



## RESEARCH ANALYST ASSESSMENT

Please return your responses to this assessment and code to [m4madmin@m4mgmt.org](mailto:m4madmin@m4mgmt.org) by 12am PST/ 3am EST on Wednesday, March 4th. We anticipate that this exercise should take about two hours to complete. We appreciate your time as we work to understand your skills and strengths better. The assessment is representative of some of the work of a research analyst at M4M. You will find included with these assessment questions:

1. Three datasets (in Stata .dta format)
2. A metadata explanatory document
3. An Excel workbook containing variable dictionaries for all three datasets.

Provide responses to the following questions in the form of a **four-slide synthesis** (e.g., "Slide 1: overview, Slide 2: descriptive and statistical analyses, Slide 3: graphic analysis, Slide 4: open questions") that would be ready to share in an internal team meeting along with analysis code.

### Background

You are working on a project with another colleague. The objective is to be able to help the client take a data-informed approach to determining how to prioritize their upcoming contraceptive access intervention. The client, a small family foundation, has a personal interest in funding an intervention in one of the following three countries: Ghana, Senegal, and Nepal.

The datasets contain select variables from the most recent DHS surveys (individual recode data). Variables have been renamed for ease.

### Questions

- 1) Using this dataset, you are asked to produce one overview slide containing background from across the three countries from the information drawn from the data.
- 2) Your colleague would like you to be sure to include the following in the deck:
  - a. The proportion of women in the poorest wealth quintile using any type of family planning in each of the three countries.
  - b. The proportions of women using a modern method of contraception in the poorest and wealthiest quintiles in each country. Using an appropriate statistical test (e.g., chi-square test), determine whether the difference in modern contraceptive use between these two wealth groups is statistically significant at the  $p < 0.05$  level in each country. (Modern methods do not include folkloric or traditional methods.)



- 3) It was suggested that a graph such as this one (stratifying modern contraceptive users by wealth and source) would be useful for the presentation to the client. The family's wealth originates from the pharmaceutical industry, and the client is interested in places that show a potential for the private sector to improve access to contraception. Prepare a slide that can be used for this purpose
- 4) Data can only take us so far in informing a decision or providing information for this recommendation. What are 2-3 questions that you think still need to be answered as the team prepares its recommendations?

Thank you for completing this assessment. Please email your four-slide synthesis and code to [m4admin@m4mgmt.org](mailto:m4admin@m4mgmt.org) by 12am PST/ 3am EST on Wednesday, March 4th. Please be prepared to present to the team if requested.