

Assessment test

The purpose of this test is to assess your competence with data analysis using R, your familiarity with complex surveys and your ability to deal with ambiguity. Please read the following instructions carefully before proceeding to the exercise.

As part of this assessment, you will be given access to 2018 Nigerian Demographic and Health Survey located in this [folder](#). The survey data is in the file named NGPR7AFL.DTA. The data dictionary can be found in the file NGPR7AFL.MAP. A folder called shapefile contains a shapefile of the boundaries of Nigeria's 36 states. Review these two files and the shapefile folder before proceeding to the next questions.

1. How many children under the age of five were tested for malaria with a blood smear test?
2. How many children under the age of five were tested for malaria with a rapid test?
3. How many children tested positive for malaria with a microscopy?
4. How many children tested positive for malaria with a rapid test?
5. Make a plot showing the number of U5 children that tested positive for malaria by microscopy and the number of U5 children that tested negative for malaria by microscopy in urban and rural areas
6. Make another plot showing the proportion of U5 children that tested positive for malaria by microscopy and the proportion of U5 children that tested negative for malaria by microscopy in urban and rural areas
7. Make a map of the number of children that tested positive for malaria by state