

**OPTN/UNOS Liver and Intestinal Organ Transplantation Committee
Report to the Board of Directors
June 1-2, 2015
Atlanta, Georgia**

**David Mulligan, MD, Chair
Ryutaro Hirose, MD, Vice Chair**

Contents

Action Items	2
1. Ongoing Review of MELD/PELD Exceptions	2
2. Proposed Membership and Personnel Requirements for Intestine Transplant Centers.....	3
Committee Projects	4
3. Liver Distribution Redesign Modeling (Redistricting of Regions).....	4
4. National Liver Review Board for MELD/PELD Exceptions	6
5. Develop Materials to Educate RRB Members and Promote Consistent Reviews	6
Committee Projects Pending Implementation	7
6. Cap the Hepatocellular Carcinoma (HCC) Score at 34	7
7. Delay the Hepatocellular Carcinoma (HCC) Exception Score Assignment.....	7
8. Add Serum Sodium to the MELD Score	7
9. Re-instate the No Appeal, No Withdrawal Button for Denied MELD/PELD Exceptions	8
Implemented Committee Projects	8
10. Regional Distribution of Livers for Critically Ill Candidates, (Share 35)	8
Review of Public Comment Proposals	9
11. Proposal to Require Another Match Run Based on Infectious Disease Test Results (Disease Transmission Advisory Committee).....	9
12. Proposal to Establish Pediatric Training and Experience Bylaw Requirements (Pediatric Committee)	10
Other Committee Work.....	10
13. Waiting List Modification Reports	10
Meeting Summaries	11

OPTN/UNOS Liver and Intestinal Organ Transplantation Committee
Report to the Board of Directors
June 1-2, 2015
Atlanta, Georgia

David Mulligan, MD, Chair
Ryutaro Hirose, MD, Vice Chair

This report reflects the work of the OPTN/UNOS Liver and Intestinal Organ Transplantation Committee during December 2014-May 2015 period.

Action Items

1. Ongoing Review of MELD/PELD Exceptions

Public Comment: N/A

The MELD and PELD scores used since 2002 to prioritize offers for liver transplant candidates are an estimate of a candidate's risk of 3-month waiting list mortality. These scores allow candidates to be ranked based on their relative urgency for a liver transplant. However, in some cases the calculated MELD and PELD score may not reflect those patients' need for a liver transplant, due to the etiology of their liver disease. This is addressed in OPTN Policy [9.3: Score and Status Exceptions](#), which states that "If a candidate's transplant program believes that a candidate's MELD or PELD score does not appropriately reflect the candidate's medical urgency, the transplant physician may apply to the Regional Review Board (RRB) for a MELD or PELD score exception."

Following a national consensus conference in 2006¹, guidelines for several specific diagnoses (Hepatopulmonary Syndrome (HPS), Cholangiocarcinoma (CCA), Cystic Fibrosis (CF), Familial Amyloid Polyneuropathy (FAP), Primary Hyperoxaluria (PH), and Portopulmonary Syndrome (PPS)) were developed and distributed to the RRBs, and were ultimately incorporated into OPTN Policy in November 2009. These are described in Policy 9.3.D Specific MELD/PELD Exceptions.

Since 2009, the Liver and Intestinal Organ Transplantation Committee has continued to review the exception requests submitted to the RRBs, with a plan to supplement the MESSAGE exception guidelines. The Committee reviewed all of the non-HCC initial MELD exception requests submitted between May 1, 2012 and April 30, 2013. Thirty percent fell into categories that are covered by current policy, as denoted by asterisks. Hyponatremia, hydrothorax, and ascites should all be addressed by the proposal to add serum sodium to the MELD score, passed by the Board in 2014 and slated for implementation. Three diagnoses accounted for a large proportion of remaining exceptions: neuroendocrine tumors (NET), polycystic liver disease (PLD), and primary sclerosing cholangitis (PSC). Committee members reviewed the medical literature for these diagnoses when drafting guidelines for these diagnoses as described in the accompanying mini brief (**Exhibit A**).

¹ Freeman RB Jr, Gish RG, Harper A, Davis GL, Vierling J, Lieblein L, Klintmalm G, Blazek J, Hunter R, Punch J. Model for end-stage liver disease (MELD) exception guidelines: Results and recommendations from the MELD exception study group and conference (MESSAGE) for the approval of patients who need liver transplantation with diseases not considered by the standard MELD formula. Liver Transpl. 2006 Dec;12 Suppl 3:S128-36

Additionally, Candidates with Portopulmonary Hypertension meeting the criteria in *Table 9-2* are eligible for MELD or PELD score exceptions that do not require evaluation by the full RRB. The transplant program must submit a request for a specific MELD or PELD score exception with a written narrative that supports the requested score. Templates were developed for these exceptions in 2010 to aid the transplant programs in the process of submitting the required information to justify the exception. The Committee has identified additional elements to be incorporated into the template for Portopulmonary Hypertension (**Exhibit B**) for the purposes of policy research. If approved, the Committee will continue to monitor this effort and the additional data collected for potential additions or revisions to policy.

After careful consideration, the Committee unanimously voted in support of forwarding the guidance document to the Board for consideration by a vote of 12 in favor, 0 opposed, 0 abstentions.

RESOLVED, that the additions and modifications to *The Guidance to Liver Transplant Programs and Regional Review Boards to for MELD/PELD Exceptions Submitted for Neuroendocrine Tumors (NET), Polycystic Liver Disease (PLD), Primary Sclerosing Cholangitis (PSC) and Portopulmonary Hypertension (POPH)* as set forth in Exhibit C, are hereby approved, effective pending notice to the OPTN membership.

2. Proposed Membership and Personnel Requirements for Intestine Transplant Centers

Public Comment: [March – June 2014](#)

Public Comment: [January - March 2015](#)

There are currently no OPTN/UNOS requirements for qualifying intestinal programs, physicians, and surgeons. Currently, any transplant program that is approved to perform liver transplants can perform intestinal transplants. The Committee submitted a proposal for Membership and Personnel Requirements for Intestine Transplant Programs for public comment in August 2006, but it was not well supported, and the proposal was withdrawn. The main concerns expressed were that a large number of well-qualified programs and smaller volume programs would not be able to meet these requirements and that that no training program in the country would have met the requirements as written. The proposal also did not contain a transition plan for existing programs. The Committee was aware that the American Society of Transplant Surgeons (ASTS) was developing its own criteria for intestinal program accreditation that would set levels for volume and experience, so it agreed to postpone this effort until after the ASTS made its recommendations. The ASTS finalized its criteria for fellowship training programs in September 2008.

A Subcommittee of the Liver Committee made initial recommendations applying the bylaws for liver transplant surgeons and physicians with the ASTS volume numbers (10 transplants per year) as a starting point. These were presented to the MPSC in November 2009, and objections were expressed similar to ones regarding the prior proposal. In December 2012, the Subcommittee presented recommendations to the MPSC, and once again, concerns about the volume requirements were expressed because the number of intestine transplant surgeries has been declining since 2007. Concerns about how the bylaw would be implemented also resurfaced. In order to facilitate better cross-committee communication, a joint Liver-MPSC subcommittee was created in the fall of 2013. This joint subcommittee made several modifications to the proposal to address the concerns that had been expressed.

The Proposal for Membership and Personnel Requirements for Intestine Transplant Programs was circulated for public comment from [March 14, 2014 - June 13, 2014](#). 17 responses, in addition to the regional and Committee responses were received. While public comment was largely favorable, with 90% in favor, only 1 region, and 1 committee voting in opposition, commenters called for additional amendments to the proposal including the need for a designated dietician, affiliation with a gut rehabilitation program and a less constraining time limit on the requirements for full approval. Additionally a more detailed plan for transition of existing programs was requested.

The Committee recognized an opportunity to further improve the proposal before presenting it to the Board for consideration. The proposal was redrafted to address the concerns of the community and it was recirculated for public comment from [January 27, 2015 - March 27, 2015](#).

The Committee considered and addressed public comment feedback on its proposed language. After careful consideration, the Committee unanimously voted in support of forwarding the proposal to the Board for consideration by a vote of 12 in favor, 0 opposed, 0 abstentions.

RESOLVED, that the additions and modifications to Appendix F: *Membership and Personnel Requirements for Liver Transplant Programs and Intestine Transplant Programs*, as set forth in Exhibit D, are hereby approved, effective pending programming and notice to the OPTN membership.

Committee Projects

3. Liver Distribution Redesign Modeling (Redistricting of Regions)

Public Comment: To be determined

Board Consideration: To be determined

Despite continued improvements in liver allocation and distribution over the last 15 years, waitlist mortality remains high for candidates with higher MELD/PELD scores. Significant disparity exists between OPOs and regions with regard to the mean MELD/PELD score at transplant and waitlist mortality. The Committee has been examining ways to direct livers to those most in need. The concept of redistricting, similar to the methodology used in designing school and political districts, was introduced to the Committee. Simulation modeling suggests that optimized or fewer geographic districts would likely reduce the variation in MELD/PELD score at transplant and reduce waitlist deaths.

In April 2014, the Committee endorsed the redistricting concepts and agreed to 1) educate the community about the concepts and 2) solicit feedback from the broader community before releasing a public comment proposal on the topic. In June, the Committee therefore released a [concept document along with a questionnaire](#) seeking community input on the concept. A total of 692 responses, as well as 6 letters, were received in response. These responses were analyzed to form the basis of an agenda and to identify potential key speakers for a public forum on Redesigning Liver Distribution, held in Chicago on September 16, 2014.

Following the September 2014 Liver Forum on Redesigning Liver Distribution, the Committee established several Ad Hoc Subcommittees, each composed partly of members of the committee and partly of additional subject matter experts. These working groups will address three key focus areas identified by the community: metrics to assess geographic disparity, logistical/transportation considerations, and financial issues. The issue of increasing liver donation and utilization was also identified as a key goal. The Committee

OPTN/UNOS Liver and Intestinal Organ Transplantation Committee

revived and repurposed an earlier subcommittee to address this topic in a parallel effort to redesigning liver distribution, to identify issues that may apply broadly to overall system improvement.

The subcommittees met several times each month via conference call to develop data-driven and consensus based recommendations on the key issues identified as they relate to the Liver Committee's specific quest to reduce geographic variation in severity of illness at transplant.

The Ad Hoc Subcommittee on Metrics of Disparity and Optimization of Distribution was tasked with reexamining and further defining the parameters that should be employed in a patient based distribution system. After extensive conversation, the members of the Subcommittee have agreed to consider incorporating additional metrics such as:

- Demand to supply ratio by DSA and region
- Waitlist mortality by DSA and region
- Transplant rate by DSA and region

The Metrics subcommittee is currently considering a model that would employ districts with overlaid "proximity circles" around the donor hospital. Waitlisted candidates that fall within these proximity circles would be assigned additional MELD points for prioritization. The idea is that the total number of livers "crossing in the air" may be fewer, with an associated reduction in transportation cost.

The Ad Hoc Subcommittee on Logistics and Transportation was tasked to identify "tools and rules" necessary to increase efficiency and facilitate broader sharing. It has identified several common logistical and transportation issues that arose after the implementation of Share 35, as well as different solutions implemented by various OPOs and centers. Although these recommendations may not lend themselves to being incorporated into policy, our committee believes that this conversation is an important first step in building stronger relationships and sharing best practices found within the community.

The Ad Hoc Subcommittee on Finances of Broader Sharing was tasked to identify the intricate factors associated with the cost of sharing non-local liver offers. Both in the concept paper questionnaire responses and at the public forum, members of the community expressed concern that while the overall economic impact of redistricting seemed positive, the analysis performed did not incorporate costs specific to the OPOs and transplant hospitals. The subcommittee is currently developing a survey for circulation to OPO and hospital administrators to gather data on these costs so that a more thorough economic analysis can be performed.

The Ad Hoc Subcommittee on Increasing Liver Donation and Utilization has been tasked to explore relationships between transplant hospitals, OPOs and others in the transplant community to maximize the number of livers donated and utilized for transplantation. The subcommittee has revisited the efforts of the previous Liver Utilization Subcommittee, including potential enhancements to the DonorNet® system and a donor profile for expedited placement that had been developed but not implemented.

Representatives from the Subcommittees will present these findings during a second Liver Forum, to be hosted on June 22, 2015 in Chicago, Illinois. The Committee will again meet the following day to discuss the outcomes of the Forum and determine a path forward for potential policy proposal.

4. National Liver Review Board for MELD/PELD Exceptions

Public Comment: TBD

Board Consideration: TBD

In November 2013, the Board of Directors directed the Committee to develop a plan for a National Review Board (NRB) for MELD/PELD exceptions. At the June 2014 Board meeting, the Committee presented the preliminary construct for an NRB, and requested Board feedback. The Board was supportive of the concept and urged the Committee to continue the work. The goal of an NRB is to promote consistent reviews across the country.

The construct that the Committee initially presented to the Board is similar to one that was circulated for public comment in 2004. In further development of this concept members agreed that one national liver review board posed more challenges than solutions in addition to an exponential estimated cost for programming.

The Committee is currently exploring the idea of combining current regions into “Super Review Boards.” Under this concept, regions would still be required to select representatives who would serve a 2-3 year term with a two term limit. Cases submitted for review would be assigned randomly to 7 members of the review board and would be closed when 4 members have voted; much like the way the current RRB process functions. Pediatric cases would be reviewed by pediatric providers and adult cases would be reviewed by adult providers. Additional standardized guidelines for approving MELD/PELD exception cases will be developed, to be used by the NRB to promote consistent reviews.

The Committee will likely seek endorsement from the Board on this refined concept in December, 2015.

5. Develop Materials to Educate RRB Members and Promote Consistent Reviews

Public Comment: N/A

Board Consideration: December, 2015 (Estimated)

Regional Review Board members have varying degrees of understanding about their duties, liver allocation policies, and the RRB process. The Committee has reviewed the prior and current RRB Operational Guidelines. Committee members have identified differences in the way RRBs operate (e.g., some have regular calls, some meet at Regional meetings; some have specific criteria for exceptions or timeframes for voting, etc.). The Committee has also identified the need to better educate incoming and new RRB members about MELD/PELD exception policies.

At the request of the Committee and in conjunction with the liver transplant programs in Region 5, staff have developed educational materials currently being piloted with the newest incoming RRB members in Region 5. This online tutorial includes a slide set with speaker notes and an assessment tool. Additionally, rotation schedules were updated to eliminate many of the complications attributed to constant member turnover. The first group to pilot this effort completed the tutorial provided. In December 2014, the first half of this group rotated off the Board and new members were provided the same online tutorial.

While it is too early to determine if these materials significantly impacted the process of the RRB, members have provided positive reviews. The Committee has developed similar materials for each region and will begin training the RRB Chairs in July, 2015. Each Chair will then train RRB members during the Fall 2015 regional meeting cycle.

The Committee will continue to monitor the effort and plan to implement the training as a requirement if shown to improve the system.

Committee Projects Pending Implementation

6. Cap the Hepatocellular Carcinoma (HCC) Score at 34

Public Comment: March - June 2013

Board Approval: November 2014

Implementation Date: Third quarter, 2015 (Estimated)

The Board approved the proposal to Cap the HCC Exception Score at 34 in November 2014. Candidates with a MELD/PELD score exception for HCC receive high priority on the liver waiting list, especially as their exception scores may increase automatically every three months. Increasingly, there are candidates with multiple HCC exception extensions who are now receiving regional offers under the “Share 35 Regional” policy implemented in June 2013. However, candidates with HCC exceptions are likely to have a much lower risk of disease progression or dropout (i.e., removal from the waiting list for death or being too sick) than those without HCC exceptions. This policy will cap the HCC exception score at 34, in effect giving candidates with calculated MELD/PELD scores of 35 and higher a better opportunity to receive regional offers under the new policy.

This policy is pending programming and will become effective upon implementation.

7. Delay the Hepatocellular Carcinoma (HCC) Exception Score Assignment

Public Comment: March - June 2014

Board Approval: November 2014

Implementation Date: Third quarter, 2015 (Estimated)

The Board approved the proposal to Cap the HCC Exception Score at 34 in November 2014. Candidates with a MELD/PELD score exception for HCC receive high priority on the liver waiting list, especially as their exception scores may increase automatically every three months. These candidates have significantly lower dropout rates (i.e., removal from the waiting list for death or being too sick) than non-HCC candidates, with the exception of those areas of the country with lengthy waiting times.

This policy is intended to address the disparities in drop-out rates between patients with HCC exceptions and those without is to delay the score assignment by 6-months. Simulation modeling has shown that this would reduce the disparity in the transplant and drop-out rates for those with and without HCC exceptions. In areas of the country with shorter waiting times to transplant, the delay will also allow a window of time for centers to observe candidates with rapidly growing tumors who may have very poor outcomes with a transplant.

This policy is pending programming and will become effective upon implementation.

8. Add Serum Sodium to the MELD Score

Public Comment: March 15, 2013- June 15, 2013

Board Approval: June, 2014

Implementation Date: Fourth quarter, 2015 (Estimated)

The Board approved the proposal to incorporate serum sodium into the MELD score calculation in June 2014. This included a Board amendment that would restrict the additional points for sodium to only those candidates with a MELD score (as currently calculated) of 12 or higher. Data from the University of Michigan showed that patients with a MELD score

below 12 would not benefit from adding serum sodium points to their MELD score calculation. These data suggest that the incorporation of serum sodium may lead to an increased chance of transplantation in candidates who may not benefit from transplantation at that time.

This policy is pending programming and will become effective upon implementation. Once programmed, the system will automatically calculate candidates' new MELD score. The Committee has requested a 7-day "grace period" during implementation for those candidates whose scores would be moved from one recertification category to another, and may as a result require immediate recertification (i.e., the candidates would face an immediate "downgrade" of their MELD score). If a center has not recertified these candidates on the 8th day after implementation, the candidates will be downgraded to their previous lower MELD score as is done currently when certification expires.

9. Re-instate the No Appeal, No Withdrawal Button for Denied MELD/PELD Exceptions

Board Approval: June, 2009

Implementation Date: Second half of 2015

Policy 3.6.4.5 states that "Each RRB must set an acceptable time for reviews to be completed, within twenty-one days after application; if approval is not given within twenty-one days, the patient's transplant physician may list the patient at the higher MELD or PELD score, subject to automatic referral to the Liver and Intestinal Organ Transplantation and Membership and Professional Standards Committees." When this policy was approved in November 2001, the 21-day time frame was intended to provide adequate time for dialogue between the physician and the RRB, while allowing the treating physician to make the ultimate decision regarding the candidate's listing, with the knowledge that the case would be referred to the Liver Committee and potentially the MPSC. When first implemented, the listing center could select the "no appeal/no withdraw" ("override") button on the application after a denial by the RRB. If this button was selected, the candidate would be assigned the requested score, with a warning that the case would be referred to the Liver Committee and potentially the MPSC. The button was last utilized by a center in 2003, and was inadvertently removed when a modification to the policy was subsequently implemented. Listing physicians still have the option of last-minute appeal of denied cases, but the Committee did not feel that is an appropriate solution. The Committee recommended that the "no appeal/no withdraw" button should be reinstated.

In June 2009, the Board approved a proposal to reinstate the MELD/PELD exception "override" button. This would enable a treating physician to make the ultimate decision regarding the candidate's listing in cases when the physician and the Regional Review Board (RRB) cannot reach an agreement. Such cases would be referred to the Liver Committee for additional review. This project is awaiting implementation.

Implemented Committee Projects

10. Regional Distribution of Livers for Critically Ill Candidates, (Share 35)

Public comment: September 2011 - January 2012

Board Approval: June, 2012

Implementation Date: June 18, 2013

The “Share 35” liver allocation policy was implemented on June 18, 2013. The policy gives greater priority to candidates with MELD/PELD scores of 35 and higher. The Committee has been monitoring the impact of the policy to ensure that the results are as intended.

The eighteen months data analyses were presented on April 29th, 2015 (**Exhibit E**). The data were very consistent with the 6-month and 1-year data. As seen previously, the percentage of regional sharing increased from 20.5% to 31.53% of deceased donor transplants. The percentage of transplants in recipients with MELD/PELD scores of 35 and higher increased from 18.9% to 26.4%. Six regions showed a slight increase in cold ischemia times (CIT). Overall, the median CIT increased from 6.0 to 6.1 hours.

Organ travel distance increased in 9 regions; the overall median distance increased from 56 to 83 miles. The percent of livers recovered for transplant and not transplanted decreased slightly, from 10.4% to 9.4%. The percentage of donors from whom livers were not recovered decreased from 13.8% to 13.0%.

Post-transplant survival was unchanged in the post-era (90.57% vs 90.58%); the adjusted rates were also not statistically different. Overall, the crude waiting list mortality rate was slightly lower. While most regions experienced lower mortality rates following Share 35, several Regions (4 and 6) showed increases. Candidates reaching a MELD/PELD score of 35 or higher had a greater transplant rate and a lower death rate in the post-policy era. The Committee will continue to review the effects of Share 35 at six-month intervals.

Review of Public Comment Proposals

The Committee has reviewed 2 of the 13 proposals released for public comment from January-March, 2015.

11. Proposal to Require Another Match Run Based on Infectious Disease Test Results (Disease Transmission Advisory Committee)

The Liver & Intestinal Organ Transplantation Committee reviewed the Disease Transmission Advisory Committee’s (DTAC) [Proposal to Require Another Match Run Based on Infectious Disease Test Results](#), which was circulated for public comment from January 27th-March 27th, 2015.

The purpose of [Policy 2.9 \(Required Deceased Donor Infectious Disease Testing\)](#) is to determine whether deceased organ donors have evidence of infection with a number of potentially transmissible pathogens. For some of these specific pathogens, organ transplant candidates may choose not to receive offers from positive donors. In this case, these candidates do not appear on a match run. Current policy does not require the host OPO to re-execute the match run if new results become available after execution of the initial match run.

The Committee expressed general support for the DTAC proposal but suggested that perhaps the multiple layer algorithms may be too complex. The Committee suggested when serologies are finalized, the match simply be rerun. The Committee emphasized the importance of timing and did not want to see an increase in organ discards as a result of the additional time that would need to be spent following these algorithms. Although some concern has surfaced in regional meetings or noted by other members of the community, the Committee felt that this policy would likely result in a change in behavior. The Committee stressed that if OPOs make an effort to complete serologies before making offers, it would limit the number of times that they would have to re-execute the match run as a result of positive results. Likewise, transplant centers will need to be held accountable for entering

appropriate acceptance criteria in the Waitlist. There should not be increased frequency in these cases.

12. Proposal to Establish Pediatric Training and Experience Bylaw Requirements (Pediatric Committee)

The The Liver & Intestinal Organ Transplantation Committee reviewed the [Proposal to Establish Pediatric Training and Experience Bylaw Requirements](#), which was circulated for public comment from January 27th-March 27th, 2015.

Pediatric transplantation is a subspecialty within the field of transplantation. In the current OPTN Bylaws, the primary surgeon and primary physician are not required to have pediatric training or experience in order to serve as key personnel at programs that perform pediatric transplants. The Bylaws' silence on pediatric program requirements means that there is not a universal standard of quality in pediatric care, which, in the most rare and serious of circumstances, could pose a risk to patient safety.

Although the Liver Committee is generally supportive of the concept of developing experience and training bylaws for the speciality of pediatric transplantation, they are not supportive of the proposal as written. The policy as written does not adequately address the idea that children and adolescents require providers with special expertise. There were great concerns raised over classifying all candidates under the age of 18 as pediatric. Members felt that there is a significant difference in the training and experience required for a surgeon and a physician caring for an 18 month old as opposed to an 18 year old. The Committee suggests that the Pediatric Committee take a closer look at this factor by stratifying candidates and classifying them as infant, pediatric, adolescent & adult.

The Committee also suggested that the Pediatric Committee entertain the idea of incorporating size or weight into the classification system but acknowledges that relying on these factors alone may be challenging on an independent candidate level. Outcomes were emphasized as another point to incorporate, on a center by center level rather than focusing on the primary surgeon and primary physician. The Committee feels that ultimately outcomes determine whether a policy or bylaw is truly effective in regards to patient safety.

The Committee also acknowledges that many pediatric candidates are currently traveling to programs outside of their local area but is concerned that this proposal may limit access for those candidates that do not have the means to travel. In conclusion, the Committee would urge the Pediatric Committee to re-evaluate whether or not this proposal will actually lead to an increase in patient safety, whether that increase in patient safety is worth the decrease in patient access and the continued resources that would be required to bring this concept to fruition. The Committee thanks the Pediatric Committee for their presentation and the opportunity to comment on this important issue.

Other Committee Work

13. Waiting List Modification Reports

The Organ Center sends monthly waiting time modification reports to the Committee for review. The Committee has not recommended any further action with regards to these waiting time modifications. (**Exhibit F**)

Meeting Summaries

The committee held meetings on the following dates:

- December 11, 2014
- January 26, 2015
- February 23, 2015
- March 27, 2015
- April 29, 2015

Meetings summaries for this Committee are available on the OPTN website at:
<http://optn.transplant.hrsa.gov/converge/members/committeesDetail.asp?ID=25>