



High Frequency OSCillation in ARDS

Frequently Asked Questions

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Inclusion / Exclusion questions

1. How do I calculate the P/F Ratio?

Take the patient's latest PaO₂ (in kPa) from the blood gas report and divide that value by fractional inspired concentration oxygen the patient was receiving at the time the arterial blood gas was taken.

For example;

PaO₂ = 8.76 kPa
O₂ = 60% (= 0.6)

Therefore, divide 8.76 by 0.60 ($8.76/0.60$) = PF ratio of 14.6 kPa

2. Are there any other patients who should not be in the trial?

Apart from patients not meeting the inclusion criteria or meeting the exclusion criteria there are certain patients who must not be included for ethical or practical reasons. These are:

- Adults with learning disabilities
- Adults who have a terminal illness
- Adults with mental illness (particularly if detained under mental health legislation)
- Adults with dementia
- Prisoners
- Those who would be considered to have a particularly dependent relationship with the investigator, e.g. medical students.

3. If a patient has met the inclusion criteria for the trial but the P/F ratio improves before the patient is entered into the trial, can the patient still be considered for the trial?

Yes. This is however at the discretion of the consultant. If they are *not* entered into the trial their details should be written in the 'Why not in trial' log and the reason documented under 'Other' as 'Patient improved significantly after initial trial arterial blood gas'.

4. Does a history of childhood asthma alone exclude the patient from the trial?

No. Only patients with active (uncontrolled or moderate-severe) asthma cannot be randomised to the trial.

5. If a patient has mild COPD can they be included in the trial as the entry criteria only excludes moderate or severe airway disease causing airflow limitation?

Yes. A patient can be included in the trial unless:

- On conventional ventilation they have a limitation on expiratory air flow measured using a flow time trace or an auto-PEEP function that is sufficiently severe to require them to modify the conventional ventilator.
- They have uncontrolled bronchospasm or moderate to severe COPD

6. Is sleep apnoea a reason why the patient should not be entered into the trial?

No. As long as the patient is not showing signs of restrictive lung disease they can be entered into the trial.

7. If a patient has respiratory distress secondary to pulmonary haemorrhage, should they be included in the trial?

No. Although the haemorrhage can cause similar chest x-ray appearances to ARDS, pulmonary haemorrhage is not ARDS and the patient should be excluded.

8. I have a patient who has raised intracranial pressure. Is HFOV contraindicated for this patient?

Yes because HFOV may initially increase PaCO₂ and hence the intracranial pressure

9. Can a patient receive HFOV if they have a tracheostomy?

Yes.

10. Can the patient recovering from pulmonary surgery be included in the trial?

No because HFOV is not recommended for patients who have a surgical closure of a bronchus.

11. Can a patient with an air leak be randomised?

Yes unless it is a large air leak then inclusion into the criteria is contra indicated.

12. Can a patient who is currently in a prone position be included into the trial?

Yes. This is however at the discretion of the consultant.

13. Can a patient with suspected HIV be included in the trial?

Yes.

14. Can a patient with H1N1 be admitted to the trial?

Yes. In terms of ventilator management there is no reason to believe that severe hypoxaemic respiratory disease caused by H1N1 is fundamentally different from any other cause of this condition. The filter within the Vision Alpha Ventilator is identical to the one used by Tyco/Puritan-Bennett ventilators. It does not trap all viral particles but will trap all droplets. Thus the Vision Alpha is the same as any other ventilator you will be using for these patients and you should use the same precautions for study patients. In practice this amounts to gowns, gloves, eye protection and FFP3 masks. These general precautions will suffice and patients can be randomised to HFOV if they fulfill all eligibility criteria.

15. Can a patient on ECMO be recruited to the trial?

No. If a patient is on ECMO then they cannot be recruited into the trial.

16. Can a patient receive ECMO while being part of the OSCAR trial?

Yes. If they have been recruited onto the OSCAR trial in HFOV or control group and clinical situation warrants ECMO or an extra corporeal CO₂ removal ventilator.

17. If a patient is transferred from a different hospital / unit with an endotracheal tube in situ when do we count the first time of ventilation?

If a patient is transferred from another hospital / unit then the first time of ventilation is counted from the time the patient was last intubated. Not the first time ventilated within your unit.

Equipment / Technical Questions

1. What do I do if the measured FiO_2 does not correlate with the set FiO_2 ?

If a patient is not on the ventilator you can calibrate the oxygen sensor on the final screen. You may need to calibrate the sensor more than once. If a patient is on the ventilator you can consider manually ventilating the patient whilst the sensor is calibrated or un-plug the oxygen sensor (at the ventilator, indicated in picture) and add an independent oxygen analyser into the circuit.




2. How long does an oxygen sensor last?

The oxygen sensor should last one year, if you experience problems with the sensor though do contact the trial office.

3. How do I calibrate the oxygen sensor?

Turn oxygen to 100%. Select the screen with this symbol in the bottom right hand

corner  which is highlighted in turquoise, and select the icon 'Calibrate O₂' and confirm. Calibration can take up to 2 minutes and cannot be done whilst a patient is on the ventilator. Once calibration is over go back to the IMV data screen and check that the measured and set FiO_2 levels correspond. If there is still a discrepancy of more than 10% you will have to calibrate the sensor again.

4. Is any of the equipment disposable?

Yes. The tubing, oscillator diaphragm, blue box of the humidifier and expiration filter **ARE** disposable.

- ❖ The **impedance valve** is **NOT** disposable
- ❖ The red and yellow **wiring that connects the temperature sensors** of the circuit to the humidifier are **NOT** disposable.
- ❖ The **oxygen sensor** and its T-piece are **NOT** disposable.

5. How long can I use the patient set for?

Each circuit is for single patient use and can be used for a maximum of 30 days. This includes all the tubing, oscillator diaphragm, blue box of the humidifier and expiration filter.

6. Can I introduce a nebuliser into the circuit?

Yes. But only a certain type of nebuliser. A standard nebuliser does not work well with the oscillator and we would suggest that they should not be used. Not only is lung delivery of the nebulised drug to the lung almost non-existent, but adding flow to the circuit is likely to make the ventilator alarm and this also makes circuit interruption and de-recruitment more likely. Bronchodilators can be administered intravenously, nebulised saline shouldn't really be needed as the humidification system is very good and mucolytics could be given enterally if at all.

The nebuliser that does work with the Vision Alpha ventilator is available through Inspiration Healthcare but is not provided by the trial.

7. Can I give the patient nitric oxide?

Yes. Nitric oxide can be added into the circuit after the oxygen sensor or at the level of the humidifier. A sampling adaptor can also be inserted at the 'Y-piece'. Take advice from the OSCAR trial clinicians or Inspiration Healthcare if necessary.

8. How long is the alarm silenced for? Can I turn it on again?

When you press the mute button, the alarm will be silenced for 2 minutes, if you press it again within the 2 minutes it will silence for a further 2 minutes.

To turn the alarm on again, hold the mute button down for at least 3 seconds and then release. The alarm turns on as soon as you stop holding down the button.

9. What does the new bacterial heated filter on the top of the humidifier do?

This new bacterial filter is heated and stops bacteria from travelling from the expiratory limb towards the humidifier and the impedance valve. This means the impedance valve cannot get contaminated and therefore does not need ethylene oxide sterilisation. The white filter to place inside the heated chamber will be found within your circuit box.

10. How long does this new filter last?

This new bacterial filter lasts 30 days and is single patient use as with the rest of the boxed circuitry.

12. What do I do with the impedance valve and how do I clean it?

The impedance valve is not to be sent to the OSCAR Trial office once the heated filters have been fitted. The impedance valve is not disposable but can be used repeatedly. To clean the impedance valve use non-alcoholic wipes.

13. When I started the Vision Alpha ventilator it was alarming and cutting out continuously what should I do?

Check there are no obvious blockages within the circuit. Make sure the Vision Alpha is connected to a dedicated Oxygen and Medical Air outlet. If the Vision Alpha is sharing a Oxygen and Medical Air outlet with another ventilator the vision alpha may not receive enough gas and so will alarm and cut out.

General Clinical HFOV Questions

1. What is the ideal size of endotracheal tube?

The tube should be as short and as wide as possible; we suggest a size 9mm ID for men and a size 8mm ID for women. They should be cut to length.

2. How long should the patient receive HFO ventilation for?

For a maximum of 30 days. If the patient has failed to improve after 30 days of HFO ventilation it will be deemed that HFO ventilation has not been a successful therapy for this patient and they should be moved on to a conventional ventilator.

3. Is there a minimum time the patient must spend on the oscillator?

No. We do recommend however, that once the patient reaches the settings that suggest they move back to conventional ventilation (MAP <24cmH₂O, FiO₂ <40%) they should be kept on those settings for 12 hours, and continue to remain stable, before going over to conventional ventilation.

4. What do we do if the PaO₂ is not greater than 8kPa but we have reached a Mean Airway Pressure of 50cmH₂O or more?

Hold the current settings for 8 hours and repeat the blood gas, sometimes the patient needs a bit more time to recruit their lung – this is called ‘slow recruitment’. If they fail to improve please consider the following:

- Make sure there are no technical problems, i.e. is the ventilator doing what the operator believes it should be doing?
- Ensure the patient has adequate circulatory volume (appropriately filled) and receiving appropriate vasopressor support, sedation and probably paralysis.
- Review implementation of protocol; consider if the patient might be over-distended and attempt a trial of reduced Mean Airway Pressure if reasonable.
- Actively exclude problems with the endotracheal tube; may need bronchoscopy (see page 16, Section 15).
- Actively manage retained secretions
- EXCLUDE UNDRAINED/inadequately drained PNEUMOTHORACES. Have a very high index of suspicion for occult anterior air collections. If there are large air leaks, are there enough drains on suction? (Mean Airway Pressure may need to be tailored to minimise leak and optimise inflation).

Please contact the trial help line 24hrs a day on **07825 733953** at any point if you are concerned about the patient, we may advise the following:

- Consider the use of nitric oxide (NO) if available
- Consider the prone position
- Consider decreasing the MAP, as you may be over distending the lung

5. What do I do if the patient starts with a Mean Airway Pressure <24cmH₂O and we haven't needed to increase it for lung recruitment?

Once you get to step 3 of the Oxygenation Algorithm (weaning the MAP) you hold the patient at their current settings for at least 12 hours and then, providing they are stable, move the patient back on to conventional ventilation.

6. What do I do if the arterial CO₂ is high?

If the PaCO₂ has increased by more than 4 kPa on the first blood gas after starting HFOV turn the cycle volume to maximum. After the patient is established on HFOV we would allow permissive hypercapnia until the arterial pH is less than 7.25. If the pH is <7.25 then consider increasing the cycle volume by 10ml. If the cycle volume is at its maximum value for the frequency then you can **decrease the frequency by 1Hz.**

If you reach the minimum frequency and the maximum cycle volume consider the following:

- Consider deepening sedation and using neuro-muscular paralysis
- Consider suctioning, if there are doubts regarding excessive secretions
- Repeat Chest X ray
- Please contact the trial help line 24hrs a day on **07825 733953** at any point if you are concerned about the patient. The following may be recommended:
 - They may suggest partially deflating the cuff of the endotracheal tube this could be done in a stepwise reduction; you should increase the base flow to compensate for the leak, or
 - Consider alkanisation with IV HCO₃

7. What do I do if the CO₂ is low?

We would advise to only act if the pH is >7.40, you could consider decreasing the cycle volume, by 10ml or **increasing** the frequency, by 1Hz. Always contact the trial phone on **07825733953** if you are concerned about the patient and want further advice.

8. Can I induce a cuff leak to eliminate excess CO₂ whilst my patient is receiving HFOV?

Although this technique has been used with other oscillators (i.e. Sensor Medics), we have no data as to whether this practice alters the function of the Vision Alpha. We would therefore discourage this. Please contact the trial office if you are planning to introduce a cuff leak.

9. What do I do if the patient desaturates?

If you have been increasing the mean airway pressure (Step 1 of oxygenation algorithm) you should reduce the Mean Airway Pressure by 5cmH₂O.

If you have been reducing the FiO₂ (Step 2 of oxygenation algorithm), you should increase the FiO₂ and if the Mean Airway Pressure is <50cmH₂O you should increase the Mean Airway Pressure by 5cmH₂O.

If you have been reducing the Mean Airway Pressure (Step 3 of oxygenation algorithm) then increase the FiO₂ and if the Mean Airway Pressure is <50cmH₂O you should increase the Mean Airway Pressure by 5cmH₂O:

- **Always consider a pneumothorax** – look for asymmetric chest movement and a change in the measured amplitude
- **Always consider air trapping** – increase in CVP
- **Always consider secretions or a blocked ET tube** – increase in the measured amplitude
- If the patient is making respiratory effort, which is associated with episodes of desaturation: **Consider increasing sedation either as boluses or as an infusion.**

10. How do I recognise:

Pneumothorax?

Look for; hypotension, a fall in PaO₂ (both acute), asymmetric chest wall movement, tracheal deviation and/or an initial change in the measured Amplitude.

Air Trapping?

Look for; hypotension, a fall in PaO₂, increase in PaCO₂ (all gradual) and an increase in CVP.

Blocked ET Tube?

Look for; a fall in PaO₂, increase in PaCO₂ and/or an increase in the measured Amplitude.

Secretions?

Look for; a fall in PaO₂ (gradual and slight) and/or an increase in the measured Amplitude.

11. What values do I record daily from the HFO ventilator and where will I find them on the ventilator?

- Set mean airway pressure - record the set value that appears above the mean airway pressure knob.
- Set frequency - record the set value that appears above the frequency knob.
- Set cycle volume - record the set value that appears above the cycle volume knob.
- Set base flow - record the set value that appears near the top, on the left hand side of the screen.
- Measured amplitude - record the value that appears in the 'HFO data' box, on the right hand side of the screen, under 'Amplitude'.
- FiO₂ - record the set value that appears above the FiO₂ knob.

12. When I collect and record the daily data I am not sure what some of the values mean?

Frequency (Hz):

A control of ventilation

1 Hz = 60 breaths per minute

Vision Alpha ventilator has a range of 5-15 Hz (300-900 breaths per minute)

Start at value according to protocol which is 10Hz

The frequency is decreased to remove CO₂ (in combination with increasing the cycle volume using the Carbon Dioxide Management algorithm)

Mean Airway Pressure:

A control of oxygenation

Vision Alpha ventilator has a range of 5-60cmH₂O

Start at value according to protocol which is the patient's current mean airway pressure + 5cmH₂O

Increase the value to promote recruitment and oxygenation (using the Oxygen Management algorithm)

Value can be decreased when in line with the OSCAR algorithm

Cycle volume (ml):

A control of ventilation

Vision Alpha ventilator has a range of 14-350ml (dependant on frequency value)

Start at value according to protocol which is 100ml at a frequency of 10Hz

The cycle volume value will change with a change in frequency

Increase the cycle volume to remove CO₂ (in combination with decreasing the frequency using the Carbon Dioxide Management algorithm)

The cycle volume will affect the amplitude. The greater the cycle volume the greater the amplitude

Measured Amplitude (cmH₂O):

Reflects the compliance of the circuit/lungs
Changes can be subtle but can be effective warning system
Will change if the frequency is altered
Unexplained rise: Secretions/Obstruction
Unexplained fall: Pneumothorax

Base (Bias) Flow:

Start at value according to protocol which is 20L.min⁻¹
The base flow should be increased prior to suctioning to 30L.min⁻¹ (in addition to increasing the current mean airway pressure by 5cmH₂O). Both these adjustments need to be returned to the original values after suctioning
Increase to 30L.min⁻¹ if the patient is inter-breathing whilst a review of the sedation is performed (this will minimise alarms from sounding in the interim period)

13. What do we do if the patient becomes disconnected from HFO ventilation?

Re-connect them as quickly as possible. If this cannot be done, bag the patient until another method of ventilation is available. If the patient is reconnected quickly there may still have been some de-recruitment of the lungs, you may need to go through a recruitment manoeuvre (step 1 of oxygen management algorithm) afterwards if they have desaturated.

If the patient becomes disconnected the ventilator might stop, it will re-start if the patient is re-connected quickly.

14. Can the patient be on HFO ventilation if they have a chest drain in?

If the patient has a chest drain inserted whilst they are on HFO ventilation they can continue to receive HFO ventilation. The base flow may need to be increased to 30L.min⁻¹ if there is an air leak.

Patient may need a higher MAP to help recruit the lung.

If the patient has a chest drain insitu prior to being recruited to the trial it is at the discretion of their clinician as to whether they should be entered into the trial.

15. Can the patient undergo bronchoscopy?

Yes. If the patient requires a bronchoscopy increase the base flow to 40L.min⁻¹ and increase the Mean Airway Pressure by 5cmH₂O, perform the procedure as quickly as possible. Then return the Base Flow to previous setting, after 10-15 minutes reduce the Mean Airway Pressure. Be aware that this may cause de-recruitment of the lungs and you may need to hold the Mean Airway Pressure for a bit longer or re-recruit the lungs as per Step 1 of the oxygen management algorithm.

Consider sedating and paralysing the patient prior to the procedure.

16. What levels of sedation/paralysis are appropriate?

Patients ventilated on HFOV do not necessarily need any more sedation or paralysis as compared to patients on conventional ventilation.

However, it may be necessary to deepen sedation or consider muscle paralysis if:

- Patient appears uncomfortable
- Increasing FiO₂ requirement or FiO₂ > 0.8
- High mean airway pressures i.e. > 35cmH₂O
- Worsening respiratory acidosis
- Any other clinical indication as would be appropriate in patient on conventional ventilation.

Also, it is useful to consider sedation breaks as one would consider for patients on conventional ventilation.

17. What do I do if the ventilator keeps stopping and re-starting when in oscillatory mode?

The ventilator will briefly stop oscillating and re-start if the high mean airway pressure 2 (HighMAP2) alarm is triggered. The most common cause for this is that the patient is inter-breathing with the ventilator and causing the mean airway pressure to swing. This can be most easily seen on the LED bar graph at the top of the ventilator.

To remedy this you can consider increasing the base flow in steps of 5 until the swing stops. Try not to run the base flow at maximum (40L.min⁻¹) for significant periods of time as the humidifier will not work as effectively and therefore alarm. If increasing the base flow has not helped you can increase the patient's sedation or adjust the alarm limits. If you are to adjust the alarm limits you must be certain that the cause for the raised mean airway pressure is the patient inter-breathing.

If there are no signs that the patient is inter-breathing with the ventilator check that fluid has not gathered in the green pressure line tubing, causing the pressure to be falsely high. Also check whether the pressure line filter is saturated, if so you will need to change the pressure line filter.

Check that there are no signs that the patient has significant air-trapping – fall in BP, PaO₂, rise in CVP.

18. What do we do if the patient needs to go to theatre/radiology/a side room etc?

The patient can, temporarily, be given conventional ventilation so that they can be moved as necessary. This is because the Vision Alpha does not have a battery. It is recommended that the patient is switched onto the Conventional Mode on the Vision Alpha first, so that they are stable and then move them onto a portable ventilator.

19. What do I do if the patient has a cardiac arrest?

Follow your hospital protocol to manage these patients.

- Do not perform cardiac massage while on the HFOV setting.
- Turn the patient to conventional mode.
- Check for pneumothorax as normal.
- When patient relatively cardio vascularly stable restart HFOV
- If CVS unstable then patient is to stay on conventional ventilation
- Be aware that HFOV needs to be stopped to perform a 12 lead ECG.

20. How do I wean a patient off HFOV?

First their FiO_2 needs to be weaned so that it is <0.4 , then the Mean Airway Pressure can be weaned until it is $<24\text{cmH}_2\text{O}$. If the patient has remained at these settings for 12 hours or more and remained stable they can be moved on to a trial of conventional ventilation.

21. If the patient is no longer receiving HFO ventilation but their condition deteriorates can they receive HFO ventilation again?

Once a patient has been moved back to conventional ventilation, they should remain on the Vision Alpha ventilator, in the 'Conventional Mode' setting for 48 hours. If during this 48 hour period they deteriorate (or it is believed they may benefit from further HFO ventilation) they can go back on to HFO ventilation and work through algorithm.

If the patient continues to improve on conventional ventilation on the Vision Alpha they should be moved to a normal ventilator on ICU after 48 hours. Once they are off the Vision Alpha ventilator they are not to receive further HFO ventilation.

22. If the patient receives further HFO ventilation how long can they receive it for?

A total of 30 days post randomisation.

Caring for a patient on HFOV questions

1. Can I turn the patient?

Yes. Just be aware that this may cause de-recruitment of the lungs and you may need to go through a recruitment manoeuvre (step 1 of oxygenation algorithm) afterwards if they de-saturate.

2. Can I lay the patient prone?

Yes. Take advice from the OSCAR trial management group if necessary.

3. Can I suction the patient?

Yes. Generally suction should be avoided in the first 24 hours of HFOV. However, if there are concerns regarding excessive secretions, failure to oxygenate or ventilate, suctioning should be considered.

You must use an in-line catheter device and be aware that this may cause de-recruitment of the lungs. Approximately 10-15 minutes before procedure increase the base flow by 10 Lmin^{-1} and increase the Mean Airway Pressure by $5\text{cmH}_2\text{O}$, perform the procedure as quickly as possible.

Withdraw the suction catheter completely as this may, on occasion, interfere with mean airway pressure measurements.

Then return the Base Flow to previous setting, after 10-15 minutes reduce the Mean Airway Pressure. As this may cause de-recruitment of the lungs and you may need to hold the Mean Airway Pressure for a bit longer or re-recruit the lungs as per Step 1 of the oxygenation algorithm.

Keep suction to the minimum and as required only.

4. Can the patient have physiotherapy?

Yes. They can have physiotherapy as normal. However, due to the oscillations through the chest there may be less need for this.

Supplementary questions

[These will be updated on a regular basis]

SUPPLEMENTARY QUESTIONS ADDED 7 December 2009:

A patient has been ventilated for 5 consecutive days, extubated 2 days ago but now requires re-intubation. Does this mean that the patient has already been ventilated for 5 days so we have only 2 days left to decide whether to randomise the patient?

No. If a patient is extubated and then re-intubated, the clock restarts at day 1 following re-intubation. A patient needs to be ventilated for less than 7 consecutive days (168 hours) from the moment of either intubation or re-intubation in order to meet the exclusion criteria.

When does ventilation start?

The actual time when ventilation commences is when the patient is first ventilated on any ICU. If the patient is transferred from another Level 3 ICU, ventilation starts when the patient was ventilated on the referring ICU. If the patient comes from the operating theatre intubated and ventilated, ventilation starts when he/she reaches ICU.

Our patient has been intubated and ventilated whilst in theatre. Does that mean ventilation started in theatre?

No. For the purpose of the OSCAR trial, ventilation in theatre does not count as it is not considered to be “therapeutic ventilation”.

A patient is currently on non-invasive ventilation. Is this defined as ventilated?

No. When a patient is receiving a non-invasive mode of ventilation these days will not be counted as a day ventilated.

The amplitude on the Vision Alpha ventilator has increased. What might cause such an increase?

Amplitude is determined by the compliance of the circuit and the patient’s lungs. Changes can be subtle but may be an effective early warning system. If there is an increase in amplitude you might want to consider the following:

- Secretions in the ET tube
- Have you repositioned the patient?
- Sedation
- NG tube drainage
- Patient biting on ET tube
- Movement/deviation of the ET tube
- Partial/total blockage of the ET tube

The patients’ amplitude has increased slightly but I have excluded a pneumothorax. Is there any other explanation?

Yes. Your initial thought to exclude a pneumothorax as the cause is correct but you might not always see an increase in the amplitude depending on the type of pneumothorax. The amplitude might have fallen simply due to an improvement in the patients condition.

What level of sedation does a patient require to receive HFOV?

For those new to HFOV it may be easier to initiate HFOV if the patient is reasonably well sedated because the transition may be accompanied by hypercapnia. Sedation should be tailored to the patient's individual needs so a patient may or may not require extra sedation to what they are currently receiving if they are randomised to HFOV. Sedation breaks should be given as normal.

Do I have to check the Vision Alpha ventilator prior to randomising a patient?

Yes. You need to ensure that the ventilator works in both the conventional and HFOV modes prior to randomising a patient. This process can be done using the "training set" that you have on the unit. Please do not open a new patient set just to check the ventilator is operative. Once you have checked the ventilator ensure that there is a patient set and impedance valve available should your patient be randomised to the HFOV of the study. Only once the ventilator and patient consumables check has been performed should a suitable patient be randomised.

We have just randomised a patient to OSCAR and the patient was allocated to the intervention arm of the study. How soon do we have to start HFOV?

Those patients randomised to HFOV should commence HFOV as soon as possible following randomisation (i.e. within an hour of randomisation).

Our unit uses Airway Pressure Release Ventilation (APRV) for our control mode of ventilation. What PEEP value do we write on the OSCAR documentation if our patient is being ventilated using APRV as part of the control group?

Leave the PEEP value blank and write a note on the form stating that the patient is receiving APRV.

Our patient has had oesophageal surgery. Can they be included in the OSCAR trial?

Yes.

A patient with H1N1 has had a pulmonary bleed. Can they still be entered into OSCAR?

Yes, after initial resuscitation.

Our patient is currently on 40% oxygen with a MAP of 22cmH₂O. The patient has been held at the current oscillator settings for 10 hours and then we are going to convert to a trial of conventional ventilation for up to 48 hours. However, the consultant would rather leave them on their current HFOV settings for a further 12 hours. Is this a problem?

No. The important timing consideration is that once a patient has a FiO₂ of ≤ 0.40 and a MAP of $\leq 24\text{cmH}_2\text{O}$ the patient should be held at their current oscillator settings to ensure that they are stable before conversion to conventional ventilation. If the consultant wants more time to ensue they are stable, this is entirely appropriate.

What does the LED bar graph at the top of the Vision Alpha represent?

The black square in the middle of the LED represent the MAP. As you look at the front of the ventilator, the green squares to the right of this black square represent the inspiratory range and those to the left the expiratory range.

Who do I contact for **medical** advice?

Consult with your **principal investigator** or your **OSCAR research nurse** first. Then discuss the patient **with the seniors in your ICU**.

If you are a senior member of staff and it is:

Within office hours (8am - 5pm) please telephone:

The trial office: **(01865) 220614** who will contact one of the on-call consultants.

If there is no reply please contact:

Dr Duncan Young on **(01865) 741166** bleep 1249.

Or the trial clinical mobile: **07825 733 953**

Out of hours (5pm to 8am) and you have an **urgent** clinical query

Once the issue has been **discussed with seniors in your ICU**, the **senior member** of staff should call the on-call mobile:

On-call mobile: 07825 733 953

The OSCAR mobile is diverted to one of the Management Group clinicians who endeavour to provide 24 hour on-call support.

Who do I contact for **technical** problems with the **ventilator**?

In the first instance please refer to the **OSCAR abbreviated manual** (laminated pages with ventilator containing troubleshooting tips) and also a copy at nurses station.

Your principal investigator/OSCAR research nurse or respiratory staff may be able to help.

If the issue cannot be resolved in-house, or you need **urgent ventilator** advice, contact **Inspiration healthcare** telephone: **(01455) 840 555**.

Who do I contact for administrative queries?

Contact the trial office, telephone the OSCAR trial office on **(01865) 220614**, If you have no response immediately, leave an answer phone message and we will get back to you as soon as possible. Or you can email us your request/query on: OSCAR.trial@nda.ox.ac.uk.

Who do I contact for information about the OSCAR trial generally?

See our website: <http://www.oscar-trial.org>