Appendix

Questionnaire (translated)
Modified and comprehensive version of previously used questionnaires [18, 19]

Q-1 In which hospital do you work?
   Academic Medical Center
   Leiden University Medical Center
   Onze Lieve Vrouwe Gasthuis

Q-2 What is your function in the hospital?
   Intensivist
   ICU fellow
   Resident
   ICU nurse
   ICU nurse in training
   Other (please specify)

Q-3 What is your age?
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Q-4 Is oxygen induced lung injury a concern when placing a patient on mechanical ventilation?
   YES, a major concern due to the *high incidence* of injury
   YES, a major concern due to the *severity* of injury
   YES, a major concern due to the *high incidence and severity* of injury
   YES, but not a *major* concern
   NO, it is not a concern

Q-5 In your opinion, which one of the following two situations poses a greater threat of lung injury for mechanically ventilated patients?
   High FiO₂
   High tidal volumes and high ventilator pressures
   Don’t know

Q-6 In situations when maximal SaO₂ achievable is low, say 85%, or when FiO₂ requirements are high, do you assess indices of *tissue* oxygenation?
   NO
   YES, lactate
   YES, microcirculation with OPS/SDF imaging
   YES, but a different index or a combination (see other)
   YES, other (please specify)

Q-7 to Q-11 pertain to young and middle-aged ARDS patients in the ICU requiring mechanical ventilation. Please assume that all ventilator settings (PEEP, airway pressure, I:E ratio, flow rates, with minimal auto-PEEP) are optimized with respect to the PaO₂/FiO₂ ratio and hemodynamic indices. Lung injury due to high FiO₂ and/or ventilator settings is minimized. There is no evidence to indicate end-organ ischemia, and hemodynamics are stable

Q-7 Independent of FiO₂, what is the minimum level of arterial oxygen saturation (SaO₂) allowable for a duration under 15 minutes?
95-100%
90-95%
85-90%
80-85%
75-80%

Q-8 Independent of FiO₂, what is the minimum level of arterial oxygen tension (PaO₂) allowable for a duration under 15 minutes?
   4-7 kPa
   7-10 kPa
   10-13 kPa
   13-16 kPa

Q-9 Independent of FiO₂, what is the minimum level of arterial oxygen saturation (SaO₂) allowable when the duration is between 24-48 hours?
   95-100%
   90-95%
   85-90%
   80-85%
   75-80%

Q-10 Independent of FiO₂, what is the minimum level of arterial oxygen tension (PaO₂) allowable when the duration is between 24-48 hours?
   4-7 kPa
   7-10 kPa
   10-13 kPa
   13-16 kPa

Q-11 Independent of FiO₂, after what duration would a stable SaO₂ of 85% begin to raise concerns?
   < 2 hours
   2 – 24 hours
   24 – 48 hours
   48 – 72 hours
   > 72 hours

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Q-12 to Q-31 pertain to a situation when a patient must be placed on mechanical ventilation for at least 5 days, and FiO₂ = 50% please indicate whether you would increase, decrease or not change the level of FiO₂ for each corresponding level of arterial saturation or arterial oxygen tension.

Q-12 Patient admitted to the ICU with pneumonia and ARDS.
   a. SaO₂ = 80-85%   b. 6 kPa
      Increase        Increase
      Decrease       Decrease
      Not change     Not change

Q-13 Patient admitted to the ICU with pneumonia and ARDS.
   a. SaO₂ = 85-90%   b. 9 kPa
Increase Increase
Decrease Decrease
Not change Not change

Q-14 Patient admitted to the ICU with pneumonia and ARDS.
  a. $\text{SaO}_2 = 90\text{-}95\%$  b. $12 \text{kPa}$

Increase Increase
Decrease Decrease
Not change Not change

Q-15 Patient admitted to the ICU with pneumonia and ARDS.
  a. $\text{SaO}_2 = 95\text{-}100\%$  b. $16 \text{kPa}$

Increase Increase
Decrease Decrease
Not change Not change

Q-16 Patient admitted to the ICU with signs of cardiac ischemia (ST-depressions in the anterior leads [max 3mm]) and pneumonia.
  a. $\text{SaO}_2 = 80\text{-}85\%$  b. $6 \text{kPa}$

Increase Increase
Decrease Decrease
Not change Not change

Q-17 Patient admitted to the ICU with signs of cardiac ischemia (ST-depressions in the anterior leads [max 3mm]) and pneumonia.
  a. $\text{SaO}_2 = 85\text{-}90\%$  b. $9 \text{kPa}$

Increase Increase
Decrease Decrease
Not change Not change

Q-18 Patient admitted to the ICU with signs of cardiac ischemia (ST-depressions in the anterior leads [max 3mm]) and pneumonia.
  a. $\text{SaO}_2 = 90\text{-}95\%$  b. $12 \text{kPa}$

Increase Increase
Decrease Decrease
Not change Not change

Q-19 Patient admitted to the ICU with signs of cardiac ischemia (ST-depressions in the anterior leads [max 3mm]) and pneumonia.
  b. $\text{SaO}_2 = 95\text{-}100\%$  b. $16 \text{kPa}$

Increase Increase
Decrease Decrease
Not change Not change
Q-20 Patient admitted to the ICU with recent cerebral ischemia and one-sided hemiplegia.
   a. \( \text{SaO}_2 = 80-85\% \)  
   b. 6 kPa
   
   Increase  
   Decrease  
   Not change

Q-21 Patient admitted to the ICU with recent cerebral ischemia and one-sided hemiplegia.
   a. \( \text{SaO}_2 = 85-90\% \)  
   b. 9 kPa
   
   Increase  
   Decrease  
   Not change

Q-22 Patient admitted to the ICU with recent cerebral ischemia and one-sided hemiplegia.
   a. \( \text{SaO}_2 = 90-95\% \)  
   b. 12 kPa
   
   Increase  
   Decrease  
   Not change

Q-23 Patient admitted to the ICU with recent cerebral ischemia and one-sided hemiplegia.
   c. \( \text{SaO}_2 = 95-100\% \)  
   b. 16 kPa
   
   Increase  
   Decrease  
   Not change

Q-24 Patient admitted to the ICU with liver abcess and sepsis.
   a. \( \text{SaO}_2 = 80-85\% \)  
   b. 6 kPa
   
   Increase  
   Decrease  
   Not change

Q-25 Patient admitted to the ICU with liver abcess and sepsis.
   a. \( \text{SaO}_2 = 85-90\% \)  
   b. 9 kPa
   
   Increase  
   Decrease  
   Not change

Q-26 Patient admitted to the ICU with liver abcess and sepsis.
   b. \( \text{SaO}_2 = 90-95\% \)  
   b. 12 kPa
   
   Increase  
   Decrease
Q-27 Patient admitted to the ICU with liver abscess and sepsis. SaO\textsubscript{2} = 95-100%
   d. SaO\textsubscript{2} = 95-100%  
   b. 16 kPa

   Increase  
   Decrease  
   Not change

Q-28 Jehovah’s Witness admitted to the ICU with stable hemoglobin of 1.8 mmol/L after gastric bleeding.
   a. SaO\textsubscript{2} = 80-85%  
   b. 6 kPa

   Increase  
   Decrease  
   Not change

Q-29 Jehovah’s Witness admitted to the ICU with stable hemoglobin of 1.8 mmol/L after gastric bleeding.
   a. SaO\textsubscript{2} = 85-90%  
   b. 9 kPa

   Increase  
   Decrease  
   Not change

Q-30 Jehovah’s Witness admitted to the ICU with stable hemoglobin of 1.8 mmol/L after gastric bleeding.
   a. SaO\textsubscript{2} = 90-95%  
   b. 12 kPa

   Increase  
   Decrease  
   Not change

Q-31 Jehovah’s Witness admitted to the ICU with stable hemoglobin of 1.8 mmol/L after gastric bleeding.
   a. SaO\textsubscript{2} = 95-100%  
   b. 16 kPa

   Increase  
   Decrease  
   Not change