

**OPTN Lung Transplantation Committee
Promote Efficiency of Lung Allocation Workgroup
Meeting Summary
May 21, 2024
Conference Call**

**Marie Budev, DO, MPH, Chair
Matthew Hartwig, MD, Vice Chair**

Introduction

The Promote Efficiency of Lung Allocation Workgroup (Workgroup) met via Webex teleconference on 05/21/2024 to discuss the following agenda items:

1. System requirements discussion
2. Review & Recommend project

The following is a summary of the Workgroup's discussions.

1. System requirements discussion

On April 23, 2024, the Workgroup discussed OPTN Computer System enforcement of proposed policy requirements for the promote efficiency of lung donor testing project. The Workgroup defined "initial offer" as when the Organ Procurement Organization (OPO) sends electronic notification to the first program on the match run. The Workgroup defined "during allocation" as the time between the initial offer being sent until the time of organ offer acceptance.

Below are the recommendations for the lung donor testing project to date.

Arterial blood gases:

- Maintain requirement for arterial blood gas (ABG) and ventilator settings on 5 cm/H2O/positive end expiratory pressure (PEEP) including partial pressure of oxygen (PO2)/fraction of inspired oxygen (FiO2) ratio and 100% FiO2 within 2 hours of the initial offer
 - Require subsequent ABGs with these ventilator settings every 4 hours during allocation and every 8 hours after both lungs are accepted until organ recovery
 - Allow allocation to continue even if ABGs are more than 4 hours old
 - Recommend a 30-minute waiting period after any lung recruitment maneuver before subsequent ABG testing
 - Recommend in guidance tidal volume of 6-8ml per kg per ideal body weight
 - Provide guidance that PEEP may need to be adjusted due to donor weight

Chest x-rays:

- Requiring in policy an updated chest x-ray every 12 hours during allocation
 - Allowing allocation to continue even if the chest x-ray is more than 12 hours old

Chest computed tomography (CT) scan:

- Requiring in policy a chest CT scan, if performed
 - Recommend in guidance that the chest CT scan be performed within 72 hours of the initial offer

- Require an echocardiogram (echo) or right heart catheterization (RHC) in policy
 - Including RHC in policy allows OPOs to forego an echo when RHC data is already available

Mycology sputum smear:

- In guidance, change test name “mycology sputum smear” to “fungal culture”

Summary of discussion:

The Workgroup recommended defining challenge gas in policy as an ABG drawn with these ventilator settings: FiO₂ at 100%, PEEP of 5cmH₂O, tidal volume of 6-8ml per kg per ideal body weight.

The Workgroup recommended including in policy the waiting period for drawing challenge gases following recruitment method.

The Workgroup recommended allowing OPOs to upload images or an interpretation to fulfill the requirement for the chest x-ray prior to the initial offer.

The Workgroup updated their previous recommendation to require subsequent chest x-rays every 12 hours to every 24 hours.

The Workgroup recommended stating the intent of including echo and RHC in policy and in guidance.

The Workgroup recommended removing “description of sputum” from the policy requirement for sputum gram stain.

The Workgroup reviewed their updated policy and guidance recommendations and recommended the lung donor testing project to the Lung Transplantation Committee.

Reviewing and adjusting previous recommendations

The Workgroup recommended defining challenge gas in policy as an ABG drawn with these ventilator settings: FiO₂ at 100%; PEEP of 5cmH₂O; tidal volume of 6-8ml per kg ideal body weight. Current policy requires an ABG drawn at 100% FiO₂ and PEEP of 5cmH₂O within two hours of the initial offer. There was agreement that existing policy language lists ventilator settings consistent with a challenge gas. Members reported that tidal volumes of 6-8ml per kg ideal body weight is standard for challenge gases, therefore, should be included in the definition. Although challenge gas is a widely used term in the lung community, members felt adding this policy definition would further clarify required ventilator settings for lung donor testing. Requiring a challenge gas for all ABG testing for allocation (ie. prior to initial offer, during allocation, upon acceptance) standardizes the testing requirements and ensures each result accurately reflects the PO₂/FiO₂ (P/F) ratio.

The Workgroup recommended including in policy the waiting period for drawing challenge gases following recruitment method. As discussed on February 13, 2024, allowing 30 minutes after recruitment will ensure challenge gases are reflective of the donor’s true lung function. ABGs drawn shortly after recruitment elevate the P/F ratio, so that donor lungs appear to be of higher quality.

The Workgroup recommended allowing OPOs to upload images or an interpretation to fulfill the requirement for the chest x-ray prior to the initial offer. Current policy requires a chest x-ray interpreted by a radiologist or qualified physician within 3 hours prior to the offer. Members from OPOs noted that OPOs may have chest x-ray images available but cannot obtain an interpretation by qualified personnel for a significant time period; for the sake of allocation efficiency, the OPO may begin sending offers, but they would be out of compliance with OPTN policy. Concerns about the potential legal ramifications of

providing chest x-ray images without interpretation were noted. Since members from lung transplant programs previously agreed they are going to review imaging themselves in any case, the Workgroup proceeded with updating the policy requirement to include an option for chest x-ray images to be uploaded without an interpretation.

The Workgroup updated their previous recommendation to require subsequent chest x-rays every 12 hours to a chest x-ray image or interpretation every 24 hours. Lung transplant programs may not need a chest x-ray every 12 hours but they would not want to go more than 24 hours without reviewing some form of imaging at least every 24 hours. It was noted that depending on the donor, some programs may request more frequent chest x-rays because donor lung status may change rapidly.

The Workgroup recommended stating the intent of including echo and RHC in policy and in guidance. Although clinical intent is not typically included in OPTN policy, members agreed that it would be helpful to state in policy that the echo or RHC requirement is to evaluate the donor for pulmonary hypertension (PH). Stating the intent may help guide OPOs to obtain the information that lung transplant programs need to evaluate the lungs. A statement will be included in guidance to indicate that lung transplant programs may request RHC if the echo prior to the offer results in suspected PH.

The Workgroup recommended removing “description of sputum” from the policy requirement for sputum gram stain as it is not clinically relevant to lung transplant programs in offer evaluation. No impacts to the OPTN Computer System were noted.

Specific scenarios & other system considerations

To inform future technical implementation and compliance monitoring, the Workgroup considered several scenarios related to their ABG recommendations. If the lung is accepted on the lung match run – at which point ABGs switch to every 8 hours – but later declined, members stated they would expect OPOs to return to obtaining ABGs every 4 hours. If the lungs were accepted outside of the lung match (ie. On heart-lung match, directed donation), members agreed that the requirement for ABGs every 8 hours upon acceptance should be upheld.

The Workgroup considered which event would conclude the requirements for ABGs every 8 hours and chest x-ray every 24 hours. Selecting an event that is already captured within the OPTN Computer System would be ideal, to align with system enforcement capabilities. One example would be cross-clamp date and time entered. There was agreement that OPOs should no longer have to report this information when the surgeons are going to the operating room for organ recovery.

2. Review and recommend project

The Workgroup reviewed language reflecting their recommended updates to [OPTN Policy 2.11.D: Required Information for Deceased Lung Donors](#) and [Guidance](#) on Requested Deceased Donor Information.

Summary of discussion:

The Workgroup recommended the lung donor testing project to the Lung Transplantation Committee.

There was no additional discussion.

Next steps:

On May 23, 2024, the Lung Transplantation Committee will review the lung donor testing project, including recommended updates to [OPTN Policy 2.11.D: Required Information for Deceased Lung Donors](#) and [Guidance](#) on Requested Deceased Donor Information.

Upcoming Meetings

- June 11, 2024, teleconference, 5PM ET

Attendance

- **Workgroup Members**
 - Marie Budev
 - Matthew Hartwig
 - Erika Lease
 - Dennis Lyu
 - Thomas Kaleekal
 - Jackie Russe
 - Erin Halpin
 - PJ Geraghty
 - Mike Morrow
 - Ernestina Melicoff
- **HRSA Representatives**
 - None present
- **SRTR Staff**
 - David Schladt
- **UNOS Staff**
 - Kelley Poff
 - Kaitlin Swanner
 - Leah Nunez
 - Chelsea Hawkins
 - Holly Sobczak
 - Samantha Weiss
 - Houlder Hudgins
 - Darby Harris
 - Susan Tlusty