

Add Health Relationship and Fertility Data

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Carolina Population Center. 2014 Add
Health Users Conference. June 27, 2014*



Overview of Presentation

- Brief introduction: Relationship and fertility data in Add Health **Waves I to III**
- **Wave IV:**
 - Distinct listing of relationships in **Wave IV**
 - Nested data structure
 - Relationship and fertility data across sections
 - Content and criteria
 - Data flows
 - Hierarchical data relationships
 - Unique ID components

Overview of Presentation

- Brief introduction: Relationship and fertility data in **Wave V**
- Computational and technical tips and example SAS code
- Common issues when working with relationship and fertility data
- Some general advice
- **Q & A**

| Waves I, II | Wave III | Wave IV | Wave V |
|---|--|---|--|
| <ul style="list-style-type: none"> • Demographic • Family, siblings, friends • Education, work • Physical and mental health • Daily activities and sleep • Relationships • Sexual & fertility histories • Substance use • Delinquency and violence • Attitudes, religion • Economics, expectations • Psychological, personality | <ul style="list-style-type: none"> Demographic <ul style="list-style-type: none"> • Family, siblings, friends • Education, work, military • Physical and mental health • Daily activities and sleep • Relationships • Sexual & fertility histories • Substance use • Involvement w/ criminal justice system • Attitudes, religion • Economics, expectations • Psychological, personality • Children and parenting • Civic participation • Gambling • mentoring | <ul style="list-style-type: none"> • Demographic • Family, siblings, friends • Education, work, military (records) • Physical and mental health • Daily activities and sleep • Relationships • Sexual & fertility histories • Substance use and abuse • Involvement w/ criminal justice sys • Work attitudes and chars, religion • Economics, expectations • Big 5 Personality, stressors • Children and parenting • Civic participation • Cognitive function • Psychosocial factors | <ul style="list-style-type: none"> • Demographic • Household • Military and employment • Income • Health and healthcare • Sexual experiences and pregnancy • Tobacco, alcohol, and substances • Early life • Personality • Social support • Parents and siblings • Religion and spirituality • Feelings and experiences • Involvement w/ criminal justice system • Relationships • Pregnancy, live births, children, and parenting • Illness and physical limitations |

Wave I & Wave II

Wave I (1994-1995; Grades 7-12; N=20,745)

Wave II (1996; Grades 8-12; N=14,738)

- Adolescents name up to 3 “**romantic**” relationships.
- If no romantic relationships, then name 3 “**like**” relationships

Information about relationships:

- Begin/end dates
- Social context when relationship began
- Partner demographics
 - *Biological sex, age, race/ethnicity*
- First & most recent sexual intercourse
 - *date, contraceptive use*
- Verbal and physical abuse (W2 only)
- Ideal relationship characteristics and experiences

Wave I & Wave II

Wave I (1994-1995; Grades 7-12; N=20,745)

Wave II (1996; Grades 8-12; N=14,738)

Fertility Experiences

(female respondents only):

Pregnancies :

- Number of times, dates, outcome
- Contraceptive use, want pregnancy?
- Marriage at time of pregnancy
- Child alive?
- Child gave up for adoption?

Wave III

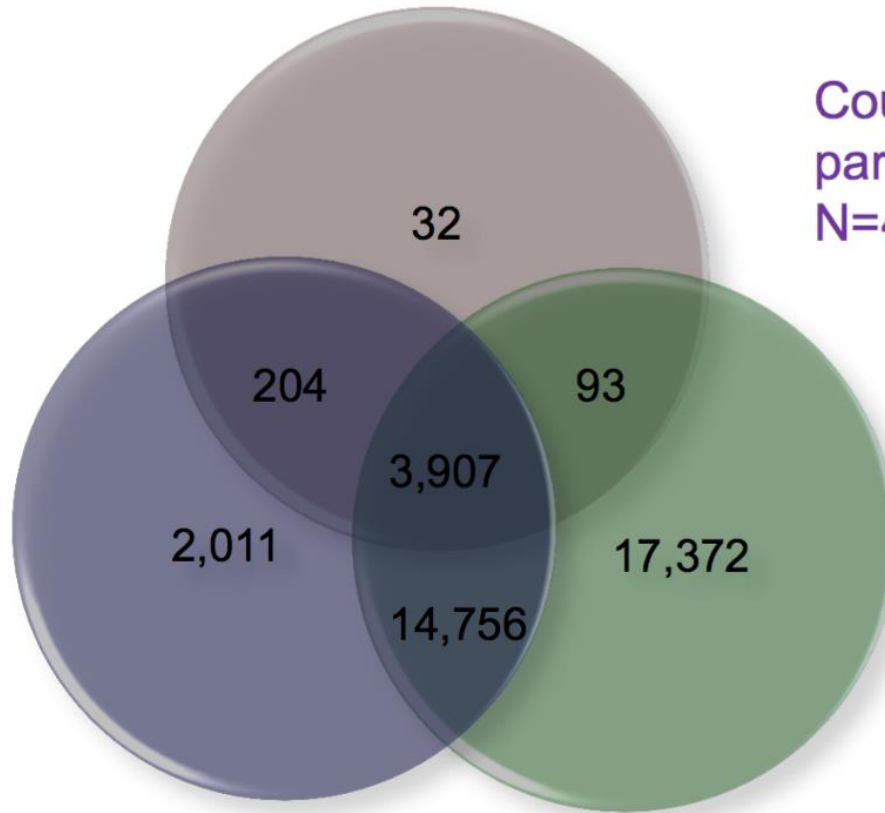
Wave III (2001-2002; Aged 18-26; N=15,197)

Romantic and pregnancy relationships since 1995
(N = 42,330 relationship records)

Relationships in Detail
(N = 38,375)

3 sets selected according to different criteria:

- **Sexual relationships**, N = 36,128
- **2 most important relationships**, N= 20,878
- **Couple (CP) sample for partner recruitment**, N = 4,236



Couples Sample for
partner recruitment
N=4,236

Sexual
Relationships
N=36,128

2 Most
important
N=20,878



Wave III

Couples Sample

The couples sample was a purposeful, quota sample (N=1,507 partners) designed to collect information on 1/3 married, 1/3 cohabiting, and 1/3 dating partners.

Relationships are eligible if:

- Current
- Opposite sex partners
- Partner 18 or older
- Relationship duration \geq 3 months

Sampling weight: **W3PTNR**

Wave III

Wave III (2001-2002; Aged 18-26; N=15,197)

Information about relationships:

Marriage history

- Begin/end dates
- Current?
- Still living together – last date
- How ended?

Cohabitation history

- Begin/end dates
- Still living together – last date
- Ever married to partner?
- How ended?



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Wave III

Relationships in Detail

R & partner's age:

- Age when first met; began a romantic relationship; began sexual relationship

Begin/end dates:

- Romantic relationship; sexual relationship; marriage

Duration:

- Living together before marriage; sexual relationship before cohabitation; same residence

Cohabitation:

- Travel distance; other residence; who else lived there; # nights together

Wave III

Relationships in Detail (cont.)

Various types of sexual activities

- When: first/most recent time – dates, frequencies
- Enjoyment of sexual activity with partner

Different types of birth control/condom use

- Combined with different types of sexual activities
- When used: first/most recent time – dates, frequencies

Relationship qualities

- Best description of current relationship (dating exclusively?)
- Currently engaged to marry?
- Abuses (verbal, physical, forced sex, resulted injuries)
- Satisfaction; love; dominance
- Joint account; purchase; chores

Wave III

Wave III (2001-2002; Aged 18-26; N=15,197)

Pregnancy Experiences (within a relationship)

For previous and current pregnancies:

- Number of times, dates, outcome
- Contraceptive use, want pregnancy?
- Pregnancy outcomes
- Prenatal care
- Substance use during pregnancy
- Who/how paid for delivery?
- Relationship status with partner at time of birth

Wave III

Wave III (2001-2002; Aged 18-26; N=15,197)

Live Births (within a relationship and pregnancy; only 1 or twins)

- Birthdate
- Birthweight and inches
- Delivered on due date?
- Was partner present?
- Child health problems
- Child go home? Child alive?
- Who is on birth certificate?
- Does child have R or partners' last name?

Wave III

Wave III (2001-2002; Aged 18-26; N=15,197)

Children and parenting (biological children)

- Child age
- Living situation of child
- Language spoken at home
- Any custody agreements
- Disruptive behavior
- Child mental and physical conditions and disabilities
- Non-resident parent activities

WAVE IV RELATIONSHIP AND FERTILITY DATA

Wave IV

Wave IV (2007-2008; Aged 24-32; N=15,701)

Relationship data collection structure differs from Wave III:

- Specific romantic/sexual relationships R have had
- Exclusive listings by partner types:
 - Married ('M')
 - Cohabiting ('C')
 - Pregnancy ('P')
 - Currently Dating ('CD')
 - Most Recent ('MR')

Note: You cannot update Wave III with Wave IV relationships -- It's not an add-on!

Wave IV: Relationships, Pregnancies, Live Births, and Children

Nested Data Structure:

- Respondent's reporting on **total number of relationships/partners** (by types)
 - Section 16A [H4TR*]
 - Married ('M')
 - Cohabiting ('C')
 - Pregnancy ('P')
 - Currently Dating ('CD')
 - Most Recent ('MR')
- **Time-segments** associated with each relationship/partner
 - Section 16B & 16C [H4TR*]
- Selected relationship in **detail**
 - Section 17 [H4RD*]

Wave IV: Relationships, Pregnancies, Live Births, and Children

Nested Data Structure (cont.):

- **All pregnancies** associated with the reported relationship/partners
 - Section 18 [H4PG*]
- All **live births** resulting from pregnancies
 - Section 19 [H4LB*]
- All live births who are still living and not given up for adoption (**children**)
 - Section 20A [H4KK*]
- Respondents who have at least 1 child at home reporting on their **parenting attitudes**.
 - Section 20B [H4KK*]

Wave IV: Romantic/Sexual Relationships

S16A: R's description of total no. of relationships, pregnancies, live births, children still living.

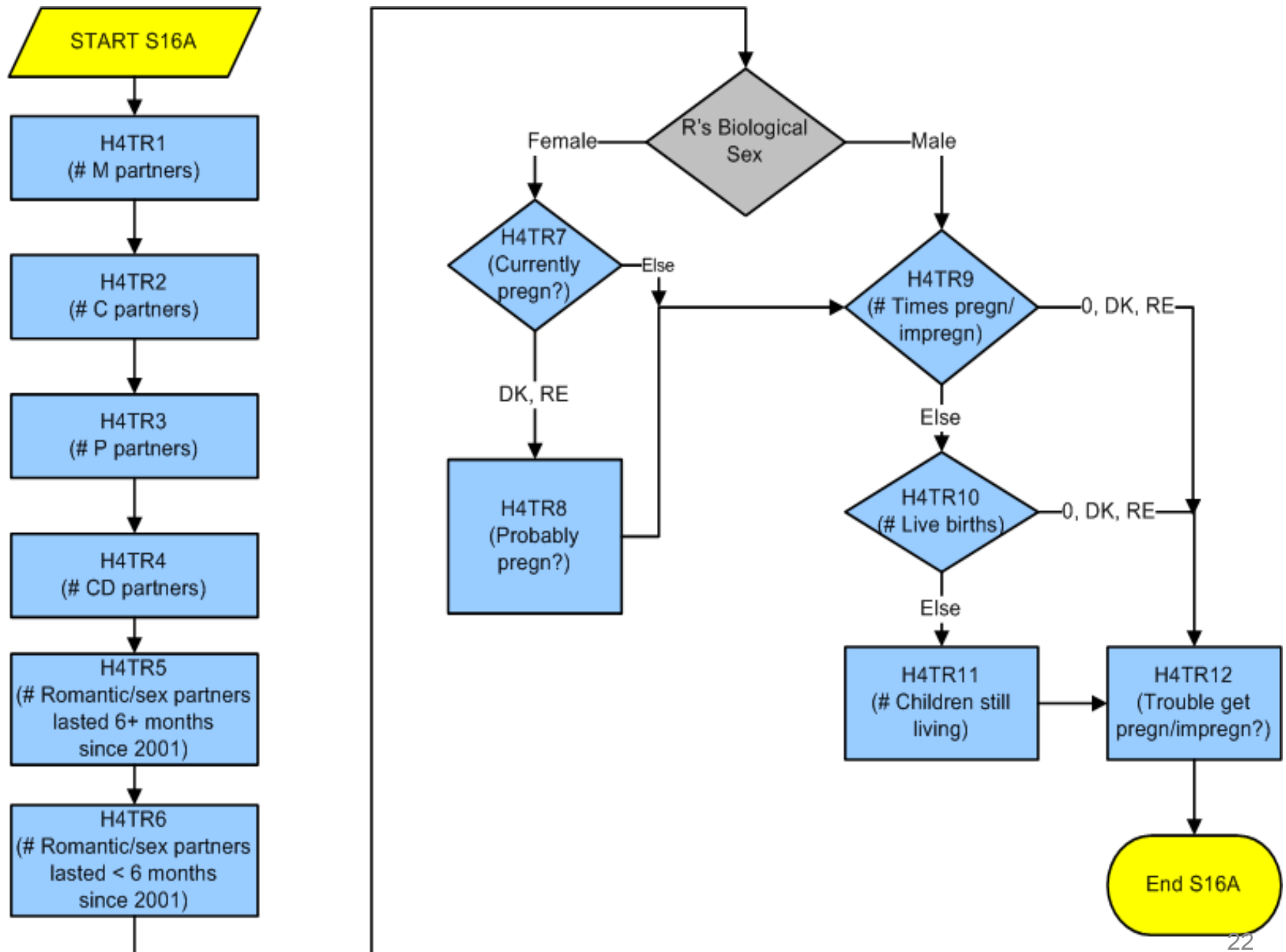
- **Unit of Analysis** – Respondent (N=15,701)
- **Record ID:** AID
- **Contents:**
 - # Persons ever married ('M' partners)
 - # Persons ever lived with but not married ('C' partners)
 - # Persons ever had a pregnancy with besides 'M' and 'C' partners ('P' partners)
 - # Persons currently dating besides 'M', 'C', and 'P' partners ('CD' partners)
 - # Other relationships < 6 months since 2001
 - # Other relationships 6+ months since 2001

Wave IV: Romantic/Sexual Relationships

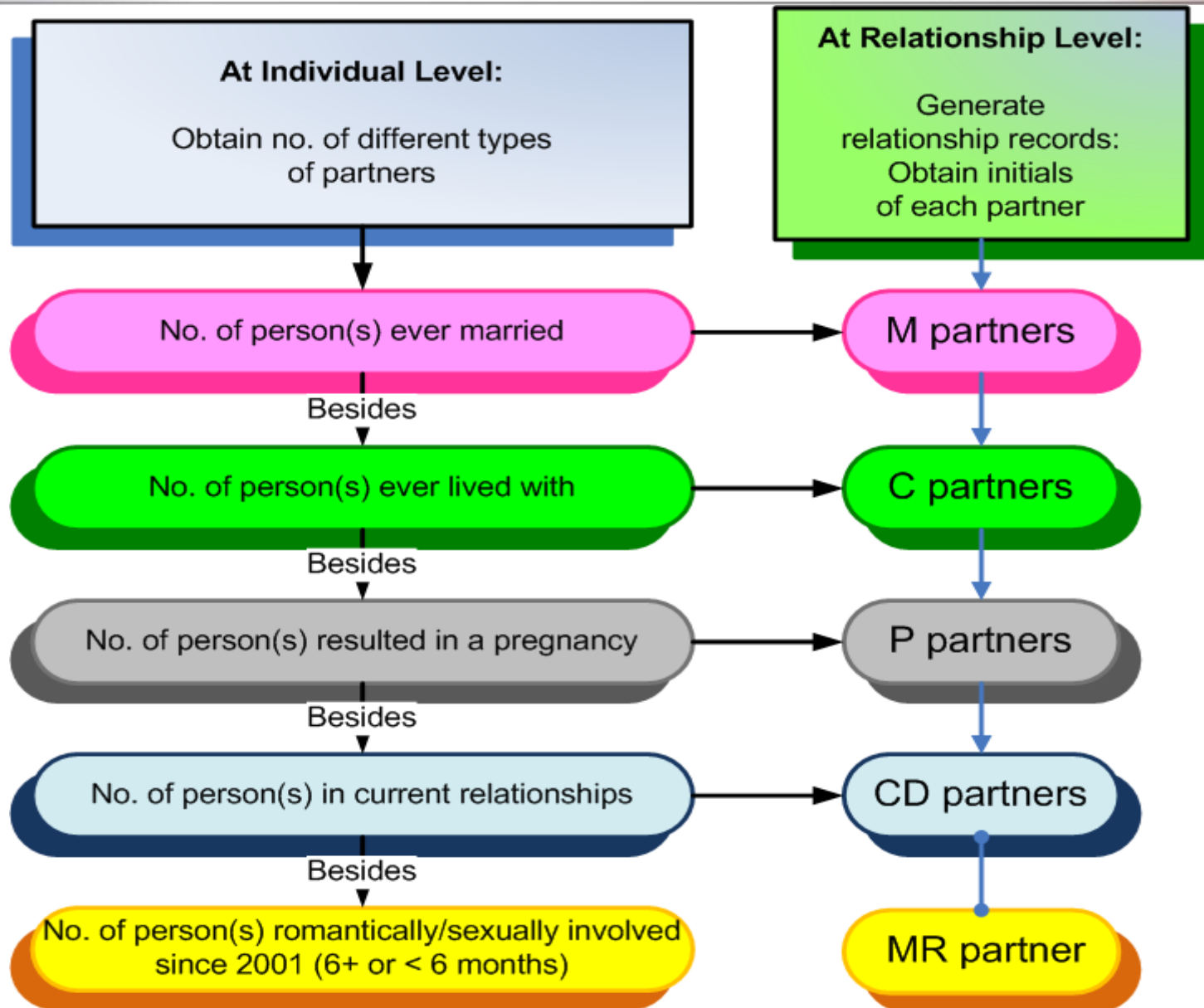
S16A: R's description of total no. of relationships, pregnancies, live births, children still living.

- **Unit of Analysis** – Respondent (N=15,701)
- **Record ID:** AID
- **Contents:**
 - Currently pregnant? {for female respondents}
 - Total # (life-time) pregnancies
 - Total # (life-time) live births
 - Total # biological children still living? {for respondents and any partners}
 - Ever have trouble getting pregnant or avoiding a miscarriage? {for respondents and any partners}

Section 16A: Relationships – Individual Level



Wave IV Hierarchical Data Structure of Individual, Relationship, Pregnancy, Live Birth, and Child Records

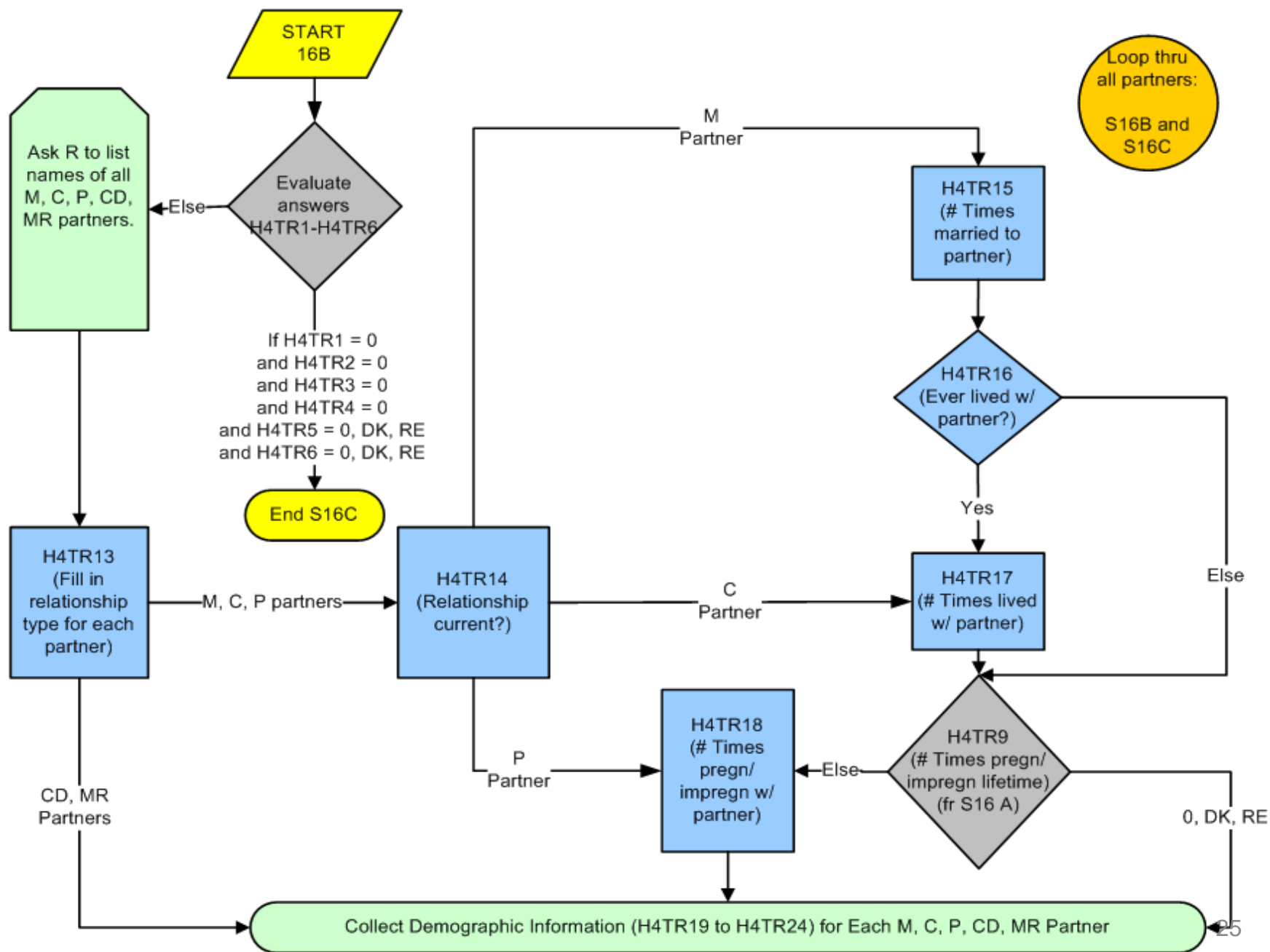


Wave IV: Romantic/Sexual Relationships

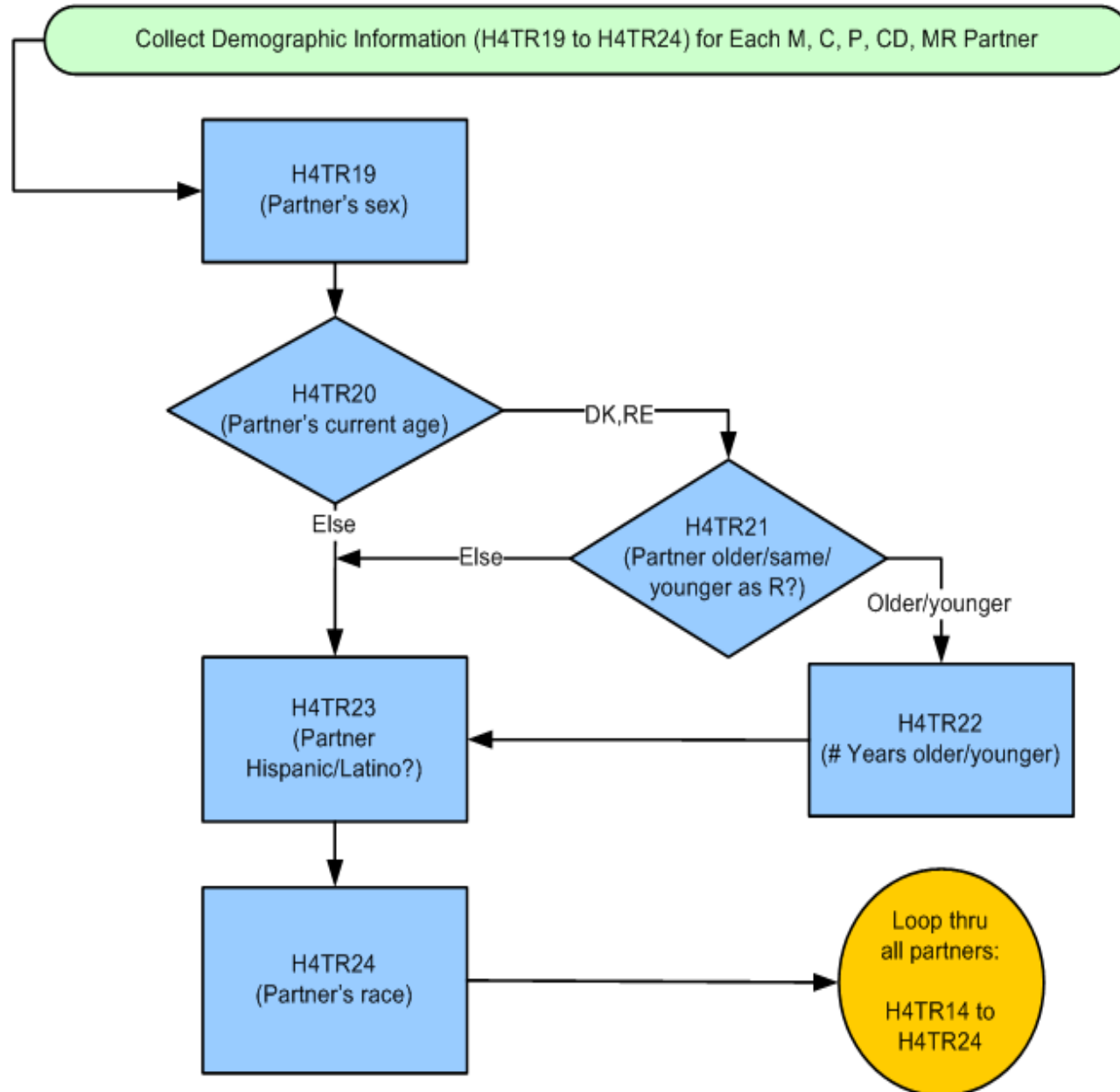
S16B: Relationship and partner characteristics

- **Unit of Analysis** – Partners (N=30,263)
- **Record ID:** AID + PTNR_ID
- **Contents:**
 - Type of relationship listed with respondent ('M', 'C', 'P', 'CD', 'MR' partner)
 - Relationship current?
 - # Times married to partner ('M')
 - Ever lived together? ('M')
 - # Times lived together with partner ('M', 'C')
 - # Times pregnant with partner ('M', 'C', 'P')
 - Partner demographics: biological sex, age, Hispanic ethnicity, and race.

Section 16B: Relationships – Partner Level



Section 16B: Relationships – Partner Level (Cont.)



Wave IV: Romantic/Sexual Relationships

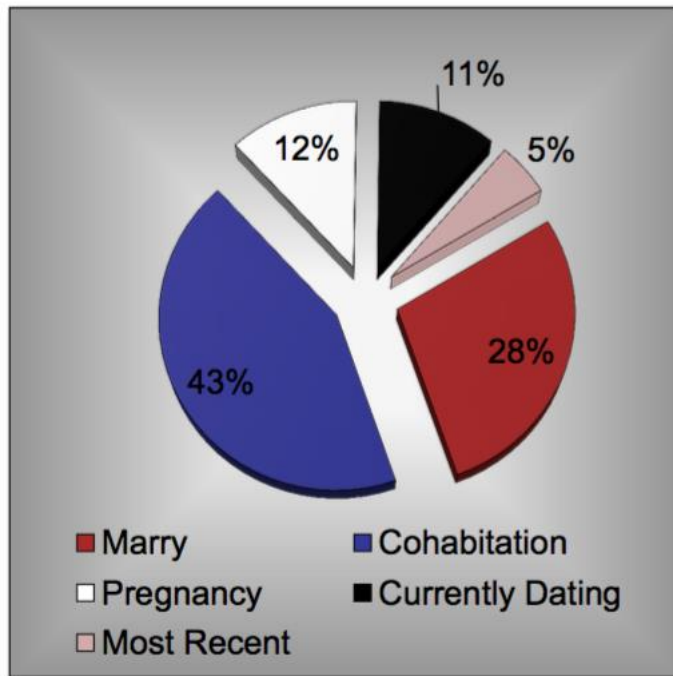
S16B: Relationship and partner characteristics

Among **15,701** respondents, **2.5%** did not report any partner records.

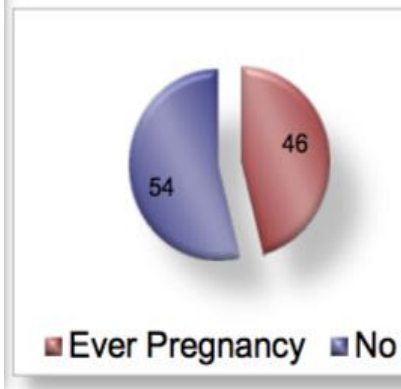
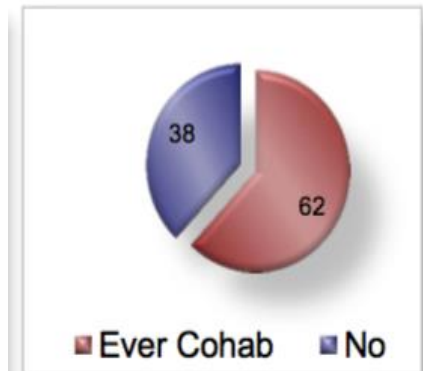
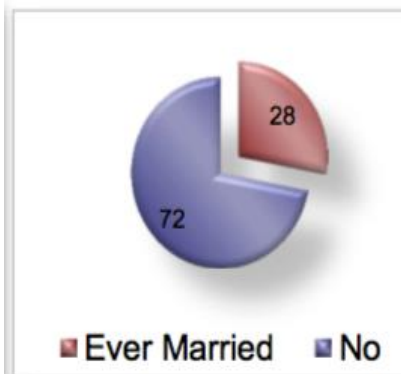


Wave IV: Romantic/Sexual Relationships

**Relationship type
(current/most recent)**



Among all relationships...

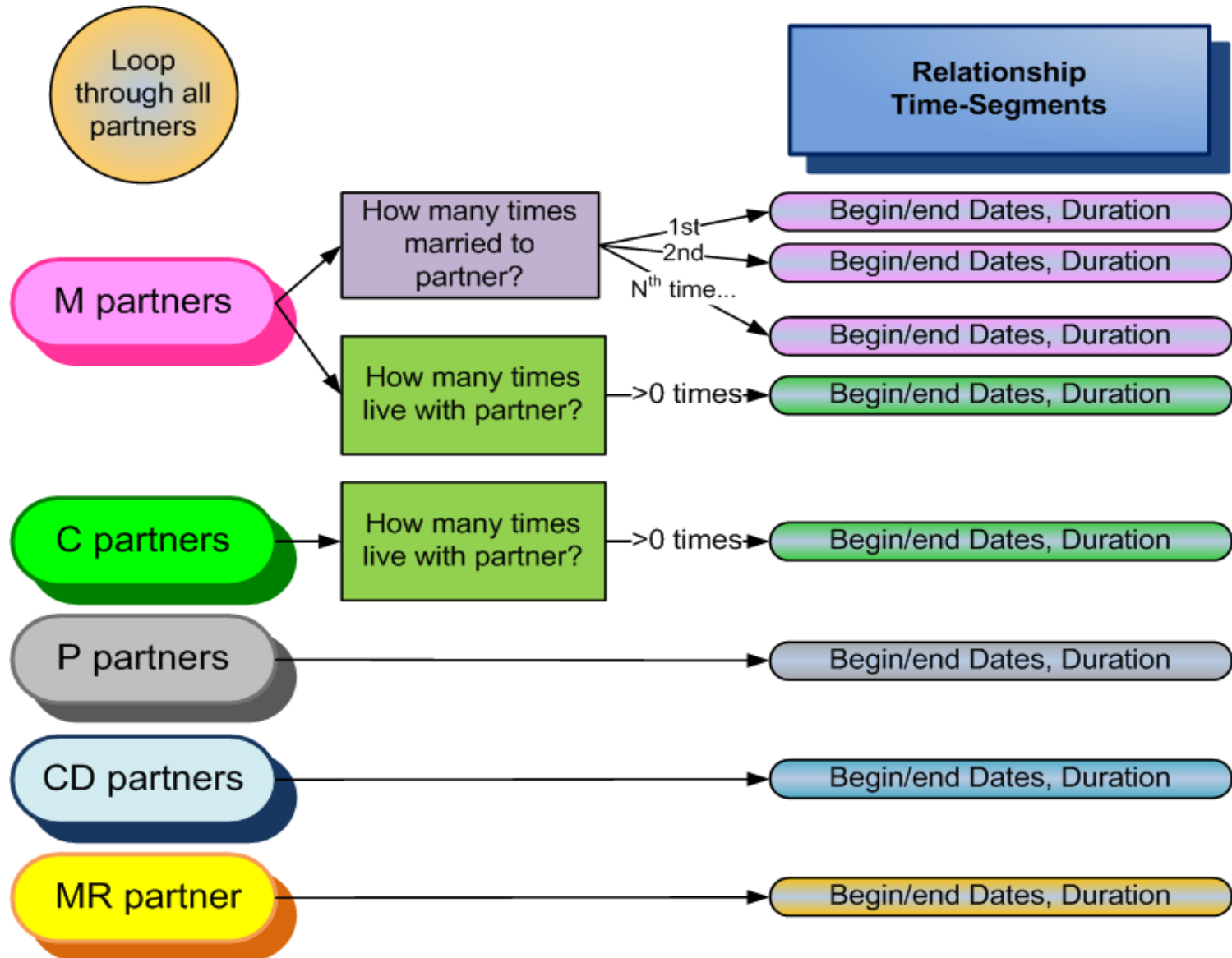


Wave IV: Romantic/Sexual Relationships

S16C: Relationship time-segments

- **Unit of Analysis** – Time-segment (N=36,133)
- **Record ID:** AID + PTNR_ID + H4TR25 + H4TR26
- **Contents:**
 - Relationship time-segment type ('M', 'C', 'P', 'CD', 'MR') [H4TR25]
 - Relationship time-segment number [H4TR26]
 - Relationship begin and end dates
 - Best estimate of relationship duration
 - How marriage ended

Wave IV Hierarchical Data Structure: Relationship and Relationship Time-Segments

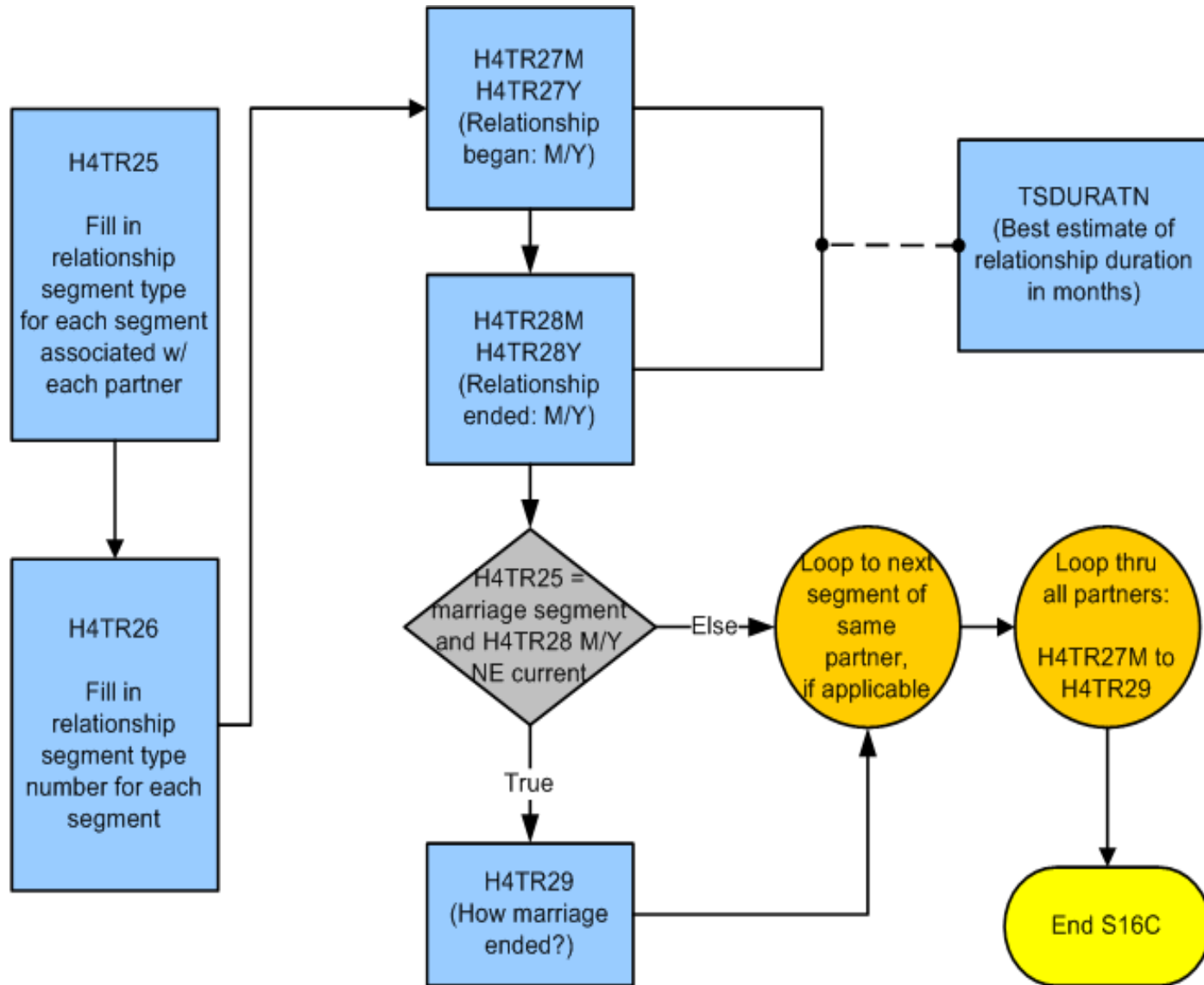


Wave IV: Romantic/Sexual Relationships

S16C: Relationship time-segments (example from 1 respondent)

| Partner ID <i>PTNR_ID</i> | Partner Type <i>H4TR13</i> | Relationship Time-Segment Type <i>H4TR25</i> | Time-Segment Number <i>H4TR26</i> | Relationship Duration <i>TSDURATN</i> |
|------------------------------|-------------------------------|---|--------------------------------------|--|
| 1 | M (current) | M (1 st time) | 1 = 1 st time | 60 months |
| | | M (2 nd time) | 2 = 2 nd time | 10 months |
| 2 | M | M (1 st time) | 1 = 1 st time | 2 months |
| | | C | 8 = all | 24 months |
| 3 | C | C | 8 = all | 14 months |
| 4 | P | P | 8 = all | 6 months |
| 5 | CD | CD | 8 = all | 10 months |

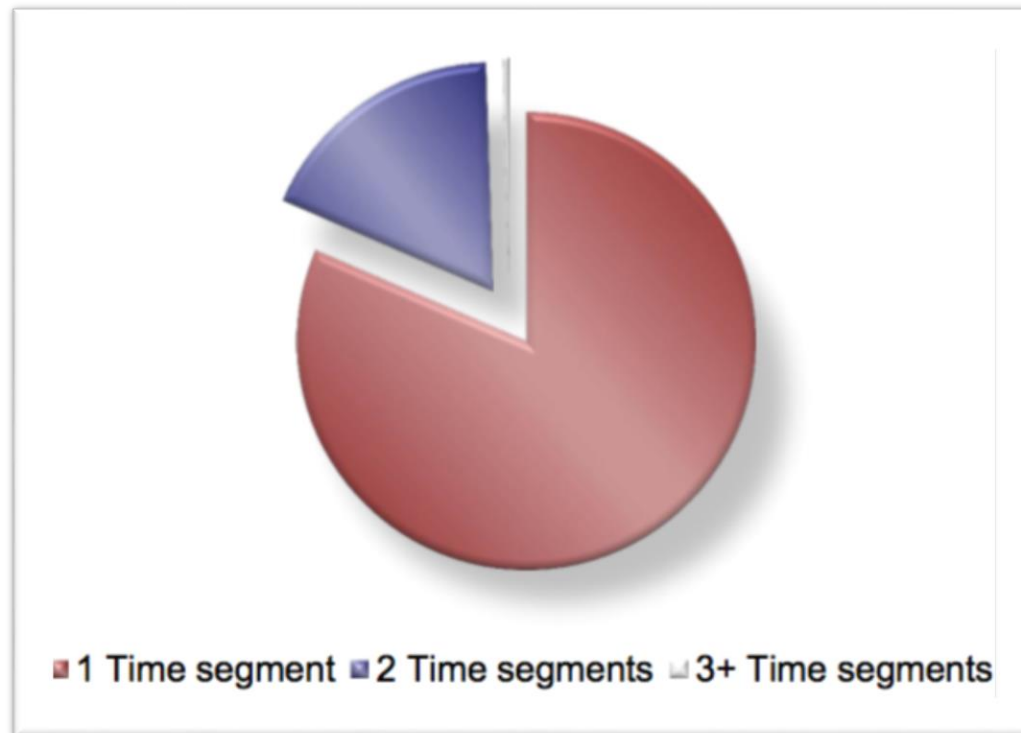
Section 16C: Relationships – Time-segment Level



Wave IV: Romantic/Sexual Relationships

S16B: Relationship and partner characteristics

Among **30,263** partner records, **81%** link to 1 time-segment; **19%** link to 2 time-segments; **only a few** linked to 3 or more time-segments.



Wave IV: Romantic/Sexual Relationships

S17: Relationship in detail

- **Unit of Analysis** – Partner (N=15,216)
- **Record ID:** AID + PTNR_ID
- **Contents:**
 - Age when relationship began
 - Duration of relationship
 - Relationship type and based on relationship:
 - Either partner have a home other than the one cohabiting?
 - # nights spent together
 - Living situation for spouse
 - Relationship qualities (enjoy ordinary things, handling problems, finances, partner listens, sex life, trust partner, love for partner, happy w/ partner, commitment, closeness)

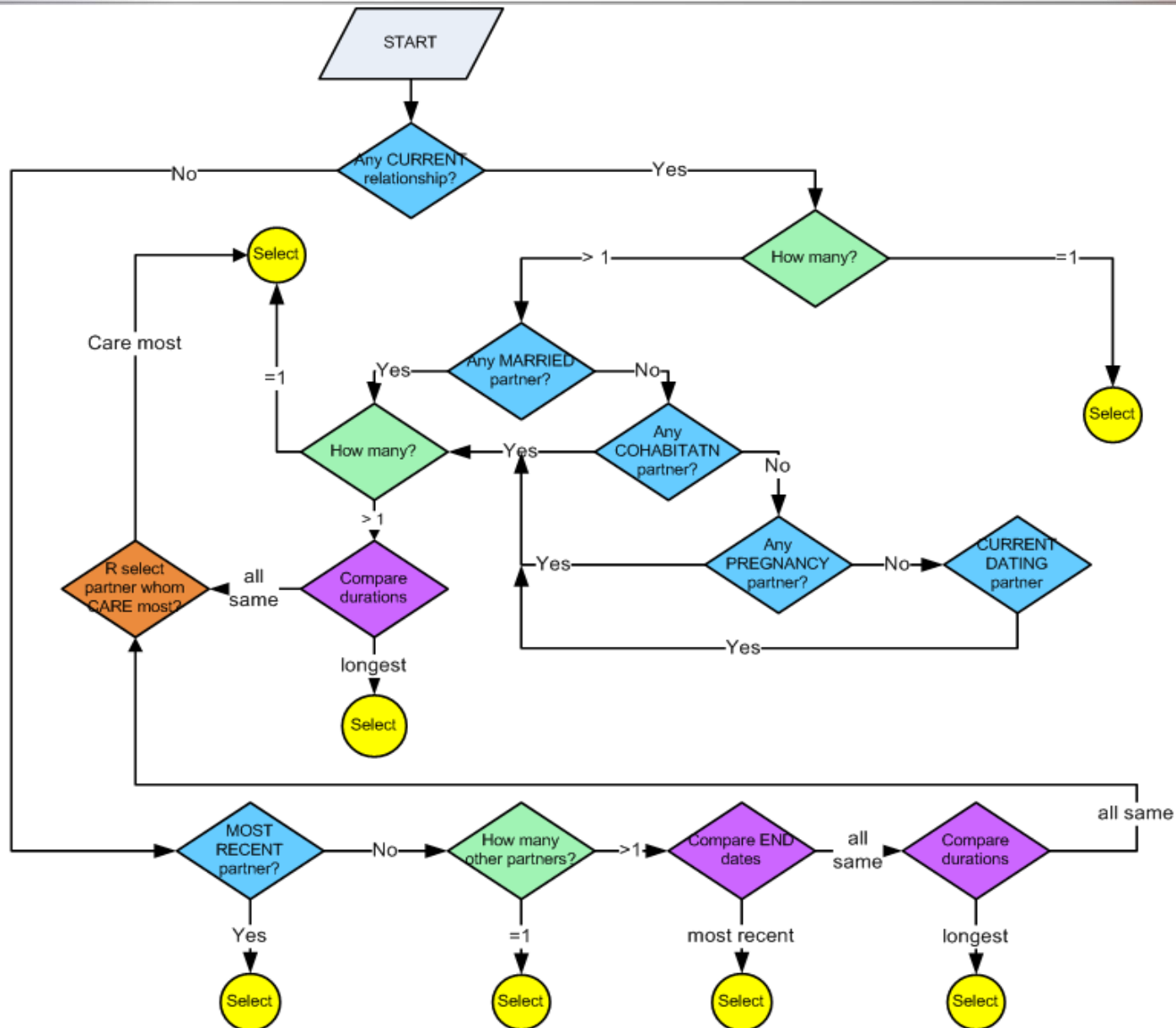
Wave IV: Romantic/Sexual Relationships

S17: Relationship in detail

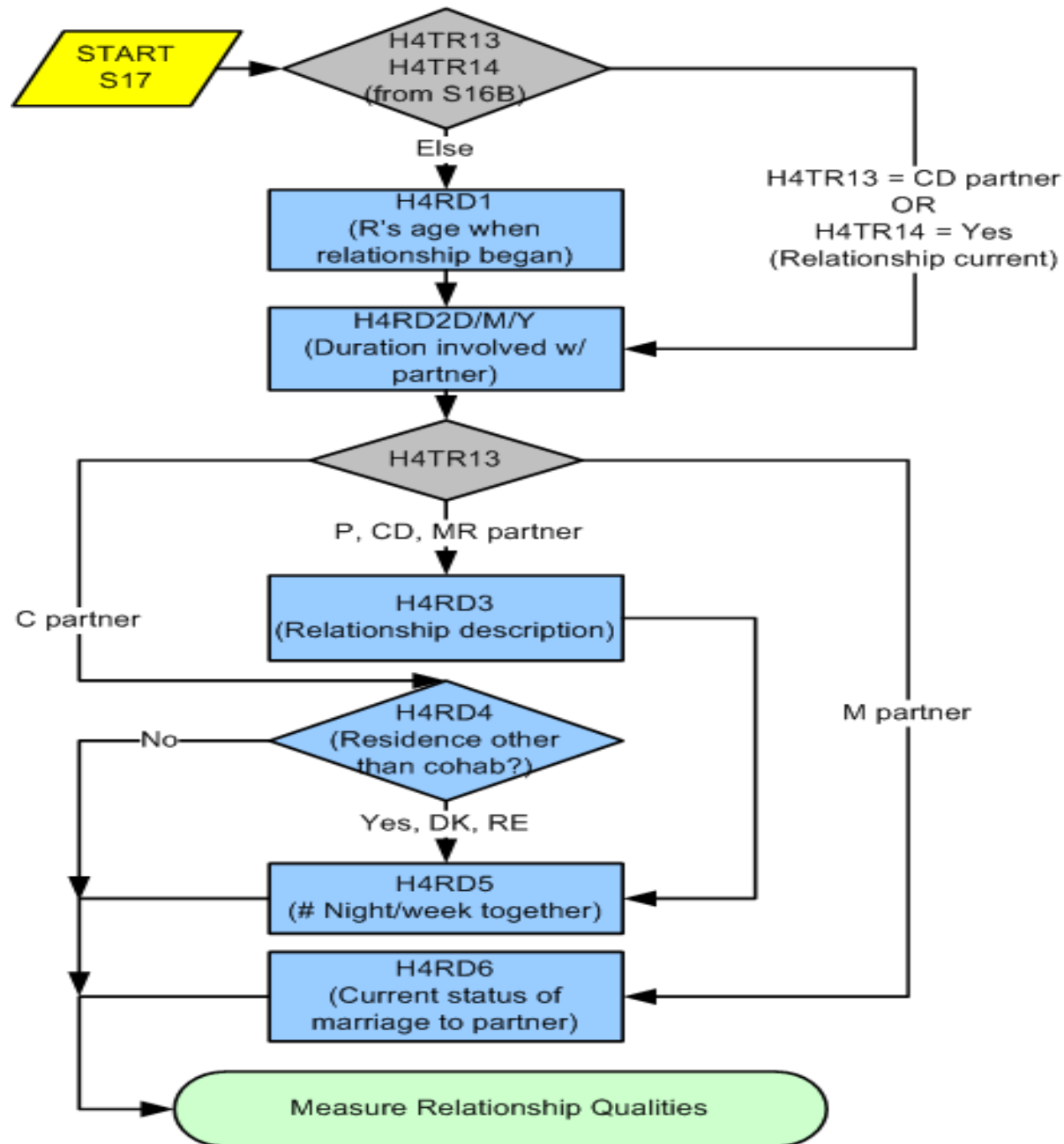
Contents (cont.):

- Chance marrying partner
- Likelihood relationship permanency
- Frequency of sexual activities
- Contraceptive use
- On both R's and Partner's side (but according to perspective of respondent):
 - Concurrent partner?
 - Any violence?
 - Slap/hit/kick?
 - Injured?
 - Forced sex?

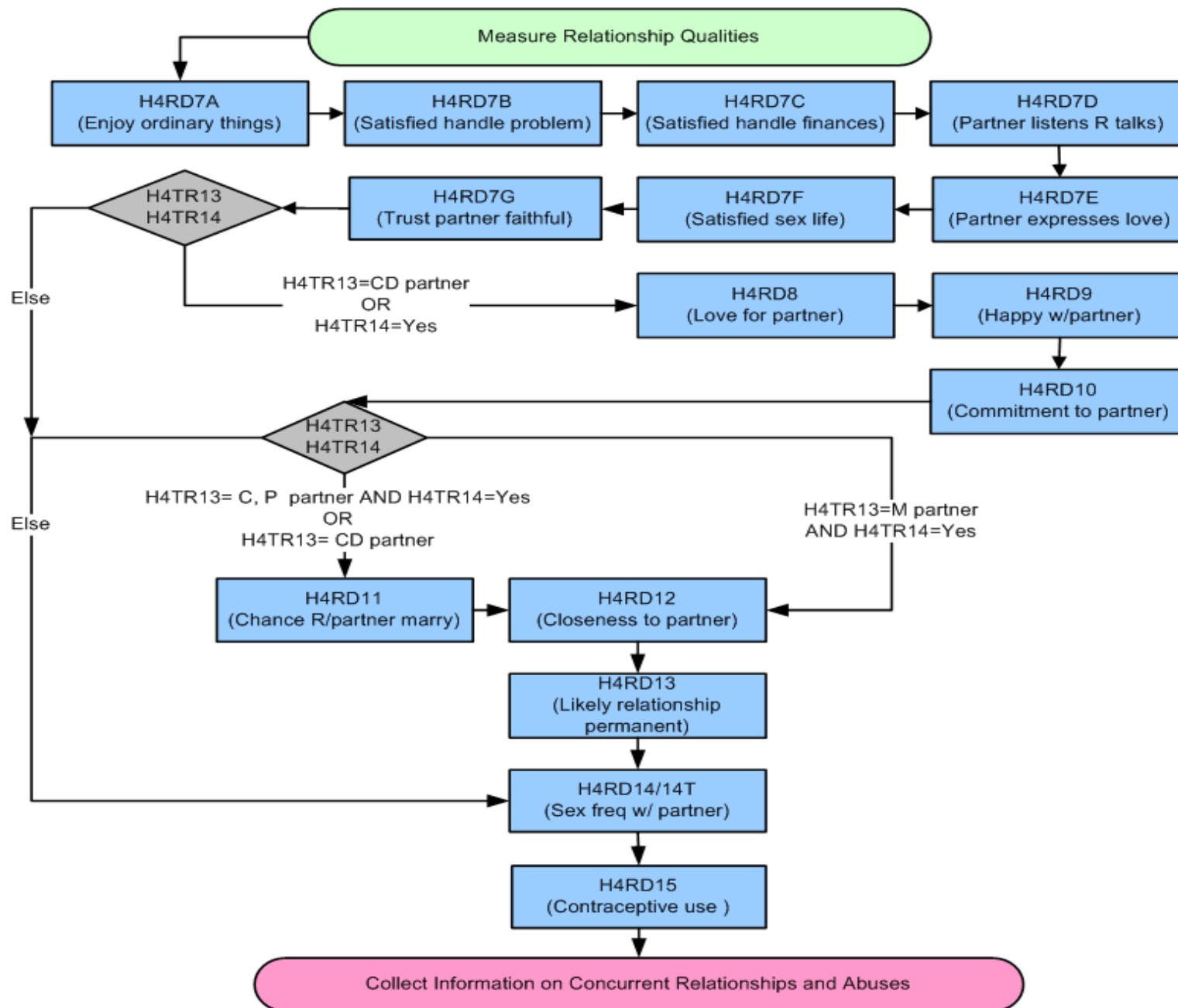
Criteria to Choose 1 Partner among All Reported For Gathering Detailed information in S17



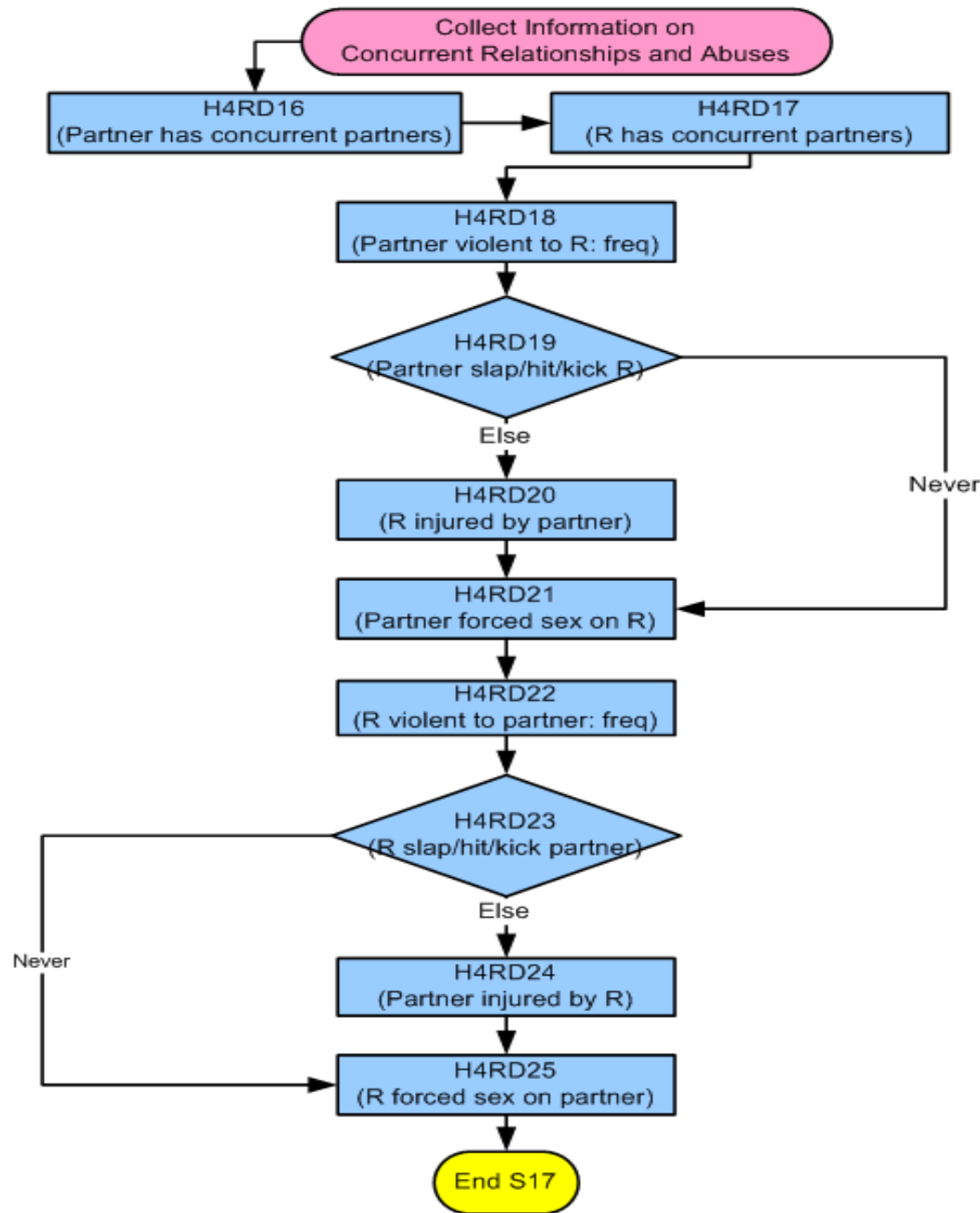
Section 17: Relationship in Detail



Section 17: Relationship in Detail (Cont.)



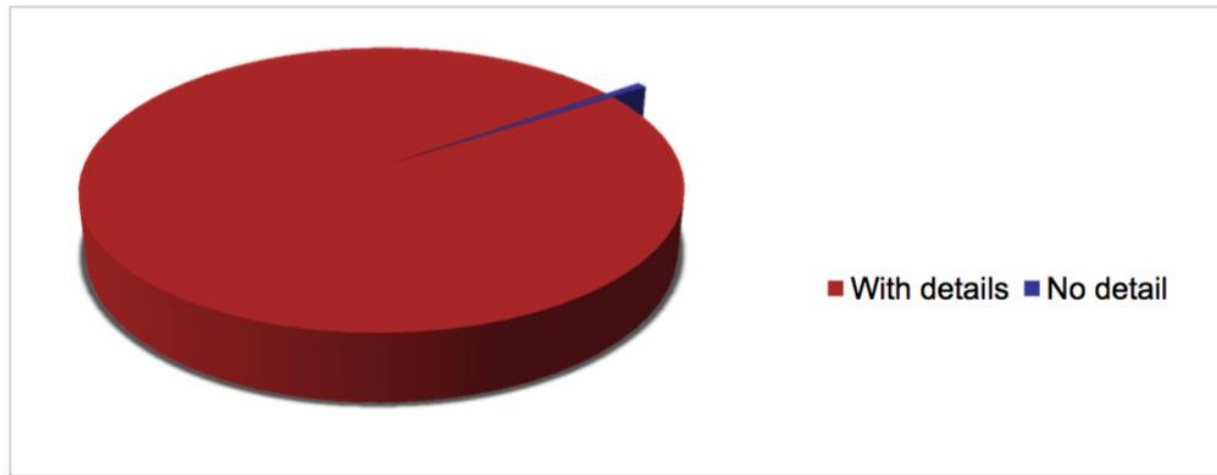
Section 17: Relationship in Detail (Cont.)



Wave IV: Romantic/Sexual Relationships

S17: Relationship in detail

Among **15,315** respondents who have at least 1 partner record in S16B, **15,216** of them gave **details on 1 partner** in S17



Wave IV: Fertility History

S18: Pregnancy Table

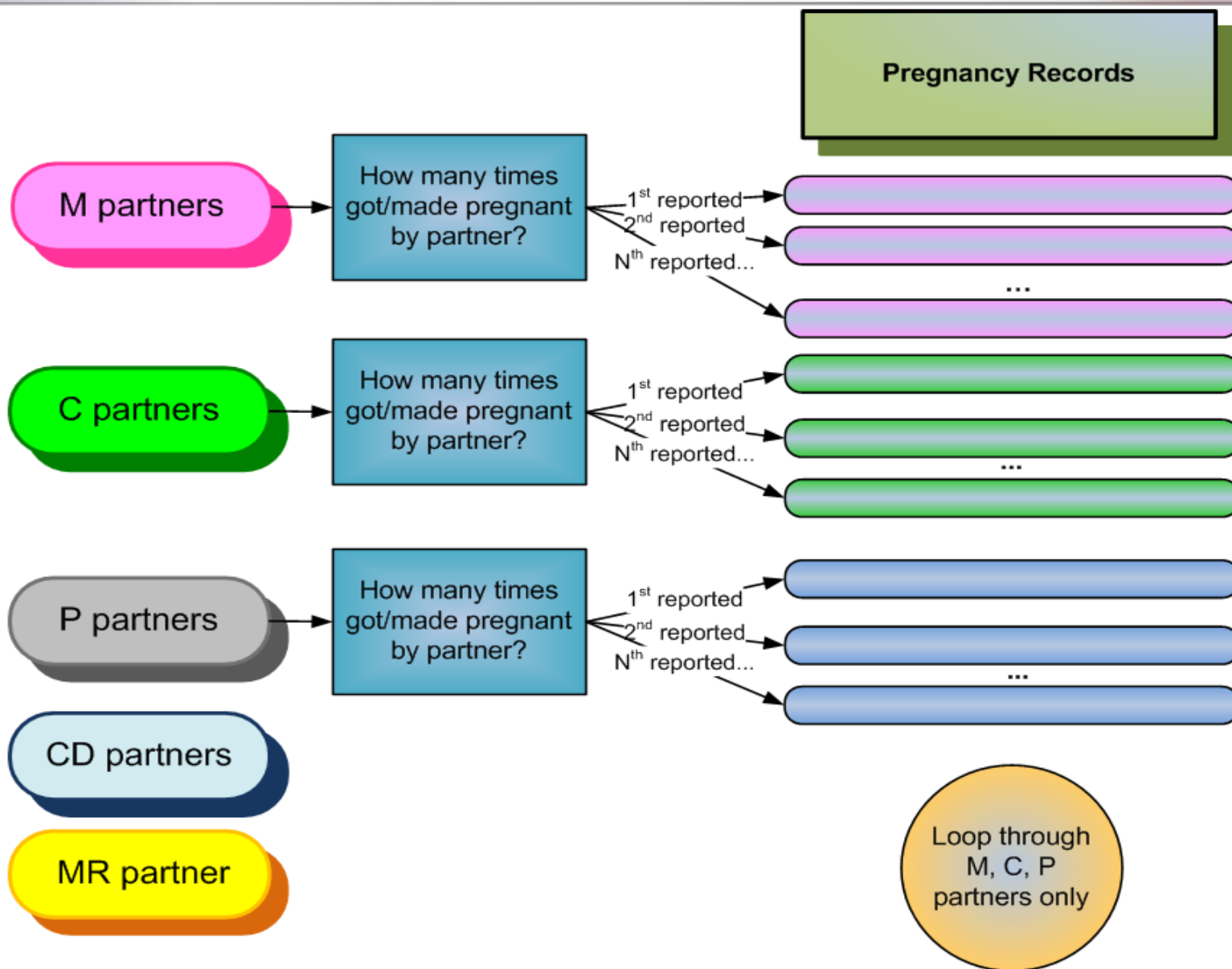
- **Unit of Analysis** – Pregnancy (N=21,966)
- **Record ID:** AID + PTNR_ID + PRGNO
- **Contents:**
 - Pregnancy outcomes
 - Abortion
 - Ectopic/tubal pregnancy
 - Miscarriage
 - Still birth
 - Live birth (C-section)
 - Live birth (vaginal delivery)
 - Pregnancy not ended

Wave IV: Fertility History

S18: Pregnancy Table

- **Contents (cont.):**
 - Pregnancy end/due dates
 - # live birth(s) per pregnancy
 - Babies fraternal/identical?
 - Birth control use prior to pregnancy
 - Want child then?
 - Relationship context at pregnancy/birth
 - R/partner went to prenatal care together;
 - # weeks pregnant at 1st visit (female Rs only)
 - Drinking and smoking habits during pregnancy (female Rs only)

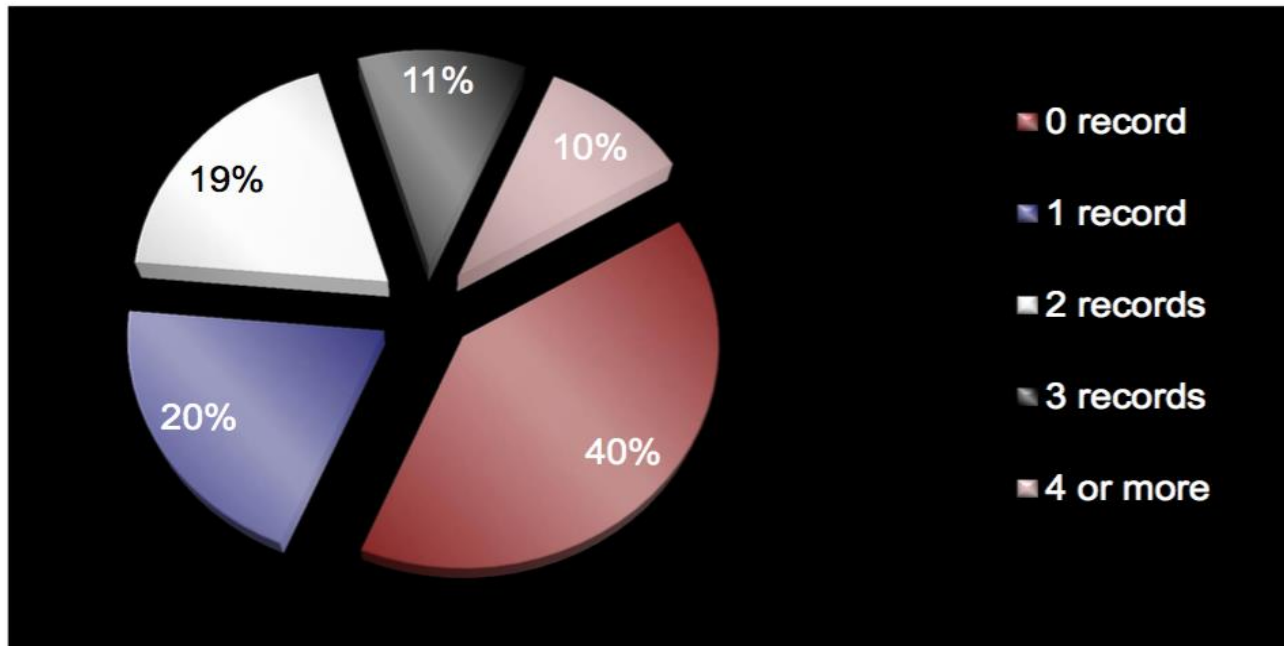
Wave IV Hierarchical Data Structure: Relationship and Pregnancy Records



Wave IV: Fertility History

S18: Pregnancy Table

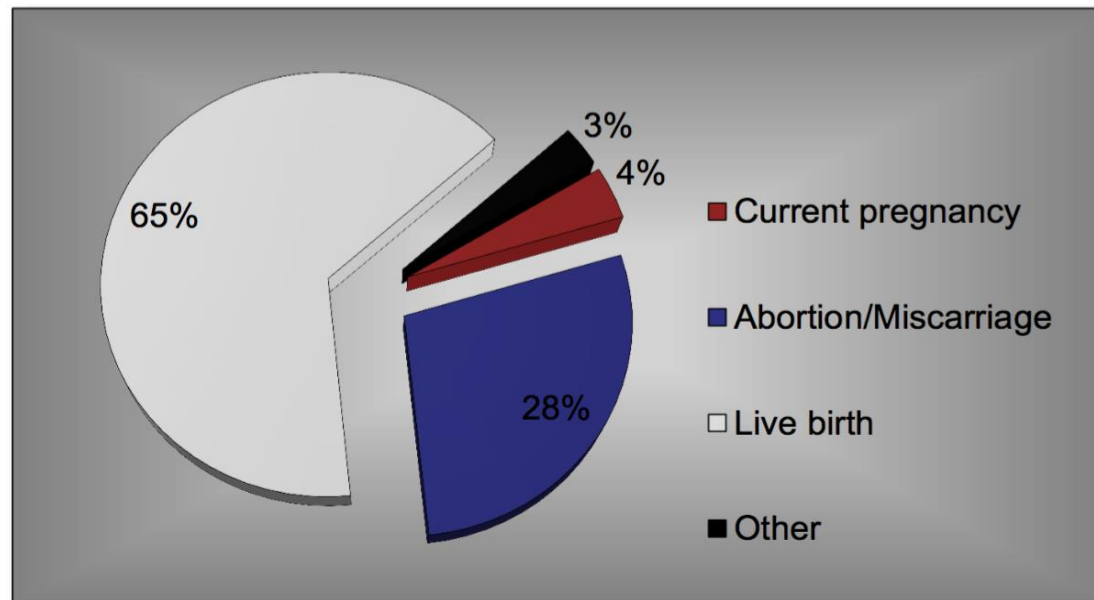
Among **15,701** respondents, **40%** reported no pregnancy record in S18; **20%** reported one pregnancy record; **19%** reported two; **11%** reported three; **10%** reported 4 or more



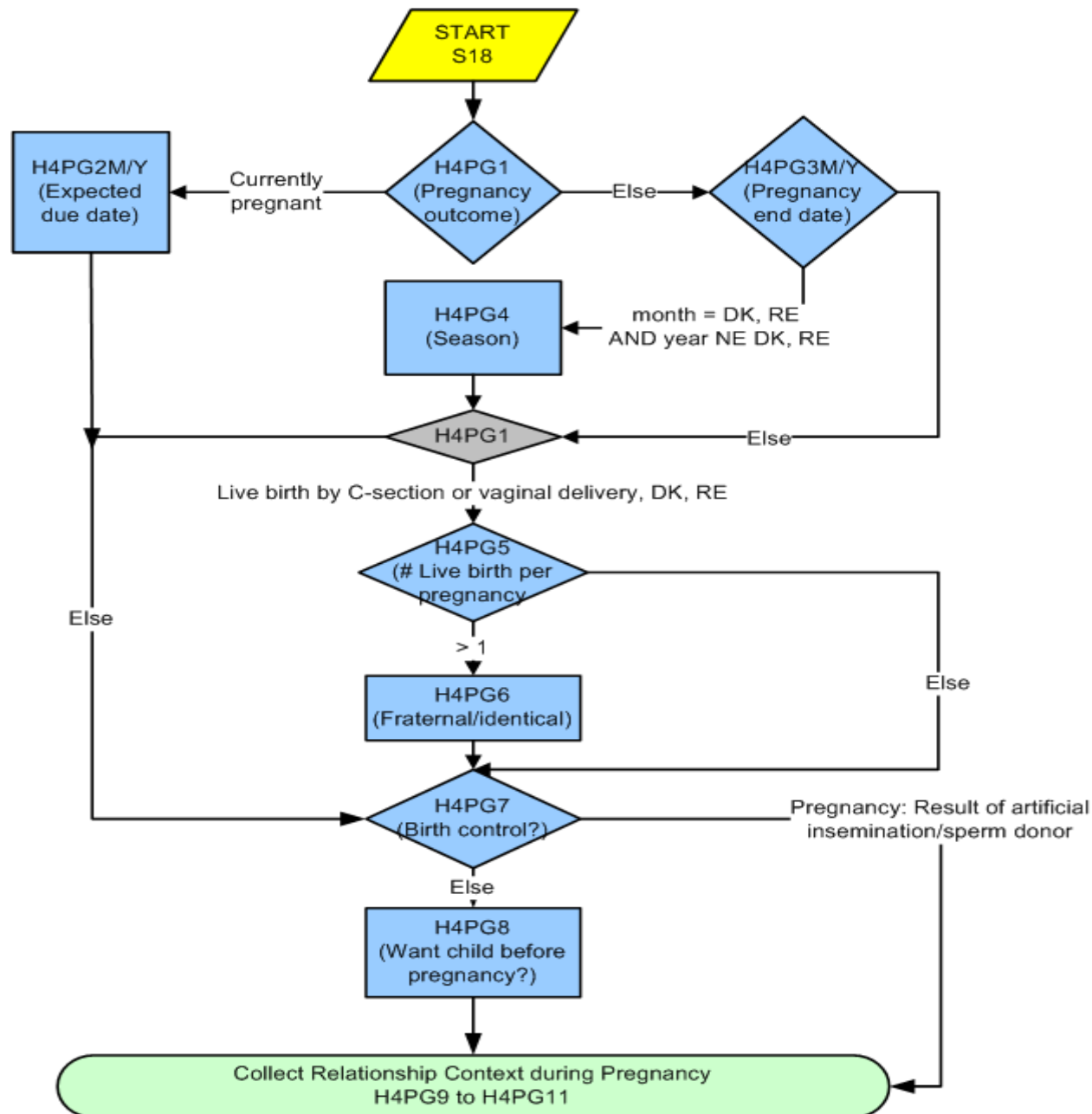
Wave IV: Fertility History

S18: Pregnancy Table

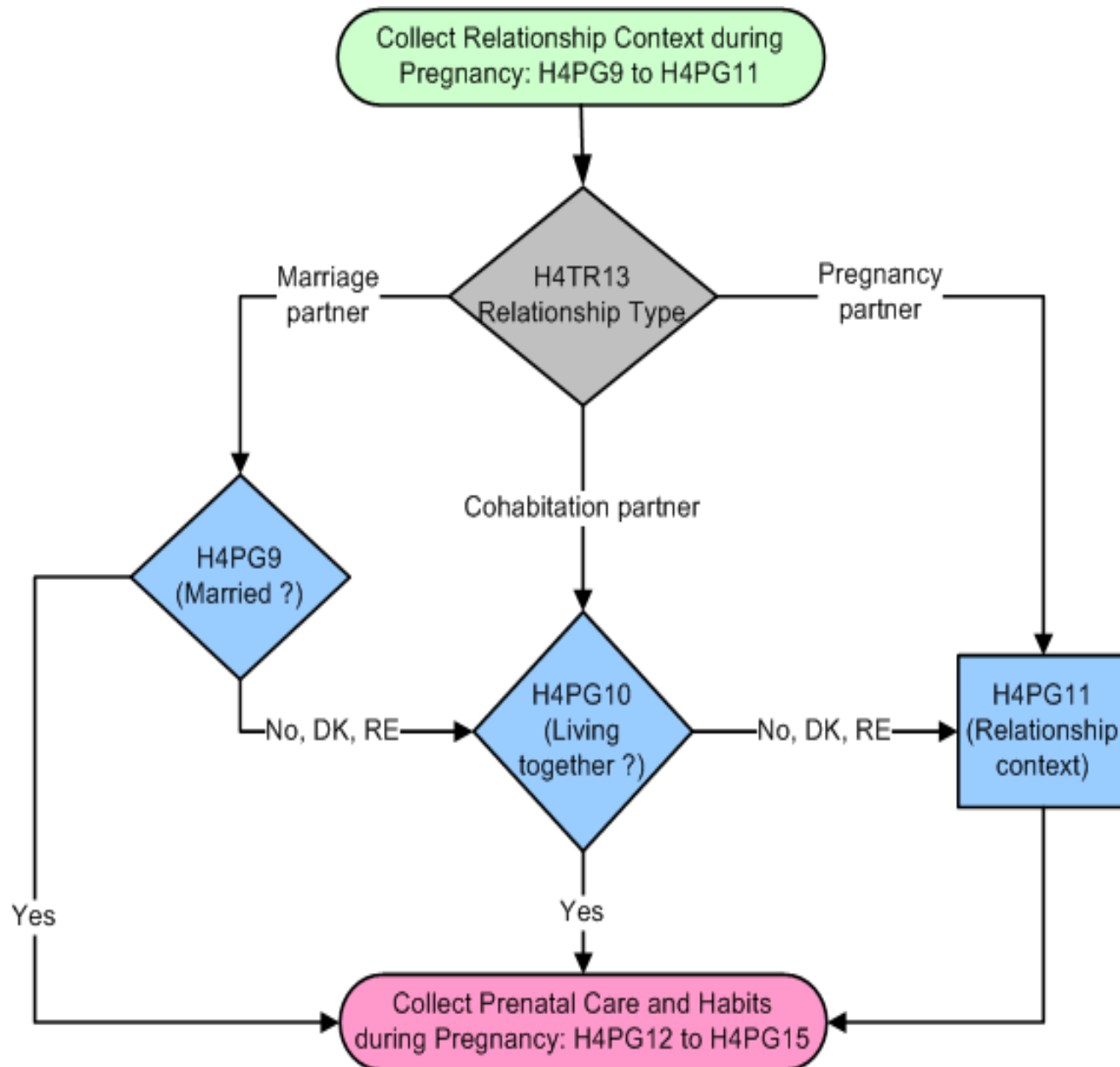
Among **21,196** pregnancy records, **65%** live birth; **28%** abortion/miscarriage; **4%** current pregnancy; **3%** other



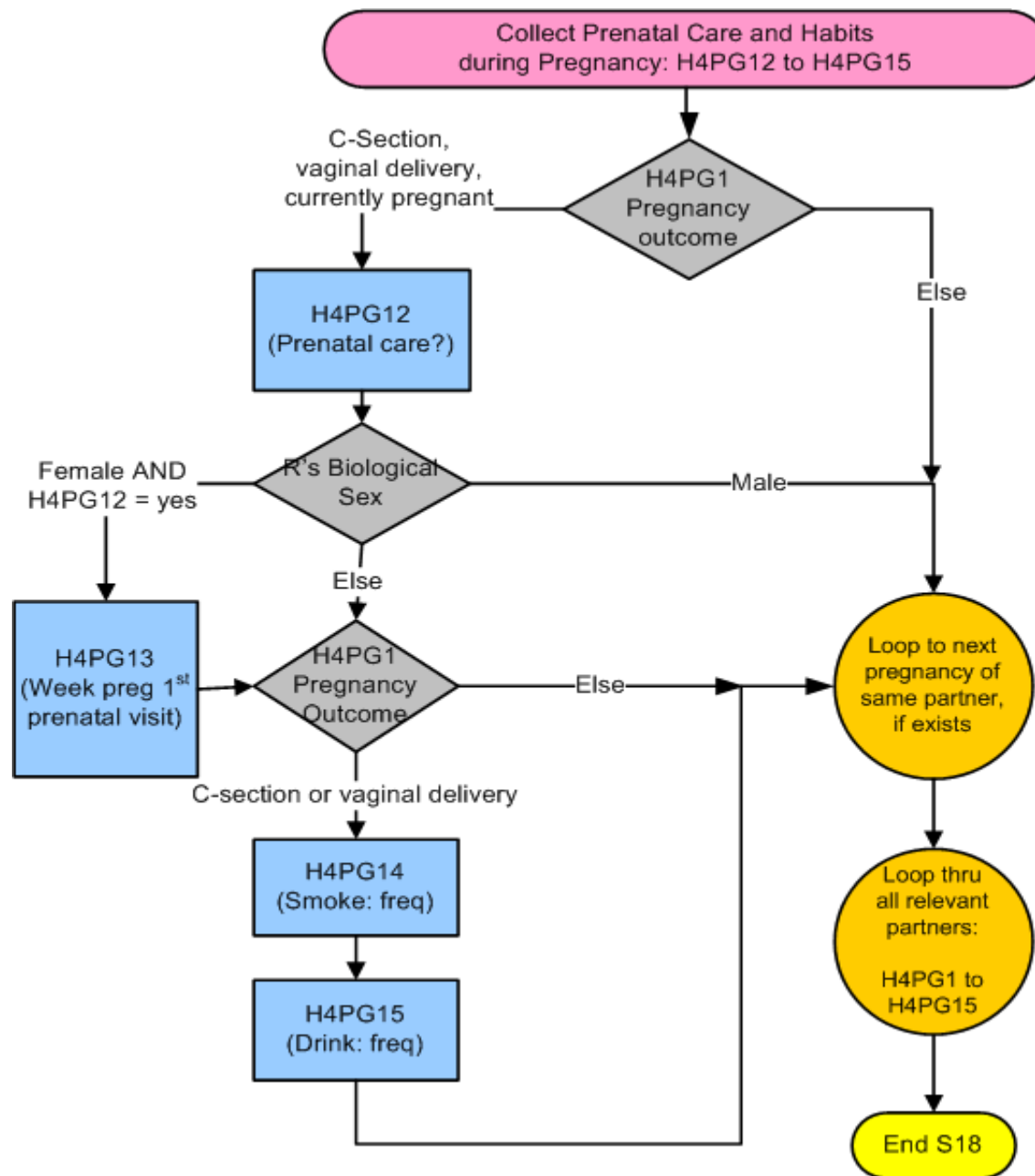
Section 18: Pregnancy Table



Section 18: Pregnancy Table (Cont.)



Section 18: Pregnancy Table (Cont.)

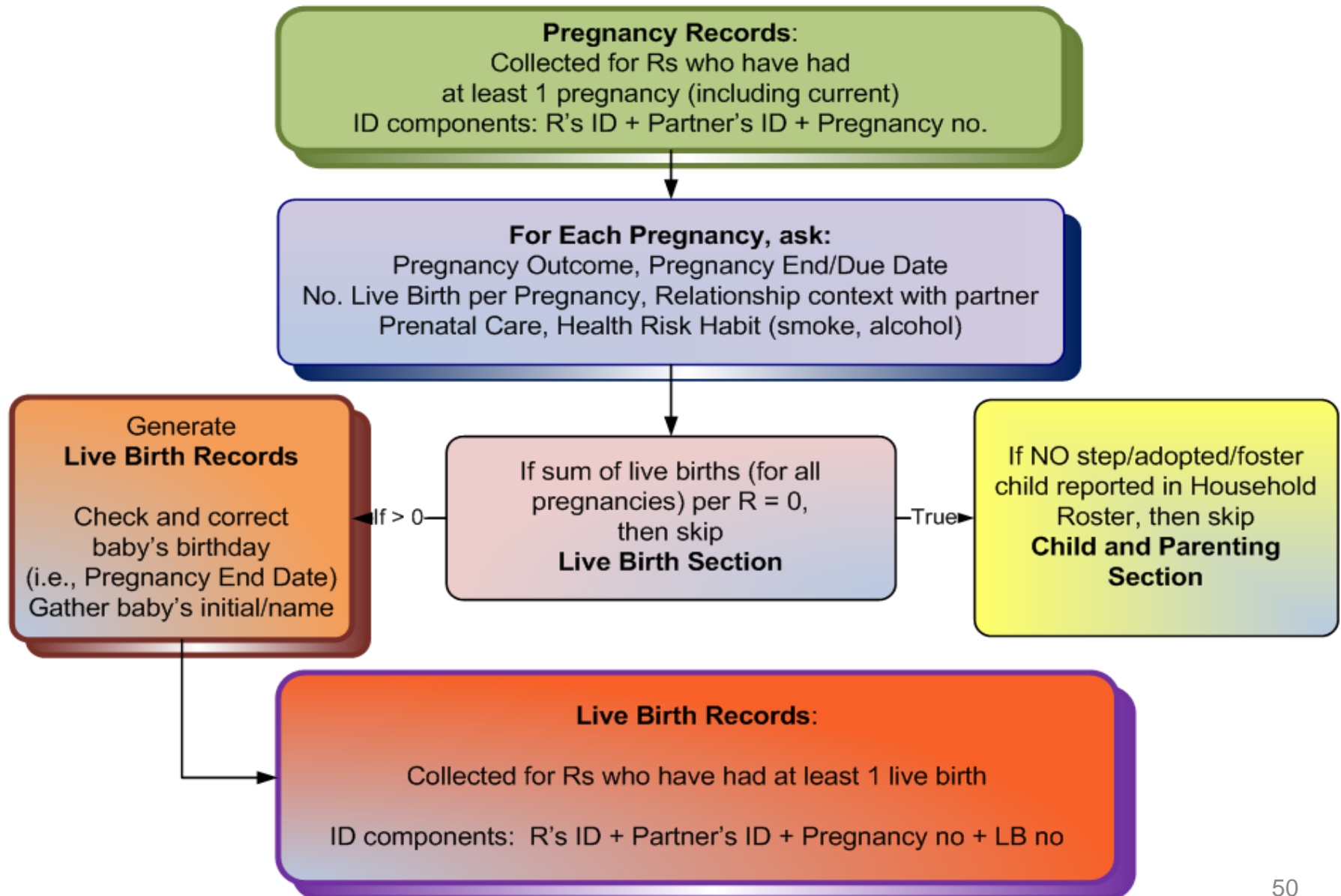


Wave IV: Fertility History

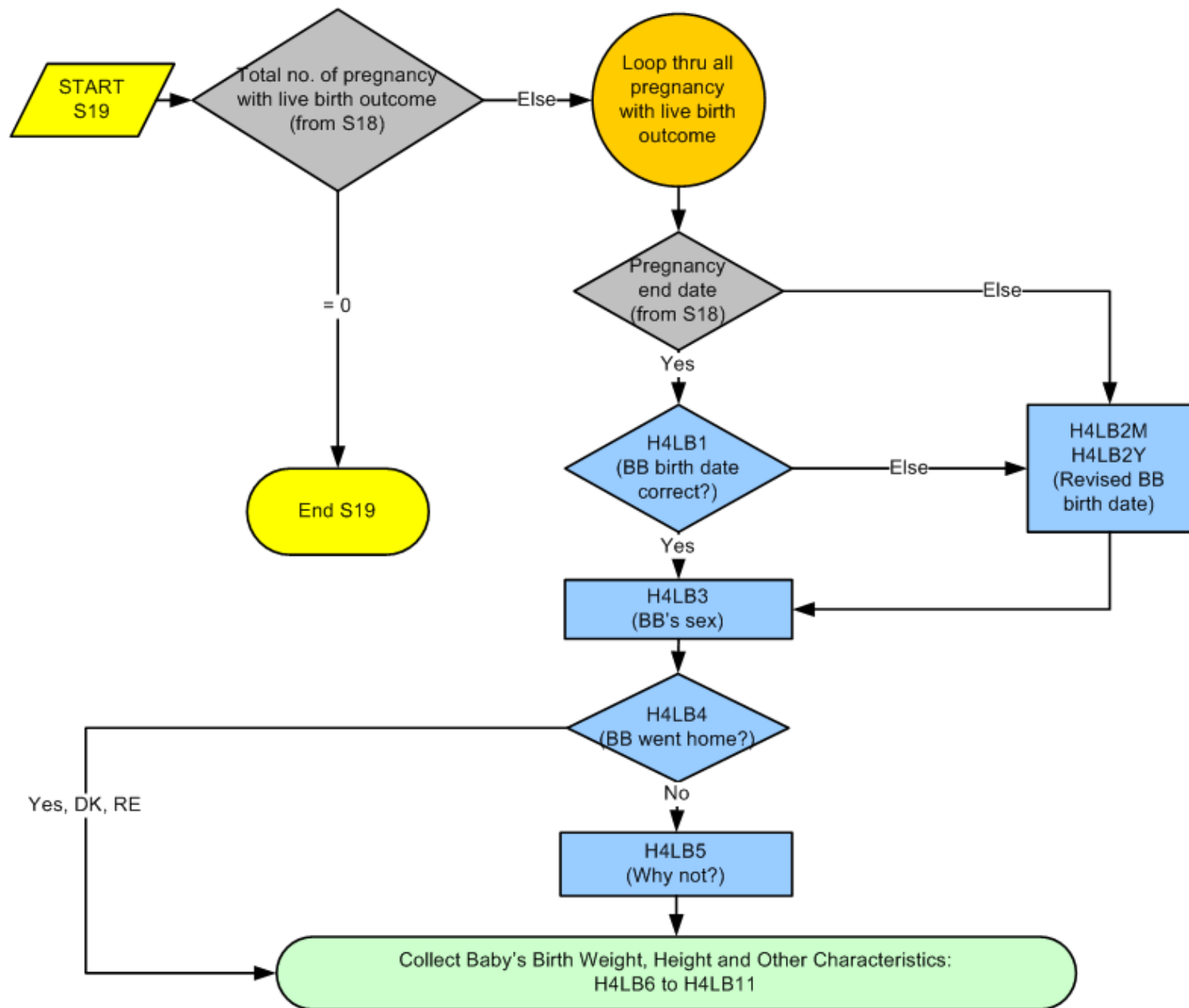
S19: Live Births

- **Unit of Analysis** – Live birth (N=14,749)
- **Record ID:** AID + PTNR_ID + PRGNO + LBNO
- **Contents:**
 - Confirm baby's birth date; corrected birth date
 - Baby's biological sex
 - Baby went home; Why not?
 - Birth weight
 - Born before/on/after due date? # weeks/days before/after
 - Still living; When died?

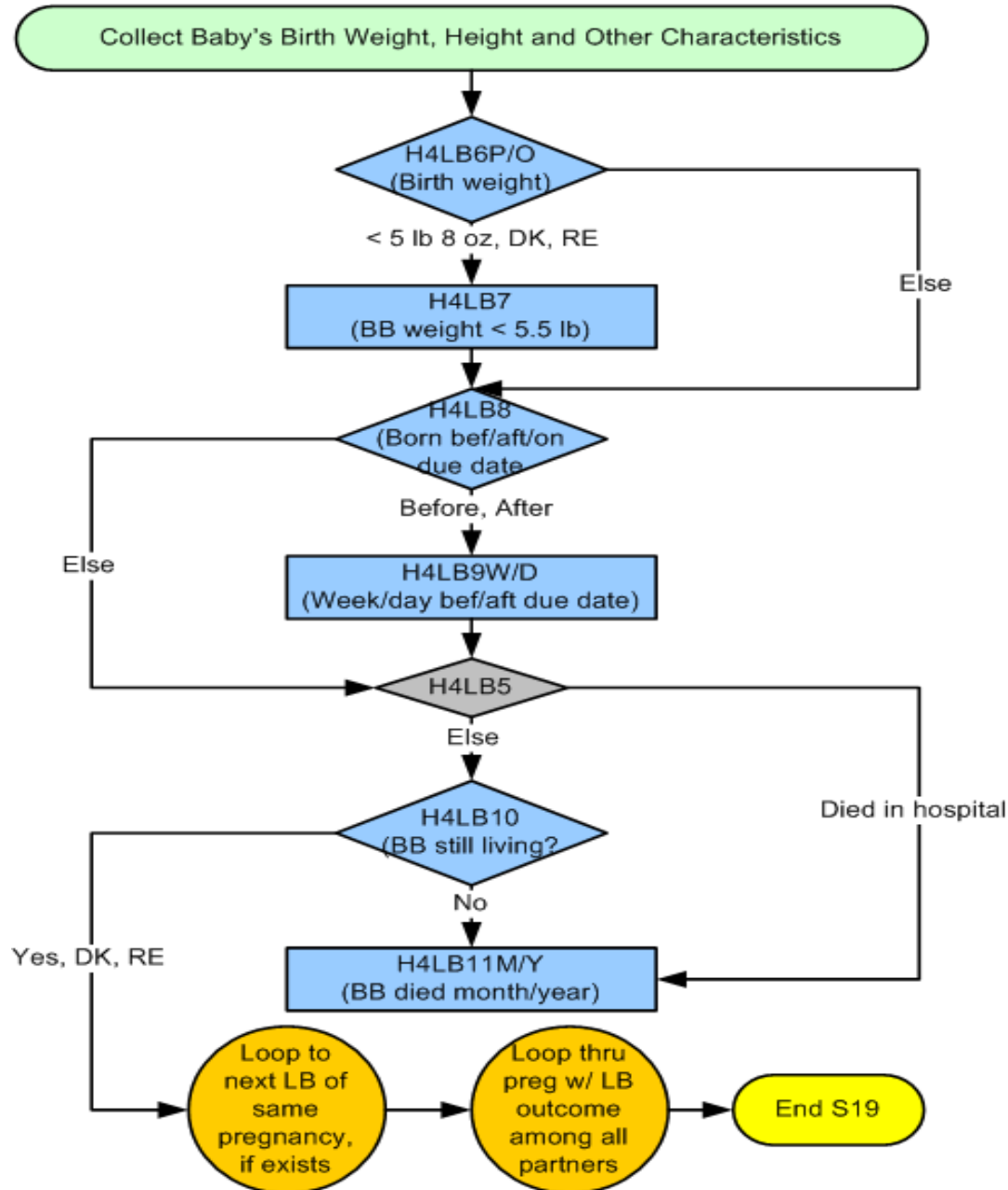
Wave IV Hierarchical Data Structure: Pregnancy and Live Birth Records



Section 19: Live Births



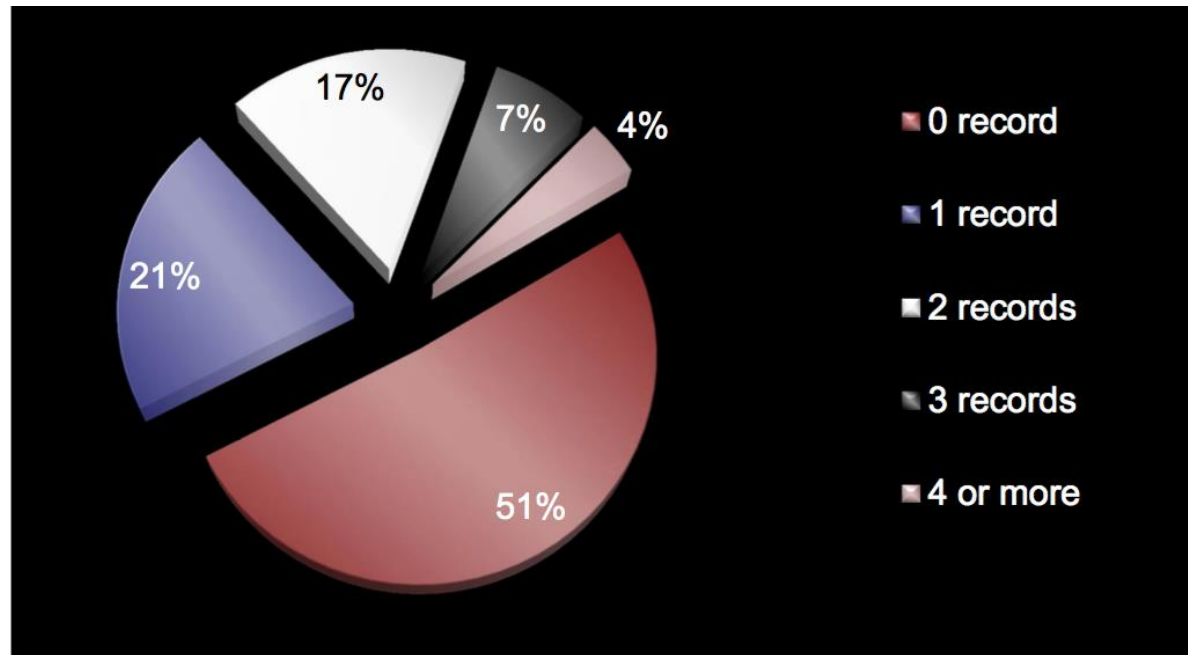
Section 19: Live Births (Cont.)



Wave IV: Fertility History

S19: Live Birth Table

Among **15,701** respondents, **51%** reported no live birth record in S19; **21%** reported one record; **17%** reported two; **7%** reported three; **4%** reported 4 or more



Wave IV: Fertility History

S20: Children and Parenting, Part A (Live Births)

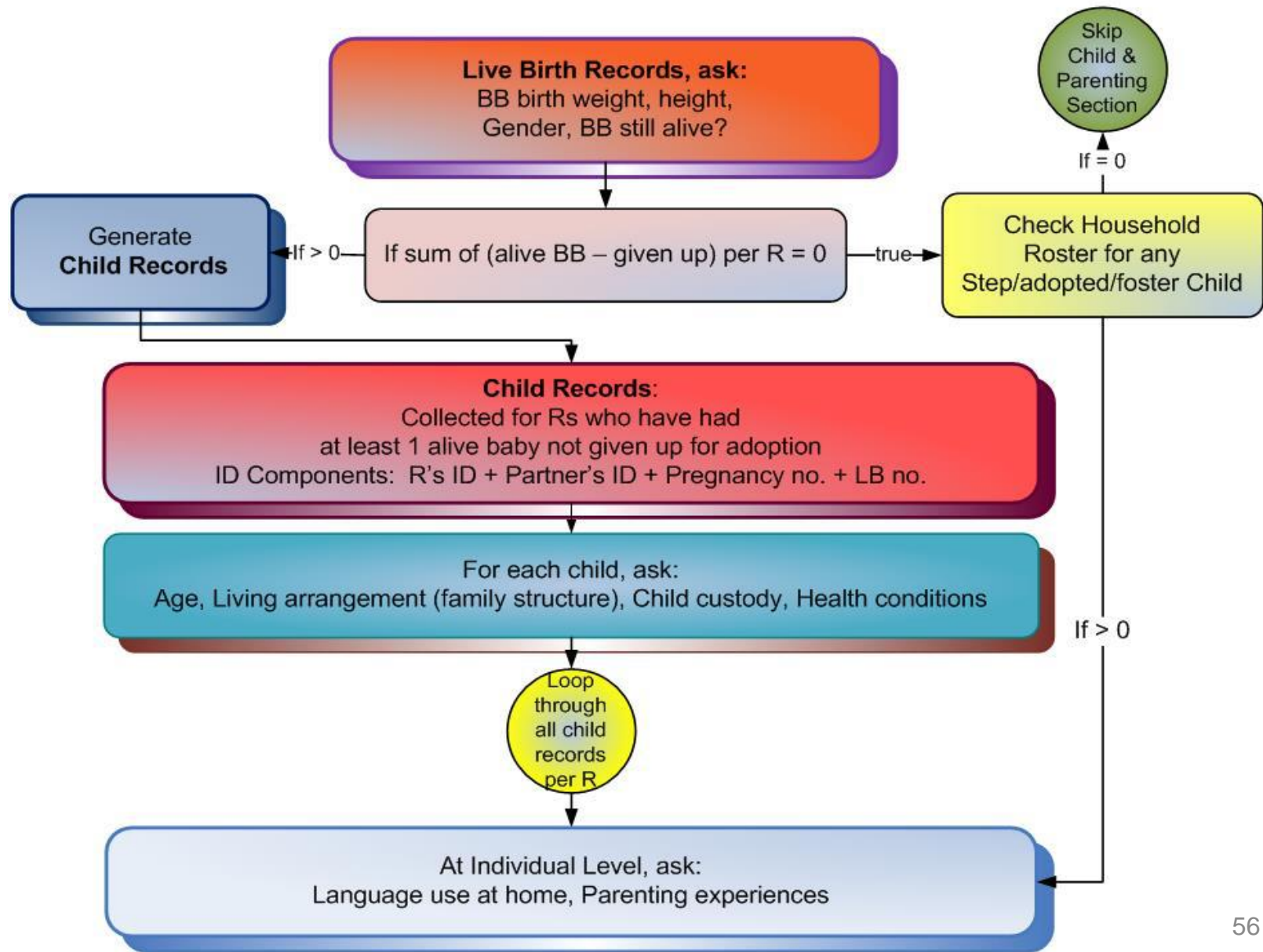
- **Unit of Analysis** – Child (N=14,553)
- **Record ID:** AID + PTNR_ID + PRGNO + LBNO
- **Contents:**
 - How old?
 - Child lives with respondent; Ever?
 - Last date living together
 - With whom child lives with
 - Distance
 - How often R see child?
 - Respondent lives with partner?
 - If not, distance?
 - Any custody agreement?
 - How often partner see child?
 - Child's general health
 - Child-specific health problems

Wave IV: Fertility History

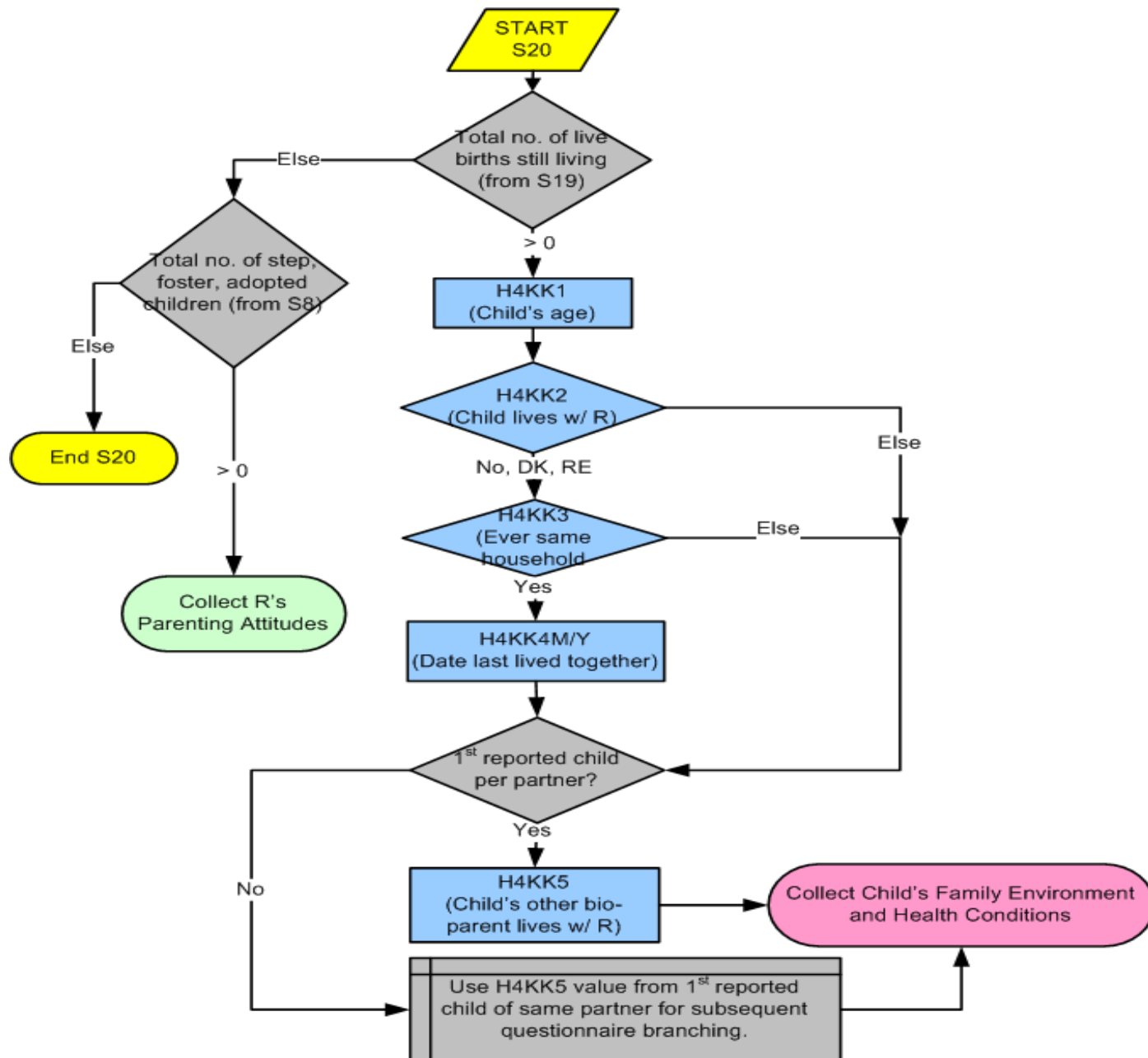
S20: Children and Parenting, Part B (All Children Living in Household)

- **Unit of Analysis** – Respondent (N=14,553)
- **Record ID:** AID
- **Contents:**
 - Language speak to child(ren) at home?
 - Happy in role as parent?
 - Respondent feels close to his/her child(ren)?
 - Child(ren): major source of stress?
 - Respondent feels overwhelmed by responsibility of being a parent

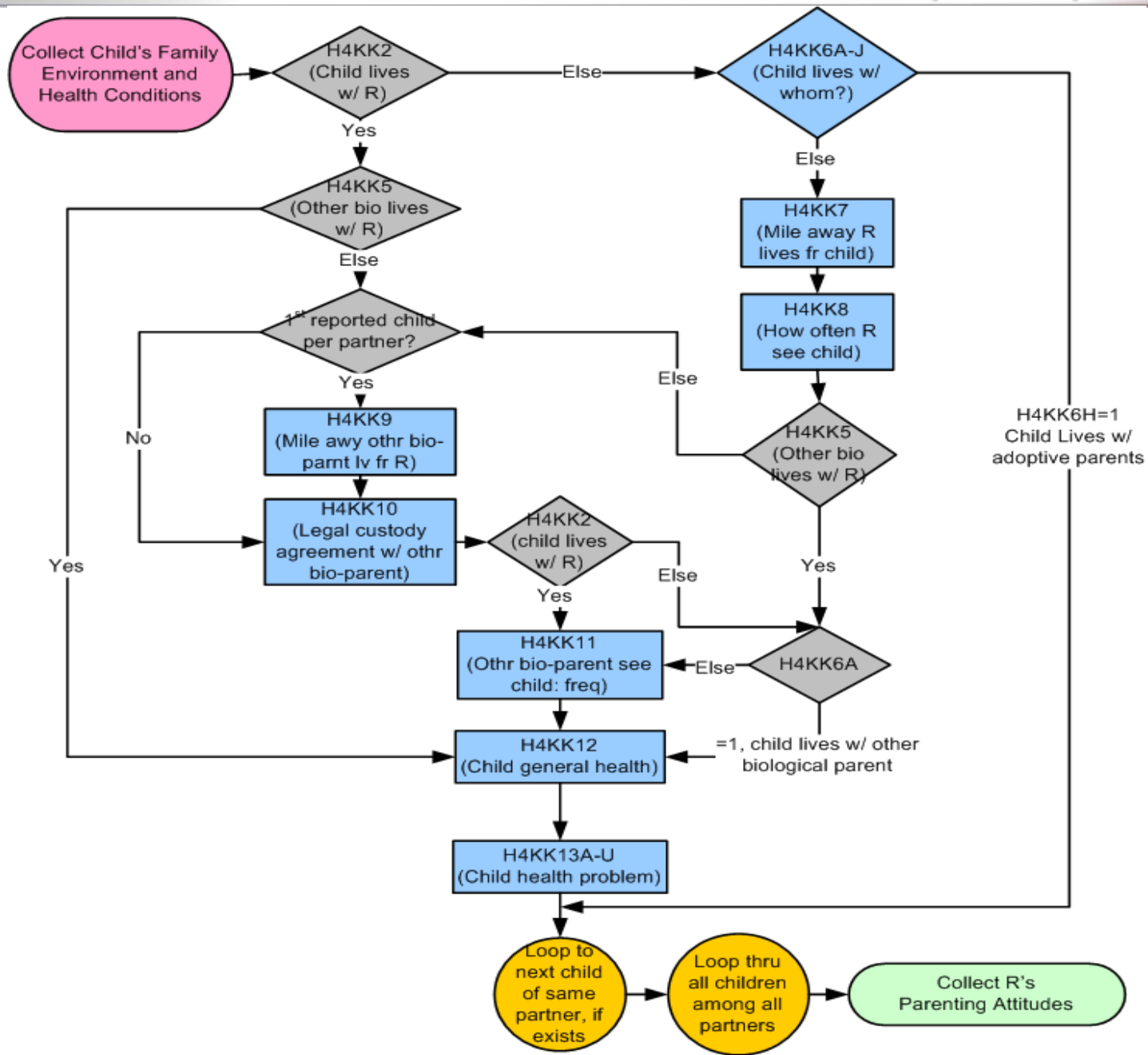
Wave IV Hierarchical Data Structure: Live Birth and Child Records



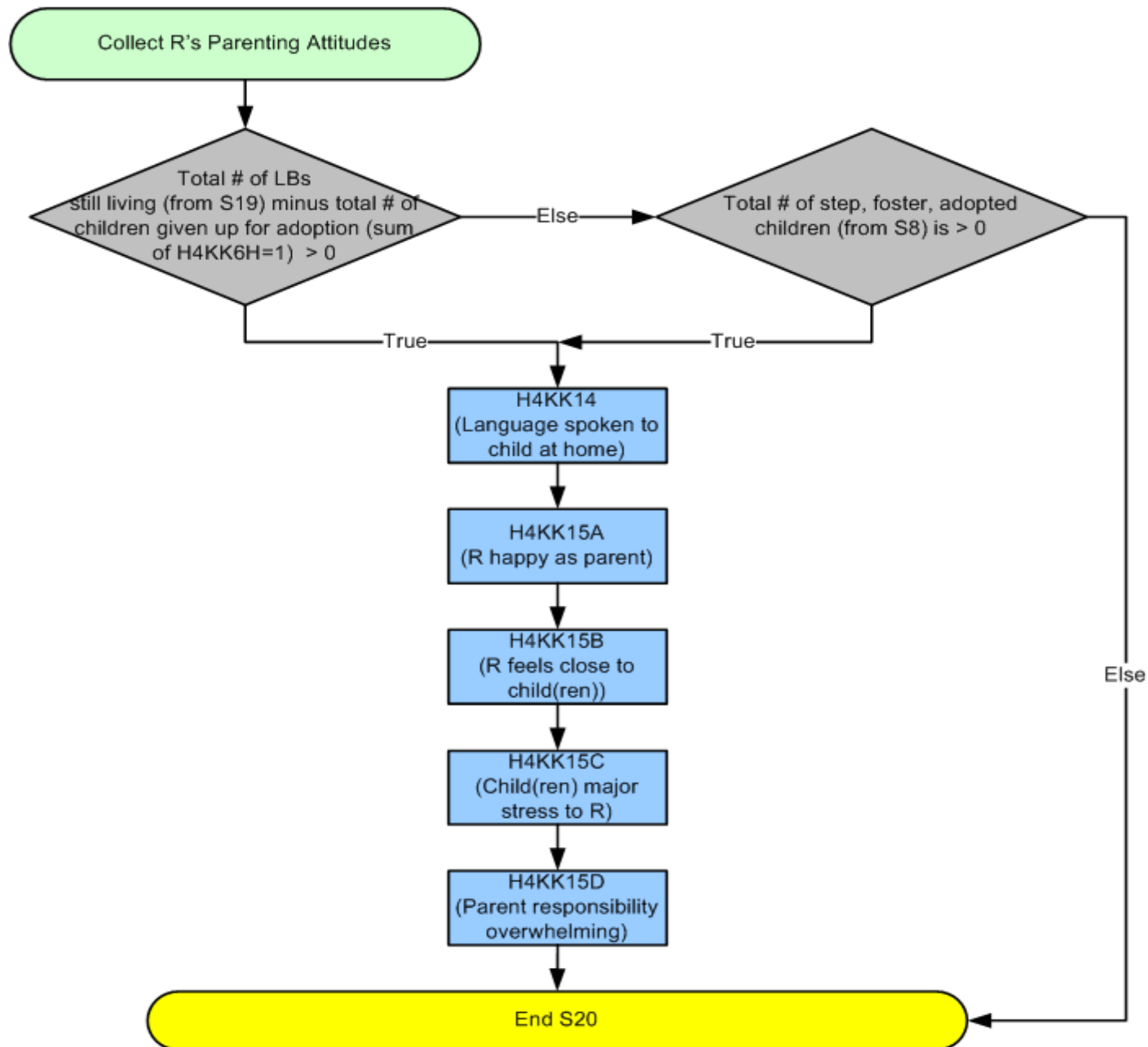
Section 20 Part A: Child Records



Section 20 Part A: Child Records (Cont.)



Section 20 Part B: Individual level -- Parenting



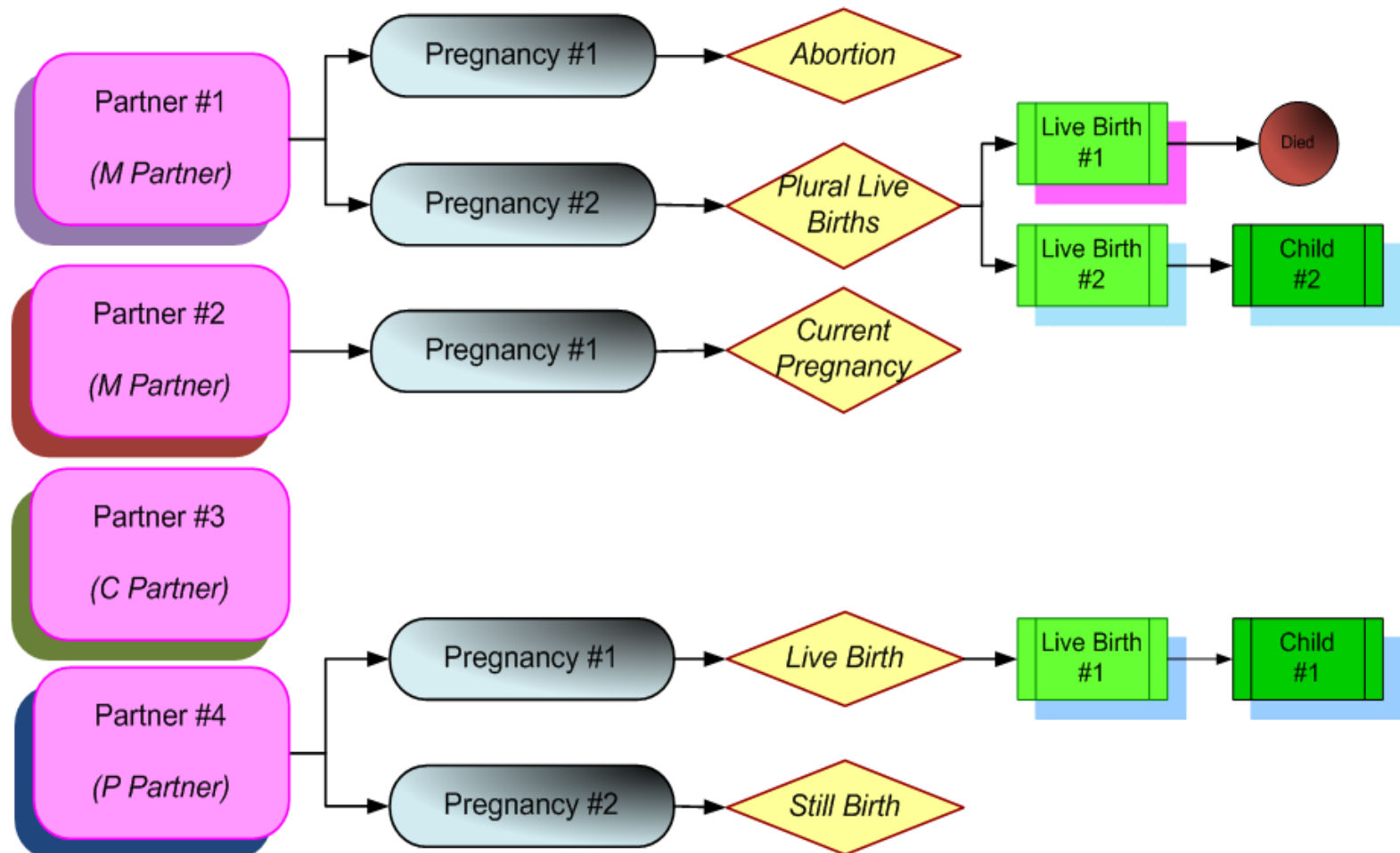
Wave IV Hierarchical Data Structure: Pregnancy, Live Birth, and Child Records

Partner Level

Pregnancy Level

Live Birth Level

Child Level



Wave V

(2016-2018; aged 32-42; Sample 1: n=3,872)

| | Content |
|------------------------------------|--|
| Relationships | <ul style="list-style-type: none">• Number of marriage and cohabitation partners• Concurrent partners• Current/most recent partner demographics<ul style="list-style-type: none">• Gender, age, race/ethnicity• Relationship duration and quality• Frequency of sexual activity• Frequency of contraceptive use• Fertility intentions• Concurrent partners• IPV and injuries |
| Pregnancy and birth history | <ul style="list-style-type: none">• R or partner ever been pregnant?• Currently pregnant due date• Pregnancy complications• Pregnancy outcomes• Birth outcomes• Use of substances and prenatal care• Relationship with partner at time of child's birth• Child's health• Parenting experiences |

Wave V : Differences

(2016-2018; aged 32-42; Sample 1: n=3,872)

| | Content |
|------------------------------------|---|
| Relationships | No relationship table Only asked for details regarding current or most recent partner (does not distinguish between partner type) |
| Pregnancy and birth history | Not a full pregnancy history by partner; questions only about total number of pregnancies (past and current) and complications for any pregnancies Full live birth and child profiles (up to 6) Does not require sorting by partner ID, pregnancy #, or live birth #; each “child record” is it’s own separate variable |

COMPUTATIONAL AND TECHNICAL TIPS

Computational and Technical Tips

Data Structure Transformation for Hierarchical Files

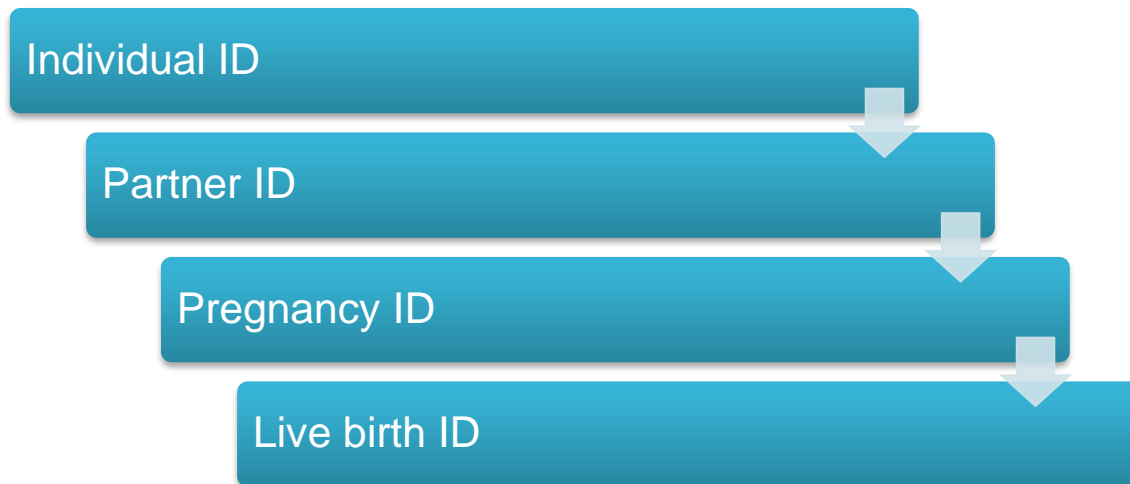
Construct unique record IDs for each file; determine what variables to sort your dataset by

- **Individual ID:** $AID + PTNR_ID + PRGNO + LBNO$
- **Relationship ID:** $AID + PTNR_ID$
- **Time-segment ID:** $AID + PTNR_ID + H4TR25 + H4TR26$
- **Pregnancy ID:** $AID + PTNR_ID + PRGNO + LBNO$
- **Live birth ID:** $AID + PTNR_ID + PRGNO + LBNO$
- **Child ID:** $AID + PTNR_ID + PRGNO + LBNO$

Computational and Technical Tips

Data Structure Transformation for Hierarchical Files

Lower-level file contains IDs of all higher-level files



For example:

Pregnancy records contain record IDs of the corresponding individual, relationship, and pregnancy record ID.

Computational and Technical Tips

Example SAS code

```
*-----*
| Construct partner record ID and          |
| pregnancy record ID (Character vars)    |
*-----*
data pregrcds (drop=nreln npreg);
  length partner_ID $ 10  preg_ID $ 12  nreln npreg $ 2;

  set pregtable (keep=AID PTNR_ID PRGNO ...);
  if PTNR_ID <=9 then nreln="0"||put(PTNR_ID,1.);
  else nreln= PTNR_ID;
  if PRGNO <=9 then npreg="0"||put(PRGNO,1.);
  else npreg= PRGNO;
  preg_ID   =AID||nreln||npreg;
  partner_ID =AID||nreln;

  label preg_ID="Preg Record ID (AID+PTNR_ID+PRGNO)"
        partner_ID="Partner Record ID (AID+PTNR_ID)"
;
run;
```

Computational and Technical Tips

Compute Frequencies, Sort Data

1. Describe respondent by his/her reporting on total numbers of 'event': e.g.,
 - Total no. of partners reported by R
 - Total no. of pregnancies reported by R
2. Describe respondent by his/her average reporting on a certain 'event': e.g.,
 - Average no. of pregnancy per partner by R
3. Describe respondent by his/her first reported 'event': e.g.,
 - Time to first pregnancy by R

Computational and Technical Tips

Example SAS code

```
*-----*
| Total no. of partner records reported by R. |
*-----*
proc sort data=partnrlds; by AID; run;
proc summary data=partnrlds;
  var partnercd;
  by AID;
  output out=sumreltn sum(partnercd)=tot_partnr;
run;

*-----*
| Total no. of pregnancy records reported by R. |
*-----*
proc sort data=pregrlds; by AID; run;
proc summary data=pregrlds;
  var pregrcd;
  by AID;
  output out=sumpreg sum(pregrcd)=tot_preg;
run;
```

Computational and Technical Tips

Example SAS code

```
*-----*
| Average no. of pregnancy per partner reported by R. |
*-----*
proc sort data=individ; by AID; run;
data individ2;
  merge individ (in=one)
        sumreltn(in=two keep=AID tot_partnr)
        sumpreg (in=three keep=AID tot_preg);
  by AID;

  if one then W4main=1;      else W4main=0;
  if two then rpt_partnr=1;  else rpt_partnr=0;
  if three then rpt_preg=1;  else rpt_preg=0;

  label tot_partnr="Total no. of partner rcrds reported by R"
        tot_preg  ="Total no. of preg rcrds reported by R"
        rpt_partnr="Rs who reprted at least 1 partner record"
        rpt_preg  ="Rs who reprted at least 1 preg record"
        W4main    ="Rs who are in W4 Main file"
;
;
```

Computational and Technical Tips

Example SAS code

```
*-----*
| Assign '0' to missing values in total no. of partner |
| records and in total no. of pregnancy records reported by R. |
*-----*
array ms1[*] tot_partnr tot_preg;
      do i=1 to dim(ms1);
          if ms1[i]=. then ms1[i]=0;
      end;

*-----*
| Compute average no. of pregnancy per partner reported by R. |
*-----*
if tot_partnr ne 0 then do;
    ave_preg_partnr = tot_preg/tot_partnr;
end;
label ave_preg_partnr="R's average no. of pregnancy per partner"
;
run;
```

Computational and Technical Tips

Example SAS code

```
*-----  
Output dataset that contains the FIRST (earliest) pregnancy  
-----;  
*First sort to find earliest pregnancy;  
  if h4pg1 in (1 2 3 4 5 6 96 98) then do;  
  if h4pg3m ge 96 & h4pg3y lt 9996 then do;  
  if h4pg4=1 then smonth= 2;  
  else if h4pg4=2 then smonth= 5;  
  else if h4pg4=3 then smonth=8;  
  else if h4pg4=4 then smonth=11;  
  else smonth= . ;  
  if smonth ne . then do;  
  enddate= mdy (smonth, 15, h4pg3y);  
  end;  
  else do;  
  enddate= mdy (6, 15, h4pg3y);  
  end;  
  end;  
  else if h4pg3m ge 96 & h4pg3y ge 9996 then enddate= . ;  
  else if h4pg3m le 12 & h4pg3y ge 9996 then enddate= . ;  
  else enddate= mdy (h4pg3m, 15, h4pg3y);  
  end;
```



Computational and Technical Tips

```
if h4tr9 in (0 96 98) then enddate=.;  
if h4pg1=7 then do;  
if h4pg2m ge 96 & h4pg2y ge 9996 then duedate= .;  
else duedate= mdy (h4pg2m, 15, h4pg2y);  
end;  
date=enddate;  
if date=. & duedate ~=. then do;  
date=duedate;  
end;
```

```
*Output dataset  
set PREGdata;  
by aid date;  
*if you sort by end date of the pregnancy so that the earliest  
has the lowest number, output dataset that contains the first  
respondent record;  
if first.aid then output pregdata;  
run;
```


Computational and Technical Tips

Example SAS code: Construction of Relationship Quality Measure

```
/* Current PRIMARY relationship quality */
if h4rd7a in (96,98) then h4rd7a2=.; else h4rd7a2=h4rd7a;
if h4rd7b in (96,98) then h4rd7b2=.; else h4rd7b2=h4rd7b;
if h4rd7c in (96,98) then h4rd7c2=.; else h4rd7c2=h4rd7c;
if h4rd7d in (96,98) then h4rd7d2=.; else h4rd7d2=h4rd7d;
if h4rd7e in (96,98) then h4rd7e2=.; else h4rd7e2=h4rd7e;
if h4rd7f in (96,98) then h4rd7f2=.; else h4rd7f2=h4rd7f;
if h4rd7g in (96,98) then h4rd7g2=.; else h4rd7g2=h4rd7g;
if h4rd7a2>. and h4rd7b2>. and h4rd7c2>. and h4rd7d2>. and h4rd7e2>. and h4rd7f2>. and
    h4rd7g2>. then do;
relnqual=sum(h4rd7a2,h4rd7b2,h4rd7c2,h4rd7d2,h4rd7e2,h4rd7f2,h4rd7g2);
end;
if currreln4cat in (1,2,3) then currrelnqual=relnqual;
else if currreln4cat=. then currrelnqual=.;
label currrelnqual='CurrReInQualityScale7-35LowIsHappy';

/* Current PRIMARY relationship duration */
if currreln4cat in (1,2,3) then do;
currrelnDurn=h4rd2y+(h4rd2m/12)+(h4rd2d/365.25);
end;
else if currreln4cat in (.,0) then currrelnDurn=.;
label currrelnDurn='DurationOfCurrReInInYears (incDecimals)';
```



Computational and Technical Tips

Examples for Different Levels and Units of Analysis, and Hierarchical Files Merging

| Level of analysis | Purpose | Input files | | Data sorted by for computation or merging | Summary statistics/descriptive per unit of analysis | Files merged by | Output file |
|-------------------|--|------------------|--------------------------------|---|--|-----------------|------------------|
| | | Unit of analysis | Unique ID per unit of analysis | | | | Unit of analysis |
| Respondent | Describe respondent by a summary of partner characteristics. e.g., Total no. of partners reported by respondent | Respondent | AI D | AI D | Per respondent e.g., Count of partners | AI D | Respondent |
| | | Partner | AI D, PTNR_ID | AI D | | | |
| Respondent | Describe respondent by a summary of pregnancy history. e.g., Total no. of pregnancies with abortion as outcome | Respondent | AI D | AI D | Per respondent e.g., Count of pregnancies ended in abortion | AI D | Respondent |
| | | Pregnancy | AI D, PTNR_ID, PRGNO | AI D | | | |

Computational and Technical Tips

Examples for Different Levels and Units of Analysis, and Hierarchical Files Merging (Cont.)

| Level of analysis | Purpose | Input files | | Data sorted by for computation or merging | Summary statistics/descriptive per unit of analysis | Files merged by | Output file |
|-------------------|---|------------------|--------------------------------|---|--|-----------------|------------------|
| | | Unit of analysis | Unique ID per unit of analysis | | | | Unit of analysis |
| Respondent | Describe respondent by a summary of live birth history. e.g., Total no. of live births born outside marriage | Respondent | AID | AID | Per respondent e.g., Flag live births born while R and partner not married and count up total | AID | Respondent |
| | | Live birth | AID, PTNR_ID, PRGNO, LBNO | AID | | | |
| Partner | Associate respondent's characteristics to partners. e.g., Identify hetero/homosexual relationship | Partner | AID, PTNR_ID | AID | Spread R's information onto each partner record e.g., spread R's biological sex onto partner record and compare | AID | Partner |
| | | Respondent | AID | AID | | | |

Computational and Technical Tips

Examples for Different Levels and Units of Analysis, and Hierarchical Files Merging (Cont.)

| Level of analysis | Purpose | Input files | | Data sorted by for computation or merging | Summary statistics/descriptive per unit of analysis | Files merged by | Output file |
|-------------------|--|------------------|--------------------------------|---|--|------------------|------------------|
| | | Unit of analysis | Unique ID per unit of analysis | | | | Unit of analysis |
| Partner | Associate pregnancy characteristics to partners. | Partner | AI D, PTNR_ID | AI D, PTNR_ID | Per partner e. g. , Flag pregnancies with non-birth outcomes and count up total. | AI D, PTNR_ID | Partner |
| | e. g. , No. of non-birth pregnancies associated with each partner | Pregnancy | AI D, PTNR_ID, PRGNO | AI D, PTNR_ID | | | |
| Partner | Associate partner demographics w/ partner detailed information in S17. | Partner | AI D, PTNR_ID | AI D, PTNR_ID | By partner | AI D, PTNR_ID | Partner |
| | | Partner | AI D, PTNR_ID | AI D, PTNR_ID | | | |

Issues When Working with Relationship and Fertility Data

- Retrospective reports on relationship and fertility history
- Some dates and ages reported in whole years
- Sexual behavior and fertility during adolescence are sensitive topics that may be underreported
- Data items vary by wave
- Challenging programming jobs

General Advice

- **Spend time to know your data!**
 - Examine question branching; Test skip patterns; Check value ranges; Further clean your data for odd/extreme cases. Know your variables!
 - Check your programs: When in doubt, list your cases and examine.
 - Do logical checks and analytical checks on your results. You can never be too careful!
- **Take small steps: Think through your results**
 - Do thorough preliminary analysis before going into sophisticated multivariate advanced statistics.
 - Take pains to document your data and programming decisions.

General Advice

- **Do not assume!**
 - Read as much as you can including:
 - Add Health documentation
 - Subscribe to Add Health list server:
 - Email Add Health (addhealth@unc.edu) and request that your email address be added
 - Check out publications using Add Health data



Thank you!

Questions?

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For syntax and other resources, visit:

<https://www.cpc.unc.edu/projects/addhealth/>