Variables in the original Individual Recode used to create calendar variables:

Caseid - unique women identifier

vcal\_1 ... vcal\_9 - actual calendar columns. Variable vcal\_1 contains reproductive events such as births, pregnancies, terminations of pregnancy, and methods of contraceptive use. Variable vcal\_2 is related to vcal\_1 and records reasons for stopping the use of a contraceptive method. So far none of the samples I’ve worked with had any data in vcal\_3, vcal\_4, … vcal\_9 variables. These variables are included in the recode but don’t contain any information.

V006 - month of interview (Gregorian)

V007 - year of interview (Gregorian)

V017 - Century month code for the first month of the calendar. This is constant for all cases and is the century month code of January of the first year of the calendar.

V019 - records the length (number of months) of the calendar for every woman. This variable is coded 0 for incomplete interviews.

V019a - number of calendar columns. For Kenya 2014 DHS v019a=2. There are 9 calendar columns possible, if they don’t contain any information they are still included in the IR as empty columns (as I mentioned above).

New variables created based on the calendar variables:

CMC\_month - Century Month Code for every month of the woman’s calendar. The first CMC for all women in the sample is constant and is the century month code of January of the first year of the calendar. For the Kenya 2014 sample all women’s calendar start with CMC 1309 (January 2009). CMC\_month depends on the duration of the calendar for every woman, since women in the sample have reproductive calendars of different lengths. Note that CMC\_month is listed for every woman in descending order, so it starts with the most recent month.

Event - this variable contains a unique reproductive event that happened to a woman in every CMC\_month. It is based on breaking up the vcal\_1 string and attributing an event to the corresponding CMC\_month. The Event variable can contain only one code and is created by recoding alpha-numeric codes from vcal\_1. The new codes I created are numeric only, see below (based on DHS Recode VII):

|  |  |  |
| --- | --- | --- |
| **method/event** | **codes in the original IR file (vcal\_1)** | **new codes**  **(event)** |
| Non-use of contraception | 0 | 0 |
| Pill | 1 | 1 |
| IUD | 2 | 2 |
| Injections | 3 | 3 |
| Diaphragm | 4 | 4 |
| Condom | 5 | 5 |
| Female sterilization | 6 | 6 |
| Male sterilization | 7 | 7 |
| Periodic abstinence/rhythm | 8 | 8 |
| Withdrawal | 9 | 9 |
| Abstinence | A | 10 |
| Female condom | C | 11 |
| Emergency contraception | E | 12 |
| Foam and jelly | F | 13 |
| Lactational amenorrhea | L | 14 |
| Other modern methods | M | 15 |
| Implants/Norplant | N | 16 |
| Standard days method | S | 17 |
| Standard days method – Cycle collar (Mali 2012) | R | 17 |
| Standard days method (Rwanda 2010) | D | 17 |
| Other traditional methods | W | 18 |
| Fixed day methods (Guatemala 2014)  Benin 2011 | Q | 19 |
| Monthly injections (from Egypt 2014) | G | 20 |
| Prolonged breastfeeding (Egypt 2014, Egypt 2000) | H | 21 |
| Prolonged breastfeeding (Egypt 2008/2005) | R | 21 |
| Prolonged breastfeeding (Egypt 2003/1995) | G | 21 |
| NA (Madagascar 2008) | K | 22 |
| Diaphragm/Foam/Jelly (Egypt 2000/2003) | D | 22 |
| Diaphragm/Foam/Jelly (Egypt 2008/2005) | K | 22 |
| Country-specific method 1 | α | 23 |
| Contraceptive patch (Namibia 2013) | K | 24 |
| Method continued with new source (1,6) (Egypt 2005) | Z | 25 |
| Hysterectomy (Bangladesh 2011/2004) | H | 26 |
| Injectables 2M NUR-ISTEATE (South Africa 2016) | I | 27 |
| Birth | B | 100 |
| Pregnancy | P | 200 |
| Terminated pregnancy/non-live birth | T | 300 |

Preg - binary variable indicating whether a woman was pregnant during that CMC\_month (1-yes, 0-no)

Birth - binary variable indicating whether a woman delivered a live birth during that CMC\_month (1-yes, 0-no)

Term - binary variable indicating whether a woman terminated a pregnancy/delivered a non-live birth during that CMC\_month (1-yes, 0-no)

Contr - binary variable indicating whether a woman used any contraceptive method during that CMC\_month (1-yes, 0-no)

Total\_preg - total number of months a woman was pregnant during the entire length of her reproductive health calendar

Count\_birth - total number of live births a woman had during the entire length of her reproductive health calendar

Count\_term - total number of terminations/non-live births a woman had during the entire length of her reproductive health calendar

Contr\_duration - total number of months a woman used any contraceptive methods during the length of her reproductive calendar

Switch - binary variable indicating whether in any given month a woman was using a different contraceptive method compared to the previous month (1-yes, 0-no). This variable describes cases when women switched to a different contraceptive method or started using a contraceptive method prior to not using any methods. Comparison to a previous months when a woman was pregnant, gave birth, or termination does not make sense, so months after pregnancy, birth, and/or terminations will be filled with code 99 (NA).

Switch\_new - binary variable indicating whether in a given month a woman was using a contraceptive method different to that a month before (1-yes, 0-no). This variable describes instances of switching to a different method if a woman was using any method in the previous month.

duration\_1 … duration\_N - duration of use of specific contraceptive methods. Number after the underscore sign refers to the method as recoded in variable Event. For example, duration\_2 refers to the total number of months a woman used an IUD during her reproductive calendar.

Reason - reason for discontinuation of a method. The variable refers to the CMC\_month when a woman stopped using a contraceptive method, and lists the reason. New codes for reasons of discontinuation are listed below and based on DHS Recode VII:

|  |  |  |
| --- | --- | --- |
| **Reasons for discontinuation** | **codes in the original IR file** | **new codes** |
| Became pregnant while using | 1 | 1 |
| Wanted to become pregnant | 2 | 2 |
| Husband disapproved | 3 | 3 |
| Side effects | 4 | 4 |
| Health concerns | 5 | 5 |
| Access/availability | 6 | 6 |
| Wanted more effective method | 7 | 7 |
| Inconvenient to use | 8 | 8 |
| Infrequent sex/husband away | 9 | 9 |
| Cost | C | 10 |
| Fatalistic | F | 11 |
| Difficult to get pregnant/menopause | A | 12 |
| Marital dissolution | D | 13 |
| Other reasons | W | 14 |
| Don’t know | K | 15 |
| IUD fell out (Egypt 2005) | P | 16 |
| IUD fell out (Egypt 2003) | N | 16 |
| Doctor’s opinion (Egypt 2008/2005) | O | 17 |
| Ramadan (Jordan 2009) | R | 18 |
| Method not available (Ethiopia 2005) | M | 19 |
| Standard days method (Ethiopia 2011) | O | 17 |
| Husband ill (Egypt 2003) | P | 20 |
| Can’t get pregnant (Egypt 2003) | Q | 21 |
| Changed method (Egypt 2003) | J | 22 |
| Husband wants her pregnant (Egypt 2003) | K | 23 |
| Afraid of forgetting method (Egypt 2003) | L | 24 |
| Afraid of using method (Egypt 2003) | M | 25 |
| Thinks she is pregnant(Egypt 2003) | R | 26 |
| Gained weight (India 2005) | G | 27 |
| Lack of sexual satisfaction (India 2005) | L | 28 |
| Created a menstrual problem (India 2005) | M | 29 |
| Didn’t like method (India 2005) | N | 30 |
| Lack of privacy (India 2005) | P | 31 |

Disc\_event - binary variable indicating whether a woman stopped using a contraceptive method during that CMC\_month (1-yes, 0-no)

Disc\_total - total number of times a woman stopped using a contraceptive method throughout the entire length of her reproductive health calendar.

Married – binary variable based on vcal\_3, refers to the CMC\_month when a woman reported being married/in a union (1-yes, 0-no)

Seq – sequential (in chronological order) number for the month of calendar interview for every woman

contr\_source – based on vcal\_5, refers to the source of contraception. Specific codes TBD (don’t know what exactly the original DHS codes mean yet), left them as is for now

cml\_preg – cumulative duration of pregnancy from the start in month. Variable refers to the months when a woman was pregnant, gave birth, or reported a termination

preg\_flag – binary variable indicating if the cumulative duration of a pregnancy > 9 months (1-yes, 0-no)

prfirst – binary variables denoting if a woman was pregnant in the first (earliest) month of her calendar (1-yes, 0-no)

trunc – binary variable indicating if a pregnancy is truncated at the end of the calendar. The logic behind this variable is that if a woman is pregnant during the last month of her calendar, we can’t record the outcome of that pregnancy, which can lead to confusion when looking at the number of months a woman has been pregnant relative to the number of pregnancy outcomes (birth/termination) captured in the calendar.

Id – sequential numeric id for every woman

Caseid\_CMC – unique woman-month variable based on concatenating a woman’s caseid with the CMC code for every month of her calendar

Vcal\_1.dhs – vcal\_9.dhs – original codes for the DHS calendar variables (after splitting the string). Didn’t replace empty rows with 99/NA to be consistent with the DHS coding

**Country-specific variables:**

India 2005: ultrasound – whether or not a woman had an ultrasound during pregnancy (recorded for the last month of pregnancy (ie birth)