

**Supplemental Table 1: Maternal report of source of care: original report, reclassified by specific provider name, and events reported at participating providers**

| Provider Type               | Rural      |              |               | Urban      |              |               |
|-----------------------------|------------|--------------|---------------|------------|--------------|---------------|
|                             | Reported   | Reclassified | Participating | Reported   | Reclassified | Participating |
| <b>Govt / Public Sector</b> |            |              |               |            |              |               |
| Govt hospital               | 12         | 0            | -             | 6          | 5            | 0             |
| Govt health center/post     | 105        | 123          | 122           | 109        | 110          | 110           |
| Govt mobile hospital/clinic | 0          | 0            | -             | 0          | 0            | -             |
| Govt CBA/fieldworker        | 35         | 35           | 35            | 1          | 1            | 1             |
| <b>Private Sector</b>       |            |              |               |            |              |               |
| Pvt hospital/clinic         | 0          | 0            | -             | 1          | 1            | 0             |
| Mission hospital/clinic     | 6          | 0            | -             | 0          | 0            | -             |
| Pharmacy                    | 1          | 1            | 0             | 2          | 2            | 2             |
| Pvt doctor                  | 0          | 0            | -             | 0          | 0            | -             |
| Pvt CBA/fieldworker         | 1          | 0            | -             | 0          | 0            | -             |
| <b>Informal</b>             |            |              |               |            |              |               |
| Shop                        | 2          | 2            | 0             | 8          | 8            | 0             |
| Traditional practitioner    | 4          | 5            | 4             | 0          | 0            | 0             |
| Market                      | 0          | 0            | 0             | 1          | 1            | 0             |
| <b>TOTAL</b>                | <b>166</b> | <b>166</b>   | <b>161</b>    | <b>128</b> | <b>128</b>   | <b>113</b>    |

Supplemental Table 2. Accuracy of maternal report by reported illness type, by strata

| A. Diarrhea                          | Source of Care (Provider Category) |                  | Any Care-Seeking |                  | Care-Seeking at Skilled Provider |                  |
|--------------------------------------|------------------------------------|------------------|------------------|------------------|----------------------------------|------------------|
|                                      | Rural                              | Urban            | Rural            | Urban            | Rural                            | Urban            |
| TP                                   | 44                                 | 32               | 40               | 33               | 39                               | 32               |
| TP+FN                                | 48                                 | 33               | 42               | 34               | 40                               | 33               |
| <b>Sensitivity, percent (95% CI)</b> | 95.1 [54.4-99.7]                   | 97 [81.4-99.6]   | 95.2 [82.9-98.8] | 97.1 [81.9-99.6] | 97.5 [84.3-99.6]                 | 97 [81.4-99.6]   |
| TN                                   | 14                                 | 41               | 14               | 41               | 16                               | 44               |
| TN+FP                                | 17                                 | 52               | 16               | 52               | 18                               | 55               |
| <b>Specificity, percent (95% CI)</b> | 82.4 [57.3-94.2]                   | 84.9 [43.1-97.7] | 87.5 [61.4-96.9] | 84.9 [43.1-97.7] | 88.9 [64.8-97.2]                 | 85.8 [46.4-97.7] |
| TP+TN                                | 58                                 | 73               | 54               | 74               | 55                               | 76               |
| TP+TN+FP+FN                          | 65                                 | 85               | 58               | 86               | 58                               | 88               |
| <b>Accuracy, percent (95% CI)</b>    | 91.9 [70.9-98.1]                   | 89.8 [65.9-97.6] | 93.1 [83.0-97.4] | 89.8 [66.5-97.5] | 94.8 [85.2-98.3]                 | 90.1 [67.0-97.6] |
| <b>AUC, percent (95% CI)</b>         | 87 [76.9-97.2]                     | 87.9 [81.6-94.3] | 91.4 [82.4-100]  | 88 [81.7-94.3]   | 93.2 [85.3-100]                  | 88.5 [82.4-94.6] |

  

| B. Fever                             | Source of Care (Provider Category) |                  | Any Care-Seeking |                  | Care-Seeking at Skilled Provider |                  |
|--------------------------------------|------------------------------------|------------------|------------------|------------------|----------------------------------|------------------|
|                                      | Rural                              | Urban            | Rural            | Urban            | Rural                            | Urban            |
| TP                                   | 132                                | 80               | 123              | 80               | 122                              | 80               |
| TP+FN                                | 143                                | 81               | 128              | 80               | 127                              | 80               |
| <b>Sensitivity, percent (95% CI)</b> | 92.3 [86.6-95.7]                   | 98.8 [89.1-99.9] | 96.3 [89.0-98.9] | 100 --           | 96.3 [88.8-98.9]                 | 100 --           |
| TN                                   | 24                                 | 26               | 24               | 26               | 28                               | 33               |
| TN+FP                                | 34                                 | 43               | 34               | 42               | 38                               | 48               |
| <b>Specificity, percent (95% CI)</b> | 70.6 [53.4-83.4]                   | 60.5 [45.4-73.8] | 70.6 [53.4-83.4] | 61.9 [46.6-75.2] | 73.7 [57.6-85.2]                 | 69.3 [52.1-82.5] |
| TP+TN                                | 156                                | 106              | 147              | 106              | 150                              | 113              |
| TP+TN+FP+FN                          | 177                                | 124              | 162              | 122              | 165                              | 128              |
| <b>Accuracy, percent (95% CI)</b>    | 88.1 [82.5-92.1]                   | 85.5 [78.1-90.7] | 90.7 [85.2-94.3] | 86.9 [79.7-91.8] | 90.9 [85.5-94.4]                 | 88.3 [81.5-92.8] |
| <b>AUC, percent (95% CI)</b>         | 81.4 [73.4-89.5]                   | 79.6 [72.1-87.1] | 83.3 [75.4-91.3] | 81 [73.5-88.4]   | 84.9 [77.6-92.2]                 | 84.4 [77.7-91.0] |

| C. ARI                               | Source of Care (Provider Category) |                  | Any Care-Seeking |                  | Care-Seeking at Skilled Provider |                  |
|--------------------------------------|------------------------------------|------------------|------------------|------------------|----------------------------------|------------------|
|                                      | Rural                              | Urban            | Rural            | Urban            | Rural                            | Urban            |
| TP                                   | 23                                 | 11               | 21               | 11               | 21                               | 11               |
| TP+FN                                | 27                                 | 11               | 24               | 11               | 23                               | 11               |
| <b>Sensitivity, percent (95% CI)</b> | 85.2 [66.5-94.3]                   | 100 --           | 87.6 [54.4-97.7] | 100 --           | 93.2 [52.1-99.4]                 | 100 --           |
| TN                                   | 3                                  | 4                | 3                | 4                | 5                                | 4                |
| TN+FP                                | 5                                  | 6                | 5                | 5                | 7                                | 5                |
| <b>Specificity, percent (95% CI)</b> | 60 [20.0-90.0]                     | 66.7 [26.8-91.6] | 60 [20.0-90.0]   | 80 [30.9-97.3]   | 71.4 [32.7-92.8]                 | 80 [30.9-97.3]   |
| TP+TN                                | 26                                 | 15               | 24               | 15               | 26                               | 15               |
| TP+TN+FP+FN                          | 32                                 | 17               | 29               | 16               | 30                               | 16               |
| <b>Accuracy, percent (95% CI)</b>    | 81.3 [64.1-91.3]                   | 88.2 [63.2-97.0] | 82.6 [61.9-93.3] | 93.8 [66.5-99.1] | 87.4 [64.2-96.4]                 | 93.8 [66.5-99.1] |
| <b>AUC, percent (95% CI)</b>         | 72.6 [47.6-97.5]                   | 83.3 [62.7-100]  | 73.8 [48.8-98.7] | 90 [70.4-100]    | 81.4 [62.4-100]                  | 90 [70.4-100]    |

**Supplemental Table 3. Characteristics associated with accuracy of maternal report of any care-seeking and seeking care from a skilled provider**

| <b>Any Match</b>                                   | <b>n</b> | <b>OR</b> | <b>[95% CI]</b> | <b>p-value</b> |
|--|----------|-----------|-----------------|----------------|
| <b>Demographic Characteristics</b>                 |          |           |                 |                |
| Child Sex  |          |           |                 |                |
| Female (Ref)                                       | 191      | 1         | -               | -              |
| Male   | 178      | 1.56      | [0.69-3.56]     | 0.287          |
| Child Age  | 369      | 1.24      | [0.90-1.71]     | 0.179          |
| Number of children <5 years in household           | 369      | 1.41      | [0.77-2.56]     | 0.263          |
| Maternal Age                                       | 369      | 0.99      | [0.93-1.05]     | 0.689          |
| Maternal education                                 |          |           |                 |                |
| None or primary incomplete (Ref)                   | 77       | 1         | -               | -              |
| Primary complete                                   | 74       | 1.36      | [0.35-5.32]     | 0.658          |
| Secondary incomplete                               | 161      | 0.46      | [0.15-1.39]     | 0.168          |
| Secondary complete or higher                       | 57       | 1.23      | [0.24-6.34]     | 0.805          |
| Household wealth (quintile)                        |          |           |                 |                |
| Poorest (Ref)                                      | 90       | 1         | -               | -              |
| Second   | 67       | 3.96      | [1.02-15.37]    | 0.047          |
| Middle   | 78       | 0.95      | [0.34-2.67]     | 0.927          |
| Fourth   | 75       | 1.23      | [0.35-4.32]     | 0.743          |
| Highest (Wealthiest)                               | 59       | 0.96      | [0.22-4.09]     | 0.953          |
| Household location                                 |          |           |                 |                |
| Rural  | 194      | 1         | -               | -              |
| Urban  | 175      | 1.63      | [0.63-4.19]     | 0.312          |
| <b>Illness Characteristics</b>                     |          |           |                 |                |
| Fever (Ref)  | 191      | 1         | -               | -              |
| Diarrhea   | 73       | 3.53      | [1.15-10.82]    | 0.027          |
| ARI  | 9        | 0.55      | [0.09-3.24]     | 0.506          |
| Fever & Diarrhea                                   | 60       | 0.57      | [0.19-1.71]     | 0.316          |
| Diarrhea & ARI                                     | 3        | 1         | -               | -              |
| Fever & ARI  | 25       | 0.23      | [0.04-1.38]     | 0.107          |
| Fever & ARI & Diarrhea                             | 8        | 0.24      | [0.02-3.02]     | 0.266          |
| <b>True Care-Seeking Behavior / Source of Care</b> |          |           |                 |                |
| Public Sector Only (Ref)                           | 229      | 1         | -               | -              |
| Traditional Only                                   | 5        | 0.01      | [0.00-0.03]     | <0.001         |
| Public & Private                                   | 1        | 1         | -               | -              |
| Public & Traditional                               | 6        | 1         | -               | -              |
| No care sought                                     | 128      | 0.04      | [0.01-0.12]     | <0.001         |

| Skilled Provider                                   | n   | OR   | [95% CI]     | p-value |
|--|-----|------|--------------|---------|
| <b>Demographic Characteristics</b>                 |     |      |              |         |
| Child Sex  |     |      |              |         |
| Female (Ref)                                       | 195 | 1    | -            | -       |
| Male   | 183 | 1.32 | [0.58-2.98]  | 0.511   |
| Child Age  | 378 | 1.25 | [0.91-1.72]  | 0.167   |
| Number of children <5 years in household           | 378 | 1.5  | [0.83-2.72]  | 0.184   |
| Maternal Age                                       | 378 | 0.97 | [0.92-1.04]  | 0.405   |
| Maternal education                                 |     |      |              |         |
| None or primary incomplete (Ref)                   | 81  | 1    | -            | -       |
| Primary complete                                   | 74  | 1.28 | [0.32-5.22]  | 0.728   |
| Secondary incomplete                               | 163 | 0.38 | [0.13-1.13]  | 0.082   |
| Secondary complete or higher                       | 60  | 0.91 | [0.18-4.64]  | 0.91    |
| Household wealth (quintile)                        |     |      |              |         |
| Poorest (Ref)                                      | 92  | 1    | -            | -       |
| Second   | 68  | 4.75 | [1.21-18.60] | 0.025   |
| Middle   | 79  | 1.16 | [0.41-3.29]  | 0.784   |
| Fourth   | 77  | 2.24 | [0.59-8.46]  | 0.235   |
| Highest (Wealthiest)                               | 62  | 1.51 | [0.36-6.37]  | 0.572   |
| Household location                                 |     |      |              |         |
| Rural  | 197 | 1    | -            | -       |
| Urban  | 181 | 2.05 | [0.80-5.27]  | 0.135   |
| <b>Illness Characteristics</b>                     |     |      |              |         |
| Fever (Ref)  | 197 | 1    | -            | -       |
| Diarrhea   | 73  | 2.97 | [0.94-9.44]  | 0.064   |
| ARI  | 9   | 0.74 | [0.10-5.17]  | 0.758   |
| Fever & Diarrhea                                   | 62  | 0.52 | [0.18-1.48]  | 0.219   |
| Diarrhea & ARI                                     | 3   | 1    | -            | -       |
| Fever & ARI  | 26  | 0.25 | [0.04-1.43]  | 0.118   |
| Fever & ARI & Diarrhea                             | 8   | 0.19 | [0.02-2.44]  | 0.204   |
| <b>True Care-Seeking Behavior / Source of Care</b> |     |      |              |         |
| Public Sector Only (Ref)                           | 229 | 1    | -            | -       |
| Traditional Only                                   | 5   | 1    | -            | -       |
| Public & Private                                   | 1   | 1    | -            | -       |
| Public & Traditional                               | 6   | 1    | -            | -       |
| No care sought                                     | 137 | 0.04 | [0.01-0.13]  | <0.001  |

**Supplemental Table 4. Inflation factor for maternal report of care-seeking at true prevalence in study population, by strata**

| <b>A. Diarrhea</b>          | <b>Source of care<br/>(Provider Category)</b> |              | <b>Any Care-seeking</b> |              | <b>Care-seeking at Skilled<br/>Provider</b> |              |
|-----------------------------|---|--------------|-------------------------|--------------|---|--------------|
|                             | <b>Rural</b>                                  | <b>Urban</b> | <b>Rural</b>            | <b>Urban</b> | <b>Rural</b>                                | <b>Urban</b> |
| <b>True Prevalence</b>      | 73.8%   | 38.8%        | 72.4%                   | 39.5%        | 69.0%                                       | 37.5%        |
| <b>Sensitivity</b>          | 95.1%   | 97.0%        | 95.2%                   | 97.1%        | 97.5%                                       | 97.0%        |
| <b>Specificity</b>          | 82.4%   | 84.9%        | 87.5%                   | 84.9%        | 88.9%                                       | 85.8%        |
| <b>Estimated Prevalence</b> | 74.8%   | 46.9%        | 72.4%                   | 47.5%        | 70.7%                                       | 45.2%        |
| <b>Inflation Factor</b>     | 1.01  | 1.21         | 1.00                    | 1.20         | 1.02  | 1.21         |

  

| <b>B. Fever</b>             | <b>Source of care<br/>(Provider Category)</b> |              | <b>Any Care-seeking</b> |              | <b>Care-seeking at Skilled<br/>Provider</b> |              |
|-----------------------------|---|--------------|-------------------------|--------------|---|--------------|
|                             | <b>Rural</b>                                  | <b>Urban</b> | <b>Rural</b>            | <b>Urban</b> | <b>Rural</b>                                | <b>Urban</b> |
| <b>True Prevalence</b>      | 80.8%   | 65.3%        | 79.0%                   | 65.6%        | 77.0%                                       | 62.5%        |
| <b>Sensitivity</b>          | 92.3%   | 98.8%        | 96.3%                   | 100.0%       | 96.3%                                       | 100.0%       |
| <b>Specificity</b>          | 70.6%   | 60.5%        | 70.6%                   | 61.9%        | 73.7%                                       | 69.3%        |
| <b>Estimated Prevalence</b> | 80.2%   | 78.2%        | 82.3%                   | 78.7%        | 80.2%                                       | 74.0%        |
| <b>Inflation Factor</b>     | 0.99  | 1.20         | 1.04                    | 1.20         | 1.04  | 1.18         |

  

| <b>C. ARI</b>               | <b>Source of care<br/>(Provider Category)</b> |              | <b>Any Care-seeking</b> |              | <b>Care-seeking at Skilled<br/>Provider</b> |              |
|-----------------------------|---|--------------|-------------------------|--------------|---|--------------|
|                             | <b>Rural</b>                                  | <b>Urban</b> | <b>Rural</b>            | <b>Urban</b> | <b>Rural</b>                                | <b>Urban</b> |
| <b>True Prevalence</b>      | 84.4%   | 64.7%        | 82.8%                   | 68.8%        | 76.7%                                       | 68.8%        |
| <b>Sensitivity</b>          | 85.2%   | 100.0%       | 87.6%                   | 100.0%       | 93.2%                                       | 100.0%       |
| <b>Specificity</b>          | 60.0%   | 66.7%        | 60.0%                   | 80.0%        | 71.4%                                       | 80.0%        |
| <b>Estimated Prevalence</b> | 78.1%   | 76.5%        | 79.4%                   | 75.0%        | 78.1%                                       | 75.0%        |
| <b>Inflation Factor</b>     | 0.93  | 1.18         | 0.96                    | 1.09         | 1.02  | 1.09         |

**Supplemental Table 5. Accuracy of maternal report provider category match by strata, without correcting incorrect provider classifications**

|                                      | Source of Care (Provider Category) |                  | Any Care-Seeking |                  | Care-Seeking at Skilled Provider |                  |
|--------------------------------------|------------------------------------|------------------|------------------|------------------|----------------------------------|------------------|
|                                      | Rural                              | Urban            | Rural            | Urban            | Rural                            | Urban            |
| TP                                   | 131                                | 92               | 139              | 94               | 136                              | 93               |
| TP+FN                                | 161                                | 95               | 146              | 95               | 142                              | 94               |
| <b>Sensitivity, percent (95% CI)</b> | 83 [71.4-90.5]                     | 96.8 [90.7-99.0] | 95.4 [89.3-98.1] | 98.9 [92.9-99.9] | 95.8 [90.9-98.1]                 | 98.9 [92.8-99.9] |
| TN                                   | 35                                 | 61               | 35               | 61               | 42                               | 69               |
| TN+FP                                | 49                                 | 81               | 48               | 80               | 55                               | 87               |
| <b>Specificity, percent (95% CI)</b> | 71.4 [57.4-82.3]                   | 75.5 [62.1-85.3] | 72.9 [58.8-83.6] | 76.8 [61.1-87.4] | 76.4 [63.4-85.8]                 | 80.2 [63.5-90.5] |
| TP                                   | 131                                | 92               | 139              | 94               | 136                              | 93               |
| TP+FP                                | 145                                | 112              | 152              | 113              | 149                              | 111              |
| <b>PPV, percent (95% CI)</b>         | 90.3 [84.4-94.2]                   | 82.1 [73.9-88.2] | 91.4 [85.8-95.0] | 83.2 [75.1-89.0] | 91.3 [85.6-94.9]                 | 83.8 [75.7-89.5] |
| TN                                   | 35                                 | 61               | 35               | 61               | 42                               | 69               |
| TN+FN                                | 65                                 | 64               | 42               | 62               | 48                               | 70               |
| <b>NPV, percent (95% CI)</b>         | 59.7 [33.4-81.4]                   | 95.3 [86.5-98.5] | 85.4 [60.4-95.8] | 98.4 [89.4-99.8] | 87.8 [71.1-95.5]                 | 98.6 [90.6-99.8] |
| TP+TN                                | 166                                | 153              | 174              | 155              | 178                              | 162              |
| TP+TN+FP+FN                          | 210                                | 176              | 194              | 175              | 197                              | 181              |
| <b>Accuracy, percent (95% CI)</b>    | 80 [71.0-86.6]                     | 86.9 [81.1-91.2] | 89.7 [84.6-93.3] | 88.6 [82.9-92.5] | 90.4 [85.4-93.8]                 | 89.5 [84.1-93.2] |
| <b>AUC, percent (95% CI)</b>         | 76.4 [69.3-83.5]                   | 86.1 [81.0-91.1] | 84.1 [77.5-90.6] | 87.6 [82.8-92.4] | 86.1 [80.2-92.0]                 | 89.1 [84.7-93.5] |

**Supplemental Table 6. Accuracy of maternal report provider category match by strata, without excluding non-participating providers**

|                                      | Source of Care (Provider Category) |                  | Any Care-Seeking |                  | Care-Seeking at Skilled Provider |                  |
|--------------------------------------|------------------------------------|------------------|------------------|------------------|----------------------------------|------------------|
|                                      | Rural                              | Urban            | Rural            | Urban            | Rural                            | Urban            |
| TP                                   | 147                                | 93               | 139              | 94               | 137                              | 93               |
| TP+FN                                | 162                                | 95               | 146              | 95               | 142                              | 94               |
| <b>Sensitivity, percent (95% CI)</b> | 91.2 [83.6-95.5]                   | 97.9 [92.0-99.5] | 95.4 [89.3-98.1] | 98.9 [92.9-99.9] | 96.6 [90.1-98.9]                 | 98.9 [92.8-99.9] |
| TN                                   | 35                                 | 61               | 35               | 61               | 42                               | 69               |
| TN+FP                                | 54                                 | 96               | 53               | 90               | 57                               | 91               |
| <b>Specificity, percent (95% CI)</b> | 65.2 [49.0-78.5]                   | 64.1 [48.0-77.6] | 66 [52.4-77.4]   | 68.2 [52.8-80.5] | 73.7 [60.8-83.5]                 | 77.1 [58.5-88.9] |
| TP                                   | 147                                | 93               | 139              | 94               | 137                              | 93               |
| TP+FP                                | 166                                | 128              | 157              | 123              | 152                              | 115              |
| <b>PPV, percent (95% CI)</b>         | 88.6 [82.8-92.6]                   | 72.7 [64.3-79.7] | 88.5 [82.5-92.7] | 76.4 [68.1-83.1] | 90.1 [84.3-94.0]                 | 80.9 [72.6-87.1] |
| TN                                   | 35                                 | 61               | 35               | 61               | 42                               | 69               |
| TN+FN                                | 50                                 | 63               | 42               | 62               | 47                               | 70               |
| <b>NPV, percent (95% CI)</b>         | 74.1 [45.4-90.7]                   | 96.8 [88.2-99.2] | 85.4 [60.4-95.8] | 98.4 [89.4-99.8] | 91.5 [68.8-98.1]                 | 98.6 [90.6-99.8] |
| TP+TN                                | 182                                | 154              | 174              | 155              | 179                              | 162              |
| TP+TN+FP+FN                          | 216                                | 191              | 199              | 185              | 199                              | 185              |
| <b>Accuracy, percent (95% CI)</b>    | 84.7 [77.3-90.0]                   | 80.6 [74.4-85.6] | 87.4 [82.1-91.4] | 83.8 [77.8-88.4] | 89.9 [84.9-93.4]                 | 87.6 [82.0-91.6] |
| <b>AUC, percent (95% CI)</b>         | 77.8 [71.0-84.6]                   | 80.7 [75.7-85.8] | 80.6 [74.0-87.3] | 83.4 [78.4-88.3] | 85.1 [79.1-91.0]                 | 87.4 [82.8-91.9] |



**Supplemental Table 7. Sensitivity of maternal report provider category match by method of confirmation**

|                                 | <b>n</b> | <b>OR</b> | <b>[95% CI]</b> | <b>p-value</b> |
|---------------------------------|----------|-----------|-----------------|----------------|
| <b>Source of care</b>           |          |           |                 |                |
| Govt health center / post (Ref) | 211      | 1         | -               | -              |
| Govt CBA                        | 34       | 0.31      | [0.06-1.47]     | 0.139          |
| Pharmacy                        | 1        | 1         | [1.00-1.00]     | -              |
| Traditional practitioner        | 11       | 0.02      | [0.00-0.10]     | <0.001         |
| <b>Confirmation Method</b>      |          |           |                 |                |
| Register Only (Ref)             | 59       | 1         | -               | -              |
| Ribbon                          | 58       | 0.3       | [0.03-2.87]     | 0.296          |
| Scan                            | 42       | 0.3       | [0.03-3.18]     | 0.319          |
| Ribbon & Scan                   | 98       | 1.23      | [0.11-14.15]    | 0.868          |