Supplemental Material

Monitoring Drinking Water Quality in Nationally Representative Household Surveys in Low- and Middle-Income Countries: Cross-Sectional Analysis of 27 Multiple Indicator Cluster Surveys 2014–2020

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Water testing equipment and consumables

Figure S1. Equipment and consumables used for water quality testing Photo credit: Yadigar Coskun.

Differences in *E. coli* risk level between point of collection and point of use

Figure S2. Change in *E. coli* risk level for households. Differences refer to changes in risk classification based on the number of colony forming units (CFU) per 100 mL as follows: <1 "Low risk", 1-10 "Moderate risk", 11-100 "High risk" and >100 "Very high risk". CAR – Central African Republic, LaoPDR – Lao People's Democratic Republic, STP – Sao Tome and Principe.

Differences in *E. coli* risk level for households with *E. coli* detected at point of collection and reporting appropriate treatment practices

Figure S3. Difference in *E. coli* risk level between point of collection and point of use for households with *E. coli* detected at point of collection and reporting appropriate treatment practices. Differences refer to changes in risk classification based on the number of colony forming units (CFU) per 100 mL as follows: <1 "Low risk", 1-10 "Moderate risk", 11-100 "High risk" and >100 "Very high risk". Appropriate water treatment practices include boiling, filtration, adding chlorine and solar disinfection. CAR – Central African Republic, LaoPDR – Lao People's Democratic Republic, STP – Sao Tome and Principe. Excludes STP and Palestine where <25 samples available for households with contamination at the point of collection and reporting appropriate household water treatment practices.

E. coli risk level at point of use for households with *E. coli* detected at point of collection and reporting appropriate treatment practices

Figure S4. *E. coli* risk level at point of use for households with contaminated drinking water sources reporting appropriate treatment practices. Appropriate water treatment practices include boiling, filtration, adding chlorine and solar disinfection. CAR – Central African Republic, LaoPDR – Lao People's Democratic Republic, STP – Sao Tome and Principe. Excludes STP and Palestine where <25 samples available for households with contamination at the point of collection and reporting appropriate household water treatment practices.

Inconsistency checks

Table S1. Proportion of *E. coli* samples flagged as potentially inconsistent.

Blanks tests results

Table S2. Proportion of blank tests with detectable *E. coli.*

Main source versus source of sample

Table S3. Concordance between main water source and source of the sample of drinking water provided by survey respondents.

Table S4. Mean monthly precipitation above yearly mean precipitation.

Main reasons point of collection sample not collected

Table S5. Main reasons point of collection sample not collected.

Main reasons drinking water unavailable

Table S6. Main reasons drinking water unavailable.

Additional File- Excel Document