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Subject: Re: Mortality rates and binary variable

Posted by [Bridgette-DHS](#) on Thu, 20 Aug 2020 17:56:12 GMT

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Following is a response from DHS Research & Data Analysis Director, Tom Pullum:

U5M and the other child mortality rates are calculated in a very complex way. The code is available on our GitHub site (see the new landing page for the DHS forum). What you are doing would only be a rough estimate, perhaps for individual-level analysis.

You are doing a linear probability model. You should use logit regression, especially for probabilities outside the range .3 to .7. If you just replace "regress" with "logit" you will get an intercept,  $b_0$ , which is the log odds that your outcome is 1. U5MR would be analogous to  $1000 * [\exp(b_0) / (1 + \exp(b_0))]$ . However, this estimate is affected by censoring. Children born in the past 5 years have not had full exposure to the risk of dying before age 5. There are various ways to deal with this. The coarsest approach would be to reduce the sample to children born more than 5 years ago (i.e. children with  $v008-b3 > 60$ ), even if their death occurred in the past 5 years.

You could look at publications on the topic and at methods such as hazard models. You only need to go down this path if you want to do multivariate analysis of under-five mortality.

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