

COVID Survey Weights Construction Memo

The Performance Monitoring for Action (PMA) project uses innovative mobile technology to support low-cost, rapid-turnaround surveys that monitor key health and development indicators. PMA collects nationally or sub-nationally representative data on knowledge, practice, and coverage of family planning services using a multi-stage stratified cluster design to draw a probability sample of households and females of childbearing age.

In 2019, PMA started the first year a new phase of longitudinal panel data and completed the baseline round of data collection in Burkina Faso, Kenya, the Democratic Republic of Congo (DRC), and Nigeria.

The COVID-19 phone survey was conducted in Kinshasa (DRC), Nigeria (Lagos and Kano), Kenya, and Burkina Faso between June and July 2020 among females aged 15-49 at the time of the COVID-19 Survey who were interviewed at the baseline (Phase 1) survey between November and December 2019, consented to follow-up, and owned or had access to a phone.

COVID-19 phone survey weight

COVID-19 survey weights were generated for women aged 15-49 at the time of the COVID-19 survey, who completed the Phase 1 household and female surveys, consented to follow-up, provided a valid phone number, and completed the COVID-19 phone survey, using the following procedure:

- Non-normalized Phase 1 female weights were initially adjusted for selectivity due to phone ownership or access, using an inverse probability weighting (IPW) approach. Briefly, the log odds of owning a phone or having access to a phone was modeled as a linear combination of age, education, marital status, wealth and residence at baseline. The inverse predicted probability of owning/having access to a phone was then used as a weight to adjust initial Phase 1 weights.
- Female weights were further adjusted for loss to follow-up weight, that is, the inverse of predicted probability of having a completed COVID-19 phone survey, using similar IPW

approach in all geographies except in Kano, where loss to follow-up weight was calculated as female non-response at the cluster level.

Phase 1 household weights were used in women identified as usual residents of the household who did not sleep in the household the night before Phase 1 survey and who completed the COVID-19 phone survey.

COVID-19 survey weights were then normalized at the national level to create the final weights. In the case of countries where the survey was conducted in a selected administrative area (e.g., Kinshasa, Democratic Republic of Congo), COVID-19 survey weights were normalized within the administrative area. Final normalized female weight at baseline was used when COVID-19 survey was missing.