Format: Numeric

### Questions and instructions

#### CATEGORIES

| Value   | Category       | Cases |       |
|---------|----------------|-------|-------|
| 0       | No             | 1682  | 7.5%  |
| 1       | Yes            | 20703 | 92.5% |
| 7       | Not applicable | 0     | 0%    |
| 8       | Unknown        | 0     | 0%    |
| 9       | Missing        | 0     |       |
| Sysmiss |                | 3654  |       |

## Description

### DEFINITION

Whether health record seen for DPT1 report

## Imputation and derivation

### DERIVATION

variable: cardseen (table[s]: all\_vaccination\_records [derived table])

## DPT1SOURCE: Source for DPT1 report (D)

Data file: vacc\_data\_selected\_BEST

### Overview

Valid: 22559 Invalid: 3480

Type: Discrete Decimal: 0 Width: 1 Range: 1 - 8 Format: Numeric

## Questions and instructions

### CATEGORIES

| Value   | Category    | Cases |       |
|---------|-------------|-------|-------|
| 1       | crs_birth   | 2388  | 10.6% |
| 2       | cen_individ | 3585  | 15.9% |
| 3       | crs_cenm    | 703   | 3.1%  |
| 4       | crs_bfup    | 1110  | 4.9%  |
| 5       | css_sei     | 12973 | 57.5% |
| 6       | ves_vese    | 1356  | 6%    |
| 7       | tmt_tmtv    | 128   | 0.6%  |
| 8       | gp_va       | 316   | 1.4%  |
| Sysmiss |             | 3480  |       |

## Description

## DEFINITION

Source for DPT1 report

**Imputation and derivation**

## DERIVATION

variable: source (table[s]: all\_vaccination\_records [derived table])

**DPT1YN: Had DPT1 vaccination (D)****Data file:** vacc\_data\_selected\_BEST**Overview**

Valid: 22559 Invalid: 3480

Type: Discrete Decimal: 0 Width: 1 Range: 0 - 9 Format: Numeric

**Questions and instructions**

## CATEGORIES

| Value   | Category       | Cases |       |
|---------|----------------|-------|-------|
| 0       | No             | 531   | 2.4%  |
| 1       | Yes            | 22028 | 97.6% |
| 7       | Not applicable | 0     | 0%    |
| 8       | Unknown        | 0     | 0%    |
| 9       | Missing        | 0     |       |
| Sysmiss |                | 3480  |       |

**Description**

## DEFINITION

Had DPT1 vaccination

**Imputation and derivation**

## DERIVATION

variable: dpt1yn (table[s]: all\_vaccination\_records [derived table])

**DPT1YR: Year of DPT1 vaccination (D)****Data file:** vacc\_data\_selected\_BEST**Overview**

Valid: 19486 Invalid: 6553

Type: Continuous Decimal: 0 Width: 4 Range: 1997 - 2020 Format: Numeric

## Description

---

### DEFINITION

Year of DPT1 vaccination

## Imputation and derivation

---

### DERIVATION

variable: dpt1yr (table[s]: all\_vaccination\_records [derived table])

---

## DPT1DATE: Date of DPT1 vaccination (D)

**Data file:** vacc\_data\_selected\_BEST

### Overview

Valid: 19484

Type: Discrete    Width: 10    Range: -    Format: character

## Description

---

### DEFINITION

Date of DPT1 vaccination

## Imputation and derivation

---

### DERIVATION

variable: dpt1date (table[s]: all\_vaccination\_records [derived table])

---

## DPT1DAYEST: Date of DPT1 vaccination is estimated (D)

**Data file:** vacc\_data\_selected\_BEST

### Overview

Valid: 8    Invalid: 26031

Type: Discrete    Decimal: 0    Width: 1    Range: 1 - 1    Format: Numeric

## Description

---

### DEFINITION

Date of DPT1 vaccination is estimated

## Imputation and derivation

---

### DERIVATION

variable: dpt1dayest (table[s]: all\_vaccination\_records [derived table])

**DPT1VC: Health centre of DPT1 vaccination (D)****Data file:** vacc\_data\_selected\_BEST**Overview**

Valid: 21452    Invalid: 4587

Type: Continuous    Decimal: 0    Width: 6    Range: 10000 - 999999    Format: Numeric

**Description**

## DEFINITION

Health centre of DPT1 vaccination

**Imputation and derivation**

## DERIVATION

variable: dpt1vc (table[s]: all\_vaccination\_records [derived table])

**DPT1BPROB: Problem with DPT1 date (missing or before DOB) (D)****Data file:** vacc\_data\_selected\_BEST**Overview**

Valid: 22559    Invalid: 3480

Type: Discrete    Decimal: 0    Width: 1    Range: 0 - 1    Format: Numeric

**Description**

## DEFINITION

Problem with DPT1 date (missing or before DOB)

**Imputation and derivation**

## DERIVATION

variable: dpt1date (table[s]: all\_vaccination\_records [derived table])

variable: birth\_date (table[s]: all\_vaccination\_records [derived table])

gen `vacc'Bprob=0

replace `vacc'Bprob=1 if (`vacc'date&lt;birth\_date &amp; `vacc'date~=. &amp; birth\_date~=. ) | (`vacc'date==. &amp; `vacc'yn==1)

**DPT1SPROB: Problem with DPT1 date (schedule issue) (D)****Data file:** vacc\_data\_selected\_BEST**Overview**

Valid: 22559    Invalid: 3480

Type: Discrete    Decimal: 0    Width: 1    Range: 0 - 1    Format: Numeric

## Description

### DEFINITION

Problem with DPT1 date (schedule issue)

## Imputation and derivation

### DERIVATION

variable: dpt1date (table[s]: all\_vaccination\_records [derived table])

variable: birth\_date (table[s]: all\_vaccination\_records [derived table])

\*for DPT1, HH1, PCV1, RV1 and P1: problem if vacc date is less than 5 weeks, or more than 10 weeks after birthdate (supposed to be at 6 weeks or later)

if "`vacc'"=="dpt1" replace `vacc'Sprob=1 if (dpt1date-birth\_date<35 | dpt1date-birth\_date>70) & dpt1date~=. & birth\_date~=.

## DPT1FYINTDATE: First interview date when reported had DPT2 (D)

Data file: vacc\_data\_selected\_BEST

### Overview

Valid: 22028

Type: Discrete    Width: 10    Range: -    Format: character

## Description

### DEFINITION

First interview date when reported had DPT2

## Imputation and derivation

### DERIVATION

variable: dpt1intdate (table[s]: all\_vaccination\_records [derived table])

variable: bcgyn (table[s]: all\_vaccination\_records [derived table])

\*calculate first interview date where card seen and vaccine recorded as yes

bys ident: egen tempC=min(`vacc'intdate) if card==1 & `vacc'yn==1

bys ident: egen tempNC=min(`vacc'intdate) if card==2 & `vacc'yn==1

bys ident: egen `vacc'fyintdate=min(tempC)

bys ident: egen tempNCd=min(tempNC)

replace `vacc'fyintdate=tempNCd if `vacc'fyintdate==. & tempNCd~=.

## DPT1KEEP: Completeness of kept DPT1 report (D)

Data file: vacc\_data\_selected\_BEST

### Overview

Valid: 22559    Invalid: 3480

Type: Discrete    Decimal: 0    Width: 1    Range: 1 - 9    Format: Numeric

## Questions and instructions

### CATEGORIES

| Value   | Category                                 | Cases |       |
|---------|------------------------------------------|-------|-------|
| 1       | vacc=y, date ok, card seen               | 13018 | 57.7% |
| 2       | vacc=y, date NOT ok (S), card seen       | 6159  | 27.3% |
| 3       | vacc=y, date NOT ok (B), card seen       | 972   | 4.3%  |
| 4       | vacc=y, date NOT ok (S&B), card seen     | 160   | 0.7%  |
| 5       | vacc=y, date ok, card NOT seen           | 72    | 0.3%  |
| 6       | vacc=y, date NOT ok (S), card NOT seen   | 72    | 0.3%  |
| 7       | vacc=y, date NOT ok (B), card NOT seen   | 1572  | 7%    |
| 8       | vacc=y, date NOT ok (S&B), card NOT seen | 3     | 0%    |
| 9       | last report of vacc=n                    | 531   | 2.4%  |
| Sysmiss |                                          | 3480  |       |

### Description

#### DEFINITION

Completeness of kept DPT1 report

### Imputation and derivation

#### DERIVATION

variable: dpt1keep (table[s]: all\_vaccination\_records [derived table])

```

la def vacckep 1 "vacc=y, date ok, card seen" 2 "vacc=y, date NOT ok (S), card seen" 3 "vacc=y, date NOT ok (B), card
seen" 4 "vacc=y, date NOT ok (S&B), card seen" 5 "vacc=y, date ok, card NOT seen" 6 "vacc=y, date NOT ok (S), card NOT
seen" 7 "vacc=y, date NOT ok (B), card NOT seen" 8 "vacc=y, date NOT ok (S&B), card NOT seen" 9 "last report of vacc=n"
*1. keep the first record where the vaccine=yes, birth-date problem=no, schedule problem=no and healthcard=seen
gen `vacc'keep=1 if order==1 & `vacc'yn==1 & `vacc'Bprob==0 & `vacc'Sprob==0 & card==1
bys ident: egen kept=max(`vacc'keep)
*2. if no record identified: keep the first record where the vaccine=yes, birth-date problem=no, schedule problem=yes and
healthcard=seen
replace `vacc'keep=2 if order==1 & `vacc'yn==1 & `vacc'Bprob==0 & `vacc'Sprob==1 & card==1 & kept==.
drop kept
bys ident: egen kept=max(`vacc'keep)
*3. if no record identified: keep the first record where the vaccine=yes, birth-date problem=yes, schedule problem=no and
healthcard=seen
replace `vacc'keep=3 if order==1 & `vacc'yn==1 & `vacc'Bprob==1 & `vacc'Sprob==0 & card==1 & kept==.
drop kept
bys ident: egen kept=max(`vacc'keep)
*4. if no record identified: keep the first record where the vaccine=yes, birth-date problem=yes, schedule problem=yes and
healthcard=seen
replace `vacc'keep=4 if order==1 & `vacc'yn==1 & `vacc'Bprob==1 & `vacc'Sprob==1 & card==1 & kept==.
drop kept
bys ident: egen kept=max(`vacc'keep)
*5. if no record identified: keep the first record where the vaccine=yes, birth-date problem=no, schedule problem=no and
healthcard=not seen
replace `vacc'keep=5 if order==1 & `vacc'yn==1 & `vacc'Bprob==0 & `vacc'Sprob==0 & card==2 & kept==.
drop kept

```

```

bys ident: egen kept=max(`vacc'keep)
*6. if no record identified: keep the first record where the vaccine=yes, birth-date problem=no, schedule problem=yes and
healthcard=not seen
replace `vacc'keep=6 if order==1 & `vacc'yn==1 & `vacc'Bprob==0 & `vacc'Sprob==1 & card==2 & kept==.
drop kept
bys ident: egen kept=max(`vacc'keep)
*7. if no record identified: keep the first record where the vaccine=yes, birth-date problem=yes, schedule problem=no and
healthcard=not seen
replace `vacc'keep=7 if order==1 & `vacc'yn==1 & `vacc'Bprob==1 & `vacc'Sprob==0 & card==2 & kept==.
drop kept
bys ident: egen kept=max(`vacc'keep)
*8. if no record identified: keep the first record where the vaccine=yes, birth-date problem=yes, schedule problem=yes and
healthcard=not seen
replace `vacc'keep=8 if order==1 & `vacc'yn==1 & `vacc'Bprob==1 & `vacc'Sprob==1 & card==2 & kept==.
drop kept
bys ident: egen kept=max(`vacc'keep)
*9. if no record identified: keep the LAST record where the vaccine is recorded as no (regardless whether healthcard seen or
not)
replace `vacc'keep=9 if Norder==Ntotal & `vacc'yn==0 & kept==.
la val `vacc'keep vacckep
drop kept

```

---

## DPT2INTDATE: Interview date for DPT2 report (D)

**Data file:** vacc\_data\_selected\_BEST

### Overview

Valid: 21708

Type: Discrete    Width: 10    Range: -    Format: character

### Description

#### DEFINITION

Interview date for DPT2 report

### Imputation and derivation

#### DERIVATION

variable: intdate (table[s]: all\_vaccination\_records [derived table])

---

## DPT2CARDSEEN: Whether health record seen for DPT2 report (D)

**Data file:** vacc\_data\_selected\_BEST

### Overview

Valid: 21528    Invalid: 4511

Type: Discrete    Decimal: 0    Width: 1    Range: 0 - 9    Format: Numeric

### Questions and instructions

#### CATEGORIES

| Value   | Category       | Cases |       |
|---------|----------------|-------|-------|
| 0       | No             | 1784  | 8.3%  |
| 1       | Yes            | 19744 | 91.7% |
| 7       | Not applicable | 0     | 0%    |
| 8       | Unknown        | 0     | 0%    |
| 9       | Missing        | 0     |       |
| Sysmiss |                | 4511  |       |

## Description

### DEFINITION

Whether health record seen for DPT2 report

## Imputation and derivation

### DERIVATION

variable: cardseen (table[s]: all\_vaccination\_records [derived table])

## DPT2SOURCE: Source for DPT2 report (D)

Data file: vacc\_data\_selected\_BEST

### Overview

Valid: 21708 Invalid: 4331

Type: Discrete Decimal: 0 Width: 1 Range: 1 - 8 Format: Numeric

## Questions and instructions

### CATEGORIES

| Value   | Category    | Cases |       |
|---------|-------------|-------|-------|
| 1       | crs_birth   | 1126  | 5.2%  |
| 2       | cen_individ | 3398  | 15.7% |
| 3       | crs_cenm    | 684   | 3.2%  |
| 4       | crs_bfup    | 1228  | 5.7%  |
| 5       | css_sei     | 13377 | 61.6% |
| 6       | ves_vese    | 1419  | 6.5%  |
| 7       | tmt_tmtv    | 170   | 0.8%  |
| 8       | gp_va       | 306   | 1.4%  |
| Sysmiss |             | 4331  |       |

## Description

## DEFINITION

Source for DPT2 report

**Imputation and derivation**

## DERIVATION

variable: source (table[s]: all\_vaccination\_records [derived table])

**DPT2YN: Had DPT2 vaccination (D)****Data file:** vacc\_data\_selected\_BEST**Overview**

Valid: 21708 Invalid: 4331

Type: Discrete Decimal: 0 Width: 1 Range: 0 - 9 Format: Numeric

**Questions and instructions**

## CATEGORIES

| Value   | Category       | Cases |       |
|---------|----------------|-------|-------|
| 0       | No             | 721   | 3.3%  |
| 1       | Yes            | 20987 | 96.7% |
| 7       | Not applicable | 0     | 0%    |
| 8       | Unknown        | 0     | 0%    |
| 9       | Missing        | 0     |       |
| Sysmiss |                | 4331  |       |

**Description**

## DEFINITION

Had DPT2 vaccination

**Imputation and derivation**

## DERIVATION

variable: dpt2yn (table[s]: all\_vaccination\_records [derived table])

**DPT2YR: Year of DPT2 vaccination (D)****Data file:** vacc\_data\_selected\_BEST**Overview**

Valid: 18294 Invalid: 7745

Type: Continuous Decimal: 0 Width: 4 Range: 1997 - 2020 Format: Numeric

## Description

---

### DEFINITION

Year of DPT2 vaccination

## Imputation and derivation

---

### DERIVATION

variable: dpt2yr (table[s]: all\_vaccination\_records [derived table])

---

## DPT2DATE: Date of DPT2 vaccination (D)

**Data file:** vacc\_data\_selected\_BEST

### Overview

Valid: 18291

Type: Discrete    Width: 10    Range: -    Format: character

## Description

---

### DEFINITION

Date of DPT2 vaccination

## Imputation and derivation

---

### DERIVATION

variable: dpt2date (table[s]: all\_vaccination\_records [derived table])

---

## DPT2DAYEST: Date of DPT2 vaccination is estimated (D)

**Data file:** vacc\_data\_selected\_BEST

### Overview

Valid: 4    Invalid: 26035

Type: Discrete    Decimal: 0    Width: 1    Range: 1 - 1    Format: Numeric

## Description

---

### DEFINITION

Date of DPT2 vaccination is estimated

## Imputation and derivation

---

### DERIVATION

variable: dpt2dayest (table[s]: all\_vaccination\_records [derived table])

**DPT2VC: Health centre of DPT2 vaccination (D)****Data file:** vacc\_data\_selected\_BEST**Overview**

Valid: 20434    Invalid: 5605

Type: Continuous    Decimal: 0    Width: 6    Range: 10000 - 999999    Format: Numeric

**Description**

## DEFINITION

Health centre of DPT2 vaccination

**Imputation and derivation**

## DERIVATION

variable: dpt2vc (table[s]: all\_vaccination\_records [derived table])

**DPT2BPROB: Problem with DPT2 date (missing or before DOB) (D)****Data file:** vacc\_data\_selected\_BEST**Overview**

Valid: 21708    Invalid: 4331

Type: Discrete    Decimal: 0    Width: 1    Range: 0 - 1    Format: Numeric

**Description**

## DEFINITION

Problem with DPT2 date (missing or before DOB)

**Imputation and derivation**

## DERIVATION

variable: dpt2date (table[s]: all\_vaccination\_records [derived table])

variable: birth\_date (table[s]: all\_vaccination\_records [derived table])

gen `vacc'Bprob=0

replace `vacc'Bprob=1 if (`vacc'date&lt;birth\_date &amp; `vacc'date~=. &amp; birth\_date~=. ) | (`vacc'date==. &amp; `vacc'yn==1)

**DPT2SPROB: Problem with DPT2 date (schedule issue) (D)****Data file:** vacc\_data\_selected\_BEST**Overview**

Valid: 21708    Invalid: 4331

Type: Discrete    Decimal: 0    Width: 1    Range: 0 - 1    Format: Numeric

## Description

### DEFINITION

Problem with DPT2 date (schedule issue)

## Imputation and derivation

### DERIVATION

variable: dpt2date (table[s]: all\_vaccination\_records [derived table])

variable: birth\_date (table[s]: all\_vaccination\_records [derived table])

\*for DPT2, HH2, PCV2, RV2 and P2: problem if vacc date is less than 3 weeks, or more than 6 weeks after first dose (supposed to be 1 month after first dose)

if "`vacc'"=="dpt2" replace `vacc'Sprob=1 if (dpt2date-dpt1date<21 | dpt2date-dpt1date>42 | dpt1date==.) & dpt2date~=. & birth\_date~=.

## DPT2FYINTDATE: First interview date when reported had DPT3 (D)

Data file: vacc\_data\_selected\_BEST

### Overview

Valid: 20987

Type: Discrete    Width: 10    Range: -    Format: character

## Description

### DEFINITION

First interview date when reported had DPT3

## Imputation and derivation

### DERIVATION

variable: dpt2intdate (table[s]: all\_vaccination\_records [derived table])

variable: dpt2yn (table[s]: all\_vaccination\_records [derived table])

\*calculate first interview date where card seen and vaccine recorded as yes

bys ident: egen tempC=min(`vacc'intdate) if card==1 & `vacc'yn==1

bys ident: egen tempNC=min(`vacc'intdate) if card==2 & `vacc'yn==1

bys ident: egen `vacc'fyintdate=min(tempC)

bys ident: egen tempNCd=min(tempNC)

replace `vacc'fyintdate=tempNCd if `vacc'fyintdate==. & tempNCd~=.

## DPT2KEEP: Completeness of kept DPT2 report (D)

Data file: vacc\_data\_selected\_BEST

### Overview

Valid: 21708    Invalid: 4331

Type: Discrete    Decimal: 0    Width: 1    Range: 1 - 9    Format: Numeric

## Questions and instructions

### CATEGORIES

| Value   | Category                                 | Cases |       |
|---------|------------------------------------------|-------|-------|
| 1       | vacc=y, date ok, card seen               | 12239 | 56.4% |
| 2       | vacc=y, date NOT ok (S), card seen       | 5807  | 26.8% |
| 3       | vacc=y, date NOT ok (B), card seen       | 1098  | 5.1%  |
| 4       | vacc=y, date NOT ok (S&B), card seen     | 37    | 0.2%  |
| 5       | vacc=y, date ok, card NOT seen           | 89    | 0.4%  |
| 6       | vacc=y, date NOT ok (S), card NOT seen   | 54    | 0.2%  |
| 7       | vacc=y, date NOT ok (B), card NOT seen   | 1663  | 7.7%  |
| 8       | vacc=y, date NOT ok (S&B), card NOT seen | 0     | 0%    |
| 9       | last report of vacc=n                    | 721   | 3.3%  |
| Sysmiss |                                          | 4331  |       |

### Description

#### DEFINITION

Completeness of kept DPT2 report

### Imputation and derivation

#### DERIVATION

variable: dpt2keep (table[s]: all\_vaccination\_records [derived table])

```

la def vacckep 1 "vacc=y, date ok, card seen" 2 "vacc=y, date NOT ok (S), card seen" 3 "vacc=y, date NOT ok (B), card
seen" 4 "vacc=y, date NOT ok (S&B), card seen" 5 "vacc=y, date ok, card NOT seen" 6 "vacc=y, date NOT ok (S), card NOT
seen" 7 "vacc=y, date NOT ok (B), card NOT seen" 8 "vacc=y, date NOT ok (S&B), card NOT seen" 9 "last report of vacc=n"
*1. keep the first record where the vaccine=yes, birth-date problem=no, schedule problem=no and healthcard=seen
gen `vacc'keep=1 if order==1 & `vacc'yn==1 & `vacc'Bprob==0 & `vacc'Sprob==0 & card==1
bys ident: egen kept=max(`vacc'keep)
*2. if no record identified: keep the first record where the vaccine=yes, birth-date problem=no, schedule problem=yes and
healthcard=seen
replace `vacc'keep=2 if order==1 & `vacc'yn==1 & `vacc'Bprob==0 & `vacc'Sprob==1 & card==1 & kept==.
drop kept
bys ident: egen kept=max(`vacc'keep)
*3. if no record identified: keep the first record where the vaccine=yes, birth-date problem=yes, schedule problem=no and
healthcard=seen
replace `vacc'keep=3 if order==1 & `vacc'yn==1 & `vacc'Bprob==1 & `vacc'Sprob==0 & card==1 & kept==.
drop kept
bys ident: egen kept=max(`vacc'keep)
*4. if no record identified: keep the first record where the vaccine=yes, birth-date problem=yes, schedule problem=yes and
healthcard=seen
replace `vacc'keep=4 if order==1 & `vacc'yn==1 & `vacc'Bprob==1 & `vacc'Sprob==1 & card==1 & kept==.
drop kept
bys ident: egen kept=max(`vacc'keep)
*5. if no record identified: keep the first record where the vaccine=yes, birth-date problem=no, schedule problem=no and
healthcard=not seen
replace `vacc'keep=5 if order==1 & `vacc'yn==1 & `vacc'Bprob==0 & `vacc'Sprob==0 & card==2 & kept==.
drop kept

```

```

bys ident: egen kept=max(`vacc'keep)
*6. if no record identified: keep the first record where the vaccine=yes, birth-date problem=no, schedule problem=yes and
healthcard=not seen
replace `vacc'keep=6 if order==1 & `vacc'yn==1 & `vacc'Bprob==0 & `vacc'Sprob==1 & card==2 & kept==.
drop kept
bys ident: egen kept=max(`vacc'keep)
*7. if no record identified: keep the first record where the vaccine=yes, birth-date problem=yes, schedule problem=no and
healthcard=not seen
replace `vacc'keep=7 if order==1 & `vacc'yn==1 & `vacc'Bprob==1 & `vacc'Sprob==0 & card==2 & kept==.
drop kept
bys ident: egen kept=max(`vacc'keep)
*8. if no record identified: keep the first record where the vaccine=yes, birth-date problem=yes, schedule problem=yes and
healthcard=not seen
replace `vacc'keep=8 if order==1 & `vacc'yn==1 & `vacc'Bprob==1 & `vacc'Sprob==1 & card==2 & kept==.
drop kept
bys ident: egen kept=max(`vacc'keep)
*9. if no record identified: keep the LAST record where the vaccine is recorded as no (regardless whether healthcard seen or
not)
replace `vacc'keep=9 if Norder==Ntotal & `vacc'yn==0 & kept==.
la val `vacc'keep vacckep
drop kept

```

---

## DPT3INTDATE: Interview date for DPT3 report (D)

**Data file:** vacc\_data\_selected\_BEST

### Overview

Valid: 21146

Type: Discrete    Width: 10    Range: -    Format: character

### Description

#### DEFINITION

Interview date for DPT3 report

### Imputation and derivation

#### DERIVATION

variable: intdate (table[s]: all\_vaccination\_records [derived table])

---

## DPT3CARDSEEN: Whether health record seen for DPT3 report (D)

**Data file:** vacc\_data\_selected\_BEST

### Overview

Valid: 20962    Invalid: 5077

Type: Discrete    Decimal: 0    Width: 1    Range: 0 - 9    Format: Numeric

### Questions and instructions

#### CATEGORIES

| Value   | Category       | Cases |       |
|---------|----------------|-------|-------|
| 0       | No             | 1873  | 8.9%  |
| 1       | Yes            | 19089 | 91.1% |
| 7       | Not applicable | 0     | 0%    |
| 8       | Unknown        | 0     | 0%    |
| 9       | Missing        | 0     |       |
| Sysmiss |                | 5077  |       |

## Description

### DEFINITION

Whether health record seen for DPT3 report

## Imputation and derivation

### DERIVATION

variable: cardseen (table[s]: all\_vaccination\_records [derived table])

## DPT3SOURCE: Source for DPT3 report (D)

Data file: vacc\_data\_selected\_BEST

### Overview

Valid: 21146 Invalid: 4893

Type: Discrete Decimal: 0 Width: 1 Range: 1 - 8 Format: Numeric

## Questions and instructions

### CATEGORIES

| Value   | Category    | Cases |       |
|---------|-------------|-------|-------|
| 1       | crs_birth   | 657   | 3.1%  |
| 2       | cen_individ | 3121  | 14.8% |
| 3       | crs_cenm    | 657   | 3.1%  |
| 4       | crs_bfup    | 1250  | 5.9%  |
| 5       | css_sei     | 13551 | 64.1% |
| 6       | ves_vese    | 1433  | 6.8%  |
| 7       | tmt_tmtv    | 172   | 0.8%  |
| 8       | gp_va       | 305   | 1.4%  |
| Sysmiss |             | 4893  |       |

## Description

## DEFINITION

Source for DPT3 report

**Imputation and derivation**

## DERIVATION

variable: source (table[s]: all\_vaccination\_records [derived table])

**DPT3YN: Had DPT3 vaccination (D)****Data file:** vacc\_data\_selected\_BEST**Overview**

Valid: 21146 Invalid: 4893

Type: Discrete Decimal: 0 Width: 1 Range: 0 - 9 Format: Numeric

**Questions and instructions**

## CATEGORIES

| Value   | Category       | Cases |       |
|---------|----------------|-------|-------|
| 0       | No             | 1000  | 4.7%  |
| 1       | Yes            | 20146 | 95.3% |
| 7       | Not applicable | 0     | 0%    |
| 8       | Unknown        | 0     | 0%    |
| 9       | Missing        | 0     |       |
| Sysmiss |                | 4893  |       |

**Description**

## DEFINITION

Had DPT3 vaccination

**Imputation and derivation**

## DERIVATION

variable: dpt3yn (table[s]: all\_vaccination\_records [derived table])

**DPT3YR: Year of DPT3 vaccination (D)****Data file:** vacc\_data\_selected\_BEST**Overview**

Valid: 17298 Invalid: 8741

Type: Continuous Decimal: 0 Width: 4 Range: 1997 - 2020 Format: Numeric

## Description

---

### DEFINITION

Year of DPT3 vaccination

## Imputation and derivation

---

### DERIVATION

variable: dpt3yr (table[s]: all\_vaccination\_records [derived table])

---

## DPT3DATE: Date of DPT3 vaccination (D)

**Data file:** vacc\_data\_selected\_BEST

### Overview

Valid: 17294

Type: Discrete    Width: 10    Range: -    Format: character

## Description

---

### DEFINITION

Date of DPT3 vaccination

## Imputation and derivation

---

### DERIVATION

variable: dpt3date (table[s]: all\_vaccination\_records [derived table])

---

## DPT3DAYEST: Date of DPT3 vaccination is estimated (D)

**Data file:** vacc\_data\_selected\_BEST

### Overview

Valid: 7    Invalid: 26032

Type: Discrete    Decimal: 0    Width: 1    Range: 1 - 1    Format: Numeric

## Description

---

### DEFINITION

Date of DPT3 vaccination is estimated

## Imputation and derivation

---

### DERIVATION

variable: dpt3dayest (table[s]: all\_vaccination\_records [derived table])

**DPT3VC: Health centre of DPT3 vaccination (D)****Data file:** vacc\_data\_selected\_BEST**Overview**

Valid: 19601    Invalid: 6438

Type: Continuous    Decimal: 0    Width: 6    Range: 10000 - 999999    Format: Numeric

**Description**

## DEFINITION

Health centre of DPT3 vaccination

**Imputation and derivation**

## DERIVATION

variable: dpt3vc (table[s]: all\_vaccination\_records [derived table])

**DPT3BPROB: Problem with DPT3 date (missing or before DOB) (D)****Data file:** vacc\_data\_selected\_BEST**Overview**

Valid: 21146    Invalid: 4893

Type: Discrete    Decimal: 0    Width: 1    Range: 0 - 1    Format: Numeric

**Description**

## DEFINITION

Problem with DPT3 date (missing or before DOB)

**Imputation and derivation**

## DERIVATION

variable: dpt3date (table[s]: all\_vaccination\_records [derived table])

variable: birth\_date (table[s]: all\_vaccination\_records [derived table])

gen `vacc'Bprob=0

replace `vacc'Bprob=1 if (`vacc'date&lt;birth\_date &amp; `vacc'date~= . &amp; birth\_date~= .) | (`vacc'date==. &amp; `vacc'yn==1)

**DPT3SPROB: Problem with DPT3 date (schedule issue) (D)****Data file:** vacc\_data\_selected\_BEST**Overview**

Valid: 21146    Invalid: 4893

Type: Discrete    Decimal: 0    Width: 1    Range: 0 - 1    Format: Numeric

## Description

### DEFINITION

Problem with DPT3 date (schedule issue)

## Imputation and derivation

### DERIVATION

variable: dpt3date (table[s]: all\_vaccination\_records [derived table])

variable: birth\_date (table[s]: all\_vaccination\_records [derived table])

\*for DPT3, DPTH3, PCV3 and P3: problem if vacc date is less than 3 weeks, or more than 6 weeks after second dose (supposed to be 1 month after second dose)

if "`vacc'"="dpt3" replace `vacc'Sprob=1 if (dpt3date<birth\_date | dpt3date-dpt2date<21 | dpt3date-dpt2date>42 | dpt2date==.) & dpt3date~=. & birth\_date~=.

## DPT3FYINTDATE: First interview date when reported had DPT4 (D)

Data file: vacc\_data\_selected\_BEST

### Overview

Valid: 20146

Type: Discrete    Width: 10    Range: -    Format: character

## Description

### DEFINITION

First interview date when reported had DPT4

## Imputation and derivation

### DERIVATION

variable: dpt3intdate (table[s]: all\_vaccination\_records [derived table])

variable: dpt3yn (table[s]: all\_vaccination\_records [derived table])

\*calculate first interview date where card seen and vaccine recorded as yes

bys ident: egen tempC=min(`vacc'intdate) if card==1 & `vacc'yn==1

bys ident: egen tempNC=min(`vacc'intdate) if card==2 & `vacc'yn==1

bys ident: egen `vacc'fyintdate=min(tempC)

bys ident: egen tempNCd=min(tempNC)

replace `vacc'fyintdate=tempNCd if `vacc'fyintdate==. & tempNCd~=.

## DPT3KEEP: Completeness of kept DPT3 report (D)

Data file: vacc\_data\_selected\_BEST

### Overview

Valid: 21146    Invalid: 4893

Type: Discrete    Decimal: 0    Width: 1    Range: 1 - 9    Format: Numeric

## Questions and instructions

### CATEGORIES

| Value   | Category                                 | Cases |       |
|---------|------------------------------------------|-------|-------|
| 1       | vacc=y, date ok, card seen               | 11126 | 52.6% |
| 2       | vacc=y, date NOT ok (S), card seen       | 5939  | 28.1% |
| 3       | vacc=y, date NOT ok (B), card seen       | 1106  | 5.2%  |
| 4       | vacc=y, date NOT ok (S&B), card seen     | 94    | 0.4%  |
| 5       | vacc=y, date ok, card NOT seen           | 78    | 0.4%  |
| 6       | vacc=y, date NOT ok (S), card NOT seen   | 57    | 0.3%  |
| 7       | vacc=y, date NOT ok (B), card NOT seen   | 1746  | 8.3%  |
| 8       | vacc=y, date NOT ok (S&B), card NOT seen | 0     | 0%    |
| 9       | last report of vacc=n                    | 1000  | 4.7%  |
| Sysmiss |                                          | 4893  |       |

### Description

#### DEFINITION

Completeness of kept DPT3 report

### Imputation and derivation

#### DERIVATION

variable: dpt3keep (table[s]: all\_vaccination\_records [derived table])

```

la def vacckep 1 "vacc=y, date ok, card seen" 2 "vacc=y, date NOT ok (S), card seen" 3 "vacc=y, date NOT ok (B), card
seen" 4 "vacc=y, date NOT ok (S&B), card seen" 5 "vacc=y, date ok, card NOT seen" 6 "vacc=y, date NOT ok (S), card NOT
seen" 7 "vacc=y, date NOT ok (B), card NOT seen" 8 "vacc=y, date NOT ok (S&B), card NOT seen" 9 "last report of vacc=n"
*1. keep the first record where the vaccine=yes, birth-date problem=no, schedule problem=no and healthcard=seen
gen `vacc'keep=1 if order==1 & `vacc'yn==1 & `vacc'Bprob==0 & `vacc'Sprob==0 & card==1
bys ident: egen kept=max(`vacc'keep)
*2. if no record identified: keep the first record where the vaccine=yes, birth-date problem=no, schedule problem=yes and
healthcard=seen
replace `vacc'keep=2 if order==1 & `vacc'yn==1 & `vacc'Bprob==0 & `vacc'Sprob==1 & card==1 & kept==.
drop kept
bys ident: egen kept=max(`vacc'keep)
*3. if no record identified: keep the first record where the vaccine=yes, birth-date problem=yes, schedule problem=no and
healthcard=seen
replace `vacc'keep=3 if order==1 & `vacc'yn==1 & `vacc'Bprob==1 & `vacc'Sprob==0 & card==1 & kept==.
drop kept
bys ident: egen kept=max(`vacc'keep)
*4. if no record identified: keep the first record where the vaccine=yes, birth-date problem=yes, schedule problem=yes and
healthcard=seen
replace `vacc'keep=4 if order==1 & `vacc'yn==1 & `vacc'Bprob==1 & `vacc'Sprob==1 & card==1 & kept==.
drop kept
bys ident: egen kept=max(`vacc'keep)
*5. if no record identified: keep the first record where the vaccine=yes, birth-date problem=no, schedule problem=no and
healthcard=not seen
replace `vacc'keep=5 if order==1 & `vacc'yn==1 & `vacc'Bprob==0 & `vacc'Sprob==0 & card==2 & kept==.
drop kept

```

```

bys ident: egen kept=max(`vacc'keep)
*6. if no record identified: keep the first record where the vaccine=yes, birth-date problem=no, schedule problem=yes and
healthcard=not seen
replace `vacc'keep=6 if order==1 & `vacc'yn==1 & `vacc'Bprob==0 & `vacc'Sprob==1 & card==2 & kept==.
drop kept
bys ident: egen kept=max(`vacc'keep)
*7. if no record identified: keep the first record where the vaccine=yes, birth-date problem=yes, schedule problem=no and
healthcard=not seen
replace `vacc'keep=7 if order==1 & `vacc'yn==1 & `vacc'Bprob==1 & `vacc'Sprob==0 & card==2 & kept==.
drop kept
bys ident: egen kept=max(`vacc'keep)
*8. if no record identified: keep the first record where the vaccine=yes, birth-date problem=yes, schedule problem=yes and
healthcard=not seen
replace `vacc'keep=8 if order==1 & `vacc'yn==1 & `vacc'Bprob==1 & `vacc'Sprob==1 & card==2 & kept==.
drop kept
bys ident: egen kept=max(`vacc'keep)
*9. if no record identified: keep the LAST record where the vaccine is recorded as no (regardless whether healthcard seen or
not)
replace `vacc'keep=9 if Norder==Ntotal & `vacc'yn==0 & kept==.
la val `vacc'keep vacckep
drop kept

```

---

## HH1INTDATE: Interview date for HH1 report (D)

**Data file:** vacc\_data\_selected\_BEST

### Overview

Valid: 15929

Type: Discrete    Width: 10    Range: -    Format: character

### Description

#### DEFINITION

Interview date for HH1 report

### Imputation and derivation

#### DERIVATION

variable: intdate (table[s]: all\_vaccination\_records [derived table])

---

## HH1CARDSEEN: Whether health record seen for HH1 report (D)

**Data file:** vacc\_data\_selected\_BEST

### Overview

Valid: 15786    Invalid: 10253

Type: Discrete    Decimal: 0    Width: 1    Range: 0 - 9    Format: Numeric

### Questions and instructions

#### CATEGORIES

| Value   | Category       | Cases |       |
|---------|----------------|-------|-------|
| 0       | No             | 1746  | 11.1% |
| 1       | Yes            | 14040 | 88.9% |
| 7       | Not applicable | 0     | 0%    |
| 8       | Unknown        | 0     | 0%    |
| 9       | Missing        | 0     |       |
| Sysmiss |                | 10253 |       |

## Description

### DEFINITION

Whether health record seen for HH1 report

## Imputation and derivation

### DERIVATION

variable: cardseen (table[s]: all\_vaccination\_records [derived table])

## HH1SOURCE: Source for HH1 report (D)

Data file: vacc\_data\_selected\_BEST

### Overview

Valid: 15929 Invalid: 10110

Type: Discrete Decimal: 0 Width: 1 Range: 1 - 8 Format: Numeric

## Questions and instructions

### CATEGORIES

| Value   | Category    | Cases |       |
|---------|-------------|-------|-------|
| 1       | crs_birth   | 0     | 0%    |
| 2       | cen_individ | 105   | 0.7%  |
| 3       | crs_cenm    | 0     | 0%    |
| 4       | crs_bfup    | 0     | 0%    |
| 5       | css_sei     | 13916 | 87.4% |
| 6       | ves_vese    | 1406  | 8.8%  |
| 7       | tmt_tmtv    | 128   | 0.8%  |
| 8       | gp_va       | 374   | 2.3%  |
| Sysmiss |             | 10110 |       |

## Description

## DEFINITION

Source for HH1 report

**Imputation and derivation**

## DERIVATION

variable: source (table[s]: all\_vaccination\_records [derived table])

**HH1YN: Had HH1 vaccination (D)****Data file:** vacc\_data\_selected\_BEST**Overview**

Valid: 15929 Invalid: 10110

Type: Discrete Decimal: 0 Width: 1 Range: 0 - 9 Format: Numeric

**Questions and instructions**

## CATEGORIES

| Value   | Category       | Cases |       |
|---------|----------------|-------|-------|
| 0       | No             | 539   | 3.4%  |
| 1       | Yes            | 15390 | 96.6% |
| 7       | Not applicable | 0     | 0%    |
| 8       | Unknown        | 0     | 0%    |
| 9       | Missing        | 0     |       |
| Sysmiss |                | 10110 |       |

**Description**

## DEFINITION

Had HH1 vaccination

**Imputation and derivation**

## DERIVATION

variable: hh1yn (table[s]: all\_vaccination\_records [derived table])

**HH1YR: Year of HH1 vaccination (D)****Data file:** vacc\_data\_selected\_BEST**Overview**

Valid: 12664 Invalid: 13375

Type: Continuous Decimal: 0 Width: 4 Range: 1997 - 2019 Format: Numeric

## Description

---

### DEFINITION

Year of HH1 vaccination

## Imputation and derivation

---

### DERIVATION

variable: hh1yr (table[s]: all\_vaccination\_records [derived table])

---

## ■ HH1DATE: Date of HH1 vaccination (D)

**Data file:** vacc\_data\_selected\_BEST

### Overview

Valid: 12662    Invalid: 13377

Type: Continuous    Decimal: 0    Width: 5    Range: 13689 - 21788    Format: Numeric

## Description

---

### DEFINITION

Date of HH1 vaccination

## Imputation and derivation

---

### DERIVATION

variable: hh1date (table[s]: all\_vaccination\_records [derived table])

---

## ■ HH1DAYEST: Date of HH1 vaccination is estimated (D)

**Data file:** vacc\_data\_selected\_BEST

### Overview

Valid: 9    Invalid: 26030

Type: Discrete    Decimal: 0    Width: 1    Range: 1 - 1    Format: Numeric

## Description

---

### DEFINITION

Date of HH1 vaccination is estimated

## Imputation and derivation

---

### DERIVATION

variable: hh1dayest (table[s]: all\_vaccination\_records [derived table])

**HH1VC: Health centre of HH1 vaccination (D)****Data file:** vacc\_data\_selected\_BEST**Overview**

Valid: 14784    Invalid: 11255  
 Type: Continuous    Decimal: 0    Width: 6    Range: 10000 - 999999    Format: Numeric

**Description**

## DEFINITION

Health centre of HH1 vaccination

**Imputation and derivation**

## DERIVATION

variable: hh1vc (table[s]: all\_vaccination\_records [derived table])

**HH1BPROB: Problem with HH1 date (missing or before DOB) (D)****Data file:** vacc\_data\_selected\_BEST**Overview**

Valid: 15929    Invalid: 10110  
 Type: Discrete    Decimal: 0    Width: 1    Range: 0 - 1    Format: Numeric

**Description**

## DEFINITION

Problem with HH1 date (missing or before DOB)

**Imputation and derivation**

## DERIVATION

variable: hh1date (table[s]: all\_vaccination\_records [derived table])

variable: birth\_date (table[s]: all\_vaccination\_records [derived table])

gen `vacc'Bprob=0

replace `vacc'Bprob=1 if (`vacc'date&lt;birth\_date &amp; `vacc'date~=. &amp; birth\_date~=. ) | (`vacc'date==. &amp; `vacc'yn==1)

**HH1SPROB: Problem with HH1 date (schedule issue) (D)****Data file:** vacc\_data\_selected\_BEST**Overview**

Valid: 15929    Invalid: 10110  
 Type: Discrete    Decimal: 0    Width: 1    Range: 0 - 1    Format: Numeric

## Description

### DEFINITION

Problem with HH1 date (schedule issue)

## Imputation and derivation

### DERIVATION

variable: hh1date (table[s]: all\_vaccination\_records [derived table])

variable: birth\_date (table[s]: all\_vaccination\_records [derived table])

\*for DPT1, HH1, PCV1, RV1 and P1: problem if vacc date is less than 5 weeks, or more than 10 weeks after birthdate (supposed to be at 6 weeks or later)

if "`vacc'"=="hh1" replace `vacc'Sprob=1 if (hh1date-birth\_date<35 | hh1date-birth\_date>70) & hh1date~=. & birth\_date~=.

## HH1FYINTDATE: First interview date when reported had HH2 (D)

Data file: vacc\_data\_selected\_BEST

### Overview

Valid: 15390

Type: Discrete    Width: 10    Range: -    Format: character

## Description

### DEFINITION

First interview date when reported had HH2

## Imputation and derivation

### DERIVATION

variable: hh1intdate (table[s]: all\_vaccination\_records [derived table])

variable: hh1yn (table[s]: all\_vaccination\_records [derived table])

\*calculate first interview date where card seen and vaccine recorded as yes

bys ident: egen tempC=min(`vacc'intdate) if card==1 & `vacc'yn==1

bys ident: egen tempNC=min(`vacc'intdate) if card==2 & `vacc'yn==1

bys ident: egen `vacc'fyintdate=min(tempC)

bys ident: egen tempNCd=min(tempNC)

replace `vacc'fyintdate=tempNCd if `vacc'fyintdate==. & tempNCd~=.

## HH1KEEP: Completeness of kept HH1 report (D)

Data file: vacc\_data\_selected\_BEST

### Overview

Valid: 15929    Invalid: 10110

Type: Discrete    Decimal: 0    Width: 1    Range: 1 - 9    Format: Numeric

## Questions and instructions

### CATEGORIES

| Value   | Category                                 | Cases |       |
|---------|------------------------------------------|-------|-------|
| 1       | vacc=y, date ok, card seen               | 9031  | 56.7% |
| 2       | vacc=y, date NOT ok (S), card seen       | 3465  | 21.8% |
| 3       | vacc=y, date NOT ok (B), card seen       | 1086  | 6.8%  |
| 4       | vacc=y, date NOT ok (S&B), card seen     | 62    | 0.4%  |
| 5       | vacc=y, date ok, card NOT seen           | 62    | 0.4%  |
| 6       | vacc=y, date NOT ok (S), card NOT seen   | 42    | 0.3%  |
| 7       | vacc=y, date NOT ok (B), card NOT seen   | 1642  | 10.3% |
| 8       | vacc=y, date NOT ok (S&B), card NOT seen | 0     | 0%    |
| 9       | last report of vacc=n                    | 539   | 3.4%  |
| Sysmiss |                                          | 10110 |       |

### Description

#### DEFINITION

Completeness of kept HH1 report

### Imputation and derivation

#### DERIVATION

variable: hh1keep (table[s]: all\_vaccination\_records [derived table])

```

la def vacckep 1 "vacc=y, date ok, card seen" 2 "vacc=y, date NOT ok (S), card seen" 3 "vacc=y, date NOT ok (B), card
seen" 4 "vacc=y, date NOT ok (S&B), card seen" 5 "vacc=y, date ok, card NOT seen" 6 "vacc=y, date NOT ok (S), card NOT
seen" 7 "vacc=y, date NOT ok (B), card NOT seen" 8 "vacc=y, date NOT ok (S&B), card NOT seen" 9 "last report of vacc=n"
*1. keep the first record where the vaccine=yes, birth-date problem=no, schedule problem=no and healthcard=seen
gen `vacc'keep=1 if order==1 & `vacc'yn==1 & `vacc'Bprob==0 & `vacc'Sprob==0 & card==1
bys ident: egen kept=max(`vacc'keep)
*2. if no record identified: keep the first record where the vaccine=yes, birth-date problem=no, schedule problem=yes and
healthcard=seen
replace `vacc'keep=2 if order==1 & `vacc'yn==1 & `vacc'Bprob==0 & `vacc'Sprob==1 & card==1 & kept==.
drop kept
bys ident: egen kept=max(`vacc'keep)
*3. if no record identified: keep the first record where the vaccine=yes, birth-date problem=yes, schedule problem=no and
healthcard=seen
replace `vacc'keep=3 if order==1 & `vacc'yn==1 & `vacc'Bprob==1 & `vacc'Sprob==0 & card==1 & kept==.
drop kept
bys ident: egen kept=max(`vacc'keep)
*4. if no record identified: keep the first record where the vaccine=yes, birth-date problem=yes, schedule problem=yes and
healthcard=seen
replace `vacc'keep=4 if order==1 & `vacc'yn==1 & `vacc'Bprob==1 & `vacc'Sprob==1 & card==1 & kept==.
drop kept
bys ident: egen kept=max(`vacc'keep)
*5. if no record identified: keep the first record where the vaccine=yes, birth-date problem=no, schedule problem=no and
healthcard=not seen
replace `vacc'keep=5 if order==1 & `vacc'yn==1 & `vacc'Bprob==0 & `vacc'Sprob==0 & card==2 & kept==.

```

```

drop kept
bys ident: egen kept=max(`vacc'keep)
*6. if no record identified: keep the first record where the vaccine=yes, birth-date problem=no, schedule problem=yes and
healthcard=not seen
replace `vacc'keep=6 if order==1 & `vacc'yn==1 & `vacc'Bprob==0 & `vacc'Sprob==1 & card==2 & kept==.
drop kept
bys ident: egen kept=max(`vacc'keep)
*7. if no record identified: keep the first record where the vaccine=yes, birth-date problem=yes, schedule problem=no and
healthcard=not seen
replace `vacc'keep=7 if order==1 & `vacc'yn==1 & `vacc'Bprob==1 & `vacc'Sprob==0 & card==2 & kept==.
drop kept
bys ident: egen kept=max(`vacc'keep)
*8. if no record identified: keep the first record where the vaccine=yes, birth-date problem=yes, schedule problem=yes and
healthcard=not seen
replace `vacc'keep=8 if order==1 & `vacc'yn==1 & `vacc'Bprob==1 & `vacc'Sprob==1 & card==2 & kept==.
drop kept
bys ident: egen kept=max(`vacc'keep)
*9. if no record identified: keep the LAST record where the vaccine is recorded as no (regardless whether healthcard seen or
not)
replace `vacc'keep=9 if Norder==Ntotal & `vacc'yn==0 & kept==.
la val `vacc'keep vacckkeep
drop kept

```

---

## HH2INTDATE: Interview date for HH2 report (D)

**Data file:** vacc\_data\_selected\_BEST

### Overview

Valid: 15865

Type: Discrete    Width: 10    Range: -    Format: character

### Description

#### DEFINITION

Interview date for HH2 report

### Imputation and derivation

#### DERIVATION

variable: intdate (table[s]: all\_vaccination\_records [derived table])

---

## HH2CARDSEEN: Whether health record seen for HH2 report (D)

**Data file:** vacc\_data\_selected\_BEST

### Overview

Valid: 15720    Invalid: 10319

Type: Discrete    Decimal: 0    Width: 1    Range: 0 - 9    Format: Numeric

### Questions and instructions

#### CATEGORIES

| Value   | Category       | Cases |       |
|---------|----------------|-------|-------|
| 0       | No             | 1803  | 11.5% |
| 1       | Yes            | 13917 | 88.5% |
| 7       | Not applicable | 0     | 0%    |
| 8       | Unknown        | 0     | 0%    |
| 9       | Missing        | 0     |       |
| Sysmiss |                | 10319 |       |

## Description

### DEFINITION

Whether health record seen for HH2 report

## Imputation and derivation

### DERIVATION

variable: cardseen (table[s]: all\_vaccination\_records [derived table])

## HH2SOURCE: Source for HH2 report (D)

Data file: vacc\_data\_selected\_BEST

### Overview

Valid: 15865 Invalid: 10174

Type: Discrete Decimal: 0 Width: 1 Range: 1 - 8 Format: Numeric

## Questions and instructions

### CATEGORIES

| Value   | Category    | Cases |       |
|---------|-------------|-------|-------|
| 1       | crs_birth   | 0     | 0%    |
| 2       | cen_individ | 75    | 0.5%  |
| 3       | crs_cenm    | 0     | 0%    |
| 4       | crs_bfup    | 0     | 0%    |
| 5       | css_sei     | 13830 | 87.2% |
| 6       | ves_vese    | 1435  | 9%    |
| 7       | tmt_tmtv    | 170   | 1.1%  |
| 8       | gp_va       | 355   | 2.2%  |
| Sysmiss |             | 10174 |       |

## Description

## DEFINITION

Source for HH2 report

**Imputation and derivation**

## DERIVATION

variable: source (table[s]: all\_vaccination\_records [derived table])

**HH2YN: Had HH2 vaccination (D)****Data file:** vacc\_data\_selected\_BEST**Overview**

Valid: 15865 Invalid: 10174

Type: Discrete Decimal: 0 Width: 1 Range: 0 - 9 Format: Numeric

**Questions and instructions**

## CATEGORIES

| Value   | Category       | Cases |       |
|---------|----------------|-------|-------|
| 0       | No             | 725   | 4.6%  |
| 1       | Yes            | 15140 | 95.4% |
| 7       | Not applicable | 0     | 0%    |
| 8       | Unknown        | 0     | 0%    |
| 9       | Missing        | 0     |       |
| Sysmiss |                | 10174 |       |

**Description**

## DEFINITION

Had HH2 vaccination

**Imputation and derivation**

## DERIVATION

variable: hh2yn (table[s]: all\_vaccination\_records [derived table])

**HH2YR: Year of HH2 vaccination (D)****Data file:** vacc\_data\_selected\_BEST**Overview**

Valid: 12347 Invalid: 13692

Type: Continuous Decimal: 0 Width: 4 Range: 1997 - 2019 Format: Numeric

## Description

---

### DEFINITION

Year of HH2 vaccination

## Imputation and derivation

---

### DERIVATION

variable: hh2yr (table[s]: all\_vaccination\_records [derived table])

---

## ■ HH2DATE: Date of HH2 vaccination (D)

**Data file:** vacc\_data\_selected\_BEST

### Overview

Valid: 12344    Invalid: 13695

Type: Continuous    Decimal: 0    Width: 5    Range: 13787 - 21816    Format: Numeric

## Description

---

### DEFINITION

Date of HH2 vaccination

## Imputation and derivation

---

### DERIVATION

variable: hh2date (table[s]: all\_vaccination\_records [derived table])

---

## ■ HH2DAYEST: Date of HH2 vaccination is estimated (D)

**Data file:** vacc\_data\_selected\_BEST

### Overview

Valid: 5    Invalid: 26034

Type: Discrete    Decimal: 0    Width: 1    Range: 1 - 1    Format: Numeric

## Description

---

### DEFINITION

Date of HH2 vaccination is estimated

## Imputation and derivation

---

### DERIVATION

variable: hh2dayest (table[s]: all\_vaccination\_records [derived table])

**HH2VC: Health centre of HH2 vaccination (D)****Data file:** vacc\_data\_selected\_BEST**Overview**

Valid: 14553    Invalid: 11486  
 Type: Continuous    Decimal: 0    Width: 6    Range: 10000 - 999999    Format: Numeric

**Description**

## DEFINITION

Health centre of HH2 vaccination

**Imputation and derivation**

## DERIVATION

variable: hh2vc (table[s]: all\_vaccination\_records [derived table])

**HH2BPROB: Problem with HH2 date (missing or before DOB) (D)****Data file:** vacc\_data\_selected\_BEST**Overview**

Valid: 15865    Invalid: 10174  
 Type: Discrete    Decimal: 0    Width: 1    Range: 0 - 1    Format: Numeric

**Description**

## DEFINITION

Problem with HH2 date (missing or before DOB)

**Imputation and derivation**

## DERIVATION

variable: hh2date (table[s]: all\_vaccination\_records [derived table])

variable: birth\_date (table[s]: all\_vaccination\_records [derived table])

gen `vacc'Bprob=0

replace `vacc'Bprob=1 if (`vacc'date&lt;birth\_date &amp; `vacc'date~=. &amp; birth\_date~=. ) | (`vacc'date==. &amp; `vacc'yn==1)

**HH2SPROB: Problem with HH2 date (schedule issue) (D)****Data file:** vacc\_data\_selected\_BEST**Overview**

Valid: 15865    Invalid: 10174  
 Type: Discrete    Decimal: 0    Width: 1    Range: 0 - 1    Format: Numeric

## Description

### DEFINITION

Problem with HH2 date (schedule issue)

## Imputation and derivation

### DERIVATION

variable: hh2date (table[s]: all\_vaccination\_records [derived table])

variable: birth\_date (table[s]: all\_vaccination\_records [derived table])

\*for DPT2, HH2, PCV2, RV2 and P2: problem if vacc date is less than 3 weeks, or more than 6 weeks after first dose (supposed to be 1 month after first dose)

if "`vacc'"=="hh2" replace `vacc'Sprob=1 if (hh2date-hh1date<21 | hh2date-hh1date>42 | hh1date==.) & hh2date~=. & birth\_date~=.

## HH2FYINTDATE: First interview date when reported had HH3 (D)

Data file: vacc\_data\_selected\_BEST

### Overview

Valid: 15140

Type: Discrete    Width: 10    Range: -    Format: character

## Description

### DEFINITION

First interview date when reported had HH3

## Imputation and derivation

### DERIVATION

variable: hh2intdate (table[s]: all\_vaccination\_records [derived table])

variable: hh2yn (table[s]: all\_vaccination\_records [derived table])

\*calculate first interview date where card seen and vaccine recorded as yes

bys ident: egen tempC=min(`vacc'intdate) if card==1 & `vacc'yn==1

bys ident: egen tempNC=min(`vacc'intdate) if card==2 & `vacc'yn==1

bys ident: egen `vacc'fyintdate=min(tempC)

bys ident: egen tempNCd=min(tempNC)

replace `vacc'fyintdate=tempNCd if `vacc'fyintdate==. & tempNCd~=.

## HH2KEEP: Completeness of kept HH2 report (D)

Data file: vacc\_data\_selected\_BEST

### Overview

Valid: 15865    Invalid: 10174

Type: Discrete    Decimal: 0    Width: 1    Range: 1 - 9    Format: Numeric

## Questions and instructions

### CATEGORIES

| Value   | Category                                 | Cases |       |
|---------|------------------------------------------|-------|-------|
| 1       | vacc=y, date ok, card seen               | 8611  | 54.3% |
| 2       | vacc=y, date NOT ok (S), card seen       | 3584  | 22.6% |
| 3       | vacc=y, date NOT ok (B), card seen       | 1140  | 7.2%  |
| 4       | vacc=y, date NOT ok (S&B), card seen     | 18    | 0.1%  |
| 5       | vacc=y, date ok, card NOT seen           | 66    | 0.4%  |
| 6       | vacc=y, date NOT ok (S), card NOT seen   | 33    | 0.2%  |
| 7       | vacc=y, date NOT ok (B), card NOT seen   | 1688  | 10.6% |
| 8       | vacc=y, date NOT ok (S&B), card NOT seen | 0     | 0%    |
| 9       | last report of vacc=n                    | 725   | 4.6%  |
| Sysmiss |                                          | 10174 |       |

### Description

#### DEFINITION

Completeness of kept HH2 report

### Imputation and derivation

#### DERIVATION

variable: hh2keep (table[s]: all\_vaccination\_records [derived table])

```

la def vacckep 1 "vacc=y, date ok, card seen" 2 "vacc=y, date NOT ok (S), card seen" 3 "vacc=y, date NOT ok (B), card
seen" 4 "vacc=y, date NOT ok (S&B), card seen" 5 "vacc=y, date ok, card NOT seen" 6 "vacc=y, date NOT ok (S), card NOT
seen" 7 "vacc=y, date NOT ok (B), card NOT seen" 8 "vacc=y, date NOT ok (S&B), card NOT seen" 9 "last report of vacc=n"
*1. keep the first record where the vaccine=yes, birth-date problem=no, schedule problem=no and healthcard=seen
gen `vacc'keep=1 if order==1 & `vacc'yn==1 & `vacc'Bprob==0 & `vacc'Sprob==0 & card==1
bys ident: egen kept=max(`vacc'keep)
*2. if no record identified: keep the first record where the vaccine=yes, birth-date problem=no, schedule problem=yes and
healthcard=seen
replace `vacc'keep=2 if order==1 & `vacc'yn==1 & `vacc'Bprob==0 & `vacc'Sprob==1 & card==1 & kept==.
drop kept
bys ident: egen kept=max(`vacc'keep)
*3. if no record identified: keep the first record where the vaccine=yes, birth-date problem=yes, schedule problem=no and
healthcard=seen
replace `vacc'keep=3 if order==1 & `vacc'yn==1 & `vacc'Bprob==1 & `vacc'Sprob==0 & card==1 & kept==.
drop kept
bys ident: egen kept=max(`vacc'keep)
*4. if no record identified: keep the first record where the vaccine=yes, birth-date problem=yes, schedule problem=yes and
healthcard=seen
replace `vacc'keep=4 if order==1 & `vacc'yn==1 & `vacc'Bprob==1 & `vacc'Sprob==1 & card==1 & kept==.
drop kept
bys ident: egen kept=max(`vacc'keep)
*5. if no record identified: keep the first record where the vaccine=yes, birth-date problem=no, schedule problem=no and
healthcard=not seen
replace `vacc'keep=5 if order==1 & `vacc'yn==1 & `vacc'Bprob==0 & `vacc'Sprob==0 & card==2 & kept==.
drop kept

```

```

bys ident: egen kept=max(`vacc'keep)
*6. if no record identified: keep the first record where the vaccine=yes, birth-date problem=no, schedule problem=yes and
healthcard=not seen
replace `vacc'keep=6 if order==1 & `vacc'yn==1 & `vacc'Bprob==0 & `vacc'Sprob==1 & card==2 & kept==.
drop kept
bys ident: egen kept=max(`vacc'keep)
*7. if no record identified: keep the first record where the vaccine=yes, birth-date problem=yes, schedule problem=no and
healthcard=not seen
replace `vacc'keep=7 if order==1 & `vacc'yn==1 & `vacc'Bprob==1 & `vacc'Sprob==0 & card==2 & kept==.
drop kept
bys ident: egen kept=max(`vacc'keep)
*8. if no record identified: keep the first record where the vaccine=yes, birth-date problem=yes, schedule problem=yes and
healthcard=not seen
replace `vacc'keep=8 if order==1 & `vacc'yn==1 & `vacc'Bprob==1 & `vacc'Sprob==1 & card==2 & kept==.
drop kept
bys ident: egen kept=max(`vacc'keep)
*9. if no record identified: keep the LAST record where the vaccine is recorded as no (regardless whether healthcard seen or
not)
replace `vacc'keep=9 if Norder==Ntotal & `vacc'yn==0 & kept==.
la val `vacc'keep vacckep
drop kept

```

---

## HH3INTDATE: Interview date for HH3 report (D)

**Data file:** vacc\_data\_selected\_BEST

### Overview

Valid: 15827

Type: Discrete    Width: 10    Range: -    Format: character

### Description

#### DEFINITION

Interview date for HH3 report

### Imputation and derivation

#### DERIVATION

variable: intdate (table[s]: all\_vaccination\_records [derived table])

---

## HH3CARDSEEN: Whether health record seen for HH3 report (D)

**Data file:** vacc\_data\_selected\_BEST

### Overview

Valid: 15679    Invalid: 10360

Type: Discrete    Decimal: 0    Width: 1    Range: 0 - 9    Format: Numeric

### Questions and instructions

#### CATEGORIES

| Value   | Category       | Cases |     |
|---------|----------------|-------|-----|
| 0       | No             | 1883  | 12% |
| 1       | Yes            | 13796 | 88% |
| 7       | Not applicable | 0     | 0%  |
| 8       | Unknown        | 0     | 0%  |
| 9       | Missing        | 0     |     |
| Sysmiss |                | 10360 |     |

## Description

### DEFINITION

Whether health record seen for HH3 report

## Imputation and derivation

### DERIVATION

variable: cardseen (table[s]: all\_vaccination\_records [derived table])

## HH3SOURCE: Source for HH3 report (D)

Data file: vacc\_data\_selected\_BEST

### Overview

Valid: 15827 Invalid: 10212

Type: Discrete Decimal: 0 Width: 1 Range: 1 - 8 Format: Numeric

## Questions and instructions

### CATEGORIES

| Value   | Category    | Cases |       |
|---------|-------------|-------|-------|
| 1       | crs_birth   | 0     | 0%    |
| 2       | cen_individ | 74    | 0.5%  |
| 3       | crs_cenm    | 0     | 0%    |
| 4       | crs_bfup    | 0     | 0%    |
| 5       | css_sei     | 13795 | 87.2% |
| 6       | ves_vese    | 1442  | 9.1%  |
| 7       | tmt_tmtv    | 172   | 1.1%  |
| 8       | gp_va       | 344   | 2.2%  |
| Sysmiss |             | 10212 |       |

## Description

## DEFINITION

Source for HH3 report

**Imputation and derivation**

## DERIVATION

variable: source (table[s]: all\_vaccination\_records [derived table])

**HH3YN: Had HH3 vaccination (D)****Data file:** vacc\_data\_selected\_BEST**Overview**

Valid: 15827 Invalid: 10212

Type: Discrete Decimal: 0 Width: 1 Range: 0 - 9 Format: Numeric

**Questions and instructions**

## CATEGORIES

| Value   | Category       | Cases |       |
|---------|----------------|-------|-------|
| 0       | No             | 1003  | 6.3%  |
| 1       | Yes            | 14824 | 93.7% |
| 7       | Not applicable | 0     | 0%    |
| 8       | Unknown        | 0     | 0%    |
| 9       | Missing        | 0     |       |
| Sysmiss |                | 10212 |       |

**Description**

## DEFINITION

Had HH3 vaccination

**Imputation and derivation**

## DERIVATION

variable: hh3yn (table[s]: all\_vaccination\_records [derived table])

**HH3YR: Year of HH3 vaccination (D)****Data file:** vacc\_data\_selected\_BEST**Overview**

Valid: 11891 Invalid: 14148

Type: Continuous Decimal: 0 Width: 4 Range: 1997 - 2018 Format: Numeric

## Description

---

### DEFINITION

Year of HH3 vaccination

## Imputation and derivation

---

### DERIVATION

variable: hh3yr (table[s]: all\_vaccination\_records [derived table])

---

## ■ HH3DATE: Date of HH3 vaccination (D)

**Data file:** vacc\_data\_selected\_BEST

### Overview

Valid: 11887    Invalid: 14152

Type: Continuous    Decimal: 0    Width: 5    Range: 13815 - 21453    Format: Numeric

## Description

---

### DEFINITION

Date of HH3 vaccination

## Imputation and derivation

---

### DERIVATION

variable: hh3date (table[s]: all\_vaccination\_records [derived table])

---

## ■ HH3DAYEST: Date of HH3 vaccination is estimated (D)

**Data file:** vacc\_data\_selected\_BEST

### Overview

Valid: 7    Invalid: 26032

Type: Discrete    Decimal: 0    Width: 1    Range: 1 - 1    Format: Numeric

## Description

---

### DEFINITION

Date of HH3 vaccination is estimated

## Imputation and derivation

---

### DERIVATION

variable: hh3dayest (table[s]: all\_vaccination\_records [derived table])

**HH3VC: Health centre of HH3 vaccination (D)****Data file:** vacc\_data\_selected\_BEST**Overview**

Valid: 14264    Invalid: 11775  
 Type: Continuous    Decimal: 0    Width: 6    Range: 10000 - 999999    Format: Numeric

**Description**

## DEFINITION

Health centre of HH3 vaccination

**Imputation and derivation**

## DERIVATION

variable: hh3vc (table[s]: all\_vaccination\_records [derived table])

**HH3BPROB: Problem with HH3 date (missing or before DOB) (D)****Data file:** vacc\_data\_selected\_BEST**Overview**

Valid: 15827    Invalid: 10212  
 Type: Discrete    Decimal: 0    Width: 1    Range: 0 - 1    Format: Numeric

**Description**

## DEFINITION

Problem with HH3 date (missing or before DOB)

**Imputation and derivation**

## DERIVATION

variable: hh3date (table[s]: all\_vaccination\_records [derived table])

variable: birth\_date (table[s]: all\_vaccination\_records [derived table])

gen `vacc'Bprob=0

replace `vacc'Bprob=1 if (`vacc'date&lt;birth\_date &amp; `vacc'date~=. &amp; birth\_date~=. ) | (`vacc'date==. &amp; `vacc'yn==1)

**HH3SPROB: Problem with HH3 date (schedule issue) (D)****Data file:** vacc\_data\_selected\_BEST**Overview**

Valid: 15827    Invalid: 10212  
 Type: Discrete    Decimal: 0    Width: 1    Range: 0 - 1    Format: Numeric

## Description

### DEFINITION

Problem with HH3 date (schedule issue)

## Imputation and derivation

### DERIVATION

variable: hh3date (table[s]: all\_vaccination\_records [derived table])

variable: birth\_date (table[s]: all\_vaccination\_records [derived table])

\*for DPT3, DPTH3, PCV3 and P3: problem if vacc date is less than 3 weeks, or more than 6 weeks after second dose (supposed to be 1 month after second dose)

if "`vacc'"=="hh3" replace `vacc'Sprob=1 if (hh3date<birth\_date | hh3date-hh2date<21 | hh3date-hh2date>42 | hh2date==.) & hh3date~=. & birth\_date~=.

## HH3FYINTDATE: First interview date when reported had HH4 (D)

Data file: vacc\_data\_selected\_BEST

### Overview

Valid: 14824

Type: Discrete    Width: 10    Range: -    Format: character

## Description

### DEFINITION

First interview date when reported had HH4

## Imputation and derivation

### DERIVATION

variable: hh3intdate (table[s]: all\_vaccination\_records [derived table])

variable: hh3yn (table[s]: all\_vaccination\_records [derived table])

\*calculate first interview date where card seen and vaccine recorded as yes

bys ident: egen tempC=min(`vacc'intdate) if card==1 & `vacc'yn==1

bys ident: egen tempNC=min(`vacc'intdate) if card==2 & `vacc'yn==1

bys ident: egen `vacc'fyintdate=min(tempC)

bys ident: egen tempNCd=min(tempNC)

replace `vacc'fyintdate=tempNCd if `vacc'fyintdate==. & tempNCd~=.

## HH3KEEP: Completeness of kept HH3 report (D)

Data file: vacc\_data\_selected\_BEST

### Overview

Valid: 15827    Invalid: 10212

Type: Discrete    Decimal: 0    Width: 1    Range: 1 - 9    Format: Numeric

## Questions and instructions

### CATEGORIES

| Value   | Category                                 | Cases |       |
|---------|------------------------------------------|-------|-------|
| 1       | vacc=y, date ok, card seen               | 8010  | 50.6% |
| 2       | vacc=y, date NOT ok (S), card seen       | 3736  | 23.6% |
| 3       | vacc=y, date NOT ok (B), card seen       | 1174  | 7.4%  |
| 4       | vacc=y, date NOT ok (S&B), card seen     | 51    | 0.3%  |
| 5       | vacc=y, date ok, card NOT seen           | 57    | 0.4%  |
| 6       | vacc=y, date NOT ok (S), card NOT seen   | 33    | 0.2%  |
| 7       | vacc=y, date NOT ok (B), card NOT seen   | 1763  | 11.1% |
| 8       | vacc=y, date NOT ok (S&B), card NOT seen | 0     | 0%    |
| 9       | last report of vacc=n                    | 1003  | 6.3%  |
| Sysmiss |                                          | 10212 |       |

### Description

#### DEFINITION

Completeness of kept HH3 report

### Imputation and derivation

#### DERIVATION

variable: hh3keep (table[s]: all\_vaccination\_records [derived table])

```

la def vacckep 1 "vacc=y, date ok, card seen" 2 "vacc=y, date NOT ok (S), card seen" 3 "vacc=y, date NOT ok (B), card
seen" 4 "vacc=y, date NOT ok (S&B), card seen" 5 "vacc=y, date ok, card NOT seen" 6 "vacc=y, date NOT ok (S), card NOT
seen" 7 "vacc=y, date NOT ok (B), card NOT seen" 8 "vacc=y, date NOT ok (S&B), card NOT seen" 9 "last report of vacc=n"
*1. keep the first record where the vaccine=yes, birth-date problem=no, schedule problem=no and healthcard=seen
gen `vacc'keep=1 if order==1 & `vacc'yn==1 & `vacc'Bprob==0 & `vacc'Sprob==0 & card==1
bys ident: egen kept=max(`vacc'keep)
*2. if no record identified: keep the first record where the vaccine=yes, birth-date problem=no, schedule problem=yes and
healthcard=seen
replace `vacc'keep=2 if order==1 & `vacc'yn==1 & `vacc'Bprob==0 & `vacc'Sprob==1 & card==1 & kept==.
drop kept
bys ident: egen kept=max(`vacc'keep)
*3. if no record identified: keep the first record where the vaccine=yes, birth-date problem=yes, schedule problem=no and
healthcard=seen
replace `vacc'keep=3 if order==1 & `vacc'yn==1 & `vacc'Bprob==1 & `vacc'Sprob==0 & card==1 & kept==.
drop kept
bys ident: egen kept=max(`vacc'keep)
*4. if no record identified: keep the first record where the vaccine=yes, birth-date problem=yes, schedule problem=yes and
healthcard=seen
replace `vacc'keep=4 if order==1 & `vacc'yn==1 & `vacc'Bprob==1 & `vacc'Sprob==1 & card==1 & kept==.
drop kept
bys ident: egen kept=max(`vacc'keep)
*5. if no record identified: keep the first record where the vaccine=yes, birth-date problem=no, schedule problem=no and
healthcard=not seen
replace `vacc'keep=5 if order==1 & `vacc'yn==1 & `vacc'Bprob==0 & `vacc'Sprob==0 & card==2 & kept==.
drop kept

```

```

bys ident: egen kept=max(`vacc'keep)
*6. if no record identified: keep the first record where the vaccine=yes, birth-date problem=no, schedule problem=yes and
healthcard=not seen
replace `vacc'keep=6 if order==1 & `vacc'yn==1 & `vacc'Bprob==0 & `vacc'Sprob==1 & card==2 & kept==.
drop kept
bys ident: egen kept=max(`vacc'keep)
*7. if no record identified: keep the first record where the vaccine=yes, birth-date problem=yes, schedule problem=no and
healthcard=not seen
replace `vacc'keep=7 if order==1 & `vacc'yn==1 & `vacc'Bprob==1 & `vacc'Sprob==0 & card==2 & kept==.
drop kept
bys ident: egen kept=max(`vacc'keep)
*8. if no record identified: keep the first record where the vaccine=yes, birth-date problem=yes, schedule problem=yes and
healthcard=not seen
replace `vacc'keep=8 if order==1 & `vacc'yn==1 & `vacc'Bprob==1 & `vacc'Sprob==1 & card==2 & kept==.
drop kept
bys ident: egen kept=max(`vacc'keep)
*9. if no record identified: keep the LAST record where the vaccine is recorded as no (regardless whether healthcard seen or
not)
replace `vacc'keep=9 if Norder==Ntotal & `vacc'yn==0 & kept==.
la val `vacc'keep vacckep
drop kept

```

---

## POINTDATE: Interview date for polio0 report (D)

Data file: vacc\_data\_selected\_BEST

### Overview

Valid: 22721

Type: Discrete    Width: 10    Range: -    Format: character

### Description

#### DEFINITION

Interview date for polio0 report

### Imputation and derivation

#### DERIVATION

variable: intdate (table[s]: all\_vaccination\_records [derived table])

---

## P0CARDSEEN: Whether health record seen for polio0 report (D)

Data file: vacc\_data\_selected\_BEST

### Overview

Valid: 22525    Invalid: 3514

Type: Discrete    Decimal: 0    Width: 1    Range: 0 - 9    Format: Numeric

### Questions and instructions

#### CATEGORIES

| Value   | Category       | Cases |       |
|---------|----------------|-------|-------|
| 0       | No             | 2497  | 11.1% |
| 1       | Yes            | 20028 | 88.9% |
| 7       | Not applicable | 0     | 0%    |
| 8       | Unknown        | 0     | 0%    |
| 9       | Missing        | 0     |       |
| Sysmiss |                | 3514  |       |

## Description

### DEFINITION

Whether health record seen for polio0 report

## Imputation and derivation

### DERIVATION

variable: cardseen (table[s]: all\_vaccination\_records [derived table])

## POSOURCE: Source for polio0 report (D)

Data file: vacc\_data\_selected\_BEST

### Overview

Valid: 22721 Invalid: 3318

Type: Discrete Decimal: 0 Width: 1 Range: 1 - 8 Format: Numeric

## Questions and instructions

### CATEGORIES

| Value   | Category    | Cases |       |
|---------|-------------|-------|-------|
| 1       | crs_birth   | 7323  | 32.2% |
| 2       | cen_individ | 2107  | 9.3%  |
| 3       | crs_cenm    | 366   | 1.6%  |
| 4       | crs_bfup    | 204   | 0.9%  |
| 5       | css_sei     | 11443 | 50.4% |
| 6       | ves_vese    | 889   | 3.9%  |
| 7       | tmt_tmtv    | 144   | 0.6%  |
| 8       | gp_va       | 245   | 1.1%  |
| Sysmiss |             | 3318  |       |

## Description

## DEFINITION

Source for polio0 report

**Imputation and derivation**

## DERIVATION

variable: source (table[s]: all\_vaccination\_records [derived table])

**P0YN: Had polio0 vaccination (D)****Data file:** vacc\_data\_selected\_BEST**Overview**

Valid: 22721 Invalid: 3318

Type: Discrete Decimal: 0 Width: 1 Range: 0 - 9 Format: Numeric

**Questions and instructions**

## CATEGORIES

| Value   | Category       | Cases |       |
|---------|----------------|-------|-------|
| 0       | No             | 2339  | 10.3% |
| 1       | Yes            | 20382 | 89.7% |
| 7       | Not applicable | 0     | 0%    |
| 8       | Unknown        | 0     | 0%    |
| 9       | Missing        | 0     |       |
| Sysmiss |                | 3318  |       |

**Description**

## DEFINITION

Had polio0 vaccination

**Imputation and derivation**

## DERIVATION

variable: p0yn (table[s]: all\_vaccination\_records [derived table])

**P0YR: Year of polio0 vaccination (D)****Data file:** vacc\_data\_selected\_BEST**Overview**

Valid: 16146 Invalid: 9893

Type: Continuous Decimal: 0 Width: 4 Range: 1997 - 2020 Format: Numeric

## Description

---

### DEFINITION

Year of polio0 vaccination

## Imputation and derivation

---

### DERIVATION

variable: p0yr (table[s]: all\_vaccination\_records [derived table])

---

## P0DATE: Date of polio0 vaccination (D)

**Data file:** vacc\_data\_selected\_BEST

### Overview

Valid: 16141

Type: Discrete    Width: 10    Range: -    Format: character

## Description

---

### DEFINITION

Date of polio0 vaccination

## Imputation and derivation

---

### DERIVATION

variable: p0date (table[s]: all\_vaccination\_records [derived table])

---

## P0DAYEST: Date of polio0 vaccination is estimated (D)

**Data file:** vacc\_data\_selected\_BEST

### Overview

Valid: 19    Invalid: 26020

Type: Discrete    Decimal: 0    Width: 1    Range: 1 - 1    Format: Numeric

## Description

---

### DEFINITION

Date of polio0 vaccination is estimated

## Imputation and derivation

---

### DERIVATION

variable: p0dayest (table[s]: all\_vaccination\_records [derived table])

**P0VC: Health centre of polio0 vaccination (D)****Data file:** vacc\_data\_selected\_BEST**Overview**

Valid: 19969    Invalid: 6070

Type: Continuous    Decimal: 0    Width: 6    Range: 10000 - 999999    Format: Numeric

**Description**

## DEFINITION

Health centre of polio0 vaccination

**Imputation and derivation**

## DERIVATION

variable: p0vc (table[s]: all\_vaccination\_records [derived table])

**P0BPROB: Problem with polio0 date (missing or before DOB) (D)****Data file:** vacc\_data\_selected\_BEST**Overview**

Valid: 22721    Invalid: 3318

Type: Discrete    Decimal: 0    Width: 1    Range: 0 - 1    Format: Numeric

**Description**

## DEFINITION

Problem with polio0 date (missing or before DOB)

**Imputation and derivation**

## DERIVATION

variable: p0date (table[s]: all\_vaccination\_records [derived table])

variable: birth\_date (table[s]: all\_vaccination\_records [derived table])

gen `vacc'Bprob=0

replace `vacc'Bprob=1 if (`vacc'date&lt;birth\_date &amp; `vacc'date~=. &amp; birth\_date~=. ) | (`vacc'date==. &amp; `vacc'yn==1)

**P0SPROB: Problem with polio0 date (schedule issue) (D)****Data file:** vacc\_data\_selected\_BEST**Overview**

Valid: 22721    Invalid: 3318

Type: Discrete    Decimal: 0    Width: 1    Range: 0 - 1    Format: Numeric

## Description

---

### DEFINITION

Problem with polio0 date (schedule issue)

## Imputation and derivation

---

### DERIVATION

variable: p0date (table[s]: all\_vaccination\_records [derived table])

variable: birth\_date (table[s]: all\_vaccination\_records [derived table])

\*for P0: problem if vacc date is more than 4 weeks after birthdate (supposed to be birth - 2 weeks)

if "`vacc'"=="p0" replace `vacc'Sprob=1 if p0date-birth\_date>28 & p0date~=. & birth\_date~=.

## POFYINTDATE: First interview date when reported had polio1 (D)

Data file: vacc\_data\_selected\_BEST

### Overview

Valid: 20382

Type: Discrete    Width: 10    Range: -    Format: character

## Description

---

### DEFINITION

First interview date when reported had polio1

## Imputation and derivation

---

### DERIVATION

variable: p0intdate (table[s]: all\_vaccination\_records [derived table])

variable: p0yn (table[s]: all\_vaccination\_records [derived table])

\*calculate first interview date where card seen and vaccine recorded as yes

bys ident: egen tempC=min(`vacc'intdate) if card==1 & `vacc'yn==1

bys ident: egen tempNC=min(`vacc'intdate) if card==2 & `vacc'yn==1

bys ident: egen `vacc'fyintdate=min(tempC)

bys ident: egen tempNCd=min(tempNC)

replace `vacc'fyintdate=tempNCd if `vacc'fyintdate==. & tempNCd~=.

## POKEEP: Completeness of kept polio0 report (D)

Data file: vacc\_data\_selected\_BEST

### Overview

Valid: 22721    Invalid: 3318

Type: Discrete    Decimal: 0    Width: 1    Range: 1 - 9    Format: Numeric

## Questions and instructions

### CATEGORIES

| Value   | Category                                 | Cases |       |
|---------|------------------------------------------|-------|-------|
| 1       | vacc=y, date ok, card seen               | 13693 | 60.3% |
| 2       | vacc=y, date NOT ok (S), card seen       | 2110  | 9.3%  |
| 3       | vacc=y, date NOT ok (B), card seen       | 2059  | 9.1%  |
| 4       | vacc=y, date NOT ok (S&B), card seen     | 0     | 0%    |
| 5       | vacc=y, date ok, card NOT seen           | 103   | 0.5%  |
| 6       | vacc=y, date NOT ok (S), card NOT seen   | 22    | 0.1%  |
| 7       | vacc=y, date NOT ok (B), card NOT seen   | 2395  | 10.5% |
| 8       | vacc=y, date NOT ok (S&B), card NOT seen | 0     | 0%    |
| 9       | last report of vacc=n                    | 2339  | 10.3% |
| Sysmiss |                                          | 3318  |       |

### Description

#### DEFINITION

Completeness of kept polio0 report

### Imputation and derivation

#### DERIVATION

variable: p0keep (table[s]: all\_vaccination\_records [derived table])

```

la def vacckep 1 "vacc=y, date ok, card seen" 2 "vacc=y, date NOT ok (S), card seen" 3 "vacc=y, date NOT ok (B), card
seen" 4 "vacc=y, date NOT ok (S&B), card seen" 5 "vacc=y, date ok, card NOT seen" 6 "vacc=y, date NOT ok (S), card NOT
seen" 7 "vacc=y, date NOT ok (B), card NOT seen" 8 "vacc=y, date NOT ok (S&B), card NOT seen" 9 "last report of vacc=n"
*1. keep the first record where the vaccine=yes, birth-date problem=no, schedule problem=no and healthcard=seen
gen `vacc'keep=1 if order==1 & `vacc'yn==1 & `vacc'Bprob==0 & `vacc'Sprob==0 & card==1
bys ident: egen kept=max(`vacc'keep)
*2. if no record identified: keep the first record where the vaccine=yes, birth-date problem=no, schedule problem=yes and
healthcard=seen
replace `vacc'keep=2 if order==1 & `vacc'yn==1 & `vacc'Bprob==0 & `vacc'Sprob==1 & card==1 & kept==.
drop kept
bys ident: egen kept=max(`vacc'keep)
*3. if no record identified: keep the first record where the vaccine=yes, birth-date problem=yes, schedule problem=no and
healthcard=seen
replace `vacc'keep=3 if order==1 & `vacc'yn==1 & `vacc'Bprob==1 & `vacc'Sprob==0 & card==1 & kept==.
drop kept
bys ident: egen kept=max(`vacc'keep)
*4. if no record identified: keep the first record where the vaccine=yes, birth-date problem=yes, schedule problem=yes and
healthcard=seen
replace `vacc'keep=4 if order==1 & `vacc'yn==1 & `vacc'Bprob==1 & `vacc'Sprob==1 & card==1 & kept==.
drop kept
bys ident: egen kept=max(`vacc'keep)
*5. if no record identified: keep the first record where the vaccine=yes, birth-date problem=no, schedule problem=no and
healthcard=not seen
replace `vacc'keep=5 if order==1 & `vacc'yn==1 & `vacc'Bprob==0 & `vacc'Sprob==0 & card==2 & kept==.
drop kept

```

```

bys ident: egen kept=max(`vacc'keep)
*6. if no record identified: keep the first record where the vaccine=yes, birth-date problem=no, schedule problem=yes and
healthcard=not seen
replace `vacc'keep=6 if order==1 & `vacc'yn==1 & `vacc'Bprob==0 & `vacc'Sprob==1 & card==2 & kept==.
drop kept
bys ident: egen kept=max(`vacc'keep)
*7. if no record identified: keep the first record where the vaccine=yes, birth-date problem=yes, schedule problem=no and
healthcard=not seen
replace `vacc'keep=7 if order==1 & `vacc'yn==1 & `vacc'Bprob==1 & `vacc'Sprob==0 & card==2 & kept==.
drop kept
bys ident: egen kept=max(`vacc'keep)
*8. if no record identified: keep the first record where the vaccine=yes, birth-date problem=yes, schedule problem=yes and
healthcard=not seen
replace `vacc'keep=8 if order==1 & `vacc'yn==1 & `vacc'Bprob==1 & `vacc'Sprob==1 & card==2 & kept==.
drop kept
bys ident: egen kept=max(`vacc'keep)
*9. if no record identified: keep the LAST record where the vaccine is recorded as no (regardless whether healthcard seen or
not)
replace `vacc'keep=9 if Norder==Ntotal & `vacc'yn==0 & kept==.
la val `vacc'keep vacckep
drop kept

```

---

## **P1INTDATE: Interview date for polio1 report (D)**

**Data file:** vacc\_data\_selected\_BEST

### **Overview**

Valid: 22546

Type: Discrete    Width: 10    Range: -    Format: character

### **Description**

#### DEFINITION

Interview date for polio1 report

### **Imputation and derivation**

#### DERIVATION

variable: intdate (table[s]: all\_vaccination\_records [derived table])

---

## **P1CARDSEEN: Whether health record seen for polio1 report (D)**

**Data file:** vacc\_data\_selected\_BEST

### **Overview**

Valid: 22368    Invalid: 3671

Type: Discrete    Decimal: 0    Width: 1    Range: 0 - 9    Format: Numeric

### **Questions and instructions**

#### CATEGORIES

| Value   | Category       | Cases |       |
|---------|----------------|-------|-------|
| 0       | No             | 1700  | 7.6%  |
| 1       | Yes            | 20668 | 92.4% |
| 7       | Not applicable | 0     | 0%    |
| 8       | Unknown        | 0     | 0%    |
| 9       | Missing        | 0     |       |
| Sysmiss |                | 3671  |       |

## Description

### DEFINITION

Whether health record seen for polio1 report

## Imputation and derivation

### DERIVATION

variable: cardseen (table[s]: all\_vaccination\_records [derived table])

## P1SOURCE: Source for polio1 report (D)

Data file: vacc\_data\_selected\_BEST

### Overview

Valid: 22546 Invalid: 3493

Type: Discrete Decimal: 0 Width: 1 Range: 1 - 8 Format: Numeric

## Questions and instructions

### CATEGORIES

| Value   | Category    | Cases |       |
|---------|-------------|-------|-------|
| 1       | crs_birth   | 2316  | 10.3% |
| 2       | cen_individ | 3596  | 15.9% |
| 3       | crs_cenm    | 699   | 3.1%  |
| 4       | crs_bfup    | 1115  | 4.9%  |
| 5       | css_sei     | 13032 | 57.8% |
| 6       | ves_vese    | 1337  | 5.9%  |
| 7       | tmt_tmtv    | 136   | 0.6%  |
| 8       | gp_va       | 315   | 1.4%  |
| Sysmiss |             | 3493  |       |

## Description

## DEFINITION

Source for polio1 report

**Imputation and derivation**

## DERIVATION

variable: source (table[s]: all\_vaccination\_records [derived table])

**P1YN: Had polio1 vaccination (D)****Data file:** vacc\_data\_selected\_BEST**Overview**

Valid: 22546 Invalid: 3493

Type: Discrete Decimal: 0 Width: 1 Range: 0 - 9 Format: Numeric

**Questions and instructions**

## CATEGORIES

| Value   | Category       | Cases |       |
|---------|----------------|-------|-------|
| 0       | No             | 578   | 2.6%  |
| 1       | Yes            | 21968 | 97.4% |
| 7       | Not applicable | 0     | 0%    |
| 8       | Unknown        | 0     | 0%    |
| 9       | Missing        | 0     |       |
| Sysmiss |                | 3493  |       |

**Description**

## DEFINITION

Had polio1 vaccination

**Imputation and derivation**

## DERIVATION

variable: p1yn (table[s]: all\_vaccination\_records [derived table])

**P1YR: Year of polio1 vaccination (D)****Data file:** vacc\_data\_selected\_BEST**Overview**

Valid: 19404 Invalid: 6635

Type: Continuous Decimal: 0 Width: 4 Range: 1997 - 2020 Format: Numeric

## Description

---

### DEFINITION

Year of polio1 vaccination

## Imputation and derivation

---

### DERIVATION

variable: p1yr (table[s]: all\_vaccination\_records [derived table])

---

## P1DATE: Date of polio1 vaccination (D)

**Data file:** vacc\_data\_selected\_BEST

### Overview

Valid: 19402

Type: Discrete    Width: 10    Range: -    Format: character

## Description

---

### DEFINITION

Date of polio1 vaccination

## Imputation and derivation

---

### DERIVATION

variable: p1date (table[s]: all\_vaccination\_records [derived table])

---

## P1DAYEST: Date of polio1 vaccination is estimated (D)

**Data file:** vacc\_data\_selected\_BEST

### Overview

Valid: 7    Invalid: 26032

Type: Discrete    Decimal: 0    Width: 1    Range: 1 - 1    Format: Numeric

## Description

---

### DEFINITION

Date of polio1 vaccination is estimated

## Imputation and derivation

---

### DERIVATION

variable: p1dayest (table[s]: all\_vaccination\_records [derived table])

**P1VC: Health centre of polio1 vaccination (D)****Data file:** vacc\_data\_selected\_BEST**Overview**

Valid: 21403    Invalid: 4636  
 Type: Continuous    Decimal: 0    Width: 6    Range: 10000 - 999999    Format: Numeric

**Description**

## DEFINITION

Health centre of polio1 vaccination

**Imputation and derivation**

## DERIVATION

variable: p1vc (table[s]: all\_vaccination\_records [derived table])

**P1BPROB: Problem with polio1 date (missing or before DOB) (D)****Data file:** vacc\_data\_selected\_BEST**Overview**

Valid: 22546    Invalid: 3493  
 Type: Discrete    Decimal: 0    Width: 1    Range: 0 - 1    Format: Numeric

**Description**

## DEFINITION

Problem with polio1 date (missing or before DOB)

**Imputation and derivation**

## DERIVATION

variable: p1date (table[s]: all\_vaccination\_records [derived table])

variable: birth\_date (table[s]: all\_vaccination\_records [derived table])

gen `vacc'Bprob=0

replace `vacc'Bprob=1 if (`vacc'date&lt;birth\_date &amp; `vacc'date~=. &amp; birth\_date~=. ) | (`vacc'date==. &amp; `vacc'yn==1)

**P1SPROB: Problem with polio1 date (schedule issue) (D)****Data file:** vacc\_data\_selected\_BEST**Overview**

Valid: 22546    Invalid: 3493  
 Type: Discrete    Decimal: 0    Width: 1    Range: 0 - 1    Format: Numeric

## Description

### DEFINITION

Problem with polio1 date (schedule issue)

## Imputation and derivation

### DERIVATION

variable: p1date (table[s]: all\_vaccination\_records [derived table])

variable: birth\_date (table[s]: all\_vaccination\_records [derived table])

\*for DPT1, HH1, PCV1, RV1 and P1: problem if vacc date is less than 5 weeks, or more than 10 weeks after birthdate (supposed to be at 6 weeks or later)

if "`vacc'"=="p1" replace `vacc'Sprob=1 if (p1date-birth\_date<35 | p1date-birth\_date>70) & p1date~=. & birth\_date~=.

## P1FYINTDATE: First interview date when reported had polio2 (D)

Data file: vacc\_data\_selected\_BEST

### Overview

Valid: 21968

Type: Discrete    Width: 10    Range: -    Format: character

### Description

### DEFINITION

First interview date when reported had polio2

## Imputation and derivation

### DERIVATION

variable: p1intdate (table[s]: all\_vaccination\_records [derived table])

variable: p1yn (table[s]: all\_vaccination\_records [derived table])

\*calculate first interview date where card seen and vaccine recorded as yes

bys ident: egen tempC=min(`vacc'intdate) if card==1 & `vacc'yn==1

bys ident: egen tempNC=min(`vacc'intdate) if card==2 & `vacc'yn==1

bys ident: egen `vacc'fyintdate=min(tempC)

bys ident: egen tempNCd=min(tempNC)

replace `vacc'fyintdate=tempNCd if `vacc'fyintdate==. & tempNCd~=.

## P1KEEP: Completeness of kept polio1 report (D)

Data file: vacc\_data\_selected\_BEST

### Overview

Valid: 22546    Invalid: 3493

Type: Discrete    Decimal: 0    Width: 1    Range: 1 - 9    Format: Numeric

## Questions and instructions

### CATEGORIES

| Value   | Category                                 | Cases |       |
|---------|------------------------------------------|-------|-------|
| 1       | vacc=y, date ok, card seen               | 12510 | 55.5% |
| 2       | vacc=y, date NOT ok (S), card seen       | 6587  | 29.2% |
| 3       | vacc=y, date NOT ok (B), card seen       | 977   | 4.3%  |
| 4       | vacc=y, date NOT ok (S&B), card seen     | 159   | 0.7%  |
| 5       | vacc=y, date ok, card NOT seen           | 67    | 0.3%  |
| 6       | vacc=y, date NOT ok (S), card NOT seen   | 77    | 0.3%  |
| 7       | vacc=y, date NOT ok (B), card NOT seen   | 1589  | 7%    |
| 8       | vacc=y, date NOT ok (S&B), card NOT seen | 2     | 0%    |
| 9       | last report of vacc=n                    | 578   | 2.6%  |
| Sysmiss |                                          | 3493  |       |

### Description

#### DEFINITION

Completeness of kept polio1 report

### Imputation and derivation

#### DERIVATION

variable: p1keep (table[s]: all\_vaccination\_records [derived table])

la def vacckep 1 "vacc=y, date ok, card seen" 2 "vacc=y, date NOT ok (S), card seen" 3 "vacc=y, date NOT ok (B), card seen" 4 "vacc=y, date NOT ok (S&B), card seen" 5 "vacc=y, date ok, card NOT seen" 6 "vacc=y, date NOT ok (S), card NOT seen" 7 "vacc=y, date NOT ok (B), card NOT seen" 8 "vacc=y, date NOT ok (S&B), card NOT seen" 9 "last report of vacc=n"

\*1. keep the first record where the vaccine=yes, birth-date problem=no, schedule problem=no and healthcard=seen

gen `vacc'keep=1 if order==1 & `vacc'yn==1 & `vacc'Bprob==0 & `vacc'Sprob==0 & card==1

bys ident: egen kept=max(`vacc'keep)

\*2. if no record identified: keep the first record where the vaccine=yes, birth-date problem=no, schedule problem=yes and healthcard=seen

replace `vacc'keep=2 if order==1 & `vacc'yn==1 & `vacc'Bprob==0 & `vacc'Sprob==1 & card==1 & kept==.

drop kept

bys ident: egen kept=max(`vacc'keep)

\*3. if no record identified: keep the first record where the vaccine=yes, birth-date problem=yes, schedule problem=no and healthcard=seen

replace `vacc'keep=3 if order==1 & `vacc'yn==1 & `vacc'Bprob==1 & `vacc'Sprob==0 & card==1 & kept==.

drop kept

bys ident: egen kept=max(`vacc'keep)

\*4. if no record identified: keep the first record where the vaccine=yes, birth-date problem=yes, schedule problem=yes and healthcard=seen

replace `vacc'keep=4 if order==1 & `vacc'yn==1 & `vacc'Bprob==1 & `vacc'Sprob==1 & card==1 & kept==.

drop kept

bys ident: egen kept=max(`vacc'keep)

\*5. if no record identified: keep the first record where the vaccine=yes, birth-date problem=no, schedule problem=no and healthcard=not seen

replace `vacc'keep=5 if order==1 & `vacc'yn==1 & `vacc'Bprob==0 & `vacc'Sprob==0 & card==2 & kept==.

drop kept

```

bys ident: egen kept=max(`vacc'keep)
*6. if no record identified: keep the first record where the vaccine=yes, birth-date problem=no, schedule problem=yes and
healthcard=not seen
replace `vacc'keep=6 if order==1 & `vacc'yn==1 & `vacc'Bprob==0 & `vacc'Sprob==1 & card==2 & kept==.
drop kept
bys ident: egen kept=max(`vacc'keep)
*7. if no record identified: keep the first record where the vaccine=yes, birth-date problem=yes, schedule problem=no and
healthcard=not seen
replace `vacc'keep=7 if order==1 & `vacc'yn==1 & `vacc'Bprob==1 & `vacc'Sprob==0 & card==2 & kept==.
drop kept
bys ident: egen kept=max(`vacc'keep)
*8. if no record identified: keep the first record where the vaccine=yes, birth-date problem=yes, schedule problem=yes and
healthcard=not seen
replace `vacc'keep=8 if order==1 & `vacc'yn==1 & `vacc'Bprob==1 & `vacc'Sprob==1 & card==2 & kept==.
drop kept
bys ident: egen kept=max(`vacc'keep)
*9. if no record identified: keep the LAST record where the vaccine is recorded as no (regardless whether healthcard seen or
not)
replace `vacc'keep=9 if Norder==Ntotal & `vacc'yn==0 & kept==.
la val `vacc'keep vacckep
drop kept

```

---

## **P2INTDATE: Interview date for polio2 report (D)**

**Data file:** vacc\_data\_selected\_BEST

### **Overview**

Valid: 21743

Type: Discrete    Width: 10    Range: -    Format: character

### **Description**

#### DEFINITION

Interview date for polio2 report

### **Imputation and derivation**

#### DERIVATION

variable: intdate (table[s]: all\_vaccination\_records [derived table])

---

## **P2CARDSEEN: Whether health record seen for polio2 report (D)**

**Data file:** vacc\_data\_selected\_BEST

### **Overview**

Valid: 21559    Invalid: 4480

Type: Discrete    Decimal: 0    Width: 1    Range: 0 - 9    Format: Numeric

### **Questions and instructions**

#### CATEGORIES

| Value   | Category       | Cases |       |
|---------|----------------|-------|-------|
| 0       | No             | 1816  | 8.4%  |
| 1       | Yes            | 19743 | 91.6% |
| 7       | Not applicable | 0     | 0%    |
| 8       | Unknown        | 0     | 0%    |
| 9       | Missing        | 0     |       |
| Sysmiss |                | 4480  |       |

## Description

### DEFINITION

Whether health record seen for polio2 report

## Imputation and derivation

### DERIVATION

variable: cardseen (table[s]: all\_vaccination\_records [derived table])

## P2SOURCE: Source for polio2 report (D)

Data file: vacc\_data\_selected\_BEST

### Overview

Valid: 21743 Invalid: 4296

Type: Discrete Decimal: 0 Width: 1 Range: 1 - 8 Format: Numeric

## Questions and instructions

### CATEGORIES

| Value   | Category    | Cases |       |
|---------|-------------|-------|-------|
| 1       | crs_birth   | 1080  | 5%    |
| 2       | cen_individ | 3450  | 15.9% |
| 3       | crs_cenm    | 683   | 3.1%  |
| 4       | crs_bfup    | 1230  | 5.7%  |
| 5       | css_sei     | 13462 | 61.9% |
| 6       | ves_vese    | 1366  | 6.3%  |
| 7       | tmt_tmtv    | 168   | 0.8%  |
| 8       | gp_va       | 304   | 1.4%  |
| Sysmiss |             | 4296  |       |

## Description

## DEFINITION

Source for polio2 report

**Imputation and derivation**

## DERIVATION

variable: source (table[s]: all\_vaccination\_records [derived table])

**P2YN: Had polio2 vaccination (D)****Data file:** vacc\_data\_selected\_BEST**Overview**

Valid: 21743 Invalid: 4296

Type: Discrete Decimal: 0 Width: 1 Range: 0 - 9 Format: Numeric

**Questions and instructions**

## CATEGORIES

| Value   | Category       | Cases |       |
|---------|----------------|-------|-------|
| 0       | No             | 831   | 3.8%  |
| 1       | Yes            | 20912 | 96.2% |
| 7       | Not applicable | 0     | 0%    |
| 8       | Unknown        | 0     | 0%    |
| 9       | Missing        | 0     |       |
| Sysmiss |                | 4296  |       |

**Description**

## DEFINITION

Had polio2 vaccination

**Imputation and derivation**

## DERIVATION

variable: p2yn (table[s]: all\_vaccination\_records [derived table])

**P2YR: Year of polio2 vaccination (D)****Data file:** vacc\_data\_selected\_BEST**Overview**

Valid: 18184 Invalid: 7855

Type: Continuous Decimal: 0 Width: 4 Range: 1997 - 2020 Format: Numeric

## Description

---

### DEFINITION

Year of polio2 vaccination

## Imputation and derivation

---

### DERIVATION

variable: p2yr (table[s]: all\_vaccination\_records [derived table])

---

## P2DATE: Date of polio2 vaccination (D)

**Data file:** vacc\_data\_selected\_BEST

### Overview

Valid: 18181

Type: Discrete    Width: 10    Range: -    Format: character

## Description

---

### DEFINITION

Date of polio2 vaccination

## Imputation and derivation

---

### DERIVATION

variable: p2date (table[s]: all\_vaccination\_records [derived table])

---

## P2DAYEST: Date of polio2 vaccination is estimated (D)

**Data file:** vacc\_data\_selected\_BEST

### Overview

Valid: 7    Invalid: 26032

Type: Discrete    Decimal: 0    Width: 1    Range: 1 - 1    Format: Numeric

## Description

---

### DEFINITION

Date of polio2 vaccination is estimated

## Imputation and derivation

---

### DERIVATION

variable: p2dayest (table[s]: all\_vaccination\_records [derived table])

**P2VC: Health centre of polio2 vaccination (D)****Data file:** vacc\_data\_selected\_BEST**Overview**

Valid: 20372    Invalid: 5667

Type: Continuous    Decimal: 0    Width: 6    Range: 10000 - 999999    Format: Numeric

**Description**

## DEFINITION

Health centre of polio2 vaccination

**Imputation and derivation**

## DERIVATION

variable: p2vc (table[s]: all\_vaccination\_records [derived table])

**P2BPROB: Problem with polio2 date (missing or before DOB) (D)****Data file:** vacc\_data\_selected\_BEST**Overview**

Valid: 21743    Invalid: 4296

Type: Discrete    Decimal: 0    Width: 1    Range: 0 - 1    Format: Numeric

**Description**

## DEFINITION

Problem with polio2 date (missing or before DOB)

**Imputation and derivation**

## DERIVATION

variable: p2date (table[s]: all\_vaccination\_records [derived table])

variable: birth\_date (table[s]: all\_vaccination\_records [derived table])

gen `vacc'Bprob=0

replace `vacc'Bprob=1 if (`vacc'date&lt;birth\_date &amp; `vacc'date~=. &amp; birth\_date~=. ) | (`vacc'date==. &amp; `vacc'yn==1)

**P2SPROB: Problem with polio2 date (schedule issue) (D)****Data file:** vacc\_data\_selected\_BEST**Overview**

Valid: 21743    Invalid: 4296

Type: Discrete    Decimal: 0    Width: 1    Range: 0 - 1    Format: Numeric

## Description

### DEFINITION

Problem with polio2 date (schedule issue)

## Imputation and derivation

### DERIVATION

variable: p2date (table[s]: all\_vaccination\_records [derived table])

variable: birth\_date (table[s]: all\_vaccination\_records [derived table])

\*for DPT2, HH2, PCV2, RV2 and P2: problem if vacc date is less than 3 weeks, or more than 6 weeks after first dose (supposed to be 1 month after first dose)

if "`vacc'"="p2" replace `vacc'Sprob=1 if (p2date<birth\_date | p2date-p1date<21 | p2date-p1date>42 | p1date==.) & p2date~=. & birth\_date~=.

## P2FYINTDATE: First interview date when reported had polio3 (D)

Data file: vacc\_data\_selected\_BEST

### Overview

Valid: 20912

Type: Discrete    Width: 10    Range: -    Format: character

## Description

### DEFINITION

First interview date when reported had polio3

## Imputation and derivation

### DERIVATION

variable: p2intdate (table[s]: all\_vaccination\_records [derived table])

variable: p2yn (table[s]: all\_vaccination\_records [derived table])

\*calculate first interview date where card seen and vaccine recorded as yes

bys ident: egen tempC=min(`vacc'intdate) if card==1 & `vacc'yn==1

bys ident: egen tempNC=min(`vacc'intdate) if card==2 & `vacc'yn==1

bys ident: egen `vacc'fyintdate=min(tempC)

bys ident: egen tempNCd=min(tempNC)

replace `vacc'fyintdate=tempNCd if `vacc'fyintdate==. & tempNCd~=.

## P2KEEP: Completeness of kept polio2 report (D)

Data file: vacc\_data\_selected\_BEST

### Overview

Valid: 21743    Invalid: 4296

Type: Discrete    Decimal: 0    Width: 1    Range: 1 - 9    Format: Numeric

## Questions and instructions

### CATEGORIES

| Value   | Category                                 | Cases |       |
|---------|------------------------------------------|-------|-------|
| 1       | vacc=y, date ok, card seen               | 11863 | 54.6% |
| 2       | vacc=y, date NOT ok (S), card seen       | 6064  | 27.9% |
| 3       | vacc=y, date NOT ok (B), card seen       | 1035  | 4.8%  |
| 4       | vacc=y, date NOT ok (S&B), card seen     | 112   | 0.5%  |
| 5       | vacc=y, date ok, card NOT seen           | 88    | 0.4%  |
| 6       | vacc=y, date NOT ok (S), card NOT seen   | 54    | 0.2%  |
| 7       | vacc=y, date NOT ok (B), card NOT seen   | 1696  | 7.8%  |
| 8       | vacc=y, date NOT ok (S&B), card NOT seen | 0     | 0%    |
| 9       | last report of vacc=n                    | 831   | 3.8%  |
| Sysmiss |                                          | 4296  |       |

### Description

#### DEFINITION

Completeness of kept polio2 report

### Imputation and derivation

#### DERIVATION

variable: p2keep (table[s]: all\_vaccination\_records [derived table])

```

la def vacckep 1 "vacc=y, date ok, card seen" 2 "vacc=y, date NOT ok (S), card seen" 3 "vacc=y, date NOT ok (B), card
seen" 4 "vacc=y, date NOT ok (S&B), card seen" 5 "vacc=y, date ok, card NOT seen" 6 "vacc=y, date NOT ok (S), card NOT
seen" 7 "vacc=y, date NOT ok (B), card NOT seen" 8 "vacc=y, date NOT ok (S&B), card NOT seen" 9 "last report of vacc=n"
*1. keep the first record where the vaccine=yes, birth-date problem=no, schedule problem=no and healthcard=seen
gen `vacc'keep=1 if order==1 & `vacc'yn==1 & `vacc'Bprob==0 & `vacc'Sprob==0 & card==1
bys ident: egen kept=max(`vacc'keep)
*2. if no record identified: keep the first record where the vaccine=yes, birth-date problem=no, schedule problem=yes and
healthcard=seen
replace `vacc'keep=2 if order==1 & `vacc'yn==1 & `vacc'Bprob==0 & `vacc'Sprob==1 & card==1 & kept==.
drop kept
bys ident: egen kept=max(`vacc'keep)
*3. if no record identified: keep the first record where the vaccine=yes, birth-date problem=yes, schedule problem=no and
healthcard=seen
replace `vacc'keep=3 if order==1 & `vacc'yn==1 & `vacc'Bprob==1 & `vacc'Sprob==0 & card==1 & kept==.
drop kept
bys ident: egen kept=max(`vacc'keep)
*4. if no record identified: keep the first record where the vaccine=yes, birth-date problem=yes, schedule problem=yes and
healthcard=seen
replace `vacc'keep=4 if order==1 & `vacc'yn==1 & `vacc'Bprob==1 & `vacc'Sprob==1 & card==1 & kept==.
drop kept
bys ident: egen kept=max(`vacc'keep)
*5. if no record identified: keep the first record where the vaccine=yes, birth-date problem=no, schedule problem=no and
healthcard=not seen
replace `vacc'keep=5 if order==1 & `vacc'yn==1 & `vacc'Bprob==0 & `vacc'Sprob==0 & card==2 & kept==.
drop kept

```

```

bys ident: egen kept=max(`vacc'keep)
*6. if no record identified: keep the first record where the vaccine=yes, birth-date problem=no, schedule problem=yes and
healthcard=not seen
replace `vacc'keep=6 if order==1 & `vacc'yn==1 & `vacc'Bprob==0 & `vacc'Sprob==1 & card==2 & kept==.
drop kept
bys ident: egen kept=max(`vacc'keep)
*7. if no record identified: keep the first record where the vaccine=yes, birth-date problem=yes, schedule problem=no and
healthcard=not seen
replace `vacc'keep=7 if order==1 & `vacc'yn==1 & `vacc'Bprob==1 & `vacc'Sprob==0 & card==2 & kept==.
drop kept
bys ident: egen kept=max(`vacc'keep)
*8. if no record identified: keep the first record where the vaccine=yes, birth-date problem=yes, schedule problem=yes and
healthcard=not seen
replace `vacc'keep=8 if order==1 & `vacc'yn==1 & `vacc'Bprob==1 & `vacc'Sprob==1 & card==2 & kept==.
drop kept
bys ident: egen kept=max(`vacc'keep)
*9. if no record identified: keep the LAST record where the vaccine is recorded as no (regardless whether healthcard seen or
not)
replace `vacc'keep=9 if Norder==Ntotal & `vacc'yn==0 & kept==.
la val `vacc'keep vacckep
drop kept

```

---

### **P3INTDATE: Interview date for polio3 report (D)**

**Data file:** vacc\_data\_selected\_BEST

#### **Overview**

Valid: 21191

Type: Discrete    Width: 10    Range: -    Format: character

#### **Description**

##### DEFINITION

Interview date for polio3 report

#### **Imputation and derivation**

##### DERIVATION

variable: intdate (table[s]: all\_vaccination\_records [derived table])

---

### **P3CARDSEEN: Whether health record seen for polio3 report (D)**

**Data file:** vacc\_data\_selected\_BEST

#### **Overview**

Valid: 21005    Invalid: 5034

Type: Discrete    Decimal: 0    Width: 1    Range: 0 - 9    Format: Numeric

#### **Questions and instructions**

##### CATEGORIES

| Value   | Category       | Cases |       |
|---------|----------------|-------|-------|
| 0       | No             | 1926  | 9.2%  |
| 1       | Yes            | 19079 | 90.8% |
| 7       | Not applicable | 0     | 0%    |
| 8       | Unknown        | 0     | 0%    |
| 9       | Missing        | 0     |       |
| Sysmiss |                | 5034  |       |

## Description

### DEFINITION

Whether health record seen for polio3 report

## Imputation and derivation

### DERIVATION

variable: cardseen (table[s]: all\_vaccination\_records [derived table])

## P3SOURCE: Source for polio3 report (D)

Data file: vacc\_data\_selected\_BEST

### Overview

Valid: 21191 Invalid: 4848

Type: Discrete Decimal: 0 Width: 1 Range: 1 - 8 Format: Numeric

## Questions and instructions

### CATEGORIES

| Value   | Category    | Cases |       |
|---------|-------------|-------|-------|
| 1       | crs_birth   | 623   | 2.9%  |
| 2       | cen_individ | 3220  | 15.2% |
| 3       | crs_cenm    | 654   | 3.1%  |
| 4       | crs_bfup    | 1240  | 5.9%  |
| 5       | css_sei     | 13629 | 64.3% |
| 6       | ves_vese    | 1347  | 6.4%  |
| 7       | tmt_tmtv    | 174   | 0.8%  |
| 8       | gp_va       | 304   | 1.4%  |
| Sysmiss |             | 4848  |       |

## Description

## DEFINITION

Source for polio3 report

**Imputation and derivation**

## DERIVATION

variable: source (table[s]: all\_vaccination\_records [derived table])

**P3YN: Had polio3 vaccination (D)****Data file:** vacc\_data\_selected\_BEST**Overview**

Valid: 21191 Invalid: 4848

Type: Discrete Decimal: 0 Width: 1 Range: 0 - 9 Format: Numeric

**Questions and instructions**

## CATEGORIES

| Value   | Category       | Cases |       |
|---------|----------------|-------|-------|
| 0       | No             | 1119  | 5.3%  |
| 1       | Yes            | 20072 | 94.7% |
| 7       | Not applicable | 0     | 0%    |
| 8       | Unknown        | 0     | 0%    |
| 9       | Missing        | 0     |       |
| Sysmiss |                | 4848  |       |

**Description**

## DEFINITION

Had polio3 vaccination

**Imputation and derivation**

## DERIVATION

variable: p3yn (table[s]: all\_vaccination\_records [derived table])

**P3YR: Year of polio3 vaccination (D)****Data file:** vacc\_data\_selected\_BEST**Overview**

Valid: 17118 Invalid: 8921

Type: Continuous Decimal: 0 Width: 4 Range: 1997 - 2020 Format: Numeric

## Description

---

### DEFINITION

Year of polio3 vaccination

## Imputation and derivation

---

### DERIVATION

variable: p3yr (table[s]: all\_vaccination\_records [derived table])

---

## P3DATE: Date of polio3 vaccination (D)

**Data file:** vacc\_data\_selected\_BEST

### Overview

Valid: 17114

Type: Discrete    Width: 10    Range: -    Format: character

## Description

---

### DEFINITION

Date of polio3 vaccination

## Imputation and derivation

---

### DERIVATION

variable: p3date (table[s]: all\_vaccination\_records [derived table])

---

## P3DAYEST: Date of polio3 vaccination is estimated (D)

**Data file:** vacc\_data\_selected\_BEST

### Overview

Valid: 6    Invalid: 26033

Type: Discrete    Decimal: 0    Width: 1    Range: 1 - 1    Format: Numeric

## Description

---

### DEFINITION

Date of polio3 vaccination is estimated

## Imputation and derivation

---

### DERIVATION

variable: p3dayest (table[s]: all\_vaccination\_records [derived table])

**P3VC: Health centre of polio3 vaccination (D)****Data file:** vacc\_data\_selected\_BEST**Overview**

Valid: 19538    Invalid: 6501

Type: Continuous    Decimal: 0    Width: 6    Range: 10000 - 999999    Format: Numeric

**Description**

## DEFINITION

Health centre of polio3 vaccination

**Imputation and derivation**

## DERIVATION

variable: p3vc (table[s]: all\_vaccination\_records [derived table])

**P3BPROB: Problem with polio3 date (missing or before DOB) (D)****Data file:** vacc\_data\_selected\_BEST**Overview**

Valid: 21191    Invalid: 4848

Type: Discrete    Decimal: 0    Width: 1    Range: 0 - 1    Format: Numeric

**Description**

## DEFINITION

Problem with polio3 date (missing or before DOB)

**Imputation and derivation**

## DERIVATION

variable: p3date (table[s]: all\_vaccination\_records [derived table])

variable: birth\_date (table[s]: all\_vaccination\_records [derived table])

```

la def vacckkeep 1 "vacc=y, date ok, card seen" 2 "vacc=y, date NOT ok (S), card seen" 3 "vacc=y, date NOT ok (B), card
seen" 4 "vacc=y, date NOT ok (S&B), card seen" 5 "vacc=y, date ok, card NOT seen" 6 "vacc=y, date NOT ok (S), card NOT
seen" 7 "vacc=y, date NOT ok (B), card NOT seen" 8 "vacc=y, date NOT ok (S&B), card NOT seen" 9 "last report of vacc=n"
*1. keep the first record where the vaccine=yes, birth-date problem=no, schedule problem=no and healthcard=seen
gen `vacc'keep=1 if order==1 & `vacc'yn==1 & `vacc'Bprob==0 & `vacc'Sprob==0 & card==1
bys ident: egen kept=max(`vacc'keep)
*2. if no record identified: keep the first record where the vaccine=yes, birth-date problem=no, schedule problem=yes and
healthcard=seen
replace `vacc'keep=2 if order==1 & `vacc'yn==1 & `vacc'Bprob==0 & `vacc'Sprob==1 & card==1 & kept==.
drop kept
bys ident: egen kept=max(`vacc'keep)
*3. if no record identified: keep the first record where the vaccine=yes, birth-date problem=yes, schedule problem=no and

```

```

healthcard=seen
replace `vacc'keep=3 if order==1 & `vacc'yn==1 & `vacc'Bprob==1 & `vacc'Sprob==0 & card==1 & kept==.
drop kept
bys ident: egen kept=max(`vacc'keep)
*4. if no record identified: keep the first record where the vaccine=yes, birth-date problem=yes, schedule problem=yes and
healthcard=seen
replace `vacc'keep=4 if order==1 & `vacc'yn==1 & `vacc'Bprob==1 & `vacc'Sprob==1 & card==1 & kept==.
drop kept
bys ident: egen kept=max(`vacc'keep)
*5. if no record identified: keep the first record where the vaccine=yes, birth-date problem=no, schedule problem=no and
healthcard=not seen
replace `vacc'keep=5 if order==1 & `vacc'yn==1 & `vacc'Bprob==0 & `vacc'Sprob==0 & card==2 & kept==.
drop kept
bys ident: egen kept=max(`vacc'keep)
*6. if no record identified: keep the first record where the vaccine=yes, birth-date problem=no, schedule problem=yes and
healthcard=not seen
replace `vacc'keep=6 if order==1 & `vacc'yn==1 & `vacc'Bprob==0 & `vacc'Sprob==1 & card==2 & kept==.
drop kept
bys ident: egen kept=max(`vacc'keep)
*7. if no record identified: keep the first record where the vaccine=yes, birth-date problem=yes, schedule problem=no and
healthcard=not seen
replace `vacc'keep=7 if order==1 & `vacc'yn==1 & `vacc'Bprob==1 & `vacc'Sprob==0 & card==2 & kept==.
drop kept
bys ident: egen kept=max(`vacc'keep)
*8. if no record identified: keep the first record where the vaccine=yes, birth-date problem=yes, schedule problem=yes and
healthcard=not seen
replace `vacc'keep=8 if order==1 & `vacc'yn==1 & `vacc'Bprob==1 & `vacc'Sprob==1 & card==2 & kept==.
drop kept
bys ident: egen kept=max(`vacc'keep)
*9. if no record identified: keep the LAST record where the vaccine is recorded as no (regardless whether healthcard seen or
not)
replace `vacc'keep=9 if Norder==Ntotal & `vacc'yn==0 & kept==.
la val `vacc'keep vacckkeep
drop kept

```

## **P3SPROB: Problem with polio3 date (schedule issue) (D)**

**Data file:** vacc\_data\_selected\_BEST

### **Overview**

Valid: 21191    Invalid: 4848

Type: Discrete    Decimal: 0    Width: 1    Range: 0 - 1    Format: Numeric

### **Description**

#### **DEFINITION**

Problem with polio3 date (schedule issue)

### **Imputation and derivation**

#### **DERIVATION**

variable: p3date (table[s]: all\_vaccination\_records [derived table])

variable: birth\_date (table[s]: all\_vaccination\_records [derived table])

\*for DPT3, DPTHH3, PCV3 and P3: problem if vacc date is less than 3 weeks, or more than 6 weeks after second dose (supposed to be 1 month after second dose)

if "`vacc'"=="p3" replace `vacc'Sprob=1 if (p3date<birth\_date | p3date-p2date<21 | p3date-p2date>42 | p2date==.) & p3date~= . & birth\_date~=.

## P3FYINTDATE: First interview date when reported had polio4 (D)

**Data file:** vacc\_data\_selected\_BEST

### Overview

Valid: 20072

Type: Discrete    Width: 10    Range: -    Format: character

### Description

#### DEFINITION

First interview date when reported had polio4

### Imputation and derivation

#### DERIVATION

variable: p3intdate (table[s]: all\_vaccination\_records [derived table])

variable: p3yn (table[s]: all\_vaccination\_records [derived table])

\*calculate first interview date where card seen and vaccine recorded as yes

bys ident: egen tempC=min(`vacc'intdate) if card==1 & `vacc'yn==1

bys ident: egen tempNC=min(`vacc'intdate) if card==2 & `vacc'yn==1

bys ident: egen `vacc'fyintdate=min(tempC)

bys ident: egen tempNCd=min(tempNC)

replace `vacc'fyintdate=tempNCd if `vacc'fyintdate==. & tempNCd~=.

## P3KEEP: Completeness of kept polio3 report (D)

**Data file:** vacc\_data\_selected\_BEST

### Overview

Valid: 21191    Invalid: 4848

Type: Discrete    Decimal: 0    Width: 1    Range: 1 - 9    Format: Numeric

### Questions and instructions

#### CATEGORIES

| Value | Category                               | Cases |       |
|-------|----------------------------------------|-------|-------|
| 1     | vacc=y, date ok, card seen             | 10455 | 49.3% |
| 2     | vacc=y, date NOT ok (S), card seen     | 6439  | 30.4% |
| 3     | vacc=y, date NOT ok (B), card seen     | 1157  | 5.5%  |
| 4     | vacc=y, date NOT ok (S&B), card seen   | 92    | 0.4%  |
| 5     | vacc=y, date ok, card NOT seen         | 72    | 0.3%  |
| 6     | vacc=y, date NOT ok (S), card NOT seen | 56    | 0.3%  |

|         |                                          |      |      |
|---------|------------------------------------------|------|------|
| 7       | vacc=y, date NOT ok (B), card NOT seen   | 1801 | 8.5% |
| 8       | vacc=y, date NOT ok (S&B), card NOT seen | 0    | 0%   |
| 9       | last report of vacc=n                    | 1119 | 5.3% |
| Sysmiss |                                          | 4848 |      |

## Description

### DEFINITION

Completeness of kept polio3 report

## Imputation and derivation

### DERIVATION

variable: p3keep (table[s]: all\_vaccination\_records [derived table])

```

la def vacckep 1 "vacc=y, date ok, card seen" 2 "vacc=y, date NOT ok (S), card seen" 3 "vacc=y, date NOT ok (B), card
seen" 4 "vacc=y, date NOT ok (S&B), card seen" 5 "vacc=y, date ok, card NOT seen" 6 "vacc=y, date NOT ok (S), card NOT
seen" 7 "vacc=y, date NOT ok (B), card NOT seen" 8 "vacc=y, date NOT ok (S&B), card NOT seen" 9 "last report of vacc=n"
*1. keep the first record where the vaccine=yes, birth-date problem=no, schedule problem=no and healthcard=seen
gen `vacc'keep=1 if order==1 & `vacc'yn==1 & `vacc'Bprob==0 & `vacc'Sprob==0 & card==1
bys ident: egen kept=max(`vacc'keep)
*2. if no record identified: keep the first record where the vaccine=yes, birth-date problem=no, schedule problem=yes and
healthcard=seen
replace `vacc'keep=2 if order==1 & `vacc'yn==1 & `vacc'Bprob==0 & `vacc'Sprob==1 & card==1 & kept==.
drop kept
bys ident: egen kept=max(`vacc'keep)
*3. if no record identified: keep the first record where the vaccine=yes, birth-date problem=yes, schedule problem=no and
healthcard=seen
replace `vacc'keep=3 if order==1 & `vacc'yn==1 & `vacc'Bprob==1 & `vacc'Sprob==0 & card==1 & kept==.
drop kept
bys ident: egen kept=max(`vacc'keep)
*4. if no record identified: keep the first record where the vaccine=yes, birth-date problem=yes, schedule problem=yes and
healthcard=seen
replace `vacc'keep=4 if order==1 & `vacc'yn==1 & `vacc'Bprob==1 & `vacc'Sprob==1 & card==1 & kept==.
drop kept
bys ident: egen kept=max(`vacc'keep)
*5. if no record identified: keep the first record where the vaccine=yes, birth-date problem=no, schedule problem=no and
healthcard=not seen
replace `vacc'keep=5 if order==1 & `vacc'yn==1 & `vacc'Bprob==0 & `vacc'Sprob==0 & card==2 & kept==.
drop kept
bys ident: egen kept=max(`vacc'keep)
*6. if no record identified: keep the first record where the vaccine=yes, birth-date problem=no, schedule problem=yes and
healthcard=not seen
replace `vacc'keep=6 if order==1 & `vacc'yn==1 & `vacc'Bprob==0 & `vacc'Sprob==1 & card==2 & kept==.
drop kept
bys ident: egen kept=max(`vacc'keep)
*7. if no record identified: keep the first record where the vaccine=yes, birth-date problem=yes, schedule problem=no and
healthcard=not seen
replace `vacc'keep=7 if order==1 & `vacc'yn==1 & `vacc'Bprob==1 & `vacc'Sprob==0 & card==2 & kept==.
drop kept
bys ident: egen kept=max(`vacc'keep)
*8. if no record identified: keep the first record where the vaccine=yes, birth-date problem=yes, schedule problem=yes and
healthcard=not seen
replace `vacc'keep=8 if order==1 & `vacc'yn==1 & `vacc'Bprob==1 & `vacc'Sprob==1 & card==2 & kept==.
drop kept
bys ident: egen kept=max(`vacc'keep)

```

\*9. if no record identified: keep the LAST record where the vaccine is recorded as no (regardless whether healthcard seen or not)  
 replace `vacc'keep=9 if Norder==Ntotal & `vacc'yn==0 & kept==.  
 la val `vacc'keep vacckep  
 drop kept

## PCV1INTDATE: Interview date for PCV1 report (D)

**Data file:** vacc\_data\_selected\_BEST

### Overview

Valid: 12655  
 Type: Discrete    Width: 10    Range: -    Format: character

### Description

#### DEFINITION

Interview date for PCV1 report

### Imputation and derivation

#### DERIVATION

variable: intdate (table[s]: all\_vaccination\_records [derived table])

## PCV1CARDSEEN: Whether health record seen for PCV1 report (D)

**Data file:** vacc\_data\_selected\_BEST

### Overview

Valid: 12536    Invalid: 13503  
 Type: Discrete    Decimal: 0    Width: 1    Range: 0 - 9    Format: Numeric

### Questions and instructions

#### CATEGORIES

| Value   | Category       | Cases |       |
|---------|----------------|-------|-------|
| 0       | No             | 2477  | 19.8% |
| 1       | Yes            | 10059 | 80.2% |
| 7       | Not applicable | 0     | 0%    |
| 8       | Unknown        | 0     | 0%    |
| 9       | Missing        | 0     |       |
| Sysmiss |                | 13503 |       |

### Description

#### DEFINITION

Whether health record seen for PCV1 report

## Imputation and derivation

### DERIVATION

variable: cardseen (table[s]: all\_vaccination\_records [derived table])

## PCV1SOURCE: Source for PCV1 report (D)

Data file: vacc\_data\_selected\_BEST

### Overview

Valid: 12655 Invalid: 13384

Type: Discrete Decimal: 0 Width: 1 Range: 1 - 8 Format: Numeric

## Questions and instructions

### CATEGORIES

| Value   | Category    | Cases |       |
|---------|-------------|-------|-------|
| 1       | crs_birth   | 1585  | 12.5% |
| 2       | cen_individ | 0     | 0%    |
| 3       | crs_cenm    | 0     | 0%    |
| 4       | crs_bfup    | 0     | 0%    |
| 5       | css_sei     | 8825  | 69.7% |
| 6       | ves_vese    | 1536  | 12.1% |
| 7       | tmt_tmtv    | 476   | 3.8%  |
| 8       | gp_va       | 233   | 1.8%  |
| Sysmiss |             | 13384 |       |

## Description

### DEFINITION

Source for PCV1 report

## Imputation and derivation

### DERIVATION

variable: source (table[s]: all\_vaccination\_records [derived table])

## PCV1YN: Had PCV1 vaccination (D)

Data file: vacc\_data\_selected\_BEST

## Overview

Valid: 12655    Invalid: 13384  
 Type: Discrete    Decimal: 0    Width: 1    Range: 0 - 9    Format: Numeric

## Questions and instructions

### CATEGORIES

| Value   | Category       | Cases |       |
|---------|----------------|-------|-------|
| 0       | No             | 3530  | 27.9% |
| 1       | Yes            | 9125  | 72.1% |
| 7       | Not applicable | 0     | 0%    |
| 8       | Unknown        | 0     | 0%    |
| 9       | Missing        | 0     |       |
| Sysmiss |                | 13384 |       |

## Description

### DEFINITION

Had PCV1 vaccination

## Imputation and derivation

### DERIVATION

variable: pcv1yn (table[s]: all\_vaccination\_records [derived table])

## PCV1YR: Year of PCV1 vaccination (D)

Data file: vacc\_data\_selected\_BEST

## Overview

Valid: 7458    Invalid: 18581  
 Type: Continuous    Decimal: 0    Width: 4    Range: 1900 - 2020    Format: Numeric

## Description

### DEFINITION

Year of PCV1 vaccination

## Imputation and derivation

### DERIVATION

variable: pcv1yr (table[s]: all\_vaccination\_records [derived table])

**PCV1DATE: Date of PCV1 vaccination (D)****Data file:** vacc\_data\_selected\_BEST**Overview**

Valid: 7457

Type: Discrete    Width: 10    Range: -    Format: character

**Description**

## DEFINITION

Date of PCV1 vaccination

**Imputation and derivation**

## DERIVATION

variable: pcv1date (table[s]: all\_vaccination\_records [derived table])

**PCV1DAYEST: Date of PCV1 vaccination is estimated (D)****Data file:** vacc\_data\_selected\_BEST**Overview**

Valid: 3    Invalid: 26036

Type: Discrete    Decimal: 0    Width: 1    Range: 1 - 1    Format: Numeric

**Description**

## DEFINITION

Date of PCV1 vaccination is estimated

**Imputation and derivation**

## DERIVATION

variable: pcv1dayest (table[s]: all\_vaccination\_records [derived table])

**PCV1VC: Health centre of PCV1 vaccination (D)****Data file:** vacc\_data\_selected\_BEST**Overview**

Valid: 8835    Invalid: 17204

Type: Continuous    Decimal: 0    Width: 6    Range: 10000 - 999999    Format: Numeric

**Description**

## DEFINITION

Health centre of PCV1 vaccination

## Imputation and derivation

---

### DERIVATION

variable: pcv1vc (table[s]: all\_vaccination\_records [derived table])

---

## PCV1BPROB: Problem with PCV1 date (missing or before DOB) (D)

Data file: vacc\_data\_selected\_BEST

### Overview

Valid: 12655 Invalid: 13384

Type: Discrete Decimal: 0 Width: 1 Range: 0 - 1 Format: Numeric

### Description

---

### DEFINITION

Problem with PCV1 date (missing or before DOB)

## Imputation and derivation

---

### DERIVATION

variable: pcv1date (table[s]: all\_vaccination\_records [derived table])

variable: birth\_date (table[s]: all\_vaccination\_records [derived table])

gen `vacc'Bprob=0

replace `vacc'Bprob=1 if (`vacc'date<birth\_date & `vacc'date~=. & birth\_date~=. ) | (`vacc'date==. & `vacc'yn==1)

---

## PCV1SPROB: Problem with PCV1 date (schedule issue) (D)

Data file: vacc\_data\_selected\_BEST

### Overview

Valid: 12655 Invalid: 13384

Type: Discrete Decimal: 0 Width: 1 Range: 0 - 1 Format: Numeric

### Description

---

### DEFINITION

Problem with PCV1 date (schedule issue)

## Imputation and derivation

---

### DERIVATION

variable: pcv1date (table[s]: all\_vaccination\_records [derived table])

variable: birth\_date (table[s]: all\_vaccination\_records [derived table])

\*for DPT1, HH1, PCV1, RV1 and P1: problem if vacc date is less than 5 weeks, or more than 10 weeks after birthdate (supposed to be at 6 weeks or later)

if "`vacc'"=="pcv1" replace `vacc'Sprob=1 if (pcv1date-birth\_date<35 | pcv1date-birth\_date>70) & pcv1date~=. & birth\_date~=.

## PCV1FYINTDATE: First interview date when reported had PCV2 (D)

**Data file:** vacc\_data\_selected\_BEST

### Overview

Valid: 9125

Type: Discrete    Width: 10    Range: -    Format: character

### Description

#### DEFINITION

First interview date when reported had PCV2

### Imputation and derivation

#### DERIVATION

variable: pcv1intdate (table[s]: all\_vaccination\_records [derived table])

variable: pcv1yn (table[s]: all\_vaccination\_records [derived table])

\*calculate first interview date where card seen and vaccine recorded as yes

bys ident: egen tempC=min(`vacc'intdate) if card==1 & `vacc'yn==1

bys ident: egen tempNC=min(`vacc'intdate) if card==2 & `vacc'yn==1

bys ident: egen `vacc'fyintdate=min(tempC)

bys ident: egen tempNCd=min(tempNC)

replace `vacc'fyintdate=tempNCd if `vacc'fyintdate==. & tempNCd~=.

## PCV1KEEP: Completeness of kept PCV1 report (D)

**Data file:** vacc\_data\_selected\_BEST

### Overview

Valid: 12655    Invalid: 13384

Type: Discrete    Decimal: 0    Width: 1    Range: 1 - 9    Format: Numeric

### Questions and instructions

#### CATEGORIES

| Value | Category                               | Cases |       |
|-------|----------------------------------------|-------|-------|
| 1     | vacc=y, date ok, card seen             | 4952  | 39.1% |
| 2     | vacc=y, date NOT ok (S), card seen     | 2445  | 19.3% |
| 3     | vacc=y, date NOT ok (B), card seen     | 436   | 3.4%  |
| 4     | vacc=y, date NOT ok (S&B), card seen   | 38    | 0.3%  |
| 5     | vacc=y, date ok, card NOT seen         | 11    | 0.1%  |
| 6     | vacc=y, date NOT ok (S), card NOT seen | 11    | 0.1%  |

|         |                                          |       |       |
|---------|------------------------------------------|-------|-------|
| 7       | vacc=y, date NOT ok (B), card NOT seen   | 1232  | 9.7%  |
| 8       | vacc=y, date NOT ok (S&B), card NOT seen | 0     | 0%    |
| 9       | last report of vacc=n                    | 3530  | 27.9% |
| Sysmiss |                                          | 13384 |       |

## Description

### DEFINITION

Completeness of kept PCV1 report

## Imputation and derivation

### DERIVATION

variable: pcv1keep (table[s]: all\_vaccination\_records [derived table])

```

la def vacckep 1 "vacc=y, date ok, card seen" 2 "vacc=y, date NOT ok (S), card seen" 3 "vacc=y, date NOT ok (B), card
seen" 4 "vacc=y, date NOT ok (S&B), card seen" 5 "vacc=y, date ok, card NOT seen" 6 "vacc=y, date NOT ok (S), card NOT
seen" 7 "vacc=y, date NOT ok (B), card NOT seen" 8 "vacc=y, date NOT ok (S&B), card NOT seen" 9 "last report of vacc=n"
*1. keep the first record where the vaccine=yes, birth-date problem=no, schedule problem=no and healthcard=seen
gen `vacc'keep=1 if order==1 & `vacc'yn==1 & `vacc'Bprob==0 & `vacc'Sprob==0 & card==1
bys ident: egen kept=max(`vacc'keep)
*2. if no record identified: keep the first record where the vaccine=yes, birth-date problem=no, schedule problem=yes and
healthcard=seen
replace `vacc'keep=2 if order==1 & `vacc'yn==1 & `vacc'Bprob==0 & `vacc'Sprob==1 & card==1 & kept==.
drop kept
bys ident: egen kept=max(`vacc'keep)
*3. if no record identified: keep the first record where the vaccine=yes, birth-date problem=yes, schedule problem=no and
healthcard=seen
replace `vacc'keep=3 if order==1 & `vacc'yn==1 & `vacc'Bprob==1 & `vacc'Sprob==0 & card==1 & kept==.
drop kept
bys ident: egen kept=max(`vacc'keep)
*4. if no record identified: keep the first record where the vaccine=yes, birth-date problem=yes, schedule problem=yes and
healthcard=seen
replace `vacc'keep=4 if order==1 & `vacc'yn==1 & `vacc'Bprob==1 & `vacc'Sprob==1 & card==1 & kept==.
drop kept
bys ident: egen kept=max(`vacc'keep)
*5. if no record identified: keep the first record where the vaccine=yes, birth-date problem=no, schedule problem=no and
healthcard=not seen
replace `vacc'keep=5 if order==1 & `vacc'yn==1 & `vacc'Bprob==0 & `vacc'Sprob==0 & card==2 & kept==.
drop kept
bys ident: egen kept=max(`vacc'keep)
*6. if no record identified: keep the first record where the vaccine=yes, birth-date problem=no, schedule problem=yes and
healthcard=not seen
replace `vacc'keep=6 if order==1 & `vacc'yn==1 & `vacc'Bprob==0 & `vacc'Sprob==1 & card==2 & kept==.
drop kept
bys ident: egen kept=max(`vacc'keep)
*7. if no record identified: keep the first record where the vaccine=yes, birth-date problem=yes, schedule problem=no and
healthcard=not seen
replace `vacc'keep=7 if order==1 & `vacc'yn==1 & `vacc'Bprob==1 & `vacc'Sprob==0 & card==2 & kept==.
drop kept
bys ident: egen kept=max(`vacc'keep)
*8. if no record identified: keep the first record where the vaccine=yes, birth-date problem=yes, schedule problem=yes and
healthcard=not seen
replace `vacc'keep=8 if order==1 & `vacc'yn==1 & `vacc'Bprob==1 & `vacc'Sprob==1 & card==2 & kept==.
drop kept
bys ident: egen kept=max(`vacc'keep)

```

\*9. if no record identified: keep the LAST record where the vaccine is recorded as no (regardless whether healthcard seen or not)  
 replace `vacc'keep=9 if Norder==Ntotal & `vacc'yn==0 & kept==.  
 la val `vacc'keep vacckep  
 drop kept

## PCV2INTDATE: Interview date for PCV2 report (D)

**Data file:** vacc\_data\_selected\_BEST

### Overview

Valid: 12162  
 Type: Discrete    Width: 10    Range: -    Format: character

### Description

#### DEFINITION

Interview date for PCV2 report

### Imputation and derivation

#### DERIVATION

variable: intdate (table[s]: all\_vaccination\_records [derived table])

## PCV2CARDSEEN: Whether health record seen for PCV2 report (D)

**Data file:** vacc\_data\_selected\_BEST

### Overview

Valid: 12038    Invalid: 14001  
 Type: Discrete    Decimal: 0    Width: 1    Range: 0 - 9    Format: Numeric

### Questions and instructions

#### CATEGORIES

| Value   | Category       | Cases |       |
|---------|----------------|-------|-------|
| 0       | No             | 2589  | 21.5% |
| 1       | Yes            | 9449  | 78.5% |
| 7       | Not applicable | 0     | 0%    |
| 8       | Unknown        | 0     | 0%    |
| 9       | Missing        | 0     |       |
| Sysmiss |                | 14001 |       |

### Description

#### DEFINITION

Whether health record seen for PCV2 report

## Imputation and derivation

### DERIVATION

variable: cardseen (table[s]: all\_vaccination\_records [derived table])

## PCV2SOURCE: Source for PCV2 report (D)

Data file: vacc\_data\_selected\_BEST

### Overview

Valid: 12162 Invalid: 13877

Type: Discrete Decimal: 0 Width: 1 Range: 1 - 8 Format: Numeric

### Questions and instructions

#### CATEGORIES

| Value   | Category    | Cases |      |
|---------|-------------|-------|------|
| 1       | crs_birth   | 735   | 6%   |
| 2       | cen_individ | 0     | 0%   |
| 3       | crs_cenm    | 0     | 0%   |
| 4       | crs_bfup    | 0     | 0%   |
| 5       | css_sei     | 9238  | 76%  |
| 6       | ves_vese    | 1458  | 12%  |
| 7       | tmt_tmtv    | 497   | 4.1% |
| 8       | gp_va       | 234   | 1.9% |
| Sysmiss |             | 13877 |      |

### Description

#### DEFINITION

Source for PCV2 report

## Imputation and derivation

### DERIVATION

variable: source (table[s]: all\_vaccination\_records [derived table])

## PCV2YN: Had PCV2 vaccination (D)

Data file: vacc\_data\_selected\_BEST

## Overview

Valid: 12162 Invalid: 13877

Type: Discrete Decimal: 0 Width: 1 Range: 0 - 9 Format: Numeric

## Questions and instructions

### CATEGORIES

| Value   | Category       | Cases |       |
|---------|----------------|-------|-------|
| 0       | No             | 3755  | 30.9% |
| 1       | Yes            | 8407  | 69.1% |
| 7       | Not applicable | 0     | 0%    |
| 8       | Unknown        | 0     | 0%    |
| 9       | Missing        | 0     |       |
| Sysmiss |                | 13877 |       |

## Description

### DEFINITION

Had PCV2 vaccination

## Imputation and derivation

### DERIVATION

variable: pcv2yn (table[s]: all\_vaccination\_records [derived table])

## PCV2YR: Year of PCV2 vaccination (D)

Data file: vacc\_data\_selected\_BEST

## Overview

Valid: 6596 Invalid: 19443

Type: Discrete Decimal: 0 Width: 4 Range: 2008 - 2020 Format: Numeric

## Description

### DEFINITION

Year of PCV2 vaccination

## Imputation and derivation

### DERIVATION

variable: pcv2yr (table[s]: all\_vaccination\_records [derived table])

**PCV2DATE: Date of PCV2 vaccination (D)****Data file:** vacc\_data\_selected\_BEST**Overview**

Valid: 6594

Type: Discrete    Width: 10    Range: -    Format: character

**Description**

## DEFINITION

Date of PCV2 vaccination

**Imputation and derivation**

## DERIVATION

variable: pcv2date (table[s]: all\_vaccination\_records [derived table])

**PCV2DAYEST: Date of PCV2 vaccination is estimated (D)****Data file:** vacc\_data\_selected\_BEST**Overview**

Valid: 2    Invalid: 26037

Type: Discrete    Decimal: 0    Width: 1    Range: 1 - 1    Format: Numeric

**Description**

## DEFINITION

Date of PCV2 vaccination is estimated

**Imputation and derivation**

## DERIVATION

variable: pcv2dayest (table[s]: all\_vaccination\_records [derived table])

**PCV2VC: Health centre of PCV2 vaccination (D)****Data file:** vacc\_data\_selected\_BEST**Overview**

Valid: 8143    Invalid: 17896

Type: Continuous    Decimal: 0    Width: 6    Range: 10000 - 999999    Format: Numeric

**Description**

## DEFINITION

Health centre of PCV2 vaccination

## Imputation and derivation

---

### DERIVATION

variable: pcv2vc (table[s]: all\_vaccination\_records [derived table])

---

## PCV2BPROB: Problem with PCV2 date (missing or before DOB) (D)

Data file: vacc\_data\_selected\_BEST

### Overview

Valid: 12162 Invalid: 13877

Type: Discrete Decimal: 0 Width: 1 Range: 0 - 1 Format: Numeric

### Description

---

### DEFINITION

Problem with PCV2 date (missing or before DOB)

## Imputation and derivation

---

### DERIVATION

variable: pcv2date (table[s]: all\_vaccination\_records [derived table])

variable: birth\_date (table[s]: all\_vaccination\_records [derived table])

gen `vacc'Bprob=0

replace `vacc'Bprob=1 if (`vacc'date<birth\_date & `vacc'date~=. & birth\_date~=. ) | (`vacc'date==. & `vacc'yn==1)

---

## PCV2SPROB: Problem with PCV2 date (schedule issue) (D)

Data file: vacc\_data\_selected\_BEST

### Overview

Valid: 12162 Invalid: 13877

Type: Discrete Decimal: 0 Width: 1 Range: 0 - 1 Format: Numeric

### Description

---

### DEFINITION

Problem with PCV2 date (schedule issue)

## Imputation and derivation

---

### DERIVATION

variable: pcv2date (table[s]: all\_vaccination\_records [derived table])

variable: birth\_date (table[s]: all\_vaccination\_records [derived table])

\*for DPT2, HH2, PCV2, RV2 and P2: problem if vacc date is less than 3 weeks, or more than 6 weeks after first dose (supposed to be 1 month after first dose)

```
if "`vacc'"=="pcv2" replace `vacc'Sprob=1 if (pcv2date-pcv1date<21 | pcv2date-pcv1date>42 | pcv1date==.) &
pcv2date~=. & birth_date~=.
```

## PCV2FYINTDATE: First interview date when reported had PCV3 (D)

**Data file:** vacc\_data\_selected\_BEST

### Overview

Valid: 8407

Type: Discrete    Width: 10    Range: -    Format: character

### Description

#### DEFINITION

First interview date when reported had PCV3

### Imputation and derivation

#### DERIVATION

variable: pcv2intdate (table[s]: all\_vaccination\_records [derived table])

variable: pcv2yn (table[s]: all\_vaccination\_records [derived table])

\*calculate first interview date where card seen and vaccine recorded as yes

bys ident: egen tempC=min(`vacc'intdate) if card==1 & `vacc'yn==1

bys ident: egen tempNC=min(`vacc'intdate) if card==2 & `vacc'yn==1

bys ident: egen `vacc'fyintdate=min(tempC)

bys ident: egen tempNCd=min(tempNC)

replace `vacc'fyintdate=tempNCd if `vacc'fyintdate==. & tempNCd~=.

## PCV2KEEP: Completeness of kept PCV2 report (D)

**Data file:** vacc\_data\_selected\_BEST

### Overview

Valid: 12162    Invalid: 13877

Type: Discrete    Decimal: 0    Width: 1    Range: 1 - 9    Format: Numeric

### Questions and instructions

#### CATEGORIES

| Value | Category                               | Cases |       |
|-------|----------------------------------------|-------|-------|
| 1     | vacc=y, date ok, card seen             | 4519  | 37.2% |
| 2     | vacc=y, date NOT ok (S), card seen     | 2023  | 16.6% |
| 3     | vacc=y, date NOT ok (B), card seen     | 508   | 4.2%  |
| 4     | vacc=y, date NOT ok (S&B), card seen   | 10    | 0.1%  |
| 5     | vacc=y, date ok, card NOT seen         | 12    | 0.1%  |
| 6     | vacc=y, date NOT ok (S), card NOT seen | 11    | 0.1%  |

|         |                                          |       |       |
|---------|------------------------------------------|-------|-------|
| 7       | vacc=y, date NOT ok (B), card NOT seen   | 1324  | 10.9% |
| 8       | vacc=y, date NOT ok (S&B), card NOT seen | 0     | 0%    |
| 9       | last report of vacc=n                    | 3755  | 30.9% |
| Sysmiss |                                          | 13877 |       |

## Description

### DEFINITION

Completeness of kept PCV2 report

## Imputation and derivation

### DERIVATION

variable: pcv2keep (table[s]: all\_vaccination\_records [derived table])

```

la def vacckep 1 "vacc=y, date ok, card seen" 2 "vacc=y, date NOT ok (S), card seen" 3 "vacc=y, date NOT ok (B), card
seen" 4 "vacc=y, date NOT ok (S&B), card seen" 5 "vacc=y, date ok, card NOT seen" 6 "vacc=y, date NOT ok (S), card NOT
seen" 7 "vacc=y, date NOT ok (B), card NOT seen" 8 "vacc=y, date NOT ok (S&B), card NOT seen" 9 "last report of vacc=n"
*1. keep the first record where the vaccine=yes, birth-date problem=no, schedule problem=no and healthcard=seen
gen `vacc'keep=1 if order==1 & `vacc'yn==1 & `vacc'Bprob==0 & `vacc'Sprob==0 & card==1
bys ident: egen kept=max(`vacc'keep)
*2. if no record identified: keep the first record where the vaccine=yes, birth-date problem=no, schedule problem=yes and
healthcard=seen
replace `vacc'keep=2 if order==1 & `vacc'yn==1 & `vacc'Bprob==0 & `vacc'Sprob==1 & card==1 & kept==.
drop kept
bys ident: egen kept=max(`vacc'keep)
*3. if no record identified: keep the first record where the vaccine=yes, birth-date problem=yes, schedule problem=no and
healthcard=seen
replace `vacc'keep=3 if order==1 & `vacc'yn==1 & `vacc'Bprob==1 & `vacc'Sprob==0 & card==1 & kept==.
drop kept
bys ident: egen kept=max(`vacc'keep)
*4. if no record identified: keep the first record where the vaccine=yes, birth-date problem=yes, schedule problem=yes and
healthcard=seen
replace `vacc'keep=4 if order==1 & `vacc'yn==1 & `vacc'Bprob==1 & `vacc'Sprob==1 & card==1 & kept==.
drop kept
bys ident: egen kept=max(`vacc'keep)
*5. if no record identified: keep the first record where the vaccine=yes, birth-date problem=no, schedule problem=no and
healthcard=not seen
replace `vacc'keep=5 if order==1 & `vacc'yn==1 & `vacc'Bprob==0 & `vacc'Sprob==0 & card==2 & kept==.
drop kept
bys ident: egen kept=max(`vacc'keep)
*6. if no record identified: keep the first record where the vaccine=yes, birth-date problem=no, schedule problem=yes and
healthcard=not seen
replace `vacc'keep=6 if order==1 & `vacc'yn==1 & `vacc'Bprob==0 & `vacc'Sprob==1 & card==2 & kept==.
drop kept
bys ident: egen kept=max(`vacc'keep)
*7. if no record identified: keep the first record where the vaccine=yes, birth-date problem=yes, schedule problem=no and
healthcard=not seen
replace `vacc'keep=7 if order==1 & `vacc'yn==1 & `vacc'Bprob==1 & `vacc'Sprob==0 & card==2 & kept==.
drop kept
bys ident: egen kept=max(`vacc'keep)
*8. if no record identified: keep the first record where the vaccine=yes, birth-date problem=yes, schedule problem=yes and
healthcard=not seen
replace `vacc'keep=8 if order==1 & `vacc'yn==1 & `vacc'Bprob==1 & `vacc'Sprob==1 & card==2 & kept==.
drop kept
bys ident: egen kept=max(`vacc'keep)

```

\*9. if no record identified: keep the LAST record where the vaccine is recorded as no (regardless whether healthcard seen or not)  
 replace `vacc'keep=9 if Norder==Ntotal & `vacc'yn==0 & kept==.  
 la val `vacc'keep vacckep  
 drop kept

## PCV3INTDATE: Interview date for PCV3 report (D)

**Data file:** vacc\_data\_selected\_BEST

### Overview

Valid: 11981  
 Type: Discrete    Width: 10    Range: -    Format: character

### Description

#### DEFINITION

Interview date for PCV3 report

### Imputation and derivation

#### DERIVATION

variable: intdate (table[s]: all\_vaccination\_records [derived table])

## PCV3CARDSEEN: Whether health record seen for PCV3 report (D)

**Data file:** vacc\_data\_selected\_BEST

### Overview

Valid: 11847    Invalid: 14192  
 Type: Discrete    Decimal: 0    Width: 1    Range: 0 - 9    Format: Numeric

### Questions and instructions

#### CATEGORIES

| Value   | Category       | Cases |       |
|---------|----------------|-------|-------|
| 0       | No             | 2717  | 22.9% |
| 1       | Yes            | 9130  | 77.1% |
| 7       | Not applicable | 0     | 0%    |
| 8       | Unknown        | 0     | 0%    |
| 9       | Missing        | 0     |       |
| Sysmiss |                | 14192 |       |

### Description

#### DEFINITION

Whether health record seen for PCV3 report

## Imputation and derivation

### DERIVATION

variable: cardseen (table[s]: all\_vaccination\_records [derived table])

## PCV3SOURCE: Source for PCV3 report (D)

Data file: vacc\_data\_selected\_BEST

### Overview

Valid: 11981 Invalid: 14058

Type: Discrete Decimal: 0 Width: 1 Range: 1 - 8 Format: Numeric

### Questions and instructions

#### CATEGORIES

| Value   | Category    | Cases |       |
|---------|-------------|-------|-------|
| 1       | crs_birth   | 407   | 3.4%  |
| 2       | cen_individ | 0     | 0%    |
| 3       | crs_cenm    | 0     | 0%    |
| 4       | crs_bfup    | 0     | 0%    |
| 5       | css_sei     | 9522  | 79.5% |
| 6       | ves_vese    | 1337  | 11.2% |
| 7       | tmt_tmtv    | 475   | 4%    |
| 8       | gp_va       | 240   | 2%    |
| Sysmiss |             | 14058 |       |

### Description

#### DEFINITION

Source for PCV3 report

## Imputation and derivation

### DERIVATION

variable: source (table[s]: all\_vaccination\_records [derived table])

## PCV3YN: Had PCV3 vaccination (D)

Data file: vacc\_data\_selected\_BEST

## Overview

Valid: 11981    Invalid: 14058  
 Type: Discrete    Decimal: 0    Width: 1    Range: 0 - 9    Format: Numeric

## Questions and instructions

### CATEGORIES

| Value   | Category       | Cases |       |
|---------|----------------|-------|-------|
| 0       | No             | 4055  | 33.8% |
| 1       | Yes            | 7926  | 66.2% |
| 7       | Not applicable | 0     | 0%    |
| 8       | Unknown        | 0     | 0%    |
| 9       | Missing        | 0     |       |
| Sysmiss |                | 14058 |       |

## Description

### DEFINITION

Had PCV3 vaccination

## Imputation and derivation

### DERIVATION

variable: pcv3yn (table[s]: all\_vaccination\_records [derived table])

## PCV3YR: Year of PCV3 vaccination (D)

Data file: vacc\_data\_selected\_BEST

## Overview

Valid: 5891    Invalid: 20148  
 Type: Discrete    Decimal: 0    Width: 4    Range: 2009 - 2020    Format: Numeric

## Description

### DEFINITION

Year of PCV3 vaccination

## Imputation and derivation

### DERIVATION

variable: pcv3yr (table[s]: all\_vaccination\_records [derived table])

**PCV3DATE: Date of PCV3 vaccination (D)****Data file:** vacc\_data\_selected\_BEST**Overview**

Valid: 5889

Type: Discrete    Width: 10    Range: -    Format: character

**Description**

## DEFINITION

Date of PCV3 vaccination

**Imputation and derivation**

## DERIVATION

variable: pcv3date (table[s]: all\_vaccination\_records [derived table])

**PCV3DAYEST: Date of PCV3 vaccination is estimated (D)****Data file:** vacc\_data\_selected\_BEST**Overview**

Valid: 0    Invalid: 26039

Type: Discrete    Decimal: 0    Width: 1    Range: -    Format: Numeric

**Description**

## DEFINITION

Date of PCV3 vaccination is estimated

**Imputation and derivation**

## DERIVATION

variable: pcv3dayest (table[s]: all\_vaccination\_records [derived table])

**PCV3VC: Health centre of PCV3 vaccination (D)****Data file:** vacc\_data\_selected\_BEST**Overview**

Valid: 7674    Invalid: 18365

Type: Continuous    Decimal: 0    Width: 6    Range: 10000 - 999999    Format: Numeric

**Description**

## DEFINITION

Health centre of PCV3 vaccination

## Imputation and derivation

---

### DERIVATION

variable: pcv3vc (table[s]: all\_vaccination\_records [derived table])

---

## PCV3BPROB: Problem with PCV3 date (missing or before DOB) (D)

Data file: vacc\_data\_selected\_BEST

### Overview

Valid: 11981 Invalid: 14058

Type: Discrete Decimal: 0 Width: 1 Range: 0 - 1 Format: Numeric

### Description

---

### DEFINITION

Problem with PCV3 date (missing or before DOB)

## Imputation and derivation

---

### DERIVATION

variable: pcv3date (table[s]: all\_vaccination\_records [derived table])

variable: birth\_date (table[s]: all\_vaccination\_records [derived table])

gen `vacc'Bprob=0

replace `vacc'Bprob=1 if (`vacc'date<birth\_date & `vacc'date~=. & birth\_date~=. ) | (`vacc'date==. & `vacc'yn==1)

---

## PCV3SPROB: Problem with PCV3 date (schedule issue) (D)

Data file: vacc\_data\_selected\_BEST

### Overview

Valid: 11981 Invalid: 14058

Type: Discrete Decimal: 0 Width: 1 Range: 0 - 1 Format: Numeric

### Description

---

### DEFINITION

Problem with PCV3 date (schedule issue)

## Imputation and derivation

---

### DERIVATION

variable: pcv3date (table[s]: all\_vaccination\_records [derived table])

variable: birth\_date (table[s]: all\_vaccination\_records [derived table])

\*for DPT3, DPTHH3, PCV3 and P3: problem if vacc date is less than 3 weeks, or more than 6 weeks after second dose (supposed to be 1 month after second dose)

```
if "`vacc'"=="pcv3" replace `vacc'Sprob=1 if (pcv3date<birth_date | pcv3date-pcv2date<21 | pcv3date-pcv2date>42 |
pcv2date==.) & pcv3date~= . & birth_date~=.
```

## PCV3FYINTDATE: First interview date when reported had PCV4 (D)

**Data file:** vacc\_data\_selected\_BEST

### Overview

Valid: 7926

Type: Discrete    Width: 10    Range: -    Format: character

### Description

#### DEFINITION

First interview date when reported had PCV4

### Imputation and derivation

#### DERIVATION

variable: pcv3intdate (table[s]: all\_vaccination\_records [derived table])

variable: pcv3yn (table[s]: all\_vaccination\_records [derived table])

\*calculate first interview date where card seen and vaccine recorded as yes

bys ident: egen tempC=min(`vacc'intdate) if card==1 & `vacc'yn==1

bys ident: egen tempNC=min(`vacc'intdate) if card==2 & `vacc'yn==1

bys ident: egen `vacc'fyintdate=min(tempC)

bys ident: egen tempNCd=min(tempNC)

replace `vacc'fyintdate=tempNCd if `vacc'fyintdate==. & tempNCd~=.

## PCV3KEEP: Completeness of kept PCV3 report (D)

**Data file:** vacc\_data\_selected\_BEST

### Overview

Valid: 11981    Invalid: 14058

Type: Discrete    Decimal: 0    Width: 1    Range: 1 - 9    Format: Numeric

### Questions and instructions

#### CATEGORIES

| Value | Category                               | Cases |       |
|-------|----------------------------------------|-------|-------|
| 1     | vacc=y, date ok, card seen             | 3857  | 32.2% |
| 2     | vacc=y, date NOT ok (S), card seen     | 1983  | 16.6% |
| 3     | vacc=y, date NOT ok (B), card seen     | 593   | 4.9%  |
| 4     | vacc=y, date NOT ok (S&B), card seen   | 29    | 0.2%  |
| 5     | vacc=y, date ok, card NOT seen         | 11    | 0.1%  |
| 6     | vacc=y, date NOT ok (S), card NOT seen | 9     | 0.1%  |

|         |                                          |       |       |
|---------|------------------------------------------|-------|-------|
| 7       | vacc=y, date NOT ok (B), card NOT seen   | 1444  | 12.1% |
| 8       | vacc=y, date NOT ok (S&B), card NOT seen | 0     | 0%    |
| 9       | last report of vacc=n                    | 4055  | 33.8% |
| Sysmiss |                                          | 14058 |       |

## Description

### DEFINITION

Completeness of kept PCV3 report

## Imputation and derivation

### DERIVATION

variable: pcv3keep (table[s]: all\_vaccination\_records [derived table])

```

la def vacckep 1 "vacc=y, date ok, card seen" 2 "vacc=y, date NOT ok (S), card seen" 3 "vacc=y, date NOT ok (B), card
seen" 4 "vacc=y, date NOT ok (S&B), card seen" 5 "vacc=y, date ok, card NOT seen" 6 "vacc=y, date NOT ok (S), card NOT
seen" 7 "vacc=y, date NOT ok (B), card NOT seen" 8 "vacc=y, date NOT ok (S&B), card NOT seen" 9 "last report of vacc=n"
*1. keep the first record where the vaccine=yes, birth-date problem=no, schedule problem=no and healthcard=seen
gen `vacc'keep=1 if order==1 & `vacc'yn==1 & `vacc'Bprob==0 & `vacc'Sprob==0 & card==1
bys ident: egen kept=max(`vacc'keep)
*2. if no record identified: keep the first record where the vaccine=yes, birth-date problem=no, schedule problem=yes and
healthcard=seen
replace `vacc'keep=2 if order==1 & `vacc'yn==1 & `vacc'Bprob==0 & `vacc'Sprob==1 & card==1 & kept==.
drop kept
bys ident: egen kept=max(`vacc'keep)
*3. if no record identified: keep the first record where the vaccine=yes, birth-date problem=yes, schedule problem=no and
healthcard=seen
replace `vacc'keep=3 if order==1 & `vacc'yn==1 & `vacc'Bprob==1 & `vacc'Sprob==0 & card==1 & kept==.
drop kept
bys ident: egen kept=max(`vacc'keep)
*4. if no record identified: keep the first record where the vaccine=yes, birth-date problem=yes, schedule problem=yes and
healthcard=seen
replace `vacc'keep=4 if order==1 & `vacc'yn==1 & `vacc'Bprob==1 & `vacc'Sprob==1 & card==1 & kept==.
drop kept
bys ident: egen kept=max(`vacc'keep)
*5. if no record identified: keep the first record where the vaccine=yes, birth-date problem=no, schedule problem=no and
healthcard=not seen
replace `vacc'keep=5 if order==1 & `vacc'yn==1 & `vacc'Bprob==0 & `vacc'Sprob==0 & card==2 & kept==.
drop kept
bys ident: egen kept=max(`vacc'keep)
*6. if no record identified: keep the first record where the vaccine=yes, birth-date problem=no, schedule problem=yes and
healthcard=not seen
replace `vacc'keep=6 if order==1 & `vacc'yn==1 & `vacc'Bprob==0 & `vacc'Sprob==1 & card==2 & kept==.
drop kept
bys ident: egen kept=max(`vacc'keep)
*7. if no record identified: keep the first record where the vaccine=yes, birth-date problem=yes, schedule problem=no and
healthcard=not seen
replace `vacc'keep=7 if order==1 & `vacc'yn==1 & `vacc'Bprob==1 & `vacc'Sprob==0 & card==2 & kept==.
drop kept
bys ident: egen kept=max(`vacc'keep)
*8. if no record identified: keep the first record where the vaccine=yes, birth-date problem=yes, schedule problem=yes and
healthcard=not seen
replace `vacc'keep=8 if order==1 & `vacc'yn==1 & `vacc'Bprob==1 & `vacc'Sprob==1 & card==2 & kept==.
drop kept
bys ident: egen kept=max(`vacc'keep)

```

\*9. if no record identified: keep the LAST record where the vaccine is recorded as no (regardless whether healthcard seen or not)  
 replace `vacc'keep=9 if Norder==Ntotal & `vacc'yn==0 & kept==.  
 la val `vacc'keep vacckep  
 drop kept

## RV1INTDATE: Interview date for RV1 report (D)

**Data file:** vacc\_data\_selected\_BEST

### Overview

Valid: 12560  
 Type: Discrete    Width: 10    Range: -    Format: character

### Description

#### DEFINITION

Interview date for RV1 report

### Imputation and derivation

#### DERIVATION

variable: intdate (table[s]: all\_vaccination\_records [derived table])

## RV1CARDSEEN: Whether health record seen for RV1 report (D)

**Data file:** vacc\_data\_selected\_BEST

### Overview

Valid: 12395    Invalid: 13644  
 Type: Discrete    Decimal: 0    Width: 1    Range: 0 - 9    Format: Numeric

### Questions and instructions

#### CATEGORIES

| Value   | Category       | Cases |       |
|---------|----------------|-------|-------|
| 0       | No             | 3197  | 25.8% |
| 1       | Yes            | 9198  | 74.2% |
| 7       | Not applicable | 0     | 0%    |
| 8       | Unknown        | 0     | 0%    |
| 9       | Missing        | 0     |       |
| Sysmiss |                | 13644 |       |

### Description

#### DEFINITION

Whether health record seen for RV1 report

## Imputation and derivation

### DERIVATION

variable: cardseen (table[s]: all\_vaccination\_records [derived table])

## RV1SOURCE: Source for RV1 report (D)

Data file: vacc\_data\_selected\_BEST

### Overview

Valid: 12560 Invalid: 13479

Type: Discrete Decimal: 0 Width: 1 Range: 1 - 8 Format: Numeric

### Questions and instructions

#### CATEGORIES

| Value   | Category    | Cases |       |
|---------|-------------|-------|-------|
| 1       | crs_birth   | 1555  | 12.4% |
| 2       | cen_individ | 0     | 0%    |
| 3       | crs_cenm    | 0     | 0%    |
| 4       | crs_bfup    | 0     | 0%    |
| 5       | css_sei     | 9513  | 75.7% |
| 6       | ves_vese    | 933   | 7.4%  |
| 7       | tmt_tmtv    | 320   | 2.5%  |
| 8       | gp_va       | 239   | 1.9%  |
| Sysmiss |             | 13479 |       |

### Description

#### DEFINITION

Source for RV1 report

## Imputation and derivation

### DERIVATION

variable: source (table[s]: all\_vaccination\_records [derived table])

## RV1YN: Had RV1 vaccination (D)

Data file: vacc\_data\_selected\_BEST

## Overview

Valid: 12560    Invalid: 13479  
 Type: Discrete    Decimal: 0    Width: 1    Range: 0 - 9    Format: Numeric

## Questions and instructions

### CATEGORIES

| Value   | Category       | Cases |       |
|---------|----------------|-------|-------|
| 0       | No             | 5053  | 40.2% |
| 1       | Yes            | 7507  | 59.8% |
| 7       | Not applicable | 0     | 0%    |
| 8       | Unknown        | 0     | 0%    |
| 9       | Missing        | 0     |       |
| Sysmiss |                | 13479 |       |

## Description

### DEFINITION

Had RV1 vaccination

## Imputation and derivation

### DERIVATION

variable: rv1yn (table[s]: all\_vaccination\_records [derived table])

## RV1YR: Year of RV1 vaccination (D)

Data file: vacc\_data\_selected\_BEST

## Overview

Valid: 5507    Invalid: 20532  
 Type: Discrete    Decimal: 0    Width: 4    Range: 2009 - 2020    Format: Numeric

## Description

### DEFINITION

Year of RV1 vaccination

## Imputation and derivation

### DERIVATION

variable: rv1yr (table[s]: all\_vaccination\_records [derived table])

**RV1DATE: Date of RV1 vaccination (D)****Data file:** vacc\_data\_selected\_BEST**Overview**

Valid: 5503

Type: Discrete    Width: 10    Range: -    Format: character

**Description**

## DEFINITION

Date of RV1 vaccination

**Imputation and derivation**

## DERIVATION

variable: rv1date (table[s]: all\_vaccination\_records [derived table])

**RV1DAYEST: Date of RV1 vaccination is estimated (D)****Data file:** vacc\_data\_selected\_BEST**Overview**

Valid: 3    Invalid: 26036

Type: Discrete    Decimal: 0    Width: 1    Range: 1 - 1    Format: Numeric

**Description**

## DEFINITION

Date of RV1 vaccination is estimated

**Imputation and derivation**

## DERIVATION

variable: rv1dayest (table[s]: all\_vaccination\_records [derived table])

**RV1VC: Health centre of RV1 vaccination (D)****Data file:** vacc\_data\_selected\_BEST**Overview**

Valid: 7285    Invalid: 18754

Type: Continuous    Decimal: 0    Width: 6    Range: 10000 - 999999    Format: Numeric

**Description**

## DEFINITION

Health centre of RV1 vaccination

## Imputation and derivation

---

### DERIVATION

variable: rv1vc (table[s]: all\_vaccination\_records [derived table])

---

## RV1BPROB: Problem with RV1 date (missing or before DOB) (D)

Data file: vacc\_data\_selected\_BEST

### Overview

Valid: 12560 Invalid: 13479

Type: Discrete Decimal: 0 Width: 1 Range: 0 - 1 Format: Numeric

### Description

---

### DEFINITION

Problem with RV1 date (missing or before DOB)

## Imputation and derivation

---

### DERIVATION

variable: rv1date (table[s]: all\_vaccination\_records [derived table])

variable: birth\_date (table[s]: all\_vaccination\_records [derived table])

gen `vacc'Bprob=0

replace `vacc'Bprob=1 if (`vacc'date<birth\_date & `vacc'date~=. & birth\_date~=. ) | (`vacc'date==. & `vacc'yn==1)

---

## RV1SPROB: Problem with RV1 date (schedule issue) (D)

Data file: vacc\_data\_selected\_BEST

### Overview

Valid: 12560 Invalid: 13479

Type: Discrete Decimal: 0 Width: 1 Range: 0 - 1 Format: Numeric

### Description

---

### DEFINITION

Problem with RV1 date (schedule issue)

## Imputation and derivation

---

### DERIVATION

variable: rv1date (table[s]: all\_vaccination\_records [derived table])

variable: birth\_date (table[s]: all\_vaccination\_records [derived table])

\*for DPT1, HH1, PCV1, RV1 and P1: problem if vacc date is less than 5 weeks, or more than 10 weeks after birthdate (supposed to be at 6 weeks or later)

if "`vacc'"=="rv1" replace `vacc'Sprob=1 if (rv1date-birth\_date<35 | rv1date-birth\_date>70) & rv1date~=. & birth\_date~=.

## RV1FYINTDATE: First interview date when reported had RV2 (D)

Data file: vacc\_data\_selected\_BEST

### Overview

Valid: 7507

Type: Discrete Width: 10 Range: - Format: character

### Description

#### DEFINITION

First interview date when reported had RV2

### Imputation and derivation

#### DERIVATION

variable: rv1intdate (table[s]: all\_vaccination\_records [derived table])

variable: rv1yn (table[s]: all\_vaccination\_records [derived table])

\*calculate first interview date where card seen and vaccine recorded as yes

bys ident: egen tempC=min(`vacc'intdate) if card==1 & `vacc'yn==1

bys ident: egen tempNC=min(`vacc'intdate) if card==2 & `vacc'yn==1

bys ident: egen `vacc'fyintdate=min(tempC)

bys ident: egen tempNCd=min(tempNC)

replace `vacc'fyintdate=tempNCd if `vacc'fyintdate==. & tempNCd~=.

## RV1KEEP: Completeness of kept RV1 report (D)

Data file: vacc\_data\_selected\_BEST

### Overview

Valid: 12560 Invalid: 13479

Type: Discrete Decimal: 0 Width: 1 Range: 1 - 9 Format: Numeric

### Questions and instructions

#### CATEGORIES

| Value | Category                               | Cases |       |
|-------|----------------------------------------|-------|-------|
| 1     | vacc=y, date ok, card seen             | 3926  | 31.3% |
| 2     | vacc=y, date NOT ok (S), card seen     | 1524  | 12.1% |
| 3     | vacc=y, date NOT ok (B), card seen     | 549   | 4.4%  |
| 4     | vacc=y, date NOT ok (S&B), card seen   | 35    | 0.3%  |
| 5     | vacc=y, date ok, card NOT seen         | 9     | 0.1%  |
| 6     | vacc=y, date NOT ok (S), card NOT seen | 8     | 0.1%  |
| 7     | vacc=y, date NOT ok (B), card NOT seen | 1455  | 11.6% |

|         |                                          |       |       |
|---------|------------------------------------------|-------|-------|
| 8       | vacc=y, date NOT ok (S&B), card NOT seen | 1     | 0%    |
| 9       | last report of vacc=n                    | 5053  | 40.2% |
| Sysmiss |                                          | 13479 |       |

## Description

### DEFINITION

Completeness of kept RV1 report

## Imputation and derivation

### DERIVATION

variable: rv1keep (table[s]: all\_vaccination\_records [derived table])

```

la def vacckep 1 "vacc=y, date ok, card seen" 2 "vacc=y, date NOT ok (S), card seen" 3 "vacc=y, date NOT ok (B), card seen" 4 "vacc=y, date NOT ok (S&B), card seen" 5 "vacc=y, date ok, card NOT seen" 6 "vacc=y, date NOT ok (S), card NOT seen" 7 "vacc=y, date NOT ok (B), card NOT seen" 8 "vacc=y, date NOT ok (S&B), card NOT seen" 9 "last report of vacc=n"
*1. keep the first record where the vaccine=yes, birth-date problem=no, schedule problem=no and healthcard=seen
gen `vacc'keep=1 if order==1 & `vacc'yn==1 & `vacc'Bprob==0 & `vacc'Sprob==0 & card==1
bys ident: egen kept=max(`vacc'keep)
*2. if no record identified: keep the first record where the vaccine=yes, birth-date problem=no, schedule problem=yes and healthcard=seen
replace `vacc'keep=2 if order==1 & `vacc'yn==1 & `vacc'Bprob==0 & `vacc'Sprob==1 & card==1 & kept==.
drop kept
bys ident: egen kept=max(`vacc'keep)
*3. if no record identified: keep the first record where the vaccine=yes, birth-date problem=yes, schedule problem=no and healthcard=seen
replace `vacc'keep=3 if order==1 & `vacc'yn==1 & `vacc'Bprob==1 & `vacc'Sprob==0 & card==1 & kept==.
drop kept
bys ident: egen kept=max(`vacc'keep)
*4. if no record identified: keep the first record where the vaccine=yes, birth-date problem=yes, schedule problem=yes and healthcard=seen
replace `vacc'keep=4 if order==1 & `vacc'yn==1 & `vacc'Bprob==1 & `vacc'Sprob==1 & card==1 & kept==.
drop kept
bys ident: egen kept=max(`vacc'keep)
*5. if no record identified: keep the first record where the vaccine=yes, birth-date problem=no, schedule problem=no and healthcard=not seen
replace `vacc'keep=5 if order==1 & `vacc'yn==1 & `vacc'Bprob==0 & `vacc'Sprob==0 & card==2 & kept==.
drop kept
bys ident: egen kept=max(`vacc'keep)
*6. if no record identified: keep the first record where the vaccine=yes, birth-date problem=no, schedule problem=yes and healthcard=not seen
replace `vacc'keep=6 if order==1 & `vacc'yn==1 & `vacc'Bprob==0 & `vacc'Sprob==1 & card==2 & kept==.
drop kept
bys ident: egen kept=max(`vacc'keep)
*7. if no record identified: keep the first record where the vaccine=yes, birth-date problem=yes, schedule problem=no and healthcard=not seen
replace `vacc'keep=7 if order==1 & `vacc'yn==1 & `vacc'Bprob==1 & `vacc'Sprob==0 & card==2 & kept==.
drop kept
bys ident: egen kept=max(`vacc'keep)
*8. if no record identified: keep the first record where the vaccine=yes, birth-date problem=yes, schedule problem=yes and healthcard=not seen
replace `vacc'keep=8 if order==1 & `vacc'yn==1 & `vacc'Bprob==1 & `vacc'Sprob==1 & card==2 & kept==.
drop kept
bys ident: egen kept=max(`vacc'keep)
*9. if no record identified: keep the LAST record where the vaccine is recorded as no (regardless whether healthcard seen or not)

```

```
replace `vacc'keep=9 if Norder==Ntotal & `vacc'yn==0 & kept==.
la val `vacc'keep vacckkeep
drop kept
```

## RV2INTDATE: Interview date for RV2 report (D)

**Data file:** vacc\_data\_selected\_BEST

### Overview

Valid: 12063

Type: Discrete    Width: 10    Range: -    Format: character

### Description

#### DEFINITION

Interview date for RV2 report

### Imputation and derivation

#### DERIVATION

variable: intdate (table[s]: all\_vaccination\_records [derived table])

## RV2CARDSEEN: Whether health record seen for RV2 report (D)

**Data file:** vacc\_data\_selected\_BEST

### Overview

Valid: 11894    Invalid: 14145

Type: Discrete    Decimal: 0    Width: 1    Range: 0 - 9    Format: Numeric

### Questions and instructions

#### CATEGORIES

| Value   | Category       | Cases |       |
|---------|----------------|-------|-------|
| 0       | No             | 3309  | 27.8% |
| 1       | Yes            | 8585  | 72.2% |
| 7       | Not applicable | 0     | 0%    |
| 8       | Unknown        | 0     | 0%    |
| 9       | Missing        | 0     |       |
| Sysmiss |                | 14145 |       |

### Description

#### DEFINITION

Whether health record seen for RV2 report

## Imputation and derivation

### DERIVATION

variable: cardseen (table[s]: all\_vaccination\_records [derived table])

## RV2SOURCE: Source for RV2 report (D)

Data file: vacc\_data\_selected\_BEST

### Overview

Valid: 12063 Invalid: 13976

Type: Discrete Decimal: 0 Width: 1 Range: 1 - 8 Format: Numeric

### Questions and instructions

### CATEGORIES

| Value   | Category    | Cases |       |
|---------|-------------|-------|-------|
| 1       | crs_birth   | 692   | 5.7%  |
| 2       | cen_individ | 0     | 0%    |
| 3       | crs_cenm    | 0     | 0%    |
| 4       | crs_bfup    | 0     | 0%    |
| 5       | css_sei     | 9873  | 81.8% |
| 6       | ves_vese    | 934   | 7.7%  |
| 7       | tmt_tmtv    | 321   | 2.7%  |
| 8       | gp_va       | 243   | 2%    |
| Sysmiss |             | 13976 |       |

### Description

### DEFINITION

Source for RV2 report

## Imputation and derivation

### DERIVATION

variable: source (table[s]: all\_vaccination\_records [derived table])

## RV2YN: Had RV2 vaccination (D)

Data file: vacc\_data\_selected\_BEST

### Overview

Valid: 12063 Invalid: 13976

Type: Discrete Decimal: 0 Width: 1 Range: 0 - 9 Format: Numeric

## Questions and instructions

### CATEGORIES

| Value   | Category       | Cases |       |
|---------|----------------|-------|-------|
| 0       | No             | 5300  | 43.9% |
| 1       | Yes            | 6763  | 56.1% |
| 7       | Not applicable | 0     | 0%    |
| 8       | Unknown        | 0     | 0%    |
| 9       | Missing        | 0     |       |
| Sysmiss |                | 13976 |       |

### Description

#### DEFINITION

Had RV2 vaccination

### Imputation and derivation

#### DERIVATION

variable: rv2yn (table[s]: all\_vaccination\_records [derived table])

## RV2YR: Year of RV2 vaccination (D)

Data file: vacc\_data\_selected\_BEST

### Overview

Valid: 4618 Invalid: 21421

Type: Discrete Decimal: 0 Width: 4 Range: 2009 - 2020 Format: Numeric

### Description

#### DEFINITION

Year of RV2 vaccination

### Imputation and derivation

#### DERIVATION

variable: rv2yr (table[s]: all\_vaccination\_records [derived table])

## RV2DATE: Date of RV2 vaccination (D)

Data file: vacc\_data\_selected\_BEST

## Overview

Valid: 4615

Type: Discrete    Width: 10    Range: -    Format: character

## Description

### DEFINITION

Date of RV2 vaccination

## Imputation and derivation

### DERIVATION

variable: rv2date (table[s]: all\_vaccination\_records [derived table])

## RV2DAYEST: Date of RV2 vaccination is estimated (D)

Data file: vacc\_data\_selected\_BEST

## Overview

Valid: 0    Invalid: 26039

Type: Discrete    Decimal: 0    Width: 1    Range: -    Format: Numeric

## Description

### DEFINITION

Date of RV2 vaccination is estimated

## Imputation and derivation

### DERIVATION

variable: rv2dayest (table[s]: all\_vaccination\_records [derived table])

## RV2VC: Health centre of RV2 vaccination (D)

Data file: vacc\_data\_selected\_BEST

## Overview

Valid: 6555    Invalid: 19484

Type: Continuous    Decimal: 0    Width: 6    Range: 10000 - 999999    Format: Numeric

## Description

### DEFINITION

Health centre of RV2 vaccination

## Imputation and derivation

---

### DERIVATION

variable: rv2vc (table[s]: all\_vaccination\_records [derived table])

---

## RV2BPROB: Problem with RV2 date (missing or before DOB) (D)

Data file: vacc\_data\_selected\_BEST

### Overview

Valid: 12063 Invalid: 13976

Type: Discrete Decimal: 0 Width: 1 Range: 0 - 1 Format: Numeric

### Description

---

### DEFINITION

Problem with RV2 date (missing or before DOB)

## Imputation and derivation

---

### DERIVATION

variable: rv2date (table[s]: all\_vaccination\_records [derived table])

variable: birth\_date (table[s]: all\_vaccination\_records [derived table])

gen `vacc'Bprob=0

replace `vacc'Bprob=1 if (`vacc'date<birth\_date & `vacc'date~=. & birth\_date~=. ) | (`vacc'date==. & `vacc'yn==1)

---

## RV2SPROB: Problem with RV2 date (schedule issue) (D)

Data file: vacc\_data\_selected\_BEST

### Overview

Valid: 12063 Invalid: 13976

Type: Discrete Decimal: 0 Width: 1 Range: 0 - 1 Format: Numeric

### Description

---

### DEFINITION

Problem with RV2 date (schedule issue)

## Imputation and derivation

---

### DERIVATION

variable: rv2date (table[s]: all\_vaccination\_records [derived table])

variable: birth\_date (table[s]: all\_vaccination\_records [derived table])

\*for DPT2, HH2, PCV2, RV2 and P2: problem if vacc date is less than 3 weeks, or more than 6 weeks after first dose (supposed to be 1 month after first dose)

```
if "`vacc'"=="rv2" replace `vacc'Sprob=1 if (rv2date-rv1date<21 | rv2date-rv1date>42 | rv1date==.) & rv2date~=. &
birth_date~=.
```

## RV2FYINTDATE: First interview date when reported had RV3 (D)

**Data file:** vacc\_data\_selected\_BEST

### Overview

Valid: 6763

Type: Discrete    Width: 10    Range: -    Format: character

### Description

#### DEFINITION

First interview date when reported had RV3

### Imputation and derivation

#### DERIVATION

variable: rv2intdate (table[s]: all\_vaccination\_records [derived table])

variable: rv2yn (table[s]: all\_vaccination\_records [derived table])

\*calculate first interview date where card seen and vaccine recorded as yes

bys ident: egen tempC=min(`vacc'intdate) if card==1 & `vacc'yn==1

bys ident: egen tempNC=min(`vacc'intdate) if card==2 & `vacc'yn==1

bys ident: egen `vacc'fyintdate=min(tempC)

bys ident: egen tempNCd=min(tempNC)

replace `vacc'fyintdate=tempNCd if `vacc'fyintdate==. & tempNCd~=.

## RV2KEEP: Completeness of kept RV2 report (D)

**Data file:** vacc\_data\_selected\_BEST

### Overview

Valid: 12063    Invalid: 13976

Type: Discrete    Decimal: 0    Width: 1    Range: 1 - 9    Format: Numeric

### Questions and instructions

#### CATEGORIES

| Value | Category                               | Cases |       |
|-------|----------------------------------------|-------|-------|
| 1     | vacc=y, date ok, card seen             | 3183  | 26.4% |
| 2     | vacc=y, date NOT ok (S), card seen     | 1394  | 11.6% |
| 3     | vacc=y, date NOT ok (B), card seen     | 606   | 5%    |
| 4     | vacc=y, date NOT ok (S&B), card seen   | 11    | 0.1%  |
| 5     | vacc=y, date ok, card NOT seen         | 5     | 0%    |
| 6     | vacc=y, date NOT ok (S), card NOT seen | 11    | 0.1%  |

|         |                                          |       |       |
|---------|------------------------------------------|-------|-------|
| 7       | vacc=y, date NOT ok (B), card NOT seen   | 1553  | 12.9% |
| 8       | vacc=y, date NOT ok (S&B), card NOT seen | 0     | 0%    |
| 9       | last report of vacc=n                    | 5300  | 43.9% |
| Sysmiss |                                          | 13976 |       |

## Description

### DEFINITION

Completeness of kept RV2 report

## Imputation and derivation

### DERIVATION

variable: rv2keep (table[s]: all\_vaccination\_records [derived table])

```

la def vacckep 1 "vacc=y, date ok, card seen" 2 "vacc=y, date NOT ok (S), card seen" 3 "vacc=y, date NOT ok (B), card
seen" 4 "vacc=y, date NOT ok (S&B), card seen" 5 "vacc=y, date ok, card NOT seen" 6 "vacc=y, date NOT ok (S), card NOT
seen" 7 "vacc=y, date NOT ok (B), card NOT seen" 8 "vacc=y, date NOT ok (S&B), card NOT seen" 9 "last report of vacc=n"
*1. keep the first record where the vaccine=yes, birth-date problem=no, schedule problem=no and healthcard=seen
gen `vacc'keep=1 if order==1 & `vacc'yn==1 & `vacc'Bprob==0 & `vacc'Sprob==0 & card==1
bys ident: egen kept=max(`vacc'keep)
*2. if no record identified: keep the first record where the vaccine=yes, birth-date problem=no, schedule problem=yes and
healthcard=seen
replace `vacc'keep=2 if order==1 & `vacc'yn==1 & `vacc'Bprob==0 & `vacc'Sprob==1 & card==1 & kept==.
drop kept
bys ident: egen kept=max(`vacc'keep)
*3. if no record identified: keep the first record where the vaccine=yes, birth-date problem=yes, schedule problem=no and
healthcard=seen
replace `vacc'keep=3 if order==1 & `vacc'yn==1 & `vacc'Bprob==1 & `vacc'Sprob==0 & card==1 & kept==.
drop kept
bys ident: egen kept=max(`vacc'keep)
*4. if no record identified: keep the first record where the vaccine=yes, birth-date problem=yes, schedule problem=yes and
healthcard=seen
replace `vacc'keep=4 if order==1 & `vacc'yn==1 & `vacc'Bprob==1 & `vacc'Sprob==1 & card==1 & kept==.
drop kept
bys ident: egen kept=max(`vacc'keep)
*5. if no record identified: keep the first record where the vaccine=yes, birth-date problem=no, schedule problem=no and
healthcard=not seen
replace `vacc'keep=5 if order==1 & `vacc'yn==1 & `vacc'Bprob==0 & `vacc'Sprob==0 & card==2 & kept==.
drop kept
bys ident: egen kept=max(`vacc'keep)
*6. if no record identified: keep the first record where the vaccine=yes, birth-date problem=no, schedule problem=yes and
healthcard=not seen
replace `vacc'keep=6 if order==1 & `vacc'yn==1 & `vacc'Bprob==0 & `vacc'Sprob==1 & card==2 & kept==.
drop kept
bys ident: egen kept=max(`vacc'keep)
*7. if no record identified: keep the first record where the vaccine=yes, birth-date problem=yes, schedule problem=no and
healthcard=not seen
replace `vacc'keep=7 if order==1 & `vacc'yn==1 & `vacc'Bprob==1 & `vacc'Sprob==0 & card==2 & kept==.
drop kept
bys ident: egen kept=max(`vacc'keep)
*8. if no record identified: keep the first record where the vaccine=yes, birth-date problem=yes, schedule problem=yes and
healthcard=not seen
replace `vacc'keep=8 if order==1 & `vacc'yn==1 & `vacc'Bprob==1 & `vacc'Sprob==1 & card==2 & kept==.
drop kept
bys ident: egen kept=max(`vacc'keep)

```

\*9. if no record identified: keep the LAST record where the vaccine is recorded as no (regardless whether healthcard seen or not)  
 replace `vacc'keep=9 if Norder==Ntotal & `vacc'yn==0 & kept==.  
 la val `vacc'keep vacckep  
 drop kept

## MEAS1INTDATE: Interview date for measles1 report (D)

**Data file:** vacc\_data\_selected\_BEST

### Overview

Valid: 20208  
 Type: Discrete    Width: 10    Range: -    Format: character

### Description

#### DEFINITION

Interview date for measles1 report

### Imputation and derivation

#### DERIVATION

variable: intdate (table[s]: all\_vaccination\_records [derived table])

## MEAS1CARDSEEN: Whether health record seen for measles1 report (D)

**Data file:** vacc\_data\_selected\_BEST

### Overview

Valid: 20007    Invalid: 6032  
 Type: Discrete    Decimal: 0    Width: 1    Range: 0 - 9    Format: Numeric

### Questions and instructions

#### CATEGORIES

| Value   | Category       | Cases |       |
|---------|----------------|-------|-------|
| 0       | No             | 2259  | 11.3% |
| 1       | Yes            | 17748 | 88.7% |
| 7       | Not applicable | 0     | 0%    |
| 8       | Unknown        | 0     | 0%    |
| 9       | Missing        | 0     |       |
| Sysmiss |                | 6032  |       |

### Description

#### DEFINITION

Whether health record seen for measles1 report

## Imputation and derivation

### DERIVATION

variable: cardseen (table[s]: all\_vaccination\_records [derived table])

## MEAS1SOURCE: Source for measles1 report (D)

Data file: vacc\_data\_selected\_BEST

### Overview

Valid: 20208 Invalid: 5831

Type: Discrete Decimal: 0 Width: 1 Range: 1 - 8 Format: Numeric

### Questions and instructions

#### CATEGORIES

| Value   | Category    | Cases |       |
|---------|-------------|-------|-------|
| 1       | crs_birth   | 209   | 1%    |
| 2       | cen_individ | 2688  | 13.3% |
| 3       | crs_cenm    | 584   | 2.9%  |
| 4       | crs_bfup    | 1165  | 5.8%  |
| 5       | css_sei     | 13808 | 68.3% |
| 6       | ves_vese    | 1269  | 6.3%  |
| 7       | tmt_tmtv    | 184   | 0.9%  |
| 8       | gp_va       | 301   | 1.5%  |
| Sysmiss |             | 5831  |       |

### Description

#### DEFINITION

Source for measles1 report

## Imputation and derivation

### DERIVATION

variable: source (table[s]: all\_vaccination\_records [derived table])

## MEAS1YN: Had measles1 vaccination (D)

Data file: vacc\_data\_selected\_BEST

## Overview

Valid: 20208    Invalid: 5831  
 Type: Discrete    Decimal: 0    Width: 1    Range: 0 - 9    Format: Numeric

## Questions and instructions

### CATEGORIES

| Value   | Category       | Cases |       |
|---------|----------------|-------|-------|
| 0       | No             | 1845  | 9.1%  |
| 1       | Yes            | 18363 | 90.9% |
| 7       | Not applicable | 0     | 0%    |
| 8       | Unknown        | 0     | 0%    |
| 9       | Missing        | 0     | 0%    |
| Sysmiss |                | 5831  |       |

## Description

### DEFINITION

Had measles1 vaccination

## Imputation and derivation

### DERIVATION

variable: meas1yn (table[s]: all\_vaccination\_records [derived table])

## MEAS1YR: Year of measles1 vaccination (D)

Data file: vacc\_data\_selected\_BEST

## Overview

Valid: 14831    Invalid: 11208  
 Type: Continuous    Decimal: 0    Width: 4    Range: 1997 - 2020    Format: Numeric

## Description

### DEFINITION

Year of measles1 vaccination

## Imputation and derivation

### DERIVATION

variable: meas1yr (table[s]: all\_vaccination\_records [derived table])

**MEAS1DATE: Date of measles1 vaccination (D)****Data file:** vacc\_data\_selected\_BEST**Overview**

Valid: 14821

Type: Discrete    Width: 10    Range: -    Format: character

**Description**

## DEFINITION

Date of measles1 vaccination

**Imputation and derivation**

## DERIVATION

variable: meas1date (table[s]: all\_vaccination\_records [derived table])

**MEAS1DAYEST: Date of measles1 vaccination is estimated (D)****Data file:** vacc\_data\_selected\_BEST**Overview**

Valid: 11    Invalid: 26028

Type: Discrete    Decimal: 0    Width: 1    Range: 1 - 1    Format: Numeric

**Description**

## DEFINITION

Date of measles1 vaccination is estimated

**Imputation and derivation**

## DERIVATION

variable: meas1dayest (table[s]: all\_vaccination\_records [derived table])

**MEAS1VC: Health centre of measles1 vaccination (D)****Data file:** vacc\_data\_selected\_BEST**Overview**

Valid: 17745    Invalid: 8294

Type: Continuous    Decimal: 0    Width: 6    Range: 10000 - 999999    Format: Numeric

**Description**

## DEFINITION

Health centre of measles1 vaccination

## Imputation and derivation

---

### DERIVATION

variable: meas1vc (table[s]: all\_vaccination\_records [derived table])

---

## MEAS1BPROB: Problem with measles1 date (missing or before DOB) (D)

Data file: vacc\_data\_selected\_BEST

### Overview

Valid: 20208 Invalid: 5831

Type: Discrete Decimal: 0 Width: 1 Range: 0 - 1 Format: Numeric

### Description

---

### DEFINITION

Problem with measles1 date (missing or before DOB)

## Imputation and derivation

---

### DERIVATION

variable: meas1date (table[s]: all\_vaccination\_records [derived table])

variable: birth\_date (table[s]: all\_vaccination\_records [derived table])

gen `vacc'Bprob=0

replace `vacc'Bprob=1 if (`vacc'date<birth\_date & `vacc'date~=. & birth\_date~=. ) | (`vacc'date==. & `vacc'yn==1)

gen `vacc'Bprob=0

replace `vacc'Bprob=1 if (`vacc'date<birth\_date & `vacc'date~=. & birth\_date~=. ) | (`vacc'date==. & `vacc'yn==1)

---

## MEAS1SPROB: Problem with measles1 date (schedule issue) (D)

Data file: vacc\_data\_selected\_BEST

### Overview

Valid: 20208 Invalid: 5831

Type: Discrete Decimal: 0 Width: 1 Range: 0 - 1 Format: Numeric

### Description

---

### DEFINITION

Problem with measles1 date (schedule issue)

## Imputation and derivation

---

### DERIVATION

variable: meas1date (table[s]: all\_vaccination\_records [derived table])

variable: birth\_date (table[s]: all\_vaccination\_records [derived table])

\*for MEAS1: problem if vacc date is less than 8 months, or more than 12 months after birthdate (supposed to be after 9 months)  
 if "`vacc'"=="meas1" replace `vacc'Sprob=1 if (meas1date-birth\_date<244 | meas1date-birth\_date>365) & meas1date~=. & birth\_date~=.

## MEAS1FYINTDATE: First interview date when reported had measles2 (D)

Data file: vacc\_data\_selected\_BEST

### Overview

Valid: 18363  
 Type: Discrete    Width: 10    Range: -    Format: character

### Description

#### DEFINITION

First interview date when reported had measles2

### Imputation and derivation

#### DERIVATION

variable: meas1intdate (table[s]: all\_vaccination\_records [derived table])  
 variable: meas1yn (table[s]: all\_vaccination\_records [derived table])

\*calculate first interview date where card seen and vaccine recorded as yes  
 bys ident: egen tempC=min(`vacc'intdate) if card==1 & `vacc'yn==1  
 bys ident: egen tempNC=min(`vacc'intdate) if card==2 & `vacc'yn==1  
 bys ident: egen `vacc'fyintdate=min(tempC)  
 bys ident: egen tempNCd=min(tempNC)  
 replace `vacc'fyintdate=tempNCd if `vacc'fyintdate==. & tempNCd~=.

## MEAS1KEEP: Completeness of kept measles1 report (D)

Data file: vacc\_data\_selected\_BEST

### Overview

Valid: 20208    Invalid: 5831  
 Type: Discrete    Decimal: 0    Width: 1    Range: 1 - 9    Format: Numeric

### Questions and instructions

#### CATEGORIES

| Value | Category                             | Cases |       |
|-------|--------------------------------------|-------|-------|
| 1     | vacc=y, date ok, card seen           | 12479 | 61.8% |
| 2     | vacc=y, date NOT ok (S), card seen   | 2140  | 10.6% |
| 3     | vacc=y, date NOT ok (B), card seen   | 1475  | 7.3%  |
| 4     | vacc=y, date NOT ok (S&B), card seen | 80    | 0.4%  |
| 5     | vacc=y, date ok, card NOT seen       | 93    | 0.5%  |

|         |                                          |      |       |
|---------|------------------------------------------|------|-------|
| 6       | vacc=y, date NOT ok (S), card NOT seen   | 29   | 0.1%  |
| 7       | vacc=y, date NOT ok (B), card NOT seen   | 2067 | 10.2% |
| 8       | vacc=y, date NOT ok (S&B), card NOT seen | 0    | 0%    |
| 9       | last report of vacc=n                    | 1845 | 9.1%  |
| Sysmiss |                                          | 5831 |       |

## Description

### DEFINITION

Completeness of kept measles1 report

## Imputation and derivation

### DERIVATION

variable: meas1keep (table[s]: all\_vaccination\_records [derived table])

la def vacckep1 1 "vacc=y, date ok, card seen" 2 "vacc=y, date NOT ok (S), card seen" 3 "vacc=y, date NOT ok (B), card seen" 4 "vacc=y, date NOT ok (S&B), card seen" 5 "vacc=y, date ok, card NOT seen" 6 "vacc=y, date NOT ok (S), card NOT seen" 7 "vacc=y, date NOT ok (B), card NOT seen" 8 "vacc=y, date NOT ok (S&B), card NOT seen" 9 "last report of vacc=n"

\*1. keep the first record where the vaccine=yes, birth-date problem=no, schedule problem=no and healthcard=seen

gen `vacc'keep=1 if order==1 & `vacc'yn==1 & `vacc'Bprob==0 & `vacc'Sprob==0 & card==1

bys ident: egen kept=max(`vacc'keep)

\*2. if no record identified: keep the first record where the vaccine=yes, birth-date problem=no, schedule problem=yes and healthcard=seen

replace `vacc'keep=2 if order==1 & `vacc'yn==1 & `vacc'Bprob==0 & `vacc'Sprob==1 & card==1 & kept==.

drop kept

bys ident: egen kept=max(`vacc'keep)

\*3. if no record identified: keep the first record where the vaccine=yes, birth-date problem=yes, schedule problem=no and healthcard=seen

replace `vacc'keep=3 if order==1 & `vacc'yn==1 & `vacc'Bprob==1 & `vacc'Sprob==0 & card==1 & kept==.

drop kept

bys ident: egen kept=max(`vacc'keep)

\*4. if no record identified: keep the first record where the vaccine=yes, birth-date problem=yes, schedule problem=yes and healthcard=seen

replace `vacc'keep=4 if order==1 & `vacc'yn==1 & `vacc'Bprob==1 & `vacc'Sprob==1 & card==1 & kept==.

drop kept

bys ident: egen kept=max(`vacc'keep)

\*5. if no record identified: keep the first record where the vaccine=yes, birth-date problem=no, schedule problem=no and healthcard=not seen

replace `vacc'keep=5 if order==1 & `vacc'yn==1 & `vacc'Bprob==0 & `vacc'Sprob==0 & card==2 & kept==.

drop kept

bys ident: egen kept=max(`vacc'keep)

\*6. if no record identified: keep the first record where the vaccine=yes, birth-date problem=no, schedule problem=yes and healthcard=not seen

replace `vacc'keep=6 if order==1 & `vacc'yn==1 & `vacc'Bprob==0 & `vacc'Sprob==1 & card==2 & kept==.

drop kept

bys ident: egen kept=max(`vacc'keep)

\*7. if no record identified: keep the first record where the vaccine=yes, birth-date problem=yes, schedule problem=no and healthcard=not seen

replace `vacc'keep=7 if order==1 & `vacc'yn==1 & `vacc'Bprob==1 & `vacc'Sprob==0 & card==2 & kept==.

drop kept

bys ident: egen kept=max(`vacc'keep)

\*8. if no record identified: keep the first record where the vaccine=yes, birth-date problem=yes, schedule problem=yes and healthcard=not seen

replace `vacc'keep=8 if order==1 & `vacc'yn==1 & `vacc'Bprob==1 & `vacc'Sprob==1 & card==2 & kept==.

drop kept

```
bys ident: egen kept=max(`vacc'keep)
```

```
*9. if no record identified: keep the LAST record where the vaccine is recorded as no (regardless whether healthcard seen or not)
```

```
replace `vacc'keep=9 if Norder==Ntotal & `vacc'yn==0 & kept==.
```

```
la val `vacc'keep vacckkeep
```

```
drop kept
```

## MEAS2INTDATE: Interview date for measles2 report (D)

**Data file:** vacc\_data\_selected\_BEST

### Overview

Valid: 2791

Type: Discrete    Width: 10    Range: -    Format: character

### Description

#### DEFINITION

Interview date for measles2 report

### Imputation and derivation

#### DERIVATION

variable: intdate (table[s]: all\_vaccination\_records [derived table])

## MEAS2CARDSEEN: Whether health record seen for measles2 report (D)

**Data file:** vacc\_data\_selected\_BEST

### Overview

Valid: 2784    Invalid: 23255

Type: Discrete    Decimal: 0    Width: 1    Range: 0 - 9    Format: Numeric

### Questions and instructions

#### CATEGORIES

| Value   | Category       | Cases |       |
|---------|----------------|-------|-------|
| 0       | No             | 819   | 29.4% |
| 1       | Yes            | 1965  | 70.6% |
| 7       | Not applicable | 0     | 0%    |
| 8       | Unknown        | 0     | 0%    |
| 9       | Missing        | 0     |       |
| Sysmiss |                | 23255 |       |

## Description

### DEFINITION

Whether health record seen for measles2 report

## Imputation and derivation

### DERIVATION

variable: cardseen (table[s]: all\_vaccination\_records [derived table])

## MEAS2SOURCE: Source for measles2 report (D)

Data file: vacc\_data\_selected\_BEST

### Overview

Valid: 2791 Invalid: 23248

Type: Discrete Decimal: 0 Width: 1 Range: 1 - 8 Format: Numeric

## Questions and instructions

### CATEGORIES

| Value   | Category    | Cases |       |
|---------|-------------|-------|-------|
| 1       | crs_birth   | 20    | 0.7%  |
| 2       | cen_individ | 0     | 0%    |
| 3       | crs_cenm    | 0     | 0%    |
| 4       | crs_bfup    | 0     | 0%    |
| 5       | css_sei     | 2610  | 93.5% |
| 6       | ves_vese    | 0     | 0%    |
| 7       | tmt_tmtv    | 0     | 0%    |
| 8       | gp_va       | 161   | 5.8%  |
| Sysmiss |             | 23248 |       |

## Description

### DEFINITION

Source for measles2 report

## Imputation and derivation

### DERIVATION

variable: source (table[s]: all\_vaccination\_records [derived table])

**MEAS2YN: Had measles2 vaccination (D)****Data file:** vacc\_data\_selected\_BEST**Overview**

Valid: 2791 Invalid: 23248

Type: Discrete Decimal: 0 Width: 1 Range: 0 - 9 Format: Numeric

**Questions and instructions**

## CATEGORIES

| Value   | Category       | Cases |       |
|---------|----------------|-------|-------|
| 0       | No             | 2011  | 72.1% |
| 1       | Yes            | 780   | 27.9% |
| 7       | Not applicable | 0     | 0%    |
| 8       | Unknown        | 0     | 0%    |
| 9       | Missing        | 0     |       |
| Sysmiss |                | 23248 |       |

**Description**

## DEFINITION

Had measles2 vaccination

**Imputation and derivation**

## DERIVATION

variable: meas2yn (table[s]: all\_vaccination\_records [derived table])

**MEAS2YR: Year of measles2 vaccination (D)****Data file:** vacc\_data\_selected\_BEST**Overview**

Valid: 399 Invalid: 25640

Type: Discrete Decimal: 0 Width: 4 Range: 2012 - 2019 Format: Numeric

**Description**

## DEFINITION

Year of measles2 vaccination

**Imputation and derivation**

## DERIVATION

variable: meas2yr (table[s]: all\_vaccination\_records [derived table])

**MEAS2DATE: Date of measles2 vaccination (D)****Data file:** vacc\_data\_selected\_BEST**Overview**

Valid: 387

Type: Discrete    Width: 10    Range: -    Format: character

**Description**

## DEFINITION

Date of measles2 vaccination

**Imputation and derivation**

## DERIVATION

variable: meas2date (table[s]: all\_vaccination\_records [derived table])

**MEAS2DAYEST: Date of measles2 vaccination is estimated (D)****Data file:** vacc\_data\_selected\_BEST**Overview**

Valid: 3    Invalid: 26036

Type: Discrete    Decimal: 0    Width: 1    Range: 1 - 1    Format: Numeric

**Description**

## DEFINITION

Date of measles2 vaccination is estimated

**Imputation and derivation**

## DERIVATION

variable: meas2dayest (table[s]: all\_vaccination\_records [derived table])

**MEAS2VC: Health centre of measles2 vaccination (D)****Data file:** vacc\_data\_selected\_BEST**Overview**

Valid: 754    Invalid: 25285

Type: Continuous    Decimal: 0    Width: 6    Range: 10000 - 120101    Format: Numeric

## Description

---

### DEFINITION

Health centre of measles2 vaccination

## Imputation and derivation

---

### DERIVATION

variable: meas2vc (table[s]: all\_vaccination\_records [derived table])

---

## MEAS2BPROB: Problem with measles2 date (missing or before DOB) (D)

Data file: vacc\_data\_selected\_BEST

### Overview

Valid: 2791 Invalid: 23248

Type: Discrete Decimal: 0 Width: 1 Range: 0 - 1 Format: Numeric

## Description

---

### DEFINITION

Problem with measles2 date (missing or before DOB)

## Imputation and derivation

---

### DERIVATION

variable: meas2date (table[s]: all\_vaccination\_records [derived table])

variable: birth\_date (table[s]: all\_vaccination\_records [derived table])

gen `vacc'Bprob=0

replace `vacc'Bprob=1 if (`vacc'date<birth\_date & `vacc'date~=. & birth\_date~=. ) | (`vacc'date==. & `vacc'yn==1)

---

## MEAS2SPROB: Problem with measles2 date (schedule issue) (D)

Data file: vacc\_data\_selected\_BEST

### Overview

Valid: 2791 Invalid: 23248

Type: Discrete Decimal: 0 Width: 1 Range: 0 - 1 Format: Numeric

## Description

---

### DEFINITION

Problem with measles2 date (schedule issue)

## Imputation and derivation

### DERIVATION

variable: meas2date (table[s]: all\_vaccination\_records [derived table])

variable: birth\_date (table[s]: all\_vaccination\_records [derived table])

\*for MEAS2: problem if vacc date is before first dose (supposed to be after 1st dose)

if "`vacc'"=="meas2" replace `vacc'Sprob=1 if (meas2date<meas1date | meas1date==.) & meas2date~=. & birth\_date~=.

## MEAS2FYINTDATE: First interview date when reported had measles3 (D)

Data file: vacc\_data\_selected\_BEST

### Overview

Valid: 780

Type: Discrete    Width: 10    Range: -    Format: character

### Description

### DEFINITION

First interview date when reported had measles3

## Imputation and derivation

### DERIVATION

variable: meas2intdate (table[s]: all\_vaccination\_records [derived table])

variable: meas2yn (table[s]: all\_vaccination\_records [derived table])

\*calculate first interview date where card seen and vaccine recorded as yes

bys ident: egen tempC=min(`vacc'intdate) if card==1 & `vacc'yn==1

bys ident: egen tempNC=min(`vacc'intdate) if card==2 & `vacc'yn==1

bys ident: egen `vacc'fyintdate=min(tempC)

bys ident: egen tempNCd=min(tempNC)

replace `vacc'fyintdate=tempNCd if `vacc'fyintdate==. & tempNCd~=.

## MEAS2KEEP: Completeness of kept measles2 report (D)

Data file: vacc\_data\_selected\_BEST

### Overview

Valid: 2791    Invalid: 23248

Type: Discrete    Decimal: 0    Width: 1    Range: 1 - 9    Format: Numeric

### Questions and instructions

### CATEGORIES

| Value | Category                   | Cases |       |
|-------|----------------------------|-------|-------|
| 1     | vacc=y, date ok, card seen | 354   | 12.7% |

|         |                                          |       |       |
|---------|------------------------------------------|-------|-------|
| 2       | vacc=y, date NOT ok (S), card seen       | 23    | 0.8%  |
| 3       | vacc=y, date NOT ok (B), card seen       | 88    | 3.2%  |
| 4       | vacc=y, date NOT ok (S&B), card seen     | 2     | 0.1%  |
| 5       | vacc=y, date ok, card NOT seen           | 6     | 0.2%  |
| 6       | vacc=y, date NOT ok (S), card NOT seen   | 2     | 0.1%  |
| 7       | vacc=y, date NOT ok (B), card NOT seen   | 305   | 10.9% |
| 8       | vacc=y, date NOT ok (S&B), card NOT seen | 0     | 0%    |
| 9       | last report of vacc=n                    | 2011  | 72.1% |
| Sysmiss |                                          | 23248 |       |

## Description

### DEFINITION

Completeness of kept measles2 report

## Imputation and derivation

### DERIVATION

variable: meas2keep (table[s]: all\_vaccination\_records [derived table])

la def vacckep 1 "vacc=y, date ok, card seen" 2 "vacc=y, date NOT ok (S), card seen" 3 "vacc=y, date NOT ok (B), card seen" 4 "vacc=y, date NOT ok (S&B), card seen" 5 "vacc=y, date ok, card NOT seen" 6 "vacc=y, date NOT ok (S), card NOT seen" 7 "vacc=y, date NOT ok (B), card NOT seen" 8 "vacc=y, date NOT ok (S&B), card NOT seen" 9 "last report of vacc=n"

\*1. keep the first record where the vaccine=yes, birth-date problem=no, schedule problem=no and healthcard=seen

gen `vacc'keep=1 if order==1 & `vacc'yn==1 & `vacc'Bprob==0 & `vacc'Sprob==0 & card==1

bys ident: egen kept=max(`vacc'keep)

\*2. if no record identified: keep the first record where the vaccine=yes, birth-date problem=no, schedule problem=yes and healthcard=seen

replace `vacc'keep=2 if order==1 & `vacc'yn==1 & `vacc'Bprob==0 & `vacc'Sprob==1 & card==1 & kept==.

drop kept

bys ident: egen kept=max(`vacc'keep)

\*3. if no record identified: keep the first record where the vaccine=yes, birth-date problem=yes, schedule problem=no and healthcard=seen

replace `vacc'keep=3 if order==1 & `vacc'yn==1 & `vacc'Bprob==1 & `vacc'Sprob==0 & card==1 & kept==.

drop kept

bys ident: egen kept=max(`vacc'keep)

\*4. if no record identified: keep the first record where the vaccine=yes, birth-date problem=yes, schedule problem=yes and healthcard=seen

replace `vacc'keep=4 if order==1 & `vacc'yn==1 & `vacc'Bprob==1 & `vacc'Sprob==1 & card==1 & kept==.

drop kept

bys ident: egen kept=max(`vacc'keep)

\*5. if no record identified: keep the first record where the vaccine=yes, birth-date problem=no, schedule problem=no and healthcard=not seen

replace `vacc'keep=5 if order==1 & `vacc'yn==1 & `vacc'Bprob==0 & `vacc'Sprob==0 & card==2 & kept==.

drop kept

bys ident: egen kept=max(`vacc'keep)

\*6. if no record identified: keep the first record where the vaccine=yes, birth-date problem=no, schedule problem=yes and healthcard=not seen

replace `vacc'keep=6 if order==1 & `vacc'yn==1 & `vacc'Bprob==0 & `vacc'Sprob==1 & card==2 & kept==.

drop kept

bys ident: egen kept=max(`vacc'keep)

\*7. if no record identified: keep the first record where the vaccine=yes, birth-date problem=yes, schedule problem=no and healthcard=not seen

```

replace `vacc'keep=7 if order==1 & `vacc'yn==1 & `vacc'Bprob==1 & `vacc'Sprob==0 & card==2 & kept==.
drop kept
bys ident: egen kept=max(`vacc'keep)
*8. if no record identified: keep the first record where the vaccine=yes, birth-date problem=yes, schedule problem=yes and
healthcard=not seen
replace `vacc'keep=8 if order==1 & `vacc'yn==1 & `vacc'Bprob==1 & `vacc'Sprob==1 & card==2 & kept==.
drop kept
bys ident: egen kept=max(`vacc'keep)
*9. if no record identified: keep the LAST record where the vaccine is recorded as no (regardless whether healthcard seen or
not)
replace `vacc'keep=9 if Norder==Ntotal & `vacc'yn==0 & kept==.
la val `vacc'keep vacckep
drop kept

```

## VITA1INTDATE: Interview date for 1st vitamin A report (D)

Data file: vacc\_data\_selected\_BEST

### Overview

Valid: 26039

Type: Discrete    Width: 10    Range: -    Format: character

### Description

#### DEFINITION

Interview date for 1st vitamin A report

### Imputation and derivation

#### DERIVATION

variable: intdate (table[s]: all\_vaccination\_records [derived table])

## VITA1CARDSEEN: Whether health record seen for 1st vitamin A report (D)

Data file: vacc\_data\_selected\_BEST

### Overview

Valid: 25834    Invalid: 205

Type: Discrete    Decimal: 0    Width: 1    Range: 0 - 9    Format: Numeric

### Questions and instructions

#### CATEGORIES

| Value | Category       | Cases |       |
|-------|----------------|-------|-------|
| 0     | No             | 2258  | 8.7%  |
| 1     | Yes            | 23576 | 91.3% |
| 7     | Not applicable | 0     | 0%    |
| 8     | Unknown        | 0     | 0%    |

|         |         |     |  |
|---------|---------|-----|--|
| 9       | Missing | 0   |  |
| Sysmiss |         | 205 |  |

## Description

### DEFINITION

Whether health record seen for 1st vitamin A report

## Imputation and derivation

### DERIVATION

variable: cardseen (table[s]: all\_vaccination\_records [derived table])

## VITA1SOURCE: Source for 1st vitamin A report (D)

Data file: vacc\_data\_selected\_BEST

### Overview

Valid: 26039 Invalid: 0

Type: Discrete Decimal: 0 Width: 1 Range: 1 - 8 Format: Numeric

## Questions and instructions

### CATEGORIES

| Value | Category    | Cases |       |
|-------|-------------|-------|-------|
| 1     | crs_birth   | 5971  | 22.9% |
| 2     | cen_individ | 3760  | 14.4% |
| 3     | crs_cenm    | 694   | 2.7%  |
| 4     | crs_bfup    | 599   | 2.3%  |
| 5     | css_sei     | 13220 | 50.8% |
| 6     | ves_verse   | 1216  | 4.7%  |
| 7     | tmt_tmtv    | 253   | 1%    |
| 8     | gp_va       | 326   | 1.3%  |

## Description

### DEFINITION

Source for 1st vitamin A report

## Imputation and derivation

### DERIVATION

variable: source (table[s]: all\_vaccination\_records [derived table])

**VITA1YN: Had 1st vitamin A dose (D)****Data file:** vacc\_data\_selected\_BEST**Overview**

Valid: 26039    Invalid: 0  
 Type: Discrete    Decimal: 0    Width: 1    Range: 0 - 1    Format: Numeric

**Description**

## DEFINITION

Had 1st vitamin A dose

**Imputation and derivation**

## DERIVATION

variable: vita1yn (table[s]: all\_vaccination\_records [derived table])

**VITA1YR: Year of 1st vitamin A dose (D)****Data file:** vacc\_data\_selected\_BEST**Overview**

Valid: 9864    Invalid: 16175  
 Type: Discrete    Decimal: 0    Width: 4    Range: 2005 - 2020    Format: Numeric

**Description**

## DEFINITION

Year of 1st vitamin A dose

**Imputation and derivation**

## DERIVATION

variable: vita1yr (table[s]: all\_vaccination\_records [derived table])

**VITA1DATE: Date of 1st vitamin A dose (D)****Data file:** vacc\_data\_selected\_BEST**Overview**

Valid: 9378  
 Type: Discrete    Width: 10    Range: -    Format: character

## Description

---

### DEFINITION

Date of 1st vitamin A dose

## Imputation and derivation

---

### DERIVATION

variable: vita1date (table[s]: all\_vaccination\_records [derived table])

---

## VITA1DAYEST: Date of 1st vitamin A dose is estimated (D)

**Data file:** vacc\_data\_selected\_BEST

### Overview

Valid: 7366    Invalid: 18673

Type: Discrete    Decimal: 0    Width: 1    Range: 1 - 1    Format: Numeric

## Description

---

### DEFINITION

Date of 1st vitamin A dose is estimated

## Imputation and derivation

---

### DERIVATION

variable: vita1dayest (table[s]: all\_vaccination\_records [derived table])

---

## VITA1BPROB: Problem with 1st vitamin A date (missing or before DOB) (D)

**Data file:** vacc\_data\_selected\_BEST

### Overview

Valid: 26039    Invalid: 0

Type: Discrete    Decimal: 0    Width: 1    Range: 0 - 1    Format: Numeric

## Description

---

### DEFINITION

Problem with 1st vitamin A date (missing or before DOB)

## Imputation and derivation

---

### DERIVATION

variable: vita1date (table[s]: all\_vaccination\_records [derived table])

variable: birth\_date (table[s]: all\_vaccination\_records [derived table])

```
gen `vacc'Bprob=0
replace `vacc'Bprob=1 if (`vacc'date<birth_date & `vacc'date~=. & birth_date~=.) | (`vacc'date==. & `vacc'yn==1)
```

---

## VITA1SPROB: Problem with 1st vitamin A date (schedule issue) (D)

**Data file:** vacc\_data\_selected\_BEST

### Overview

Valid: 26039    Invalid: 0  
 Type: Discrete    Decimal: 0    Width: 1    Range: 0 - 1    Format: Numeric

### Description

---

#### DEFINITION

Problem with 1st vitamin A date (schedule issue)

### Imputation and derivation

---

#### DERIVATION

variable: vita1date (table[s]: all\_vaccination\_records [derived table])  
 variable: birth\_date (table[s]: all\_vaccination\_records [derived table])

---

## VITA1FYINTDATE: First interview date when reported had 1st vitamin A (D)

**Data file:** vacc\_data\_selected\_BEST

### Overview

Valid: 20641  
 Type: Discrete    Width: 10    Range: -    Format: character

### Description

---

#### DEFINITION

First interview date when reported had 1st vitamin A

### Imputation and derivation

---

#### DERIVATION

variable: vita1intdate (table[s]: all\_vaccination\_records [derived table])  
 variable: vita1yn (table[s]: all\_vaccination\_records [derived table])

\*calculate first interview date where card seen and vaccine recorded as yes  
 bys ident: egen tempC=min(`vacc'intdate) if card==1 & `vacc'yn==1  
 bys ident: egen tempNC=min(`vacc'intdate) if card==2 & `vacc'yn==1  
 bys ident: egen `vacc'fyintdate=min(tempC)  
 bys ident: egen tempNCd=min(tempNC)  
 replace `vacc'fyintdate=tempNCd if `vacc'fyintdate==. & tempNCd~.

---

## VITA1KEEP: Completeness of kept 1st vitamin A report (D)

Data file: vacc\_data\_selected\_BEST

### Overview

Valid: 26039 Invalid: 0

Type: Discrete Decimal: 0 Width: 1 Range: 1 - 9 Format: Numeric

### Questions and instructions

#### CATEGORIES

| Value | Category                                 | Cases |       |
|-------|------------------------------------------|-------|-------|
| 1     | vacc=y, date ok, card seen               | 5569  | 21.4% |
| 2     | vacc=y, date NOT ok (S), card seen       | 3602  | 13.8% |
| 3     | vacc=y, date NOT ok (B), card seen       | 9737  | 37.4% |
| 4     | vacc=y, date NOT ok (S&B), card seen     | 15    | 0.1%  |
| 5     | vacc=y, date ok, card NOT seen           | 79    | 0.3%  |
| 6     | vacc=y, date NOT ok (S), card NOT seen   | 113   | 0.4%  |
| 7     | vacc=y, date NOT ok (B), card NOT seen   | 1526  | 5.9%  |
| 8     | vacc=y, date NOT ok (S&B), card NOT seen | 0     | 0%    |
| 9     | last report of vacc=n                    | 5398  | 20.7% |

### Description

#### DEFINITION

Completeness of kept 1st vitamin A report

### Imputation and derivation

#### DERIVATION

variable: vita1keep (table[s]: all\_vaccination\_records [derived table])

la def vacckkeep 1 "vacc=y, date ok, card seen" 2 "vacc=y, date NOT ok (S), card seen" 3 "vacc=y, date NOT ok (B), card seen" 4 "vacc=y, date NOT ok (S&B), card seen" 5 "vacc=y, date ok, card NOT seen" 6 "vacc=y, date NOT ok (S), card NOT seen" 7 "vacc=y, date NOT ok (B), card NOT seen" 8 "vacc=y, date NOT ok (S&B), card NOT seen" 9 "last report of vacc=n"

\*1. keep the first record where the vaccine=yes, birth-date problem=no, schedule problem=no and healthcard=seen  
gen `vacc'keep=1 if order==1 & `vacc'yn==1 & `vacc'Bprob==0 & `vacc'Sprob==0 & card==1

bys ident: egen kept=max(`vacc'keep)

\*2. if no record identified: keep the first record where the vaccine=yes, birth-date problem=no, schedule problem=yes and healthcard=seen

replace `vacc'keep=2 if order==1 & `vacc'yn==1 & `vacc'Bprob==0 & `vacc'Sprob==1 & card==1 & kept==.

drop kept

bys ident: egen kept=max(`vacc'keep)

\*3. if no record identified: keep the first record where the vaccine=yes, birth-date problem=yes, schedule problem=no and healthcard=seen

replace `vacc'keep=3 if order==1 & `vacc'yn==1 & `vacc'Bprob==1 & `vacc'Sprob==0 & card==1 & kept==.

drop kept

bys ident: egen kept=max(`vacc'keep)

\*4. if no record identified: keep the first record where the vaccine=yes, birth-date problem=yes, schedule problem=yes and healthcard=seen

replace `vacc'keep=4 if order==1 & `vacc'yn==1 & `vacc'Bprob==1 & `vacc'Sprob==1 & card==1 & kept==.

```

drop kept
bys ident: egen kept=max(`vacc'keep)
*5. if no record identified: keep the first record where the vaccine=yes, birth-date problem=no, schedule problem=no and
healthcard=not seen
replace `vacc'keep=5 if order==1 & `vacc'yn==1 & `vacc'Bprob==0 & `vacc'Sprob==0 & card==2 & kept==.
drop kept
bys ident: egen kept=max(`vacc'keep)
*6. if no record identified: keep the first record where the vaccine=yes, birth-date problem=no, schedule problem=yes and
healthcard=not seen
replace `vacc'keep=6 if order==1 & `vacc'yn==1 & `vacc'Bprob==0 & `vacc'Sprob==1 & card==2 & kept==.
drop kept
bys ident: egen kept=max(`vacc'keep)
*7. if no record identified: keep the first record where the vaccine=yes, birth-date problem=yes, schedule problem=no and
healthcard=not seen
replace `vacc'keep=7 if order==1 & `vacc'yn==1 & `vacc'Bprob==1 & `vacc'Sprob==0 & card==2 & kept==.
drop kept
bys ident: egen kept=max(`vacc'keep)
*8. if no record identified: keep the first record where the vaccine=yes, birth-date problem=yes, schedule problem=yes and
healthcard=not seen
replace `vacc'keep=8 if order==1 & `vacc'yn==1 & `vacc'Bprob==1 & `vacc'Sprob==1 & card==2 & kept==.
drop kept
bys ident: egen kept=max(`vacc'keep)
*9. if no record identified: keep the LAST record where the vaccine is recorded as no (regardless whether healthcard seen or
not)
replace `vacc'keep=9 if Norder==Ntotal & `vacc'yn==0 & kept==.
la val `vacc'keep vacckkeep
drop kept

```

---

## VITA2INTDATE: Interview date for 2nd vitamin A report (D)

Data file: vacc\_data\_selected\_BEST

### Overview

Valid: 26039

Type: Discrete    Width: 10    Range: -    Format: character

### Description

#### DEFINITION

Interview date for 2nd vitamin A report

### Imputation and derivation

#### DERIVATION

variable: intdate (table[s]: all\_vaccination\_records [derived table])

---

## VITA2CARDSEEN: Whether health record seen for 2nd vitamin A report (D)

Data file: vacc\_data\_selected\_BEST

### Overview

Valid: 25778    Invalid: 261

Type: Discrete    Decimal: 0    Width: 1    Range: 0 - 9    Format: Numeric

## Questions and instructions

### CATEGORIES

| Value   | Category       | Cases |       |
|---------|----------------|-------|-------|
| 0       | No             | 3293  | 12.8% |
| 1       | Yes            | 22485 | 87.2% |
| 7       | Not applicable | 0     | 0%    |
| 8       | Unknown        | 0     | 0%    |
| 9       | Missing        | 0     |       |
| Sysmiss |                | 261   |       |

## Description

### DEFINITION

Whether health record seen for 2nd vitamin A report

## Imputation and derivation

### DERIVATION

variable: cardseen (table[s]: all\_vaccination\_records [derived table])

## VITA2SOURCE: Source for 2nd vitamin A report (D)

Data file: vacc\_data\_selected\_BEST

### Overview

Valid: 26039 Invalid: 0

Type: Discrete Decimal: 0 Width: 1 Range: 1 - 8 Format: Numeric

## Questions and instructions

### CATEGORIES

| Value | Category    | Cases |       |
|-------|-------------|-------|-------|
| 1     | crs_birth   | 6072  | 23.3% |
| 2     | cen_individ | 3760  | 14.4% |
| 3     | crs_cenm    | 702   | 2.7%  |
| 4     | crs_bfup    | 598   | 2.3%  |
| 5     | css_sei     | 13348 | 51.3% |
| 6     | ves_vese    | 969   | 3.7%  |
| 7     | tmt_tmtv    | 242   | 0.9%  |
| 8     | gp_va       | 348   | 1.3%  |

## Description

---

### DEFINITION

Source for 2nd vitamin A report

## Imputation and derivation

---

### DERIVATION

variable: source (table[s]: all\_vaccination\_records [derived table])

---

## VITA2YN: Had 2nd vitamin A dose (D)

**Data file:** vacc\_data\_selected\_BEST

### Overview

Valid: 26039    Invalid: 0  
 Type: Discrete    Decimal: 0    Width: 1    Range: 0 - 1    Format: Numeric

## Description

---

### DEFINITION

Had 2nd vitamin A dose

## Imputation and derivation

---

### DERIVATION

variable: vita2yn (table[s]: all\_vaccination\_records [derived table])

---

## VITA2YR: Year of 2nd vitamin A dose (D)

**Data file:** vacc\_data\_selected\_BEST

### Overview

Valid: 6441    Invalid: 19598  
 Type: Discrete    Decimal: 0    Width: 4    Range: 2004 - 2019    Format: Numeric

## Description

---

### DEFINITION

Year of 2nd vitamin A dose

## Imputation and derivation

---

### DERIVATION

variable: vita2yr (table[s]: all\_vaccination\_records [derived table])

**VITA2DATE: Date of 2nd vitamin A dose (D)****Data file:** vacc\_data\_selected\_BEST**Overview**

Valid: 5951

Type: Discrete    Width: 10    Range: -    Format: character

**Description**

## DEFINITION

Date of 2nd vitamin A dose

**Imputation and derivation**

## DERIVATION

variable: vita2date (table[s]: all\_vaccination\_records [derived table])

**VITA2DAYEST: Date of 2nd vitamin A dose is estimated (D)****Data file:** vacc\_data\_selected\_BEST**Overview**

Valid: 1026    Invalid: 25013

Type: Discrete    Decimal: 0    Width: 1    Range: 1 - 1    Format: Numeric

**Description**

## DEFINITION

Date of 2nd vitamin A dose is estimated

**Imputation and derivation**

## DERIVATION

variable: vita2dayest (table[s]: all\_vaccination\_records [derived table])

**VITA2BPROB: Problem with 2nd vitamin A date (missing or before DOB) (D)****Data file:** vacc\_data\_selected\_BEST**Overview**

Valid: 26039    Invalid: 0

Type: Discrete    Decimal: 0    Width: 1    Range: 0 - 1    Format: Numeric

## Description

### DEFINITION

Problem with 2nd vitamin A date (missing or before DOB)

## Imputation and derivation

### DERIVATION

variable: vita2date (table[s]: all\_vaccination\_records [derived table])

variable: birth\_date (table[s]: all\_vaccination\_records [derived table])

gen `vacc'Bprob=0

replace `vacc'Bprob=1 if (`vacc'date<birth\_date & `vacc'date~=. & birth\_date~=. ) | (`vacc'date==. & `vacc'yn==1)

## VITA2SPROB: Problem with 2nd vitamin A date (schedule issue) (D)

Data file: vacc\_data\_selected\_BEST

### Overview

Valid: 26039 Invalid: 0

Type: Discrete Decimal: 0 Width: 1 Range: 0 - 1 Format: Numeric

## Description

### DEFINITION

Problem with 2nd vitamin A date (schedule issue)

## Imputation and derivation

### DERIVATION

variable: vita2date (table[s]: all\_vaccination\_records [derived table])

variable: birth\_date (table[s]: all\_vaccination\_records [derived table])

\*for VITA2: problem if vacc date is before 1st dose, or less than 11 months, or more than 18 months after birthdate (supposed to be at 12-17 months)

if ""vacc""="vita2" replace `vacc'Sprob=1 if (vita2date<vita1date | vita2date-birth\_date<336 | vita2date-birth\_date>549) & vita2date~=. & birth\_date~=.

## VITA2FYINTDATE: First interview date when reported had 2nd vitamin A (D)

Data file: vacc\_data\_selected\_BEST

### Overview

Valid: 18717

Type: Discrete Width: 10 Range: - Format: character

## Description

## DEFINITION

First interview date when reported had 2nd vitamin A

## Imputation and derivation

## DERIVATION

variable: vita2intdate (table[s]: all\_vaccination\_records [derived table])

variable: vita2yn (table[s]: all\_vaccination\_records [derived table])

\*calculate first interview date where card seen and vaccine recorded as yes

bys ident: egen tempC=min(`vacc'intdate) if card==1 & `vacc'yn==1

bys ident: egen tempNC=min(`vacc'intdate) if card==2 & `vacc'yn==1

bys ident: egen `vacc'fyintdate=min(tempC)

bys ident: egen tempNCd=min(tempNC)

replace `vacc'fyintdate=tempNCd if `vacc'fyintdate==. & tempNCd~=.

## VITA2KEEP: Completeness of kept 2nd vitamin A report (D)

Data file: vacc\_data\_selected\_BEST

### Overview

Valid: 26039 Invalid: 0

Type: Discrete Decimal: 0 Width: 1 Range: 1 - 9 Format: Numeric

### Questions and instructions

## CATEGORIES

| Value | Category                                 | Cases |       |
|-------|------------------------------------------|-------|-------|
| 1     | vacc=y, date ok, card seen               | 2253  | 8.7%  |
| 2     | vacc=y, date NOT ok (S), card seen       | 3521  | 13.5% |
| 3     | vacc=y, date NOT ok (B), card seen       | 10532 | 40.4% |
| 4     | vacc=y, date NOT ok (S&B), card seen     | 2     | 0%    |
| 5     | vacc=y, date ok, card NOT seen           | 39    | 0.1%  |
| 6     | vacc=y, date NOT ok (S), card NOT seen   | 136   | 0.5%  |
| 7     | vacc=y, date NOT ok (B), card NOT seen   | 2234  | 8.6%  |
| 8     | vacc=y, date NOT ok (S&B), card NOT seen | 0     | 0%    |
| 9     | last report of vacc=n                    | 7322  | 28.1% |

### Description

## DEFINITION

Completeness of kept 2nd vitamin A report

## Imputation and derivation

## DERIVATION

variable: vita2keep (table[s]: all\_vaccination\_records [derived table])

```

la def vacckkeep 1 "vacc=y, date ok, card seen" 2 "vacc=y, date NOT ok (S), card seen" 3 "vacc=y, date NOT ok (B), card
seen" 4 "vacc=y, date NOT ok (S&B), card seen" 5 "vacc=y, date ok, card NOT seen" 6 "vacc=y, date NOT ok (S), card NOT
seen" 7 "vacc=y, date NOT ok (B), card NOT seen" 8 "vacc=y, date NOT ok (S&B), card NOT seen" 9 "last report of vacc=n"
*1. keep the first record where the vaccine=yes, birth-date problem=no, schedule problem=no and healthcard=seen
gen `vacc'keep=1 if order==1 & `vacc'yn==1 & `vacc'Bprob==0 & `vacc'Sprob==0 & card==1
bys ident: egen kept=max(`vacc'keep)
*2. if no record identified: keep the first record where the vaccine=yes, birth-date problem=no, schedule problem=yes and
healthcard=seen
replace `vacc'keep=2 if order==1 & `vacc'yn==1 & `vacc'Bprob==0 & `vacc'Sprob==1 & card==1 & kept==.
drop kept
bys ident: egen kept=max(`vacc'keep)
*3. if no record identified: keep the first record where the vaccine=yes, birth-date problem=yes, schedule problem=no and
healthcard=seen
replace `vacc'keep=3 if order==1 & `vacc'yn==1 & `vacc'Bprob==1 & `vacc'Sprob==0 & card==1 & kept==.
drop kept
bys ident: egen kept=max(`vacc'keep)
*4. if no record identified: keep the first record where the vaccine=yes, birth-date problem=yes, schedule problem=yes and
healthcard=seen
replace `vacc'keep=4 if order==1 & `vacc'yn==1 & `vacc'Bprob==1 & `vacc'Sprob==1 & card==1 & kept==.
drop kept
bys ident: egen kept=max(`vacc'keep)
*5. if no record identified: keep the first record where the vaccine=yes, birth-date problem=no, schedule problem=no and
healthcard=not seen
replace `vacc'keep=5 if order==1 & `vacc'yn==1 & `vacc'Bprob==0 & `vacc'Sprob==0 & card==2 & kept==.
drop kept
bys ident: egen kept=max(`vacc'keep)
*6. if no record identified: keep the first record where the vaccine=yes, birth-date problem=no, schedule problem=yes and
healthcard=not seen
replace `vacc'keep=6 if order==1 & `vacc'yn==1 & `vacc'Bprob==0 & `vacc'Sprob==1 & card==2 & kept==.
drop kept
bys ident: egen kept=max(`vacc'keep)
*7. if no record identified: keep the first record where the vaccine=yes, birth-date problem=yes, schedule problem=no and
healthcard=not seen
replace `vacc'keep=7 if order==1 & `vacc'yn==1 & `vacc'Bprob==1 & `vacc'Sprob==0 & card==2 & kept==.
drop kept
bys ident: egen kept=max(`vacc'keep)
*8. if no record identified: keep the first record where the vaccine=yes, birth-date problem=yes, schedule problem=yes and
healthcard=not seen
replace `vacc'keep=8 if order==1 & `vacc'yn==1 & `vacc'Bprob==1 & `vacc'Sprob==1 & card==2 & kept==.
drop kept
bys ident: egen kept=max(`vacc'keep)
*9. if no record identified: keep the LAST record where the vaccine is recorded as no (regardless whether healthcard seen or
not)
replace `vacc'keep=9 if Norder==Ntotal & `vacc'yn==0 & kept==.
la val `vacc'keep vacckkeep
drop kept

```

## **NVAC: Number of vaccinations received (D)**

**Data file:** vacc\_data\_selected\_BEST

### **Overview**

Valid: 26039    Invalid: 0  
 Type: Discrete    Decimal: 0    Width: 2    Range: 1 - 18    Format: Numeric

### **Description**

DEFINITION

Number of vaccinations received

## Imputation and derivation

### DERIVATION

```
variable: bcgyn (table[s]: all_vaccination_records [derived table])
variable: dpt1yn (table[s]: all_vaccination_records [derived table])
variable: dpt2yn (table[s]: all_vaccination_records [derived table])
variable: dpt3yn (table[s]: all_vaccination_records [derived table])
variable: hh1yn (table[s]: all_vaccination_records [derived table])
variable: hh2yn (table[s]: all_vaccination_records [derived table])
variable: hh3yn (table[s]: all_vaccination_records [derived table])
variable: p0yn (table[s]: all_vaccination_records [derived table])
variable: p1yn (table[s]: all_vaccination_records [derived table])
variable: p2yn (table[s]: all_vaccination_records [derived table])
variable: p3yn (table[s]: all_vaccination_records [derived table])
variable: pcv1yn (table[s]: all_vaccination_records [derived table])
variable: pcv2yn (table[s]: all_vaccination_records [derived table])
variable: pcv3yn (table[s]: all_vaccination_records [derived table])
variable: rv1yn (table[s]: all_vaccination_records [derived table])
variable: rv2yn (table[s]: all_vaccination_records [derived table])
variable: meas1yn (table[s]: all_vaccination_records [derived table])
variable: meas2yn (table[s]: all_vaccination_records [derived table])
```

```
egen nvac=rownonmiss(bcgyn dpt1yn dpt2yn dpt3yn hh1yn hh2yn hh3yn p0yn p1yn p2yn p3yn pcv1yn pcv2yn pcv3yn
rv1yn rv2yn meas1yn meas2yn)
drop if nvac==0
```

## NVACGP: Grouped number of vaccinations received (D)

**Data file:** vacc\_data\_selected\_BEST

### Overview

Valid: 26039    Invalid: 0  
 Type: Discrete    Decimal: 0    Width: 1    Range: 1 - 7    Format: Numeric

### Questions and instructions

#### CATEGORIES

| Value | Category |
|-------|----------|
| 5     | 5-9      |
| 6     | 10-14    |
| 7     | 15+      |

### Description

#### DEFINITION

Grouped number of vaccinations received

## Imputation and derivation

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### DERIVATION

recode nvac (5/9=5 "5-9") (10/14=6 "10-14") (15/max=7 "15+"), gen(nvacgp)

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