**S1 File. Calculation of SF ratio and PF ratio**

The SF ratio is calculated by SpO2 (%) divided by FiO2.

FiO2 is estimated for a non-invasive oxygen delivery method in the following way.

1. For nasal cannula - 0.21 for room air, 0.21 + (oxygen flow rate \* 0.035)
2. For simple oxygen mask – 0.35 is taken for 6L/min, 0.4 is taken for 7L/min, 0.47 is taken for 8L/min, 0.53 taken for 9L/min, and 0.6 is taken for ≥10L/min1
3. For non-rebreather mask – 0.6 is taken for 6L/min, 0.7 is taken for 7L/min, and 0.8 is taken for ≥8L/min 2,3

The minimum SF ratio was considered out of multiple SF ratio of the same day.

To calculate the PF ratio, for taken SpO2 value, corresponding PaO2 value was imputed that is divide by taken FiO2. 2,3

**References**

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