Introduction

The OPO Committee met via teleconference on 06/13/2017 to discuss the following agenda items:

1. System Optimizations Policy Language

The following is a summary of the Committee’s discussions.

1. System Optimizations Policy Language

Summary of discussion:

The System Optimizations Work Group has been developing policy changes to improve the efficiency of organ placement. The proposal includes the following changes:

- Reduce the current time limits for responding to electronic organ offers
- Add additional time limit of 1 hour to make a final decision once all required information has been provided
- Limit the number of offers that can be accepted for one candidate
- Require OPOs to manage match run acceptances in real time
- Revise required deceased donor information in Policy 2.11
- Revise or create definitions

The Committee reviewed the draft policy language and recommended several minor edits. The Committee then unanimously approved the following policy language by a vote of 12 in favor, 0 opposed, and 0 abstentions:

**Organ offer acceptance**

When the transplant hospital notifies the host OPO that they accept the organ offer for an intended recipient, pending review of organ anatomy.

**Organ offer refusal**

When the transplant hospital notifies the OPTN Contractor or the host OPO that they are declining the organ offer.

**Provisional yes**

When the transplant hospital notifies the host OPO that they have evaluated the offer and are interested in accepting the organ or receiving more information about the organ.
2.2 OPO Responsibilities

The host OPO is responsible for all of the following:

1. Identifying potential deceased donors.
2. Providing evidence of authorization for donation.
4. Maintaining documentation used to exclude any patient from the imminent neurological death data definition or the eligible data definition.
5. Verifying that death is pronounced according to applicable laws.
6. Establishing and then implementing a plan to address organ donation for diverse cultures and ethnic populations.
7. Ensuring the clinical management of the deceased donor.
8. Ensuring that the necessary tissue-typing material is procured, divided, and packaged.
10. Preserving, labeling, packaging, and transporting the organs. Labeling and packaging must be completed using the OPTN organ tracking system according to Policy 16: Organ and Vessel Packaging, Labeling, Shipping, and Storage.
11. Executing the match run and using the resulting match for each deceased donor organ allocation. The previous sentence does not apply to VCA transplants; instead, members must allocate VCAs according to Policy 12.2: VCA Allocation.
12. Documenting and maintaining complete deceased donor information for seven years for all organs procured.
13. Ensuring that all deceased donor information, according to Policy 2.11: Required Deceased Donor Information, is reported to the OPTN Contractor upon receipt to enable complete and accurate evaluation of donor suitability by transplant programs.
14. Ensuring that documentation for all of the following deceased donor information is submitted to the OPTN Contractor upon receipt to enable complete and accurate evaluation of donor suitability by transplant programs:
   a. ABO source documentation
   b. ABO subtype source documentation
   c. Infectious disease results source documentation
   d. Death pronouncement source documentation
   e. Authorization for donation source documentation
   f. Human leukocyte antigen (HLA) type
   g. Donor evaluation and management
   h. Donor medical and behavioral history
   i. Organ intraoperative findings
15. Maintaining blood specimens appropriate for serologic and nucleic acid testing (NAT), as available, for each deceased donor for at least 10 years after the date of organ transplant, and ensuring these samples are available for retrospective testing. The host OPO must document the type of sample in the deceased donor medical record and, if possible, should use qualified specimens.

2.11 Required Deceased Donor Information

The host OPO must obtain report to the OPTN Contractor upon receipt all of the following information for each potential deceased donors:

1. Age
2. Diagnosis (or cause of brain death)
3. Sex
4. Donor behavioral and social history
5. Donor management information
6. Donor medical history
7. Donor evaluation information to include all laboratory testing, radiologic results, and injury to the organ
8. Ethnicity
9. Human leukocyte antigen (HLA) information, according to Policy 4.3: Requirements for Performing and Reporting HLA Typing
10. Organ anatomy and recovery information
11. Height
12. Weight
13. All vital signs, including blood pressure, heart rate, and temperature

The potential transplant program team must have the opportunity to speak directly with responsible onsite OPO donor personnel to obtain current information about the deceased donor’s physiology.

2.11.A Required Information for Deceased Kidney Donors

The host OPO must provide all the following additional information for all deceased donor kidney offers:

1. Date of admission for the current hospitalization
2. Donor name
3. Donor ID
4. Ethnicity
5. Relevant past medical or social history
6. Current history of abdominal injuries and operations
7. Current history of average blood pressure, hypotensive episodes, average urine output, and oliguria
8. Current medication and transfusion history
9. Anatomical description, including number of blood vessels, ureters, and approximate length of each
10. Biopsy results, if performed
11. Indications of sepsis
12. Injuries to or abnormalities of blood vessels, ureters, or kidney
13. Kidney perfusion information, if performed
14. Assurance that final blood and urine cultures are pending
15. Final urinalysis
16. Recovery blood pressure and urine output information
17. Recovery medications
18. Type of recovery procedure, flush solution and method, and flush storage solution
19. Warm ischemia time and organ flush characteristics

2.11.B Required Information for Deceased Liver Donors

The host OPO must provide all the following additional information for all deceased donor liver offers:
1. Donor name
2. Donor ID
3. Ethnicity
4. Height
5. Weight
6. Vital signs, including blood pressure, heart rate and temperature
7. Social history, including drug use
8. History of treatment in hospital including current medications, vasopressors, and hydration
9. Current history of hypotensive episodes, urine output, and oliguria
10. Indications of sepsis
11. Aspartate aminotransferase (AST)
12. Bilirubin (direct)

1. Human leukocyte antigen (HLA) typing if requested by the transplant hospital, including A, B, Bw4, Bw6, C, DR, DR51, DR52, DR53, DQA1, DQB1, and DPB1 antigens in the timeframe specified by the transplant program
2. Other laboratory tests within the past 12 hours of the offer including:
   a. Alanine aminotransferase/asparate aminotransferase (ALT/AST)
   b. Alkaline phosphatase
   c. Total and direct bilirubin
   d. Creatinine
   e. Hemoglobin (hgb) and hemocrit (hct)
   f. International normalized ratio (INR) or Prothrombin (PT) if INR is not available, and
   e. P partial thromboplastin time (PTT)
   g. White blood cell count (WBC)
3. Pre-procurement biopsy results, if performed
4. Pre-procurement CT imaging results, if performed
5. Human leukocyte antigen (HLA) typing if requested by the transplant hospital, including A, B, Bw4, Bw6, C, DR, DR51, DR52, DR53, DQA1, DQB1, and DPB1 antigens in the timeframe specified by the transplant program

If a transplant program requests HLA typing for a deceased liver donor, it must communicate this request to the OPO and the OPO must provide the HLA information listed above. The transplant program must document requests for donor HLA typing, including the turnaround time specified for reporting the donor HLA typing results. The OPO must document HLA typing provided to the requesting transplant program.

2.11.C Required Information for Deceased Heart Donors

The host OPO must provide all the following additional information for all deceased donor heart offers:

1. Height
2. Weight
3. Vital signs, including blood pressure, heart rate, and temperature
4. History of treatment in hospital including vasopressors and hydration
5. Cardiopulmonary, social, and drug activity histories
6. Details of any documented cardiac arrest or hypotensive episodes
7. 12-lead interpreted electrocardiogram interpretation, if available
8. 2. Arterial blood gas results and ventilator settings
9. 3. Cardiology consult, if performed or echocardiogram, if the hospital has the facilities
10. Echocardiogram, if the hospital has the facilities (consider transesophageal echocardiography if echo windows do not allow for sufficient heart function assessment)
Human leukocyte antigen (HLA) typing if requested by the transplant hospital, including A, B, Bw4, Bw6, C, DR, DR51, DR52, DR53, DQA1, DQB1, and DPB1 antigens prior to the final organ acceptance

For heart deceased donors, if a transplant program requires donor HLA typing prior to submitting a final organ acceptance, it must communicate this request to the OPO and document the request. The OPO must provide the HLA information listed above and document that the information was provided to the transplant program.

The heart recovery team must have the opportunity to speak directly with the responsible ICU personnel or the onsite donor coordinator in order to obtain current information about the deceased donor’s physiology.

**2.11.D Required Information for Deceased Lung Donors**

The host OPO must provide all the following additional information for all deceased lung donor offers:

1. Height
2. Weight
3. Vital signs, including blood pressure, heart rate, and temperature
4. History of medical treatment in hospital including vasopressors and hydration
5. Smoking history
6. Cardiopulmonary, social, and drug activity histories
7. Arterial blood gases and ventilator settings on 5 cm/H2O/PEEP including PO2/FIO2 ratio and preferably 100% FIO2, within 2 hours prior to the offer
8. Bronchoscopy results, if performed
9. Chest x-ray interpreted by a radiologist or qualified physician within 3 hours prior to the offer
10. Details of any documented cardiac arrest or hypotensive episodes
11. Arterial blood gases and ventilator settings on 5 cm/H2O/PEEP including PO2/FIO2 ratio and preferably 100% FIO2, within 2 hours prior to the offer
12. HLA typing if requested by the transplant hospital, including A, B, Bw4, Bw6, C, DR, DR51, DR52, DR53, DQA1, DQB1, and DPB1 antigens prior to final organ acceptance
13. Electrocardiogram
14. Echocardiogram, if the OPO has the facilities
15. Sputum gram stain, with description of sputum
16. Bronchoscopy results, if requested by the transplant hospital, including A, B, Bw4, Bw6, C, DR, DR51, DR52, DR53, DQA1, DQB1, and DPB1 antigens prior to final organ acceptance

If the host OPO cannot perform a bronchoscopy, it must document that it is unable to provide bronchoscopy results and the receiving transplant hospital may perform it. The lung recovery team may perform a confirmatory bronchoscopy provided unreasonable delays are avoided and deceased donor stability and the time limitations in Policy 5.5.B: Time Limit for Acceptance are maintained.

For lung deceased donors, if a transplant program requires donor HLA typing prior to submitting a final organ acceptance, it must communicate this request to the OPO and document the request. The OPO must provide the HLA information listed above and document that the information was provided to the transplant program.

The lung recovery team must have the opportunity to speak directly with the responsible ICU personnel or the onsite OPO donor coordinator in order to obtain current information about the deceased donor’s physiology.

**2.11.E Required Information for Deceased Pancreas Donors**

The host OPO must provide all the following additional information for all deceased donor pancreas offers:
1. Donor name
2. Donor ID
3. Ethnicity
4. Weight
5. Date of admission for the current hospitalization
6. Alcohol use (if known)
7. Current history of abdominal injuries and operations including pancreatic trauma
8. Current history of average blood pressure, hypotensive episodes, cardiac arrest, average urine output, and oliguria
9. Current medication and transfusion history
10. Pertinent past medical or social history including pancreatitis
11. 1. Familial history of diabetes (including Type 1 and Type 2)
2. Hemoglobin A1C, if performed
3. HLA information as follows: A, B, Bw4, Bw6, C, DR, DR51, DR52, DR53, DQA1, DQB1, and DPB1 antigens prior to organ offers
12. 4. Insulin protocol
13. Indications of sepsis
14. 5. Serum amylase
15. 6. Serum lipase
16. HLA information as follows: A, B, Bw4, Bw6, C, DR, DR51, DR52, DR53, DQA1, DQB1, and DPB1 antigens prior to organ offers

2.12 Requested Deceased Donor Information

2.12.A Kidney

With each kidney offer, the host OPO should provide the receiving transplant program with the following biopsy information for kidneys with a Kidney Donor Profile Index (KDPI) score greater than 85%, and for all other kidneys at the request of the accepting surgeon:

1. Wedge biopsy with the sample measuring approximately 10 mm (length) by 5 mm (width) and 5 mm (depth)
2. A sample that captures a minimum of 25 glomeruli
3. A frozen or fixed section slide, or the biopsy material, may accompany the kidney.

2.12.B Heart

With each heart offer, the host OPO should provide all of the following information to the receiving transplant hospital:

1. Coronary angiography (for male donors over 40 years old or female donors over 45 years old)
2. Central venous pressure (CVP) or Swan Ganz instrumentation
3. Cardiology consult
4. Cardiac enzymes, including creatinine phosphokinase (CPK) isoenzymes

A transplant hospital may request a heart catheterization of the deceased donor where the donor’s medical or social history reveals at least one of the following past medical histories:

- Male over 40 years old or female over 45 years old
- Segmental wall motion abnormality on echo
• Troponin elevation
• History of chest pain
• Abnormal electrocardiogram (ECG) consistent with ischemia or myocardial infarction
• History of two or more of the following:
  ◦ Cocaine or amphetamine use
  ◦ Diabetes
  ◦ Hyperlipidemia
  ◦ Hypertension
  ◦ Intra-cerebral bleeding
  ◦ Significant smoking
  ◦ Strong family history of coronary artery disease

2.12.C Lung
The host OPO should provide all of the following information to the receiving transplant hospital:

1. Measurement of chest circumference at the level of nipples
2. Measurement by chest x-ray vertically from the apex of the chest to the apex of the diaphragm and transverse at the level of the diaphragm
3. Mycology sputum smear
4. Non-contrast computed tomography (CT) scan of the chest, if requested by the transplant hospital

5.6 Receiving and Accepting Organ Offers

5.6.B Time Limit for Review and Acceptance of Organ Offers
A transplant hospital must access deceased donor information in the match system within one hour 30 minutes of receiving the initial organ offer notification. If the transplant hospital does not access the match system within this time, the offer will be considered refused, and it is permissible for the host OPO to enter an offer refusal.

Transplant hospitals must either accept or refuse the organ submit to the OPTN Contractor a provisional yes or an organ offer refusal within one hour 30 minutes of accessing the deceased donor information required for an organ according to Policy 2.3: Evaluating and Screening Potential Deceased Donors. If the transplant hospital does not respond within this time submit a provisional yes or an organ offer refusal within 30 minutes, the offer expires and the organ may be offered to the transplant hospital for the candidate that appears next on the match run.

Once the host OPO has provided all the required deceased donor information according to Policy 2.11: Required Deceased Donor Information, with the exception of organ anatomy and recovery information, then the transplant hospital must respond to the host OPO within one hour of receiving notification of the primary offer with either of the following:

- An organ offer acceptance
- An organ offer refusal

If the transplant hospital does not respond within one hour, it is permissible for the host OPO to offer the organ to the transplant hospital for the candidate that appears next on the match run.

This policy does not apply to VCA transplants.
5.6.C Organ Offer Acceptance Limit

For any one candidate, the transplant hospital can only have two organ offer acceptances for each organ type. The host OPO must immediately report the transplant hospital acceptances to the OPTN Contractor.

5.6.CD Effect of Acceptance

When a transplant hospital accepts an OPO’s organ offer without conditions, this acceptance binds the transplant hospital and OPO unless they mutually agree on an alternative allocation of the organ.

Next steps:
Distribute proposal for public comment in July 2017.

Upcoming Meeting
- TBD