Subject: Calculation of in utero, infant mortality, under_5 mortality, vaccination coverage & Birth Cohort
Posted by Atazonomics on Fri, 17 May 2024 06:31:16 GMT
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I want to calculate infant mortality defined as a child who ides during in utero + first 12 month of birth, infant mortality1 defined as a child dies within 12 months of her birth , under_5 mortality (dies before 60th month or within 5 years of birth), Month-Year Birth Cohort and Vaccination coverage from using the BR file of Ivoire coast, Uganda and Nigeria (i am using various rounds but not later earlier than 4). First of all i would to seek clarity on b6 vs. b7 and v008 vs. v008a.

I generate my variables in stata as describe below: Kindly advise me if this is the way to go.

```
gen age_months = v008 - b3
gen under_five = age_months <= 60 & age_months >= 0

   gen infant_mortality if b7 <= 12 & under_five <= 12 [iweight=v005/1000000]
   gen under5_mortality if b7 <= 60 & under_five <= 60 [iweight=v005/1000000]

*age (in utero + first 12 months of birth )
age_inutero = 9
age_utero_1st_12month = age_months + age_inutero

 *Cohort (month-year)
egen cohort = group(b1 b2)

*Renaming vaccines
rename h2 bcg
rename h3 dpt1
rename h4 polio1
rename h5 dpt2
rename h6 polio2
rename h7 dpt3
rename h8 polio3
rename h9 measles1

* Define vaccine
local vaccines "bcg dpt1 polio1 dpt2 polio2 dpt3 polio3 measles1"

* Recode vaccine variables to binary: 1 = received and 0 = not received
foreach v in `vaccines' {
   * Recode 0 as 0, 1-3 as 1, ignore 8 (don't know)
   recode `v' (0 = 0 "1/2/3" = 1) (8 = .), generate(received_`v')
}
```

```
* Aggregate/sum vaccinations received
egen total_vaccinated = rowtotal(received_bcg received_dpt1 received_polio1 received_dpt2
received_polio2 received_dpt3 received_polio3 received_measles1)

* Indicators for various levels of vaccination coverage
* None of the basic vaccinations received
gen none_received = total_vaccinated == 0

* All basic vaccinations received
gen all_received = total_vaccinated == 8

* At least 50% of basic vaccinations received (at least 4 out of 8)
gen at_least_half_received = total_vaccinated >= 4

* At most 50% of basic vaccinations received (4 or fewer out of 8)
gen at_most_half_received = total_vaccinated <= 4
```

Thank you very much .

Luke

Subject: Re: Calculation of in utero, infant mortality, under_5 mortality, vaccination coverage & Birth Cohort
Posted by Janet-DHS on Tue, 11 Jun 2024 19:51:05 GMT
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Following is a response from DHS staff member, Tom Pullum:

There are standard definitions of infant mortality, stillbirths, and perinatal mortality. The denominator of the infant mortality rate is live births. Stillbirths are pregnancy terminations other than live births after 28+ weeks of pregnancy.

Stata programs to calculate the standard mortality rates are given on our GitHub site for generic Chapter 8 of the final report (https://github.com/DHSProgram/DHS-Indicators-Stata).The calculation is much more complex than you describe because it is based on a synthetic cohort approach and subdivides the first year (completed months 0-11) into months 0, 1-2, 3-5, and 6-11. You can definitely apply other definitions but you will not match DHS exactly.

Your approach to vaccinations is basically correct, particularly for "none" and "all basic". You can check against the GitHub recodes (seehttps://github.com/DHSProgram/DHS-Indicators-Stata/blob/master/Chap1 0_CH/CH_VAC.do), You are recoding 8 to NA (a dot) and it should be recoded to 0.

As you probably realize, you cannot relate child survival to vaccinations. The information about vaccinations is only obtained for living children.

Subject: Re: Calculation of in utero, infant mortality, under_5 mortality, vaccination coverage & Birth Cohort
Posted by Atazonomics on Tue, 11 Jun 2024 20:45:19 GMT
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Thank you very much.

Luke