

## Supplementary Appendix S2

### Equations accompanying the Costing approach

| Equations deriving the annual health system cost for antenatal care, the cost of scaling up to universal coverage and the expected cost of the eight-visit model | Equation Number | Notes   |
|--|-----------------|---|
| <b>Capital Costs:</b>  |                 |   |
| $C = (E + I)$  | EQ1             | C: Capital costs;<br>E: Cost of equipment; and<br>I: Cost of infrastructure.  |
| <b>Recurrent Costs for the first and follow-up antenatal clinic visits</b>   |                 |   |
| $R_1 = (H + M_1 + O)$  | EQ2a            | H: Cost of human resources;<br>O: Cost of overheads;<br>M <sub>1</sub> : Cost of medicines and medical Supplies used during the first visit; and<br>R <sub>1</sub> : Recurrent costs for the first antenatal clinic visit |
| $R_2 = (H + M_2 + O)$  | EQ2b            | M <sub>2</sub> : Cost of medicines and medical supplies used during a follow-up visit; and<br>R <sub>2</sub> : Recurrent costs for the follow-up antenatal clinic visit   |
| <b>Cost of the first and follow-up antenatal clinic visits</b>   |                 |   |
| $ANC_1 = C + R_1$  | EQ3a            | ANC <sub>1</sub> : Cost of the first antenatal care visit   |
| $ANC_2 = C + R_2$  | EQ3b            | ANC <sub>2</sub> : Cost of the follow-up antenatal care visit   |
| <b>Cost of four antenatal clinic visits</b>  |                 |   |
| $fANC = ANC_1 + 3(ANC_2)$  | EQ4             | fANC: Cost of four antenatal clinic visits (also called focused antenatal care)   |

|  |     |   |
|--|-----|---|
| Annual health system cost for antenatal care |     |   |
| $fANC \times U$                              | EQ5 | U: antenatal care utilization (number of pregnant women visiting antenatal clinic at least four times throughout pregnancy) |

|   |     |   |
|---|-----|---|
| Expected cost of universal coverage of four antenatal clinic visits <sup>*,**</sup> |     |   |
| $UC = (1(R_1) + 3(R_2)) \times P$   | EQ6 | UC: Expected financial cost of universal coverage of four antenatal clinic visits (or of focused antenatal care); P: population of pregnant women<br>*: only includes financial costs<br>**: costs are not discounted |

|  |     |  |
|--|-----|--|
| Expected cost of universal coverage of eight antenatal clinic visits or budget impact analysis <sup>*,**</sup> |     |  |
| $BIA = (1(R_1) + 7(R_2)) \times P$   | EQ7 | BIA: budget impact analysis of making eight antenatal clinic visits throughout pregnancy<br>*: only includes financial costs<br>**: costs are not discounted |