

User's Guide Appendix 3b:
2017-2019 National Survey of Family Growth
Female Pregnancy File Recode Specifications

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All pregnancy file recodes have been specified based on the pregnancy file layout. All were computed using original values of century month (CM) dates where date recodes are referenced and original values of continuous recodes that were modified for public use.

The CAPI Reference Questionnaire (CRQ) contains the full specifications for the computer- assisted survey instrument, including all CRQ flow checks (routing statements) referenced below.

For selected recodes on the female pregnancy file, some form of collapsing, topcoding, or bottomcoding values was required to minimize the risk of disclosure and include the variables on the public use files. For these particular recodes, information on the original, “inhouse” variables (beginning with the prefix “IN”) are listed in the specifications below. In addition, for reasons of disclosure risk, some CM date recodes have been suppressed for public use and only the years of these events are included on the public-use files.

*To access these restricted-use variables (all listed in **Appendix 7a** and further described in **Appendix 7c**), users must apply to the NCHS Research Data Center. In addition to the information in Appendix 7, please see “**Protections to Minimize Risk of Disclosure for Individual-Level Data**” in the User’s Guide main text. The original CM date variables, with month and year information, are used in the creating these recode variables.*

** A double asterisk after the recode name indicates there was a comparable recode of the same name in the 2015-2017 NSFG. It also means that if any disclosure-risk related modification of the recode occurred for the 2015-2017 NSFG public-use files, the same action was taken for the 2017-2019 NSFG public-use files. Please consult User’s Guide Appendix 4, presenting “cross-walk” spreadsheets of the NSFG recodes for information on recode comparability across survey years as well as between male and female. Please also consult Appendix 7, which describes all analytic, restricted-use variables, for further information on variable modifications or suppressions for reasons of disclosure risk.

A double hashtag after the recode name indicates that some new modification occurred for reasons of disclosure risk reduction, in order to retain the recode on the 2017-2019 NSFG public-use files. This comparability information is also indicated in User’s Guide Appendix 4b, the recode “crosswalk” for the female respondent and pregnancy files and Appendix 7, as described above.

Section B: Pregnancy and Birth History

OUTCOME:** **"Pregnancy outcome"**

This recode assigns a single outcome code to each pregnancy, even if the pregnancy had multiple outcomes. If there were multiple outcomes for the pregnancy (e.g., 2 fetuses, with 1 born alive but other being a stillbirth), OUTCOME gives the following priority:

*live birth (either vaginal or Cesarean delivery)
induced abortion
stillbirth
miscarriage
ectopic pregnancy*

The raw variable indicating pregnancy outcome is BC-1 PREGEND, and for each pregnancy up to 6 outcomes are recorded. There were no pregnancies in the 2017-2019 NSFG data with more than 2 outcomes reported (PREGEND1, PREGEND2). There is also a Blaise-computed variable **prgoutcome** defined in Flow Check B-42a that indicates whether the pregnancy ended in live birth (code 1), ended in non-live birth (code 2), or is a current pregnancy (code 3). The computed variable **outcom_s** has the same code categories as prgoutcome, but reflects the pregnancy outcome after all key details about the pregnancy, including pregnancy order, have been verified and corrected in Section B's summary screens.

SAS logic:

```
If outcom_s=. then OUTCOME= -1; /* impute this case */
Else if outcom_s = 1 then OUTCOME = 1;
Else if outcom_s = 3 then OUTCOME = 6;
Else if outcom_s = 2 then do;
  if PREGEND1=3 or PREGEND2=3 then OUTCOME = 2; Else
  if PREGEND1=2 or PREGEND2=2 then OUTCOME = 3; Else
  if PREGEND1=1 or PREGEND2=1 then OUTCOME = 4; Else
  if PREGEND1=4 or PREGEND2=4 then OUTCOME = 5;
Else if PREGEND1=dk/rf then do;
  If BC-1b HOWENDDK=1 (live birth) then OUTCOME=1;
  Else if HOWENDDK in(5,8,9) then OUTCOME= -1; /* impute this case */
End;
End;
```

*Note: If interested in all outcomes for a multiple-outcome pregnancy (e.g., 2 fetuses where one was born alive and one was a stillbirth), use raw variables BC-1 PREGENDn. To determine if a pregnancy resulted in a multiple birth (e.g., twins, triplets), see computed variable **nbrnlv_s**. A multiple-gestation pregnancy may have only 1 outcome noted on BC-1 PREGENDn if all fetuses had the same outcome, e.g., a set of twins born by vaginal delivery.*

Imputation Note: Done for cases with *outcom_s* =missing or *HOWENDDK*=5, *dk*, or *rf*. The computed variable *outcom_s* will be missing (*sysmis*) if both *BC-1 PREGEND1*=*DK/RF* and *BC-1b HOWENDDK*=*DK/RF*.

❖ If *OUTCOME* is imputed and *HOWENDDK* NE 1 (live birth), then *OUTCOME* can only be imputed to a value of 2, 3, 4, or 5 (non-live birth outcome).

Code categories:

- 1 = Live birth
- 2 = Induced abortion
- 3 = Stillbirth
- 4 = Miscarriage
- 5 = Ectopic pregnancy
- 6 = Current pregnancy

BIRTHORD:** “Birth order”

BIRTHORD is blank (inapplicable) if the pregnancy did not result in live birth (pregnancy file recode OUTCOME NE 1).

Otherwise, BIRTHORD is set to 1 for R’s first live birth and incremented by 1 for each additional live birth R reported. BIRTHORD reflects births in chronological order. No imputation is needed, but BIRTHORD values may reflect imputed values of OUTCOME and DATEND.

SAS logic:

```
data births; set pregs;
if outcome=1; /* subset live births */
data birthord; set births; by caseid;
if first.caseid then birthord=1;
else birthord+1;
retain birthord;
label birthord="birth order";
```

Imputation Note: BIRTHORD should be adjusted if any changes are made to PREGORDR and the affected pregnancies include live births.

Code categories:

- Blank = inapplicable
- 1-nn = birth order

DATEND : “Year pregnancy ended”**

DATEND is blank (inapplicable) if the pregnancy is a current pregnancy (recode OUTCOME = 6).

The DATEND recode was initially defined as a century-month date, with values directly drawn from the Blaise-computed variable **cmendp_s** (defined in Flow Check B-42d).

If there were no corrections to the pregnancy end date or the ordering of pregnancies in Section B, then **cmendp_s** is equivalent to the Blaise-computed variable **cmprgend** (defined in Flow Check B-42a):

cmprgend = blank (inapplicable)
if this is a current pregnancy (Blaise-computed **outcom_s** =3)
= **cmbabdob** if **outcom_s** =1 (live birth)
(can be DK/RF)
= **cmotpreg** if **outcom_s** =2 (non live birth)
(can be DK/RF)

Note: For inclusion on the 2015-2017 and 2017-2019 public-use files, the CM dates for DATEND were converted to years. The original CM date variable **INDATEND** is restricted-use and available only through the NCHS Research Data Center.

Imputation Note: Done for all pregnancies where **cmendp_s** = DK or RF or where **outcom_s**=**sysmis**. Imputed values of **OUTCOME** are used to constrain imputation of **DATEND** (e.g., if **OUTCOME** is imputed to be a current pregnancy, then **DATEND** is imputed to blank/inapplicable.)

Code categories for DATEND (public-use variable):

Blank = inapplicable
xxxx - 2019 = Year pregnancy ended

Code categories for INDATEND (restricted-use variable):

Blank = inapplicable
xxxx – 1437 = date (century month) pregnancy ended

AGEPREG : "Age at pregnancy outcome"**

AGEPREG is blank (inapplicable) if this is a current pregnancy (recode OUTCOME=6).

Otherwise,

AGEPREG is defined using 2 variables:

AGEPREG = INT[(DATEND – cmbirth)/12]

Note: For 2015-2017 and 2017-2019, this recode was modified to indicate ages in whole years, rather than including two implied decimal places as in past public-use file releases. If greater precision is needed, users may apply for access to the original CM dates of pregnancies (INDATEND) and CM date of R's birth (cmbirth) in the Research Data Center.

Imputation Note: All imputed values of AGEPEG are based on imputed values of original CM version of DATEND if this recode was imputed.

Code categories:

Blank = inapplicable
xx - 49 = age at pregnancy outcome

DATECON:** “Year pregnancy began”

For current pregnancies, values of DATECON are based directly on original, non-missing values of cmpbeg_s (CM date for pregnancy start as defined in Flow Check B-42d) or constructed based on the date of interview and the imputed values of restricted-use recode PRGLNGTH.

IF recode OUTCOME=6 and $0 < \text{cmpbeg_s} < 9997$, then $\text{DATECON} = \text{cmpbeg_s}$;
IF recode OUTCOME=6 and cmpbeg_s in(., 9997, 9998, 9999) then
 $\text{DATECON} = \text{cmintvw} - \text{INT}(\text{PRGLNGTH}/4.33)$.

Else, for completed pregnancies, values of DATECON are based on recodes DATEND and PRGLNGTH (weeks converted to months).

If recode OUTCOME in (1,2,3,4,5) then do;
 $\text{DATECON} = \text{DATEND} - \text{INT}(\text{PRGLNGTH}/4.33)$;
End;

For most cases, DATECON defined in this manner will be equivalent to Blaise-computed cmprgbeg (defined in Flow Check B-42a). For those where the pregnancy beginning date or the ordering of pregnancies was corrected, then DATECON will likely be equivalent to Blaise-computed cmpbeg_s (defined in Flow Check B-42d). When there were such corrections, cmpbeg_s reflects the corrected information, including gestational length captured in the Blaise-computed variables mosgestv or moscurrp:

$\text{cmpbeg_s} = \text{int}(\text{cmendp_s} - \text{mosgestv})$ if $\text{outcom_s} = 1$ or 2 and mosgestv ne .
 $= \text{int}(\text{cmintvw} - \text{moscurrp})$ if $\text{outcom_s} = 3$ and moscurrp ne .

Note: For inclusion on the 2015-2017 and 2017-2019 public-use files, the CM dates for DATECON were converted to years. The original CM date variable INDATECON is restricted-use and available only through the NCHS Research Data Center.

Imputation Note: If either *DATEND* or *PRGLNGTH* is based on imputed values, then *DATECON* should be based on those imputed values.

Code categories for *DATECON* (public-use variable)
xxxx - 2019 = Year of pregnancy conception

Code categories for *INDATECON* (restricted-use variable):
xxxx - 1437 = date (century month) of pregnancy conception

AGECON:** “Age at time of conception”

AGECON is defined using 2 variables:

$$\text{AGECON} = \text{INT}[(\text{DATECON} - \text{cmbirth})/12]$$

Note: For 2015-2017 and 2017-2019, this recode was modified to indicate ages in whole years, rather than including two implied decimal places as in past public-use file release. If greater precision is needed, users may apply for access to the original CM dates of pregnancies (*INDATECON*) and CM date of R’s birth (*cmbirth*) in the Research Data Center.

Imputation Note: All imputed values of *AGECON* are based on imputed values of original CM version of *DATECON* if this recode was imputed.

Code categories:
xx - 49 = age at pregnancy conception

PMARPREG:** “Whether pregnancy ended before R’s 1st marriage (premarital)”

PMARPREG is blank (inapplicable) if this is a current pregnancy (pregnancy file recode *OUTCOME* = 6).

Otherwise:

PMARPREG=1 (yes) if: --R has never been married (recode *FMARITAL*=5), or
--pregnancy file recode *DATEND* < recode *MARDAT01*

PMARPREG=2 (no) if: *DATEND* >= *MARDAT01*

Note: If users wish to limit to pregnancies to “ever-married” respondents, they should subset cases with *FMARITAL* NE 5.

Imputation Note: All imputed values of PMARPREG are based on imputed values of DATEND, FMARITAL, and MARDAT01, if those recodes were imputed.

Code categories:

- Blank = inapplicable
- 1 = yes (pregnancy ended before 1st marriage)
- 2 = no (pregnancy ended in same month as or later than 1st marriage)

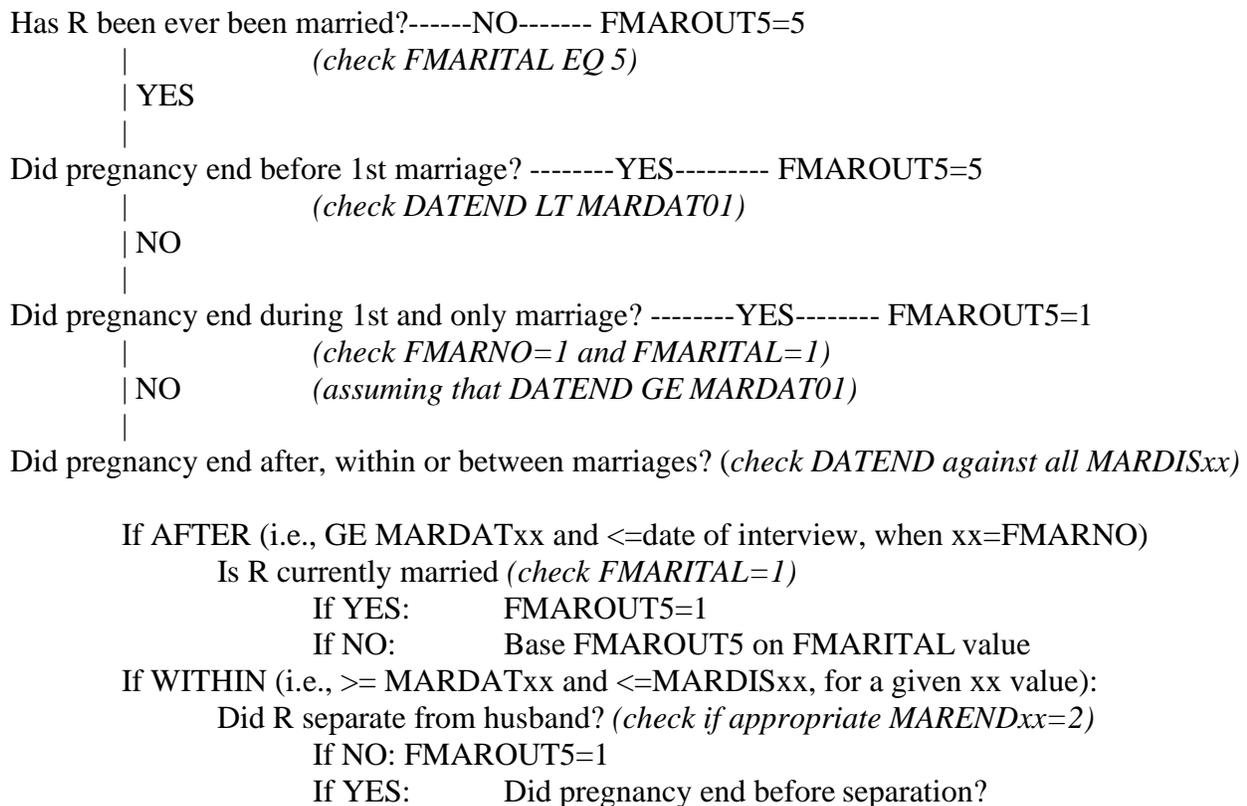
FMAROUT5:** "Formal marital status at pregnancy outcome -- 5 categories

FMAROUT5 is blank (inapplicable) if this is a current pregnancy (recode OUTCOME=6).

Variables for computing FMAROUT5:

- respondent file recode FMARITAL=formal marital status at interview
- respondent file recode FMARNO=number of marriages
- respondent file recodes MARDATxx=date of each marriage (up to 6)
- respondent file recodes MARDISxx=date of each marital dissolution (up to 6)
- respondent file recodes MARENDxx=how each marriage ended (up to 6)
- pregnancy file recode DATEND=date of pregnancy outcome

Flow chart for computing FMAROUT5:



If YES: FMAROUT5=1
If NO: FMAROUT5=4

If BETWEEN (i.e., \geq MARDIS_{xx} and \leq MARDAT_(xx+1) and MAREND_{xx} NE 2):
Did pregnancy end after divorce or death? (*check appropriate MAREND_{xx}*)
If DIVORCE: FMAROUT5=2
If DEATH: FMAROUT5=3

Imputation Note: All imputed values of this recode are based on imputed values for all source recodes.

Codes categories:

Blank = Inapplicable
1 = Married
2 = Divorced
3 = Widowed
4 = Separated
5 = Never married

RMAROUT6:** "Informal marital status at pregnancy outcome -- 6 categories

RMAROUT6 is blank (inapplicable) if this is a current pregnancy (recode OUTCOME=6).

Variables for computing RMAROUT6:

respondent file recode COHEVER=has R ever cohabited outside of marriage
respondent file recode RMARITAL=informal marital status at time of interview
respondent file Blaise-computed cmpmcohx=date of premar cohab with husband x (up to 6)
respondent file recodes MARDAT_{xx}=date of each marriage (up to 6)
respondent file Blaise-computed cmstrtcp=date of current cohab start
respondent file Blaise-computed cmcohstx=date of cohab start with former partner x (up to 6)
respondent file Blaise-computed cmstpcohx=date of cohab end with former partner x (up to 4)
pregnancy file recode DATEND=date of pregnancy outcome
pregnancy file recode FMAROUT5=formal marital status at pregnancy outcome

Flow chart for computing RMAROUT6:

If R has never cohabited outside of marriage (COHEVER=no), then RMAROUT6 should be based on FMAROUT5:

If COHEVER=2 then do;
if FMAROUT5=1 then RMAROUT6=1;
else if FMAROUT5 in(2 3 4) then RMAROUT6=FMAROUT5;
else if FMAROUT5=5 then RMAROUT6=6;
end;

ELSE, for all who have COHEVER=1:
If FMAROUT5=1 then set RMAROUT6=1.
ELSE IF FMAROUT5=4 then set RMAROUT6=4.

ELSE Is R currently cohabiting? (Check RMARITAL=2)
If yes ----- Did pregnancy end during current cohabitation?
(if DATEND GE cmstrtcp then RMAROUT6=5)

Else, only if RMAROUT5 has not been coded 1 or 4 (married or separated), check DATEND against all dates of cohabitation with former (nonmarital) partners (if any) and dates of premarital cohabitations with husbands (if any) to determine if DATEND falls within a cohabiting interval

CODE RMAROUT6=5 if:
(cmcohstx LE DATEND LE cmstpcohx) or
(cmcohstx2 LE DATEND LE cmstpcohx2) or
(cmcohstx3 LE DATEND LE cmstpcohx3) or
(cmcohstx4 LE DATEND LE cmstpcohx4) or

CODE RMAROUT6=5 if:
(cmpmcohx LE DATEND LT MARDAT01) or
(cmpmcohx2 LE DATEND LT MARDAT02) or
(cmpmcohx3 LE DATEND LT MARDAT03) or
(cmpmcohx4 LE DATEND LT MARDAT04) or
(cmpmcohx5 LE DATEND LT MARDAT05) or
(cmpmcohx6 LE DATEND LT MARDAT06).

ELSE:
If pregnancy did not end during any period of cohabitation, RMAROUT6 should be based on FMAROUT5, as indicated above for cases with COHEVER=2.

Imputation Note: All imputed values of this recode are based on imputed values for all source recodes. However, model-based imputation may still be needed if there are DK/RF values on key CM variables for the start/end of cohabitations.

Codes categories:
Blank = Inapplicable
1 = Married
2 = Divorced
3 = Widowed
4 = Separated
5 = Cohabiting
6 = Never married, not cohabiting

Imputation Note: All imputed values of this recode are based on imputed values for all source recodes.

Code categories:

- 1 = Married
- 2 = Divorced
- 3 = Widowed
- 4 = Separated
- 5 = Never married

RMARCON6:** "Informal marital status at pregnancy outcome -- 6 categories"

RMARCON6 is applicable for all pregnancies, whether current or completed, and is defined similarly to RMAROUT6. It uses the DATECON recode (century month when the pregnancy began) in place of DATEND (century month when the pregnancy ended), and it defaults to the FMARCON5 value rather than FMAROUT5.

Variables for computing RMARCON6:

- respondent file recode COHEVER=has R ever cohabited outside of marriage
- respondent file recode RMARITAL=informal marital status at time of interview
- respondent file Blaise-computed cmpmcohx=date of premar cohab with husband x (up to 6)
- respondent file recodes MARDATxx=date of each marriage (up to 6)
- respondent file Blaise-computed cmstrtcp=date of current cohab start
- respondent file Blaise-computed cmcohstx=date of cohab start with former partner x (up to 4)
- respondent file Blaise-computed cmstpcohx=date of cohab end with former partner x (up to 4)
- pregnancy file recode DATECON=date when pregnancy began
- pregnancy file recode FMARCON5=formal marital status at pregnancy conception

Flow chart for computing RMARCON6:

If R has never cohabited outside of marriage (COHEVER=no), then RMARCON6 should be based on FMARCON5:

If COHEVER=2 then do;
 if FMARCON5=1 then RMARCON6=1;
 else if FMARCON5 in(2 3 4) then RMARCON6=FMARCON5;
 else if FMARCON5=5 then RMARCON6=6;
end;

ELSE, for all who have COHEVER=1:

If FMARCON5=1 then set RMARCON6=1.

ELSE IF FMARCON5=4 then set RMARCON6=4.

ELSE Is R currently cohabiting? (Check RMARITAL=2)

 If yes ----- Did pregnancy end during current cohabitation?

(if DATECON GE cmstrtcp then RMARCON6=5)

Else, only if RMARCON5 has not been coded 1 or 4 (married or separated), check DATECON against all dates of cohabitation with former (nonmarital) partners (if any) and dates of premarital cohabitations with husbands (if any)

to determine if DATECON falls within a cohabiting interval:

CODE RMARCON6=5 if:

(cmcohstx LE DATECON LE cmstpcohx) or
(cmcohstx2 LE DATECON LE cmstpcohx2) or (cmcohstx3 LE DATECON LE
cmstpcohx3) or (cmcohstx4 LE DATECON LE cmstpcohx4) or

CODE RMARCON6=5 if:

(cmpmcohx LE DATECON LT MARDAT01) or
(cmpmcohx2 LE DATECON LT MARDAT02) or
(cmpmcohx3 LE DATECON LT MARDAT03) or
(cmpmcohx4 LE DATECON LT MARDAT04) or
(cmpmcohx5 LE DATECON LT MARDAT05) or
(cmpmcohx6 LE DATECON LT MARDAT06).

ELSE:

If pregnancy did not end during any period of cohabitation, RMARCON6 should be based on FMARCON5, as indicated above for cases with COHEVER=2.

Imputation Note: All imputed values of this recode are based on imputed values for all source recodes. However, model-based imputation may still be needed if there are DK/RF values on key CM variables for the start/end of cohabitations.

Codes categories:

Blank = Inapplicable
1 = Married
2 = Divorced
3 = Widowed
4 = Separated
5 = Cohabiting
6 = Never married, not cohabiting

LEARNPRG##: "Number of weeks pregnant when R learned she was pregnant"

LEARNPRG is blank (inapplicable) if BE-1 KNEWPREG was not meant to be asked, that is, if:

- this is a current pregnancy (recode OUTCOME=6); or
- this pregnancy ended in induced abortion (OUTCOME=2); or
- this pregnancy ended before January of 5 years before the interview date (recode

- DATEND LT cmjan5yr); or
 -- the baby was placed for adoption or no name was given (OUTCOME=1 and Blaise-computed variable BPA_BDScheck1=1 or blank; this variable is defined in Flow Check B-17)

Otherwise,
 LEARNPRG is based on responses to BE-1 KNEWPREG and, if necessary, the outcome-specific DK/RF followup questions BE-2a TRIMESTR and BE-2b LTRIMEST.

SAS logic:

```

If (. LT KNEWPREG LT 97) then LEARNPRG = KNEWPREG;
Else do;
  If OUTCOME in(1,3) then do; /* live birth or stillbirth */
    If TRIMESTR=1 then LEARNPRG=10;
    Else if TRIMESTR=2 then LEARNPRG=18;
    Else if TRIMESTR=3 then LEARNPRG=30;
  End;
  Else if OUTCOME in(4,5) then do; /* miscarriage or ectopic */
    If LTRIMEST=1 then LEARNPRG=10;
    Else if LTRIMEST=2 then LEARNPRG=18;
  End;
End;

```

Note: LEARNPRG was redefined as a categorical variable for inclusion on the 2017-2019 NSFG public-use file. INLEARNPRG, available in the NCHS Research Data Center, shows the exact number of weeks as originally defined.

Imputation Note: Done primarily for pregnancies with DK/RF on TRIMESTR or LTRIMEST. Also done for cases imputed on OUTCOME or DATEND, and the imputed values of those recodes should be used in determining the values on LEARNPRG. For example, if DATEND is imputed to a date earlier than cmjan5yr, then LEARNPRG is imputed to sysmis/inapp. Imputation is constrained such that no imputed value of LEARNPRG would be greater than restricted-use PRGLNGTH or greater than PNCAREWK. (LEARNPRG can be equal to PRGLNGTH or PNCAREWK, just not longer.)

Code categories for LEARNPRG (public-use variable):

Blank = inapplicable
 1 = 13 weeks or earlier
 2 = 14 weeks or later

Code categories for INLEARNPRG (restricted-use variable):

Blank = inapplicable
 00 - nn = weeks pregnant when first learned of pregnancy

PNCAREWK##: "Number of weeks pregnant at first prenatal care"

PNCAREWK is blank (inapplicable) if BE-7 BGNPRENA was not meant to be asked, that is, if:

- this is a current pregnancy (recode OUTCOME=6); or
- this pregnancy ended in induced abortion (OUTCOME=2); or
- this pregnancy ended before January of 5 years before the interview date (recode DATEND LT cmjan5yr); or
- the baby was placed for adoption or no name was given (OUTCOME=1 and Blaise-computed variable BPA_BDScheck1=1 or blank; this variable is defined in Flow Check B-17)

Otherwise:

If R did not report receiving prenatal care for this pregnancy (BE-6 GETPRENA = 5, DK, or RF), PNCAREWK EQ 95.

Else,

PNCAREWK is based on responses to BE-7 BGNPRENA and, if necessary, the outcome-specific DK/RF followup questions BE-8a PNCTRIM and BE-8b LPNCTRI.

SAS Logic:

```
If (. LT BGNPRENA LT 97) then PNCAREWK = BGNPRENA;
Else do;
  If OUTCOME in(1,3) then do; /* live birth or stillbirth */
    If PNCTRIM=1 then PNCAREWK=10;
    Else if PNCTRIM=2 then PNCAREWK=18;
    Else if PNCTRIM=3 then PNCAREWK=30;
  End;
  Else if OUTCOME in(4,5) then do; /* miscarriage or ectopic */
    If LPNCTRI=1 then PNCAREWK=10;
    Else if LPNCTRI=2 then PNCAREWK=18;
  End;
End;
```

Note: PNCAREWK was redefined as a categorical variable for inclusion on the 2017-2019 NSFG public-use file. INPNCAREWK, available in the NCHS Research Data Center, shows the exact number of weeks as originally defined.

Imputation Note: Done primarily for pregnancies with DK/RF on PNCTRIM or LPNCTRI. Also done for cases imputed on OUTCOME or DATEND, and the imputed values of those recodes should be used in determining the values on full-detail version of PNCAREWK. For example, if DATEND is imputed to a date earlier than cmjan5yr, then PNCAREWK is imputed to sysmis/inapp.

Imputation is constrained such that no imputed value of PNCAREWK would be earlier than LEARNPRG or greater than PRGLNGTH.

Code categories for PNCAREWK (public-use variable):

- Blank = inapplicable
- 1 = 13 weeks or earlier
- 2 = 14 weeks or later
- 3 = no prenatal care for this pregnancy

Code categories for INPNCAREWK (restricted-use variable):

- Blank = inapplicable
- 0 - nn = weeks pregnant at first prenatal care visit
- 95 = did not report receiving any prenatal care

PAYDELIV:** **"Payment for delivery"**

PAYDELIV is blank (inapplicable) if:

- this is a current pregnancy or it did not result in live birth (recode OUTCOME NE 1); or
- this birth occurred before January of 5 years before the interview date (OUTCOME=1 and recode DATEND LT cmjan5yr)

Otherwise,

The responses to BD-8 PAYBIRTH are used to define PAYDELIV. PAYBIRTH1-PAYBIRTH5 code up to 5 forms of payment for the delivery, as follows:

- 1=Insurance
- 2=Co-payment or out-of-pocket payment
- 3=Medicaid
- 4=No payment required
- 5=Some other way

Checking across PAYBIRTH1-PAYBIRTH5 (note: only 3 mentions used in 2017-2019 file):

If ANY mention of code 3,	PAYDELIV=4 /* Medicaid */
ELSE If ONLY payment specified is code 2,	PAYDELIV=1 /* own \$\$\$ */
ELSE If ONLY payment specified is code 1,	PAYDELIV=2 /* insur */
ELSE If ONLY payments specified are codes 1 & 2,	PAYDELIV=3
ELSE for all other combinations of payment methods,	PAYDELIV=5

Note: The use of the recodes OUTCOME and DATEND here ensures that we use pregnancy outcome and end dates that reflect any summary screen corrections. But it also means we may be creating inconsistencies between the original values of raw PAYBIRTHx and the PAYDELIV recode. Some cases where PAYBIRTHx was asked may become inapplicable, and some cases where PAYBIRTHx was

originally inapp may need to be imputed to a non-inapp value. For example, because DK/RF values on cmbabdob were routed into the delivery payment questions, you may find non-inapp values on PAYBIRTHx while PAYDELIV may be set to inapp if DATEND was imputed to a value outside the 5 year window.

Imputation Note: Done primarily for cases with DK/RF on the “1st mention” variable (PAYBIRTH). Also done for cases imputed on OUTCOME or DATEND, and the imputed values of those recodes should be used in determining the values on PAYDELIV. For example, if DATEND is imputed to a date earlier than cmjan5yr, then PAYDELIV is imputed to sysmis/inapp. If OUTCOME is imputed to a nonlivebirth code, then PAYDELIV is imputed to sysmis/inapp.

Code categories:

- Blank = inapplicable
- 1 = own income only
- 2 = insurance only
- 3 = Own income & insurance only
- 4 = Medicaid mentioned at all
- 5 = All other combinations of payment methods

LBW1:** "Low birthweight--Baby 1"

LBW1 is blank (inapplicable) if this pregnancy did result in live birth (recode OUTCOME ne 1).

Otherwise if OUTCOME=1,

If (6 LE (BD-3 BIRTHWGT_LB) LT 97) or (BIRTHWGT_LB LT 6 and BIRTHWGT_OZ NE DK/RF):

BIRTHWGT_LB and BIRTHWGT_OZ are converted to ounces or grams.

If (BIRTHWGT_LB GE 6 and BIRTHWGT_OZ = DK/RF), then assign LBW1=2.

If total weight is less than or equal to 88 ounces or 2,500 grams, LBW1=1.

Otherwise, LBW1=2.

Else if BD-3 BIRTHWGT_LB = DK/RF or (BIRTHWGT_LB LT 6 and BIRTHWGT_OZ=DK/RF):

BD-5 LOBTHWGT is used to define LBW1, as follows.

If BD-5 LOBTHWT1 EQ 2 (less than 5 1/2 pounds), LBW1=1.

Else if BD-5 LOBTHWT1 EQ 1 (5 1/2 pounds or more), LBW1=2.

Imputation Note: Done for cases with BD-5 LOBTHWT1=DK/RF. Also done for cases imputed on OUTCOME, and the imputed values of OUTCOME should be used in determining the values on LBW1. For example, if OUTCOME is imputed to a nonlivebirth code, then LBW1 is imputed to sysmis/inapp.

Code categories:

- Blank = inapplicable
- 1 = Yes, low birth weight (< 2500 grams or 89 ounces)
- 2 = No, not low birth weight (>= 2500 grams or 89 ounces)

BFEEDWKS##: **"Duration of breastfeeding in weeks"**

Note: *Because duration of breastfeeding can be affected by multiple births and because multiple births were relatively rare in the NSFG sample, this recode is defined ONLY for singleton gestations. However, this algorithm could be used for all births.*

BFEEDWKS is blank (inapplicable) if:

- this is a current pregnancy or it did not result in live birth (recode OUTCOME NE 1);
- it was a multiple birth (Blaise-computed variable **nbrnlv_s > 1**);
- the baby was placed for adoption, died shortly after birth, or no name was given (OUTCOME=1 and Blaise-computed variable BPA_BDScheck1=1 or 2 or blank; this variable is defined in Flow Check B-17, but may not be on the output data file)
- baby did not live with R for at least 2 months (OUTCOME=1 and Blaise-computed variable $0 \leq \text{lastage1} < 2$); or **kidage=0** or 1
- child is older than 18 years (OUTCOME=1 and Blaise-computed variables lastage = blank and kidage >= 228)

Otherwise IF OUTCOME=1 then do:

- BFEEDWKS=995 if R reported never breastfeeding this baby (BH-1 ANYNURSE1 = NO)
- BFEEDWKS=994 if R is still breastfeeding this baby (Blaise-computed variable lastage1=blank and kidage < 228) and (BH-4 QUITNURS1=NO or BH-2 FEDSOLID1=NO or AGEQTNUR_N1=996)

Otherwise, if BH-1 ANYNURSE1 = YES:

responses to BH-5 (AGEQTNUR_N1 and AGEQTNUR_P1 which are combined in **AGEQTNUR1**) are used to define BFEEDWKS.

AGEQTNUR_N1 = Number of months, weeks, or days R breastfed this child
AGEQTNUR_P1 = Units in which number was reported (months, weeks, days)
AGEQTNUR1 = Number of months this child was breastfed

For all cases where AGEQTNUR1 has a valid value, not DK/RF or not ascertained 997:

BFEEDWKS=ROUND(AGEQTNUR1*4.33)

Note: *BFEEDWKS was redefined as a categorical variable for inclusion on the 2017-2019 NSFG public-use file. INBFEEDWKS, available in the NCHS Research*

Data Center, shows the exact number of weeks as originally defined.

Imputation Note: For all imputation of BFEEDWKS, no imputed value should be greater than the smallest value among 48 weeks, lastage1 (in weeks), and kidage (in weeks). Put another way, they can never be imputed to have breastfed longer than the child lived with them, AND no imputed value should exceed 48 weeks.

Imputation is done for cases with:

- *DK/RF on BH-1 ANYNURSE1, BH-2 FEDSOLID1, BH-4 QUITNUR1, or AGEQTNUR1*
- *OUTCOME=1 and either nbrnlv_s=blank or cmbabdob=DK/RF*
- *LASTAGE1 GE 2 and original restricted-use version of KIDAGE LE 228, but AGEQTNUR1=sysmis (for these cases, nonsymis values of cmkidlft1 or cmkidied1 may constrain the upper bound of imputed values for BFEEDWKS – e.g., imputed value of BFEEDWKS should not be greater than CMKIDIED1 – DATEND, converted to weeks, or CMKIDLFT1 – DATEND, converted to weeks)*
- *LASTAGE1 < 0 (these are cases where the date when child died or left R were reported earlier than DATEND, but the edit checks were suppressed)*

Code categories for BFEEDWKS (public-use variable):

- Blank = inapplicable
- 0 = Never breastfed this child
- 1 = Breastfed less than 1 week
- 2 = Breastfed 1-13 weeks (LE 3 mos)
- 3 = Breastfed 14-26 weeks (>3/LE 6 mos)
- 4 = Breastfed 27-52 weeks (>6/LE 12 mos)
- 5 = Breastfed 53-104 weeks (>1/LE 2 yrs)
- 6 = Breastfed 105+ weeks (>2 yrs)
- 7 = Still breastfeeding this child

Code categories for INBFEEDWKS (restricted-use variable):

- Blank = Inapplicable
- 000 = Breastfed for less than 1 week
- 001 = Breastfed for 1 week
- 002 = Breastfed for 2 weeks
- 003 = Breastfed for 3 weeks
- etc.
- 994 = Still breastfeeding this child
- 995 = Never breast-fed this child

Section E: Wantedness of Pregnancies

OLDWANTR:** **"Wantedness of Pregnancy -- Respondent -- Cycle 4 Version"**

If EG-6 WANTBOLD=5 then OLDWANTR=5

Else if EG-6 WANTBOLD in(1,6) or EG-5 RESNOUSE=1 or EG-3 WHYSTOPD=1 and EG-7 PROBBABE in (5,6,9) or

if EG-6 WANTBOLD in (8,9) and EG-7 PROBBABE in (5,6,9) then do:

If EG-7 PROBBABE=5 then OLDWANTR=5.

Else if EG-7 PROBBABE=6 or EG-7 PROBBABE=DK then OLDWANTR=6.

Else do:

If EG-10 TIMINGOK=1 then OLDWANTR=3.

Else if EG-10 TIMINGOK=2 then OLDWANTR=2.

Else if EG-10 TIMINGOK=3 then OLDWANTR=1.

Else if EG-10 TIMINGOK=4 then OLDWANTR=4.

Note: *OLDWANTR, as defined for all file releases since the 1995 NSFG, is comparable to Cycle 4 (1988) recode WANTWIFE in that it does not take into account the confirmation question, EG-9 WANTBLD2, which was asked only for Rs aged 15-19 . Recode WANTRESP takes this confirmation question into account.*

Imputation Note: *Done if (EG-6 WANTBOLD=1 or EG-7 PROBBABE=1 or EG-9 WANTBLD2=1) and EG-10 TIMINGOK=8, 9, or system-missing. Other combinations resulting in missing value on OLDWANTR qualify for imputation as well. If WANTBOLD=1 (yes), or PROBBABE=1(yes) or WANTBLD2=1(yes) then OLDWANTR can be imputed to any value other than 5 (unwanted).*

Code categories:

- 1= Later, overdue
- 2= Right time
- 3= Too soon, mistimed
- 4= Didn't care, indifferent
- 5= Unwanted
- 6= Don't know, not sure

OLDWANTP:** **"Wantedness of Pregnancy -- Respondent's Partner (father of pregnancy) -- Cycle 4 Version"**

If EG-16 HPWNOLD=5 then OLDWANTP=5.

Else if EG-16 HPWNOLD=6 or EG-16 HPWNOLD=DK then OLDWANTP=6.

Else if EG-16 HPWNOLD=1 then do:

If EG-17 TIMOKHP=1 then OLDWANTP=3.
Else if EG-17 TIMOKHP=2 then OLDWANTP=2.
Else if EG-17 TIMOKHP=3 then OLDWANTP=1.
Else if EG-17 TIMOKHP=4 then OLDWANTP=4.

Note: OLDWANTP, as defined for all file releases since the 1995 NSFG, is comparable to Cycle 4 (1988) recode WANTMAN. in that it captures “DK” responses on HPWNOLD and assigns 6 on the OLDWANTP recode. The recode WANTPART, instead, calls for imputation on cases with “DK” on HPWNOLD.

Imputation Note: If HPWNOLD=1 (yes), then OLDWANTP can be imputed to any value **other than 5** (unwanted).

Code categories:

1= Later, overdue
2= Right time
3= Too soon, mistimed
4= Didn't care, indifferent
5= Unwanted
6= Don't know, not sure

WANTRESP:** “Wantedness of Pregnancy – Respondent”

If EG-10 TIMINGOK=1 then WANTRESP=3.
Else if EG-10 TIMINGOK=2 then WANTRESP=2.
Else if EG-10 TIMINGOK=3 then WANTRESP=1.
Else if EG-10 TIMINGOK=4 then WANTRESP=4.

Else if EG-6 WANTBOLD=5 or EG-7 PROBBABE=5 or EG-9 WANTBLD2=5 then WANTRESP=5.

Else if EG-7 PROBBABE=6 or EG-7 PROBBABE=DK then WANTRESP=6.

Note: This recode is comparable to the recode of the same name in Cycles 5 (1995) and later data files because it takes into account confirmation question EG-9 WANTBLD2, which was asked only for Rs aged 15-19. Recode OLDWANTR is comparable to Cycles 3 & 4 (WANTWIFE).

Imputation Note: If WANTBOLD=1 (yes), then WANTRESP can be imputed to any value **other than 5** (unwanted).

Code categories:

1= Later, overdue
2= Right time
3= Too soon, mistimed
4= Didn't care, indifferent

- 5= Unwanted
- 6= Don't know, not sure (Cycle 4 equivalent: Undetermined)

WANTPART:** **“Wantedness of pregnancy -- Respondent's Partner (father of pregnancy)”**

If EG-17 TIMOKHP=1 then WANTPART=3.
 Else if EG-17 TIMOKHP=2 then WANTPART=2.
 Else if EG-17 TIMOKHP=3 then WANTPART=1.
 Else if EG-17 TIMOKHP=4 then WANTPART=4.
 Else if EG-16 HPWNOLD=5 then WANTPART=5.
 Else if EG-16 HPWNOLD=6 then WANTPART=6.

Note: See *OLDWANTP* for recode comparable to Cycles 3 & 4 (*WANTMAN*).
OLDWANTP captures “DK” responses on *HPWNOLD* and assigns 6 on the recode.
WANTPART, instead, calls for imputation on cases with “DK” on *HPWNOLD*.

Imputation Note: If *HPWNOLD*=1 (yes), then *WANTPART* can be imputed to any value **other than 5** (unwanted).

Code categories:

- 1= Later, overdue
- 2= Right time
- 3= Too soon, mistimed
- 4= Didn't care, indifferent
- 5= Unwanted
- 6= Don't know, not sure

TOOSOON:** **“Number of Months Too Soon Pregnancy Occurred”**

TOOSOON is blank (inapplicable) if R did not choose “1 – Too soon” on EG-10 TIMINGOK. If

EG-11 TOOSOON_N ne DK/RF (<998) THEN
 If EG-11 TOOSOON_P = 2 then TOOSOON = EG-11 TOOSOON_N*12
 Else if EG-11 TOOSOON_P = 1 then TOOSOON = EG-11 TOOSOON_N

Imputation Note: *Imputation is needed for cases with DK/RF on either EG-11 TOOSOON_P or EG-11 TOOSOON_N.*

Code categories:

- Blank = inapplicable
- 1- xxx = number of months too soon

NEWWANTR:** **“Detailed Wantedness of Pregnancy – Respondent”**

Note: *This recode is comparable to recode WANTRESP in prior cycles except that it includes two categories of “too soon.”*

NEWWANTR is defined using the recodes WANTRESP and the TOOSOON first created for 2011-2013.

If WANTRESP=1 then NEWWANTR=1
Else if WANTRESP=2 then NEWWANTR=2
Else if WANTRESP=3 then do:
 If TOOSOON LT 24 then NEWWANTR=3
 Else if TOOSOON GE 24 then NEWWANTR=4
Else if WANTRESP=4 then NEWWANTR=5
Else if WANTRESP=5 then NEWWANTR=6
Else if WANTRESP=6 then NEWWANTR=7

Imputation Note: *Imputed values on NEWWANTR are determined by recodes TOOSOON and WANTRESP. If TOOSOON is to be imputed: NEWWANTR is defined using the imputed value of TOOSOON. If WANTRESP is to be imputed: NEWWANTR is defined using the imputed value of WANTRESP, for all values other than 3. When WANTRESP is imputed to 3, NEWWANTR should be imputed by regression, constrained to be 3 or 4. (when WANTRESP is being imputed, meaning EG-10 TIMINGOK was missing, TOOSOON will not have a valid value.)*

Code categories:

- 1= Later, overdue
- 2= Right time
- 3= Too soon: by less than 2 years
- 4= Too soon: by 2 years or more
- 5= Didn't care, indifferent
- 6= Unwanted
- 7= Don't know, not sure