
Subject: DPT coverage in DHS Zambia 2007 using Births Recode

Posted by [ychin3y](#) on Wed, 17 May 2017 11:58:01 GMT

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I am looking at DPT coverage using Births Recode of DHS Zambia 2007.

The final report says very high coverage. For example, 92.3% of children aged 12 and 23 months received the first dose of DPT (Table 10.2).

But when I tabulate variable "h3" (DPT1), about 73.93% of children aged 12 and 23 months did not receive DPT1.

I attached the table and my commands. I did not use weights.

Are there errors in the data or am I doing something wrong?

```
use znbr51fl.dta,clear
gen hypage=(v008-b3)/12
keep if hypage>=1 & hypage<2
tab h3
```

received dpt 1	Freq.	Percent	Cum.
-----+-----			
no	936	73.93	73.93
vacc. date on card	106	8.37	82.31
reported by mother	217	17.14	99.45
vacc. marked on card	6	0.47	99.92
9	1	0.08	100.00
-----+-----			
Total	1,266	100.00	

Subject: Re: DPT coverage in DHS Zambia 2007 using Births Recode

Posted by [Mlue](#) on Wed, 17 May 2017 14:07:58 GMT

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Hello ychin3y,

Please see example attached below, using Ethiopia DHS of 2011.

I used ETBR61FL.DTA dataset

**** I used Stata for the data analysis

** ||| IMMUNIZATION OF CHILDREN AGED 12-23 MONTHS (ETHIOPIA)

** 2011 DHS **

clear all
set mem 1g
set more off

** WEIGHT VARIABLE

gen weight = v005/1000000

** SURVEY SET

gen psu = v021
gen strata = v022
svyset psu [pw = weight], strata(strata)

// RENAME

rename v013 age
rename v106 education
rename v190 wealth
rename v025 residence
rename v024 region

////////////////////////////////////

** Child_age = 12-23 months old
gen months = v008 - b3
keep if b5 == 1 & months >= 12 & months <=23

gen child_age = months
replace child_age = 1 if b5 == 1 & months >= 12 & months <=13
replace child_age = 2 if b5 == 1 & months >= 14 & months <=15
replace child_age = 3 if b5 == 1 & months >= 16 & months <=17
replace child_age = 4 if b5 == 1 & months >= 18 & months <=19
replace child_age = 5 if b5 == 1 & months >= 20 & months <=21
replace child_age = 6 if b5 == 1 & months >= 22 & months <=23
label define child_age 1"12-13" 2"14-15" 3"16-17" 4"18-19" 5"20-21" 6"22-23"
label var child_age "Child age in months"
label val child_age child_age

** Recode of vaccination variables

```

gen BCG = inrange(h2,1,3)

gen Polio0 = inrange(h0,1,3)

gen DPT = inrange(h3,1,3)+inrange(h5,1,3)+inrange(h7,1,3)

gen Polio = inrange(h4,1,3)+inrange(h6,1,3)+inrange(h8,1,3)

**gen pv = inrange(pv1,1,3)+inrange(pv2,1,3)+inrange(pv3,1,3) /* Not available in Sierra Leone
2013 data */

gen ms = inrange(h9,1,3)

forvalues x = 1/3 {
gen Polio`x' = (Polio>=`x')
gen DPT`x' = (DPT>=`x')

}
**

**

=====
**
** DEPENDENT VARIABLE
gen vaccination = (BCG==1 & Polio==3 & DPT==3 & ms==1)
label var vaccination "Received all vaccinations"
label define vaccination 0"No" 1"Yes"
label values vaccination vaccination

** All basic vaccinations
tab vaccination [iw = weight] /* Total weighted sample = 2 169 */
tab vaccination /* Total unweighted sample = 2 090 */
svy: tab vaccination, count percent format(%4.0f) col

**

=====
**

** DROP IF NOT WITHIN SAMPLE
qui regr DPT if v208 >0 & v208 !=. [pw=weight]
drop if e(sample)!=1

*****

** BIRTH ORDER
gen birth_order1 = bord
replace birth_order1 = bord-1 if b0 == 2

```

replace birth_order1 = bord-2 if b0 == 3

recode birth_order1 (1=1 "1") (2/3=2 "2-3") (4/5=3 "4-5") ///
(6/20=4 "6+"), gen(birth_order)
label var birth_order "Birth order"
label values birth_order birth_order

**
=====

***** ANALYSIS *****

* Table 10.2

label define DPT1 0"No" 1"Yes"
label define DPT2 0"No" 1"Yes"
label define DPT3 0"No" 1"Yes"

label val DPT1 DPT1
label val DPT2 DPT2
label val DPT3 DPT3

svy: tab DPT1, percent format(%4.1f) col
svy: tab DPT2, percent format(%4.1f) col
svy: tab DPT3, percent format(%4.1f) col

**
=====

**** Table 10.3 Vaccinations by background characteristics - for DPT1

** FOR DPT1

** Sex

svy: tab b4 DPT1, count format(%4.0f)
svy: tab b4 DPT1, percent format(%4.1f) row

** Birth order

svy: tab birth_order DPT1, count format(%4.0f)
svy: tab birth_order DPT1, percent format(%4.1f) row

** Wealth quintile

svy: tab wealth DPT1, count format(%4.0f)
svy: tab wealth DPT1, percent format(%4.1f) row

//////////

**** Table 10.3 Vaccinations by background characteristics - for DPT2

** FOR DPT2

** Sex

svy: tab b4 DPT2, percent format(%4.1f) row

** Birth order

svy: tab birth_order DPT2, percent format(%4.1f) row

** Wealth quintile

svy: tab wealth DPT2, percent format(%4.1f) row

* ===== *

**** Table 10.3 Vaccinations by background characteristics - for DPT3

** FOR DPT3

** Sex

svy: tab b4 DPT3, percent format(%4.1f) row

** Birth order

svy: tab birth_order DPT3, percent format(%4.1f) row

** Wealth quintile

svy: tab wealth DPT3, percent format(%4.1f) row

**

=====

*** FOR ALL VACCINATIONS

svy: tab child_age vaccination, count format(%4.0f)

svy: tab b4 vaccination, count format(%4.0f)

svy: tab birth_order vaccination, count format(%4.0f)

svy: tab residence vaccination, count format(%4.0f)

svy: tab region vaccination, count format(%4.0f)

svy: tab wealth vaccination, count format(%4.0f)

** ===== **

*** Percentages / Coverage = All basic vaccinations

svy: tab child_age vaccination, percent format(%4.1f) row

svy: tab b4 vaccination, percent format(%4.1f) row

svy: tab birth_order vaccination, percent format(%4.1f) row miss

svy: tab residence vaccination, percent format(%4.1f) row

svy: tab region vaccination, percent format(%4.1f) row

svy: tab wealth vaccination, percent format(%4.1f) row

**

=====

**

exit

Subject: Re: DPT coverage in DHS Zambia 2007 using Births Recode

Posted by [ychin3y](#) on Wed, 17 May 2017 15:12:57 GMT

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Mlue

Thanks very much for sharing your code.

I ran your code, but it still shows that only 26.1% of children aged 12 and 23 received the first dose of DPT and 73.1% did not receive it. (I attached the result)

My concern is that this is a totally different result from the final report. The report says 92.1% received it.

I also tried it with individual recode (zmir51fl.dta) using a slightly different coding, but the result is the same.

I wonder whether there are errors in the data.

```
. svy: tab DPT1, percent format(%4.1f) col  
(running tabulate on estimation sample)
```

```
Number of strata = 18          Number of obs = 1,266  
Number of PSUs  = 302         Population size = 1,272,2038
```

Design df = 284

```
-----  
DPT1 | column  
-----+-----  
No | 73.9  
Yes | 26.1  
 |  
Total | 100.0  
-----
```

Key: column = column percentage

Subject: Re: DPT coverage in DHS Zambia 2007 using Births Recode
Posted by [Mlue](#) on Thu, 25 May 2017 10:01:14 GMT
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Hello ychin3y,

I sorted out the the code ... Now you should be getting the same results as in the report

See code below for Zambia DHS 2007 - ZMBR51FL

```
** ||| IMMUNIZATION OF CHILDREN AGED 12-23 MONTHS (ZAMBIA)
```

```
** 2007 DHS **
```

```
*****
```

```
** WEIGHT VARIABLE
```

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

```
*****
```

```
** SURVEY SET
```

```
gen psu = v021
```

```
gen strata = v023
```

```
svyset psu [pw = weight], strata(strata)
```

```
*****
```

```
// RENAME
```

```
rename v013 age
```

```
rename v106 education
rename v190 wealth
rename v025 residence
rename v024 region
```

```
////////////////////////////////////
```

```
** Child_age = 12-23 months old
gen months = v008 - b3
keep if b5 == 1 & months >= 12 & months <=23
```

```
gen child_age = months
replace child_age = 1 if b5 == 1 & months >= 12 & months <=13
replace child_age = 2 if b5 == 1 & months >= 14 & months <=15
replace child_age = 3 if b5 == 1 & months >= 16 & months <=17
replace child_age = 4 if b5 == 1 & months >= 18 & months <=19
replace child_age = 5 if b5 == 1 & months >= 20 & months <=21
replace child_age = 6 if b5 == 1 & months >= 22 & months <=23
label define child_age 1"12-13" 2"14-15" 3"16-17" 4"18-19" 5"20-21" 6"22-23"
label var child_age "Child age in months"
label val child_age child_age
```

```
** Recode of vaccination variables
```

```
gen BCG = inrange(h2,1,3)
```

```
gen Polio0 = inrange(h0,1,3)
```

```
gen DPT = (inrange(h3,1,3) | inrange(sdhh1,1,3))+inrange(h5,1,3) |
inrange(sdhh2,1,3))+inrange(h7,1,3) | inrange(sdhh3,1,3))
```

```
gen Polio = inrange(h4,1,3)+inrange(h6,1,3)+inrange(h8,1,3)
```

```
**gen pv = inrange(pv1,1,3)+inrange(pv2,1,3)+inrange(pv3,1,3) /* Not available in Sierra Leone
2013 data */
```

```
gen ms = inrange(h9,1,3)
```

```
forvalues x = 1/3 {
gen Polio`x' = (Polio>= `x')
gen DPT`x' = (DPT>= `x')
/*gen Penta`c' = (pv>= `x')*/
}
**
```

```
**
```

```
=====
```



```

**
** DEPENDENT VARIABLE
gen vaccination = (BCG==1 & Polio==3 & DPT==3 & ms==1)
label var vaccination "Received all vaccinations"
label define vaccination 0"No" 1"Yes"
label values vaccination vaccination

** All basic vaccinations
tab vaccination [iw = weight]
tab vaccination
svy: tab vaccination, count percent format(%4.1f) col

**
=====
**

** DROP IF NOT WITHIN SAMPLE
qui regr vaccination if v208 >0 & v208 !=. [pw=weight]
drop if e(sample)!=1

*****

** BIRTH ORDER
gen birth_order1 = bord
replace birth_order1 = bord-1 if b0 == 2
replace birth_order1 = bord-2 if b0 == 3

recode birth_order1 (1=1 "1") (2/3=2 "2-3") (4/5=3 "4-5") ///
(6/20=4 "6+"), gen(birth_order)
label var birth_order "Birth order"
label values birth_order birth_order

**
=====
**

***** ANALYSIS *****

* Table 10.2
label define DPT1 0"No" 1"Yes"
label define DPT2 0"No" 1"Yes"
label define DPT3 0"No" 1"Yes"

label val DPT1 DPT1
label val DPT2 DPT2
label val DPT3 DPT3

svy: tab DPT1, percent format(%4.1f) col

```

```
svy: tab DPT2, percent format(%4.1f) col
svy: tab DPT3, percent format(%4.1f) col
```

* Selected characteristics on Table 10.3

* DPT1

```
svy: tab child_age DPT1, percent format(%4.1f) row
svy: tab b4 DPT1, percent format(%4.1f) row
```

* DPT2

```
svy: tab child_age DPT2, percent format(%4.1f) row
svy: tab b4 DPT2, percent format(%4.1f) row
```

* DPT3

```
svy: tab child_age DPT3, percent format(%4.1f) row
svy: tab b4 DPT3, percent format(%4.1f) row
```

* All vaccinations

```
svy: tab child_age vaccination, percent format(%4.1f) row
svy: tab b4 vaccination, percent format(%4.1f) row
svy: tab education vaccination, percent format(%4.1f) row
svy: tab wealth vaccination, percent format(%4.1f) row
```

exit

File Attachments

1) [Zambia DPT vaccination2.do](#), downloaded 275 times

Subject: Re: DPT coverage in DHS Zambia 2007 using Births Recode

Posted by [ychin3y](#) on Thu, 25 May 2017 23:37:16 GMT

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Mlue:

So, the key is sdhh1~3 for DPT.

That solves the mystery.

Thanks so much!

I appreciate it.

Subject: Re: DPT coverage in DHS Zambia 2007 using Births Recode

Posted by [Mlue](#) on Fri, 26 May 2017 06:06:54 GMT

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Glad I could help
