Institute for International Programs – Johns Hopkins University

**Data quality assessment indicators**

The indicators below are meant to be used as data quality monitoring tools during data collection when using the RADAR Coverage Survey Questionnaire. A close monitoring of these indicators can help identify concerns related to data quality during data collection while there is still time to rectify them. We would recommend monitoring these indicators through the use of an interactive dashboard.

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| **Core indicators** | **Formula** | **Level of analysis** | **Interpretation** |
| % Household response rate | **NA\_household\_count\_completed / NA\_household\_count==**  sum(if(number(${NA\_household\_count\_completed})=1 and (selected(${HH9},"1"),1,0))  /  sum(if(number(${NA\_household\_end})=1 or selected(${HH9},'2') or selected(${HH9},'3') or selected(${HH9},'4') or selected(${HH9},'5') or selected(${HH9},'6') or selected(${HH9},'7') or selected(${HH9},'96'),1,0)) | Interviewer (HH6a)  Team (HH7)  Cluster (HH1 HH2 HH3)  Overall | Compare to recent DHS/MICS to ensure interviewers are correctly identifying and consenting respondents |
| % Women response rate | **NA\_1WM9\_count / NA\_woman\_count\_completed==**  sum(if(number(${NA\_woman\_end})=1 and (selected(${WM9},"1"),1,0))  /  NA\_woman\_count\_completed | Interviewer (HH6a)  Team (HH7)  Cluster (HH1 HH2 HH3)  Overall | Compare to recent DHS/MICS to ensure interviewers are correctly identifying and consenting respondents |
| % Child response rate | **NA\_1UF12\_count / NA\_child\_count\_completed ==**  sum(if(number(${NA\_child\_end})=1 and (selected(${UF12},"1"),1,0))  /  NA\_child\_count\_completed | Interviewer (HH6a)  Team (HH7)  Cluster (HH1 HH2 HH3)  Overall | Compare to recent DHS/MICS to ensure interviewers are correctly identifying and consenting respondents |
| Ratio: Eligible children 5:4 years of age | **NA\_f5\_count / NA\_f4\_count==**  sum(if(${HL6} > 4 and ${HL6} < 6 and (selected(${HL6a}, '1') or selected (${HL6b}, '1')), 1, 0))  /  sum(if(${HL6} > 3 and ${HL6} < 5 and (selected(${HL6a}, '1') or selected (${HL6b}, '1')), 1, 0)) | Interviewer (HH6a)  Team (HH7)  Cluster (HH1 HH2 HH3)  Overall | Check for children heaped at age 5; ratio close to 1 is ideal. Ratio greater than 1 suggests heaping on 5 or intentional aging of children by interviewers. |
| Ratio: Eligible women 14:15 years of age | **NA\_f14\_count / NA\_f15\_count==**  sum(if(selected(${HL4},"2") and ${HL6} > 13 and ${HL6} < 15 and (selected(${HL6a}, '1') or selected (${HL6b}, '1')), 1, 0))  /  sum(if(selected(${HL4},"2") and ${HL6} > 14 and ${HL6} < 16 and (selected(${HL6a}, '1') or selected (${HL6b}, '1')), 1, 0)) | Interviewer (HH6a)  Team (HH7)  Cluster (HH1 HH2 HH3)  Overall | Check for age transference; ratio close to 1 is ideal. Ratio greater than one suggests interviewers recording adolescent girls as younger than they are. |
| Ratio: Eligible women 50:49 years of age | **NA\_f50\_count / NA\_f49\_count==**  sum(if(selected(${HL4},"2") and ${HL6} > 49 and ${HL6} < 51 and (selected(${HL6a}, '1') or selected (${HL6b}, '1')), 1, 0))  /  sum(if(selected(${HL4},"2") and ${HL6} > 48 and ${HL6} < 50 and (selected(${HL6a}, '1') or selected (${HL6b}, '1')), 1, 0)) | Interviewer (HH6a)  Team (HH7)  Cluster (HH1 HH2 HH3)  Overall | Check for women heaped at age 50; ratio close to 1 is ideal. Ratio greater than 1 suggests heaping on 50 or intentional aging of women by interviewers. |
| Mean number of eligible women | **NA\_woman\_count==**  sum(if(selected(${HL4},"2") and ${HL6} > 14 and ${HL6} < 50 and (selected(${HL6a}, '1') or selected (${HL6b}, '1')), 1, 0)) | Interviewer (HH6a)  Team (HH7)  Cluster (HH1 HH2 HH3)  Overall | Check that eligible respondents are being identified (compare among clusters, interviewer, teams, etc.) |
| Mean number of eligible children under 5 years | **NA\_child4\_count==**  sum(if(${HL6} < 5 and (selected(${HL6a}, '1') or selected (${HL6b}, '1')), 1, 0)) | Interviewer (HH6a)  Team (HH7)  Cluster (HH1 HH2 HH3)  Overall | Check that eligible respondents are being identified (compare among clusters, interviewer, teams, etc.) |
| Ratio: sex ratio of last live birth in the previous two years | **NA\_1FE5\_count / NA\_2FE5\_count**  sum(if(selected(${FE5}, '1'), 1, 0))  /  sum(if(selected(${FE5}, '2'), 1, 0)) | Interviewer (HH6a)  Team (HH7)  Cluster (HH1 HH2 HH3)  Overall | Should be close to 1between approximately 1.02 and 1.07. Values greater than 1.07 may suggest that women are under-reporting female births Women may under-report female births with an early neonatal death. |
| % of women with a live birth in the previous two years | **NA\_b2y\_count / NA\_woman\_count\_completed==**  sum(if(selected(${FE1}, '1') and selected(${NA\_W3}, 'under2'), 1, 0))  /  NA\_woman\_count\_completed | Interviewer (HH6a)  Team (HH7)  Cluster (HH1 HH2 HH3)  Overall | Compare this proportion to a recent DHS/MICS to ensure women aren’t underreporting births with an early neonatal death or interviewers aren’t aging births. |
| % of women delivered at a health facility (over women with a live birth in the previous two years) | **NA\_idCB15\_count / NA\_W3\_count==**  sum(if(selected(${CB15}, '21') or selected(${CB15}, '22') or selected(${CB15}, '23') or selected(${CB15}, '24') or selected(${CB15}, '25') or selected(${CB15}, '26') or selected(${CB15}, '27') or selected(${CB15}, '31') or selected(${CB15}, '32') or selected(${CB15}, '33') or selected(${CB15}, '34') or selected(${CB15}, '35') or selected(${CB15}, '36'), 1, 0))  /  sum(if(selected(${FE1}, '1') and selected(${NA\_W3}, 'under2'), 1, 0)) | Interviewer (HH6a)  Team (HH7)  Cluster (HH1 HH2 HH3)  Overall | Compare this proportion to a recent DHS/MICS to ensure interviewers aren’t intentionally underreporting births at a health facility in order to skip some childbirth and PNC questions |
| % of women who never had sexual intercourse | **NA\_FP5\_count / NA\_1WM9\_count==**  sum(if(selected(${FP5}, '8'), 1, 0))  /  sum(if(number(${NA\_woman\_end})=1 and (selected(${WM9},"1"),1,0)) | Interviewer (HH6a)  Team (HH7)  Cluster (HH1 HH2 HH3)  Overall | Compare this proportion to a recent DHS/MICS to ensure interviewers aren’t intentionally underreporting women sexually active in order to skip some FP questions |
| % women currently married or living with a man | **NA\_FP1\_count / NA\_1WM9\_count==**  sum(if(selected(${FP1}, '1') or selected (${FP1}, '2'), 1, 0))  /  sum(if(number(${NA\_woman\_end})=1 and (selected(${WM9},"1"),1,0)) | Interviewer (HH6a)  Team (HH7)  Cluster (HH1 HH2 HH3)  Overall | Compare this proportion to a recent DHS/MICS to ensure interviewers aren’t intentionally underreporting women in union in order to skip some gender questions |
| % women who are currently pregnant | FP12==1 | Interviewer (HH6a)  Team (HH7)  Cluster (HH1 HH2 HH3)  Overall |  |
| Duplicate household | hhdf==Household data frame  hh\_id==Household ID  hh\_id=concat(HH1 HH2 HH3 HH4)  dupl\_hh==duplicated household  dupl\_hh=duplicated(hhdf$hh\_id) | Household (HH1 HH2 HH3 HH4) | One household should be recorded in the household main table |
| Duplicate woman | wmdf==Woman data frame  wm\_id==Woman ID  wm\_id=concat(WM1 WM2 WM3 WM4 WM6)  dup\_wm==duplicated woman  dup\_wm=duplicated(wmdf$wm\_id) | Woman (WM1 WM2 WM3 WM4 WM6) | A unique record of each woman expected in the woman data frame |
| Duplicate child | chdf==Child data frame  ch\_id==Man ID  ch\_id=concat(UF1 UF2 UF3 UF4 UF8 UF6)  dup\_ch==duplicated child  dup\_ch=duplicated(chdf$ch\_id) | Child (UF1 UF2 UF3 UF4 UF8 UF6) | A unique record of each child expected in the child data frame |
| % of vaccination card seen | **NA\_1IM1\_count / NA\_3yCI2\_count==**  sum(if(selected(${IM1}, '1') and number(${CI2}) < 204, 1, 0))  /  sum(if(selected(${FE1}, '1') and number(${CI2}) < 204, 1, 0)) | Interviewer (HH6a)  Team (HH7)  Cluster (HH1 HH2 HH3)  Overall | May want to ensure interviewers are probing for vaccination cards |
| % of children with fever | **NA\_1CO1\_count / NA\_child\_count\_completed==**  sum(if(selected(${CO1}, '1'), 1, 0))  /  NA\_child\_count\_completed | Interviewer (HH6a)  Team (HH7)  Cluster (HH1 HH2 HH3)  Overall | For child illness programs, may opt to increase sample size if insufficient sick children are found. Compare to recent MICS/DHS (keep seasonality in mind). If different than expected, may conduct observations and re-interviews to ensure that questions are being asked correctly.  Check % “don’t know” to ensure correct probing for identifying illness. |
| % of children with diarrhea | **NA\_1DI1\_count / NA\_child\_count\_completed==**  sum(if(selected(${DI1}, '1'), 1, 0))  /  NA\_child\_count\_completed | Interviewer (HH6a)  Team (HH7)  Cluster (HH1 HH2 HH3)  Overall |
| % of children with pneumonia | **NA\_1CO4\_count / NA\_child\_count\_completed==**  sum(if(selected(${CO2}, '1') and selected(${CO3}, '1') and (selected(${CO4}, '1') or selected(${CO4}, '3')), 1, 0))  /  NA\_child\_count\_completed | Interviewer (HH6a)  Team (HH7)  Cluster (HH1 HH2 HH3)  Overall |