
Subject: Maternal Mortality Ratio

Posted by [femifemi](#) on Thu, 04 Dec 2014 08:35:02 GMT

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I'm working on variable MM9 to calculate maternal death which could be used to further calculate MMR. Please, how can combine the variables mm9_01 to mm9_14 to a single variable? Thank you.

Subject: Re: Maternal Mortality Ratio

Posted by [Trevor-DHS](#) on Sat, 06 Dec 2014 00:05:59 GMT

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You will need to reshape the data as follows:

use "NGIR6AFL.DTA"

* Rename all of the repeating variables to drop the leading 0 to help with reshaping

```
rename mm*_0* mm*_*
```

* Reshape the maternal mortality data

```
reshape long mmidx_ mm1_ mm2_ mm3_ mm4_ mm5_ mm6_ mm7_ mm8_ mm9_ mm10_ mm11_ mm12_ mm13_ mm14_ mm15_, i(caseid) j(mmindex)
```

* Rename the new variables

```
rename mm*_ mm*
```

* Drop the empty entries

```
drop if mmidx==.
```

Subject: Re: Maternal Mortality Ratio

Posted by [femifemi](#) on Sat, 06 Dec 2014 21:50:10 GMT

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Thank you for the response. But everytime I tried to reshape the maternal mortality data after renaming all the repeating variables, the software kept on freezing. I used STATA/SE 12.0. While trying to change the memory settings, I received a summary response that such was done on the fly automatically in modern STATA. What could be the immediate solution? Thank you alot sir. The procedures I've followed:

* Rename all of the repeating variables to drop the leading 0 to help with reshaping

```
rename mm1_01 mm1_1
```

```
rename mm1_02 mm1_2
```

```
rename mm1_03 mm1_3
```

```
rename mm1_04 mm1_4
```

```
rename mm1_05 mm1_5
```

```
rename mm1_06 mm1_6
```

rename mm1_07 mm1_7
rename mm1_08 mm1_8
rename mm1_09 mm1_9

rename mm2_01 mm2_1
rename mm2_02 mm2_2
rename mm2_03 mm2_3
rename mm2_04 mm2_4
rename mm2_05 mm2_5
rename mm2_06 mm2_6
rename mm2_07 mm2_7
rename mm2_08 mm2_8
rename mm2_09 mm2_9

rename mm3_01 mm3_1
rename mm3_02 mm3_2
rename mm3_03 mm3_3
rename mm3_04 mm3_4
rename mm3_05 mm3_5
rename mm3_06 mm3_6
rename mm3_07 mm3_7
rename mm3_08 mm3_8
rename mm3_09 mm3_9

rename mm4_01 mm4_1
rename mm4_02 mm4_2
rename mm4_03 mm4_3
rename mm4_04 mm4_4
rename mm4_05 mm4_5
rename mm4_06 mm4_6
rename mm4_07 mm4_7
rename mm4_08 mm4_8
rename mm4_09 mm4_9

rename mm5_01 mm5_1
rename mm5_02 mm5_2
rename mm5_03 mm5_3
rename mm5_04 mm5_4
rename mm5_05 mm5_5
rename mm5_06 mm5_6
rename mm5_07 mm5_7
rename mm5_08 mm5_8
rename mm5_09 mm5_9

rename mm6_01 mm6_1
rename mm6_02 mm6_2
rename mm6_03 mm6_3
rename mm6_04 mm6_4
rename mm6_05 mm6_5
rename mm6_06 mm6_6
rename mm6_07 mm6_7
rename mm6_08 mm6_8
rename mm6_09 mm6_9

rename mm7_01 mm7_1
rename mm7_02 mm7_2
rename mm7_03 mm7_3
rename mm7_04 mm7_4
rename mm7_05 mm7_5
rename mm7_06 mm7_6
rename mm7_07 mm7_7
rename mm7_08 mm7_8
rename mm7_09 mm7_9

rename mm8_01 mm8_1
rename mm8_02 mm8_2
rename mm8_03 mm8_3
rename mm8_04 mm8_4
rename mm8_05 mm8_5
rename mm8_06 mm8_6
rename mm8_07 mm8_7
rename mm8_08 mm8_8
rename mm8_09 mm8_9

rename mm9_01 mm9_1
rename mm9_02 mm9_2
rename mm9_03 mm9_3
rename mm9_04 mm9_4
rename mm9_05 mm9_5
rename mm9_06 mm9_6
rename mm9_07 mm9_7
rename mm9_08 mm9_8
rename mm9_09 mm9_9

rename mm10_01 mm10_1
rename mm10_02 mm10_2
rename mm10_03 mm10_3

rename mm10_04 mm10_4
rename mm10_05 mm10_5
rename mm10_06 mm10_6
rename mm10_07 mm10_7
rename mm10_08 mm10_8
rename mm10_09 mm10_9

rename mm11_01 mm11_1
rename mm11_02 mm11_2
rename mm11_03 mm11_3
rename mm11_04 mm11_4
rename mm11_05 mm11_5
rename mm11_06 mm11_6
rename mm11_07 mm11_7
rename mm11_08 mm11_8
rename mm11_09 mm11_9

rename mm12_01 mm12_1
rename mm12_02 mm12_2
rename mm12_03 mm12_3
rename mm12_04 mm12_4
rename mm12_05 mm12_5
rename mm12_06 mm12_6
rename mm12_07 mm12_7
rename mm12_08 mm12_8
rename mm12_09 mm12_9

rename mm13_01 mm13_1
rename mm13_02 mm13_2
rename mm13_03 mm13_3
rename mm13_04 mm13_4
rename mm13_05 mm13_5
rename mm13_06 mm13_6
rename mm13_07 mm13_7
rename mm13_08 mm13_8
rename mm13_09 mm13_9

rename mm14_01 mm14_1
rename mm14_02 mm14_2
rename mm14_03 mm14_3
rename mm14_04 mm14_4
rename mm14_05 mm14_5
rename mm14_06 mm14_6
rename mm14_07 mm14_7

```
rename mm14_08 mm14_8  
rename mm14_09 mm14_9
```

```
rename mm15_01 mm15_1  
rename mm15_02 mm15_2  
rename mm15_03 mm15_3  
rename mm15_04 mm15_4  
rename mm15_05 mm15_5  
rename mm15_06 mm15_6  
rename mm15_07 mm15_7  
rename mm15_08 mm15_8  
rename mm15_09 mm15_9
```

```
rename mmidx_01 mmidx_1  
rename mmidx_02 mmidx_2  
rename mmidx_03 mmidx_3  
rename mmidx_04 mmidx_4  
rename mmidx_05 mmidx_5  
rename mmidx_06 mmidx_6  
rename mmidx_07 mmidx_7  
rename mmidx_08 mmidx_8  
rename mmidx_09 mmidx_9
```

* Reshape the maternal mortality data

```
reshape long mmidx_ mm1_ mm2_ mm3_ mm4_ mm5_ mm6_ mm7_ mm8_ mm9_ mm10_  
mm11_ mm12_ mm13_ mm14_ mm15_, i(caseid) j(mmindex)
```

Subject: Re: Maternal Mortality Ratio

Posted by [Trevor-DHS](#) on Sat, 06 Dec 2014 22:32:01 GMT

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1) The software doesn't actually freeze, although it appears like it has frozen. The problem is that the reshaping operation takes a long time to run (when I tried it the code took about an hour to run). You can reduce this substantially by dropping unnecessary variables before the reshape command. I would drop every variable that you don't need before running the reshape (sorry, I should have realized that it would be very slow). Its probably easier just to use the keep command as you will probably be keeping far less variables than you are dropping:

```
keep <varlist>
```

e.g.

```
keep caseid v005 v008 mm*
```

and any other variables that you might need.

2) You don't need to write out the rename commands individually. The command I gave will do all of the renaming in one go:

rename mm*_0* mm*_*

Subject: Re: Maternal Mortality Ratio

Posted by [femifemi](#) on Mon, 08 Dec 2014 07:05:54 GMT

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Sir, thank you for the responses.

I'm still on the estimation; my result is far from the expected. Where have I gone wrong? Is the weighting right or wrong? Thank you in anticipation sir.

The do file:

```
use "NGIR6AFL.DTA"
```

```
* Rename all of the repeating variables to drop the leading 0 to help with reshaping
```

```
rename mm*_0* mm*_*
```

```
*keep
```

```
keep caseid v005 v008 v022 v021 mm*
```

```
* Reshape the maternal mortality data
```

```
reshape long mmidx_ mm1_ mm2_ mm3_ mm4_ mm5_ mm6_ mm7_ mm8_ mm9_ mm10_ mm11_ mm12_ mm13_ mm14_ mm15_, i(caseid) j(mmindex)
```

```
* Rename the new variables
```

```
rename mm*_ mm*
```

```
* Drop the empty entries
```

```
drop if mmidx==.
```

```
* view the value labels of sibling's death and pregnancy
```

```
codebook mm9
```

```
*clean mm9
```

```
mvdecode mm9,mv(98=. \ 99=.a)
```

```
*recode variable mm9
```

```
recode mm9 (1=0 "Non Maternal") (2/6=1 "Maternal"),gen(maternal)
```

```
* weighting
```

```
gen weight=v005/1000000
```

```
svyset v021 [pweight=weight], strata(v022)
```

```
*tabulate maternal and non-maternal deaths
```

```
svy: tab maternal
```

Subject: Re: Maternal Mortality Ratio

Posted by [Trevor-DHS](#) on Sat, 13 Dec 2014 01:31:47 GMT

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If you are trying to calculate the maternal mortality ratio then the code is a lot more complicated

than this. What you have done so far provides you with an estimate of the proportion of deaths to women that are due to maternal causes - roughly 33%, which matches reasonably with the 31.7% shown in the report. Note though that the table in the report is for maternal mortality in the 7 years preceding the survey and for women who were 15-49 at the time of their exposure to the risk of maternal mortality.

I am attaching a spreadsheet that shows some of the calculations needed (the numbers in the spreadsheet are fictitious and are just an example of calculations):

In the first column you need to calculate the number of maternal deaths (or pregnancy related deaths) in the seven years preceding the survey to women aged 15-49 at the time of the death. In the second column you need to calculate the number of years of exposure in the seven years preceding the survey to women aged 15-49 at the time of the exposure. Note that any women may contribute to 3 different cells over the past 7 years. For example a women who is 40 years and 6 months at the time of interview contributes 6 months in the 40-44 category, 5 years in the 35-39 category and one and a half years in the 30-34 age category. We actually do the calculation in months (see the CMC date of birth and date of death variables) and then divide by 12 to get years.

In the third column we calculate the maternal mortality (or pregnancy related mortality) rate for each age group by dividing the first and second columns.

In the fourth column we have the distribution of the female population age 15-49 and use this to a weighted death rate in the fifth column, which is summed to produce an age adjusted total maternal mortality rate (cell F9).

This total maternal mortality rate is then divided by an age standardized general fertility rate for the same seven year time period to produce the maternal mortality ratio.

File Attachments

1) [PRMR.xls](#), downloaded 947 times

Subject: Re: Maternal Mortality Ratio

Posted by [femifemi](#) on Sat, 13 Dec 2014 20:19:09 GMT

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Thank you very much sir. I have found this very useful.

Subject: Re: Maternal Mortality Ratio

Posted by [smile](#) on Mon, 12 Jan 2015 16:47:14 GMT

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Hi,

I would like to know about maternal mortality ratio from Mozambique of DHS (2003 and 2011).I'm trying to write " Impact of Global health initiative program on maternal mortality" in Mozambique.Which variable(mm2_(sibling survival status) and mm9_(sibling death & Pregnancy)better for maternal mortality? Can I combine (mm2_ or mm9_ 01 to 15) for maternal mortality ratio? Can I use directly maternal death from that variable? Do I need to combine

(m15_1 to 5)Place of delivery for maternal health service?Pls give to me stat command for it. And then, m2a_1 to 5 and m3a_1 to 5 are assistance: doctor that has different observation.Which variable is better for maternal health service? I found 2003 DHS data has included 118 observation are 2004 year. Is it typing error or really collection data? I didn't find Mozambique report with English language for 2011 report.And then, Can I use idx97_01 to 20(maternal mortality index) for maternal mortality ratio? How can I interpret those each of 1 maternal mortality index, freq 12003,Percent 100, and Cum 100 and 2 maternal mortality index, freq 11345,Percent 100,Cum 100 like that 20 until for analysis.I really interested maternal mortality ratio for my research paper. I have found most of previous papers are focused relationship between policy and maternal health service.I want to write impact of program on maternal health service to reduce maternal mortality ratio for my thesis with using DID model.That's why please suggestion to me for studying.If you know,pls give to which paper can support to my research question for finding?

Subject: Re: Maternal Mortality Ratio

Posted by [smile](#) on Tue, 13 Jan 2015 04:23:29 GMT

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I'm trying to write my research question for master thesis.I have complicated for my MDHS maternal mortality data for using DID model and probit/ heckman model.I have to find sample selection and bias. I have to check my data for using econometric model.The result of data is very important for research paper.And then, Mozambique's lasted report are not English language.And then, I have download a lot of DHS data codes for using.I didn't understand maternal mortality ratio.I found that idx97 variables are maternal mortality index is easily using for maternal mortality ratio paper.But I don't understand how can I interpret idx97_01 table for maternal mortality.For example, when maternal mortality index 1, freq(total number of women)12003 and percent 100 for interpretation.If I will combine all of idx97_01 to idx97_20, those observation are bigger that selected total number of women for survey.My outcome variable or dependent variable (y) is maternal mortality and main variable and control variables or independent variables (x) is maternal health services those are binary variable for my model.I will analyze GHI program that has lunched 2010.That's why I will compare before (2003) and after (2011) for maternal mortality ratio of Mozambique.Therefore, I would like to know maternal mortality data variables (mm2_ , mm9_ , and id97x_) among them which variable is better for maternal mortality.I have to analyze those variables with using econometric model.I'm complicated maternal data for individual data or household data.And then, Does sibling survival status data include men information for mortality?

Subject: Re: Maternal Mortality Ratio

Posted by [Liz-DHS](#) on Thu, 15 Jan 2015 17:10:17 GMT

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Dear User,

Below is a response from one of our experts, Dr. Tom Pullum:

Quote:There is only a Portuguese version of the Mozambique 2011 DHS. If (like me) you cannot read Portuguese, you can probably still understand the tables by comparing with another country's report that is in English. The tables for each topic are pretty much the same in all surveys--except

for the numbers, of course!

I would advise you not to use ANY of the mm variables for an individual-level analysis. The only appropriate use of these variables is to estimate adult and maternal mortality for the entire country.

The sisters of the respondent may be quite different from the respondent. They may live (or have lived) in a different region of the country, with a different type of place of residence (urban/rural), different education, wealth quintile, etc. Even more relevant, you certainly cannot assume that the sisters had the same access to health services or use of health services as the respondent.

Remember also that the MMR in DHS reports refers to a long interval of time, typically seven years, so the median date of sisters' deaths will precede the median date of the respondent's most recent birth, often by several years.

Many people would like to use DHS data to like link maternal mortality to maternal health services.

It is possible to do this with countries as units, but not, unfortunately, with individuals or even sub-national areas as units. Even with countries as units, it is difficult to establish a relationship.

I suggest that you look at DHS Analytical Study #46, available on the website. In that report we looked at the impact of maternal health care and circumstances of delivery on neonatal mortality.

This relationship is much easier to analyze and might be an alternative topic for your research.

Subject: Re: Maternal Mortality Ratio

Posted by [smile](#) on Sat, 17 Jan 2015 11:12:05 GMT

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Dear Sir,

Thank you so much for your replied message.I will search previous relevant paper for my research paper.

Subject: Re: Maternal Mortality Ratio

Posted by [ams5g12](#) on Thu, 22 Jan 2015 16:58:51 GMT

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I am trying to calculate the Maternal mortality rate for Rwanda and was wondering if anyone is able to share a code for this that I could use in Stata, or is able to advise how best to go about this please?

Subject: Re: Maternal Mortality Ratio

Posted by [Liz-DHS](#) on Thu, 22 Jan 2015 18:30:14 GMT

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Dear User,

Please take a look at this previous post from one of our experts. <http://userforum.dhsprogram.com/index.php?t=msg&th=1721&got>

[o=3457&S=4b9271c5addcb391450d5c720b008a9e#msg_3457](http://userforum.dhsprogram.com/index.php?t=msg&th=1721&got). This should help you in your

analysis. If this does not answer your questions, please post again.
Thank you!

Subject: Re: Maternal Mortality Ratio In Malawi
Posted by [Christopher](#) on Sat, 18 Feb 2017 09:05:35 GMT
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Dear DHS team,

I'm working on variables of DHS 2010 to calculate maternal death which could be used to further calculate MMR. Please, may you advise on how i can combine the variables MM to calculate the MMR or which single variable? (data set in use is:
https://dhsprogram.com/customcf/legacy/data/download_dataset.cfm?Filename=MWIR61SV.ZIP&Tp=1&Ctry_Code=MW&surv_id=333).

Thank you.

Christopher

Subject: Re: Maternal Mortality Ratio In Malawi
Posted by [femifemi](#) on Sat, 18 Feb 2017 18:08:43 GMT
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I will prepare the Stata do file to calculate the maternal death for you. Contact me

gbemisola@gmail.com
