OPTN Liver and Intestinal Organ Transplantation Committee
OPTN Improving the Model for End- Stage Liver Disease (MELD) Calculation Work Group
Meeting Summary
March 19, 2021
Conference Call

James Trotter, MD, Chair

Introduction

The OPTN Improving the Model for End- Stage Liver Disease (MELD) Calculation Work Group (the Work Group) met via Citrix GoToMeeting teleconference on 03/19/2021 to discuss the following agenda items:

1. Project Scope and Plan
2. Review MELD Models and Potential Variable to Include

The following is a summary of the Work Group's discussions.

1. Project Scope and Plan

The Work Group heard an introduction to the project.

Summary of discussion:

The purpose of this project is to eliminate sex-based disparity in access to liver transplant by updating the MELD score to better predict 90- day waitlist mortality for liver transplant candidates.

The Work Group will consider which variable(s) is/are the primary driver of the current MELD inadequacy and determine which updated MELD score to include in their future liver simulated allocation model (LSAM) request.

2. Review MELD Models and Potential Variable to Include

A Work Group member presented a summary of MELD modifications.

Summary of discussion:

The member presented published literature on MELD models that aim to correct disparity by: a) adding MELD points or adjusting creatinine for female sex b) adding albumin to MELD Sodium (Na) c) adding gender to MELDNa d) adding gender and albumin to MELDNa e) adding height or body surface area adjustment f) adding glomerular filtration rate (GFR) and removing creatinine and g) additional miscellaneous methods.

A member asked why albumin was not added to the MELD when it was originally considered a few years back and added to the Pediatric End- Stage Liver Disease (PELD). Other members were unsure, but commented that albumin levels are subject to change quickly because albumin is given to hospitalized patients with acute liver failure.

A member confirmed that GFR within these models would be estimated and derived from creatinine. This member asked if the models that propose adding GFR and removing creatinine would require collection of any new variables. The presenter responded that the Modification of Diet in Renal Disease (MDRD) – 4 and Chronic Kidney Disease-Epidemiology Collaboration (CKD- EPI) models would not, but

that a concern to consider is these models' inclusion of race variables. The presented added that there is a possibility that these race variables could be removed from the models, but that it would take some time to verify a GFR without race.

A member commented their general support for adding points for gender along with offering pediatric donors to smaller adults before all adults. Another member also supported these ideas, but added a prediction that the community will ask what is being done for small men. Another member responded that the MELD 3.0 model adjusts for women, but overall also improves the MELD score for men.

Based on the literature, the presenter suggested that the Work Group start with MELD 3.0 and assess if the sex based disparity decreases. If it does not, they recommend adding other variables or looking into alternative models. Members agreed and added that in order measure individual effectiveness, the GFR and height issues should be assess separately.

A member noted that the presented studies did not include patients down to the age of 12 and that they should be considered in any future LSAM. A member asked if when women who are 6 feet tall and men who are 6 feet tall are compared, are women still disadvantaged? Another member confirmed that these tall women would still be disadvantaged due to their generally lower creatinine levels.

Next steps:

The Work Group will continue to consider which MELD model should be selected and used in the LSAM.

Upcoming Meeting

- April 7, 2021

Attendance

- **Work Group Members**
  - Pete Abt
  - Sumeet Asrani
  - Kimberly Brown
  - Derek DuBay
  - Julie Heimbach
  - Evelyn Hsu
  - James Markmann
  - Greg McKenna
  - James Trotter
- **HRSA Representatives**
  - Jim Bowman
  - Marylin Levi
- **SRTR Staff**
  - Micheal Conboy
  - Simon Horslen
  - John Lake
  - Ray Kim
  - Jon Snyder
  - David Schladt
  - Tim Weaver
  - Andrew Wey
  - Ajay Israni
- **UNOS Staff**
  - Matt Cafarella
  - Julia Foutz
  - Samantha Noreen
  - Kelley Poff
  - Matthew Prentice
  - Niyati Upadhyay
  - Leah Slife
  - Karen Williams