

### Supplementary Appendix

The rate or slope at which vaccine coverage increases over time (months) is calculated as follows:

$$\text{Slope} = \frac{\text{Change in } Y}{\text{Change in } X} = \frac{y_1 - y_0}{x_1 - x_0}$$

where  $y_0$  and  $y_1$  are initial and targeted vaccine coverages at  $x_0$  and  $x_1$  months respectively.



For example, the initial vaccine coverage (3 months after vaccine rollout) was 0.27% in the west African region. If the aim is to achieve a vaccine coverage of 60% after 18 months, then the rate/pace should increase by:

$$\text{Slope} = \frac{60 - 0.27}{18 - 3} = 4$$