

Mini-Brief

Technical Amendment to Calculation of Median MELD at Transplant

*Prepared by: Elizabeth Miller, JD
UNOS Policy and Community Relations Department*

Contents

Executive Summary	1
Background	2
Purpose	2
Overview of the Proposed Clarification	3
Resolution	4

Technical Amendment to Calculation of Median MELD at Transplant

Executive Summary

This proposed technical amendment of the policy for calculating the scores for exception requests will align the policy with the changes made by the OPTN Executive Committee in May 2019¹ with respect to the way exception scores are calculated.

Model for end-stage liver disease (MELD) exception scores for liver candidates are used to prioritize candidates on liver match runs. Candidates may apply for exception MELD scores in circumstances in which the calculated MELD score does not accurately reflect the candidate's mortality risk. In May 2019, the OPTN Executive Committee amended the NLRB policy so that exception scores are awarded relative to the median MELD at transplant (MMaT) in the DSA in which the candidate is listed. The purpose of that policy change was to align the geographic unit used for calculating MMaT with the unit of distribution (donation service areas or DSAs) used in the national liver allocation policy to promote equity in access.

The technical amendment described here will make the region the geographic unit used for calculating MMaT for Region Nine candidates in order to align with the unit of distribution used in Region Nine based upon a Board-approved Sharing Agreement for the State of New York (Region Nine Variance), which was approved by the OPTN Board well before the NLRB policy was implemented. Under this Variance, allocation of livers to candidates in Region Nine bypasses the DSA level of allocation for liver transplant and uses the region as the first geographic unit of distribution.

OPTN policy requires that the MMaT be recalculated and updated every 180 days. Per the recalculation, the hospital in one DSA within Region Nine has a higher calculated MMaT than the other transplant hospitals in Region Nine, because they are in a different DSA. Because the MMaT is currently calculated by DSAs, and does not take into account the difference in units of distribution used in the Region Nine Variance, liver transplant candidates receiving exception points within one Region Nine DSA will receive higher priority than similarly situated liver transplant candidates listed outside of that DSA but also in Region Nine unless a technical amendment is approved. This issue was not identified previously as all transplant hospitals within Region Nine had the same MMaT at the time the NLRB policy went into effect.

The amendment will align the geographic unit used for calculating MMaT for Region Nine with the unit of distribution used per the Region Nine Variance. Due to its approved Variance, Region Nine contains the only candidates and hospitals that will be affected by this clarification.

¹ OPTN Mini-Brief *Calculation of Median MELD at Transplant (MMaT) Based on Geographic Distribution Unit*. May 2019.

Background

A variance is in place in Region Nine, which consists of the state of New York and a portion of western Vermont.² Under the Variance, the DSA unit of distribution is bypassed³, and the smallest unit of distribution is OPTN Region, for the allocation of livers and liver-intestines for transplant.⁴

On May 14, 2019, the OPTN implemented a change to the way MELD exceptions are awarded that linked exception scores to the MMaT in the transplant hospital's DSA.⁵ The intent of this change, and the focus of the preceding solicitation of public comments, was to align the geographic unit used for calculating MMaT with the smallest geographic unit of liver distribution in the national liver allocation policy (DSA) to promote equity in access. This way, when two candidates have the same medical urgency for transplant and are in competition for the same pool of donors, they are awarded the same score.

At the time that the modification to the calculation of exception scores was made, candidates at all of the transplant hospitals in Region Nine had the same MMaT based on their DSA, even though they are not all in the same DSA.⁶ OPTN policy requires that the MMaT be recalculated and updated every 180 days.⁷ Upon the next scheduled update, the MMaT for the hospital in one of the DSAs in Region Nine will be 37. All of the other liver transplant hospitals in Region Nine are in one other DSA, where the updated MMaT will be 34.⁸

Purpose

Without this technical amendment, candidates with exceptions at one transplant hospital in Region Nine will consistently appear higher on the match run than candidates with exceptions for the same diagnosis at all of the other hospitals in the region. For instance, if there are two candidates who both have a diagnosis of primary hyperoxaluria who both qualify for standard MELD exceptions based on this diagnosis, they will both receive an exception score equal to the MMaT in the DSA where they are listed. In the DSA where the MMaT is 37, the candidate will receive an exception score of 37. In the DSA where the MMaT is 34, the candidate will receive an exception score of 34. They are both on the same match runs. They are receiving offers within the same local geographic unit (Region Nine) and have the same diagnosis. However, the candidate at the hospital in the DSA with the higher MMaT will receive every liver offer before the candidate in the DSA with the MMaT of 34. The impact of awarding exception scores based on MMaT in the DSA contrary to the purpose of the MMaT calculation approved in May 2019, which was to provide similar access to similar candidates within a distribution area.

² *Report of the Organ Procurement and Distribution Committee to the Board of Directors*, June 27-28, 1990.

³ DSA is still used for allocation of livers for other methods of hepatic support within the Region Nine Variance.

⁴ The variance application and some other historical documents refer to the alternative unit of distribution as state-wide. For ease of reference, because the liver transplant hospitals in the state of New York are the same as the liver transplant hospitals in Region Nine, I refer to the unit of allocation as region. There are no liver hospitals in the section of Vermont in Region Nine.

⁵ OPTN Policy Notice *OPTN/UNOS Policy Notice Revisions to National Liver Review Board Policies*, OPTN/UNOS Liver and Intestinal Transplantation Committee, January 2019, https://optn.transplant.hrsa.gov/media/2816/liver_nlr-revised-policy-notice-dsa_01252019.pdf (Accessed September 17, 2019).

⁶ *Median MELD at Transplant by Donor Service Area and Median PELD at Transplant Within the Nation*, https://optn.transplant.hrsa.gov/media/2971/mts_dsa_distribution_20190311.pdf, March 11, 2019.

⁷ OPTN Policy 9.4.D Calculation of Median MELD or PELD at Transplant

⁸ *Median MELD at Transplant by Donor Service Area and Median PELD at Transplant Within the Nation*, https://optn.transplant.hrsa.gov/media/3180/mts_dsa_distribution_20190924.pdf, September 7, 2019.

Overview of the Proposed Clarification

Exception scores for candidates listed at transplant hospitals in Region Nine would be awarded relative to the MMaT in the region, to align with the Region Nine Variance distribution. The MMaT calculation would still be based on the prior 365 day cohort of recipients who were at least 12 years old at transplant, and would still exclude recipients who are transplanted with livers from living donors, DCD donors or donors outside of the region, and Status 1A and 1B recipients. Because the Region Nine Variance will be terminated when the Acuity Circles Policy is implemented (per a vote taken by the OPTN Board of Directors on December 4, 2018)⁹, this change will expire at the same time. It will have no effect on other OPTN Regions.

⁹ OPTN Policy Notice, *Liver and Intestine Distribution Using Distance from Donor Hospital*, January 2019, https://optn.transplant.hrsa.gov/media/2788/liver_policynotice_201901.pdf (Accessed September 20, 2019).

Resolution

RESOLVED, that the changes to Policy 9.4.D: Calculation of Median MELD or PELD at Transplant, as set forth below, are hereby approved, effective September 24, 2019, and shall expire upon notice to members and implementation of the policy changes related to allocation that were approved by the OPTN Board of Directors on December 3, 2018, in the “Liver and Intestine Distribution Using Distance from Donor Hospital” proposal.

9.4 MELD or PELD Score Exceptions

9.4.D Calculation of Median MELD or PELD at Transplant

Median MELD at transplant (MMaT) is calculated by using the median of the MELD scores at the time of transplant of all recipients at least 12 years old who were transplanted at hospitals within the DSA of the candidate’s transplant hospital in the last 365 days, unless the candidate’s transplant hospital is participating in a regional sharing variance for MELD candidates. If the candidate’s transplant hospital is participating in such a variance, the MMaT is calculated by using the median of the MELD scores at the time of transplant of all recipients at least 12 years old who were transplanted within the last 365 days at hospitals in the region of the candidate’s transplant hospital.

Median PELD at transplant (MPaT) is calculated by using the median of the PELD scores at the time of transplant of all recipients less than 12 years old in the nation.

The MMaT and MPaT calculations exclude recipients who are either of the following:

1. Transplanted with livers from living donors, DCD donors, and donors from donor hospitals outside the region of the transplant hospital
2. Status 1A or 1B at the time of transplant.

The OPTN Contractor will recalculate the MMaT and MPaT every 180 days using the previous 365-day cohort. If there have been fewer than 10 qualifying transplants ~~the DSA of the~~ in the geographical area used for calculation of MMaT in the previous 365 days, the MMaT will be calculated based on the previous 730 days.

Exceptions scores will be updated to reflect changes in MMaT or MPaT each time the MMaT or MPaT is recalculated. The following exception scores are not awarded relative to MMaT or MPaT and will not be updated:

1. Exception scores of 40 or higher awarded by the NLRB according to *Policy 9.4.A: MELD or PELD Score Exception Requests*
2. Any exception awarded according to *Policy 9.5.D: Requirements for Hepatic Artery Thrombosis (HAT) MELD Score Exceptions*
3. Exceptions awarded to candidates less than 18 years old at time of registration according to *Policy 9.5.I: Requirements for Hepatocellular Carcinoma (HCC) MELD or PELD Score Exceptions*
4. Initial exceptions and first extensions awarded to candidates at least 18 at time of registration according to *Policy 9.5.I: Requirements for Hepatocellular Carcinoma (HCC) MELD or PELD Score Exceptions*