
Subject: Re: District-Level WaSH Indicators
Posted by [Janet-DHS](#) on Wed, 06 Mar 2024 21:18:02 GMT
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Following is a response from DHS staff member, Tom Pullum:

The setup for a bootstrap that matches the sample design would be complicated. It's easier to get the estimates with a model that includes svyset--which you are using. I will paste below the lines to do this. Just for an illustration, I use the Mozambique 2011 data, with subpopulation hv024=1 (Niassa). The outcome y is 1 if the source of drinking water is an unprotected well (hv201=32), which is the largest category. The model has no covariates. The lines show how to extract the proportion of households with y=1 in Niassa, as well as the lower and upper bounds of a 95% CI for that proportion. I show how to do this with logit or logistic models. You also get the standard error on the logit or odds scale but I would not recommend the se on the scale of a proportion (also not on the odds scale). CI yes, se no. Hope this helps.

* Open HR file, cases are households

use "C:\Users\26216\ICF\Analysis - Shared Resources\Data\DHSdata\MZHR62FL.DTA" , clear

* Specify outcome and subpopulation

```
gen y=0
```

```
replace y=1 if hv201==32
```

```
gen Niassa=0
```

```
replace Niassa=1 if hv024==1
```

* Prepare svyset

```
svyset hv001 [pweight=hv005], strata(hv023) singleunit(centered)
```

* Logit model

```
svy, subpop(Niassa): logit y
```

```
matrix T=r(table)
```

matrix list T

- * Extract P, L, and U as saved results
- * P, L, and U are the point estimate and the lower and upper bounds
- * of a 95% confidence interval for the proportion of households in
- * Niassa whose main source of drinking water is an unprotected well.

scalar b=T[1,1]

scalar P=exp(b)/(1+exp(b))

scalar b=T[5,1]

scalar L=exp(b)/(1+exp(b))

scalar b=T[6,1]

scalar U=exp(b)/(1+exp(b))

scalar list P L U

- * Equivalent using logistic

svy, subpop(Niassa): logistic y

matrix T=r(table)

matrix list T

scalar odds=T[1,1]

scalar P=odds/(1+odds)

scalar odds=T[5,1]

scalar L=odds/(1+odds)

scalar odds=T[6,1]

scalar U=odds/(1+odds)

scalar list P L U
