SRC – AMS Meeting Minutes

Analytical Methods Subcommittee Teleconference

July 24, 2025; 10:00 AM – 12:30 PM CDT

Voting Members:
William Parker, MD, MSCP, PhD (co-chair) ('26)
Joel Adler, MD, MPH ('26)
Jonathan (JD) Daw, PhD ('27)
Erika Helgeson, PhD ('25)
Yong-Fang Kuo, PhD ('27)
Megan Neely, PhD ('25)

Not in attendance:
Syed Ali Husain, MD, MPH, MA, FASN ('26)
William (Bill) Irish, PhD ('25)

Ex-Officio:
Grace Lyden, PhD (SRTR staff co-chair)

Not in attendance:
Adriana Alvarez, MS (HRSA)
Brianna Doby, MPH (HRSA)
Shannon Dunne, JD (HRSA)
Sarah Laskey, PhD (HRSA)

SRTR Staff:
Avery Cook, MPH, MSW
Tonya Eberhard
Amy Ketterer
Maria Masotti, PhD
Jon Miller, PhD
Sydney Kletter Sharma
Jon Snyder, PhD, MS
Nicholas Wood, PhD
David Zaun, MS

Not in attendance:
Allyson Hart, MD, MS
Ryutaro Hirose, MD
Larry Hunsicker, MD, PhD
Roslyn Mannon, MD, FASN
Mona Shater, MA

Welcome and introductions

The meeting opened with remarks from Co-chairs Drs. Grace Lyden and Will Parker, who noted the presence of five voting members, meeting quorum, and addressed the absence of Health Resources and Services Administration (HRSA) representatives due to a concurrent House hearing. Dr. Lyden encouraged the subcommittee to skip formal introductions given the group's familiarity, and she emphasized the importance of disclosing any conflicts of interest.

Nominations Committee update

Dr. Lyden provided an update on the Scientific Registry of Transplant Recipients (SRTR) Nominations Committee process and mentioned that applications for the SRTR Review Committee (SRC) and subcommittees, including the Analytical Methods Subcommittee (AMS), are open until July 31, 2025. Members were encouraged to nominate candidates, as current members Drs. Erika Helgeson, Bill Irish, and Megan Neely are concluding their terms at the end of the year. Dr. Lyden shared that four applications had already been received and encouraged current members to be proactive in outreach for additional applications.

Death after delisting update

Dr. Maria Masotti presented a progress update on the "death after delisting" project, which the committee had previously explored in detail. The team is finalizing a manuscript summarizing the concerns raised regarding potentially unrecorded deaths of delisted transplant candidates. Dr. Masotti described the team's application for National Death Index (NDI) data from the Centers for Disease Control and

Prevention (CDC) to audit the quality of SRTR's mortality data. To test the completeness of Organ Procurement and Transplantation Network (OPTN)–to-SRTR data transfer, the team plans to randomly sample 100 candidates removed from the waiting list for deteriorated condition without recorded death dates, and then send these patient IDs to the United Network for Organ Sharing (UNOS) to verify that the OPTN contractor also has no recorded death dates for these patients. There was discussion about whether the NDI linkage should delay manuscript submission. The consensus, led by Dr. Lyden and supported by Dr. Parker, was to try to get the manuscript published first and potentially include follow-up findings in a supplement or second paper. The goal is to foster broader community input and highlight this potentially systemic data issue.

Multiorgan posttransplant evaluations for heart-kidney and liver-kidney recipients

Dr. Jon Miller introduced a proposed methodology to expand the program-specific reports (PSRs) to include posttransplant evaluations for heart-kidney and liver-kidney transplant recipients. He explained that while kidney-pancreas transplants already receive full reporting, other multiorgan types have limited representation, often just descriptive statistics in single-organ reports. This proposal, prompted by growing multiorgan transplant volume and a formal request from the OPTN's Membership and Professional Standards Committee (MPSC), recommends the use of stand-alone least absolute shrinkage and selection operator (LASSO)–based Cox regression models for heart-kidney and liver-kidney recipients. These models would be risk-adjusted and independent of their single-organ counterparts. These evaluations would be produced each PSR cycle, starting with the winter 2025 PSR cycle.

Dr. Miller detailed the modeling methodology: a 2.5-year cohort (January 2022–June 2024) was analyzed using 10 imputed datasets and LASSO-based variable selection, resulting in model C statistics comparable to those in single-organ models. Heart-kidney models showed 150 graft failure events and liver-kidney about 230. Predictors were selected from heart and liver single-organ models.

Dr. Parker and others engaged in a technical discussion about LASSO tuning, variable selection, and the treatment of components like model for end-stage liver disease (MELD) scores. Dr. Jonathan Daw suggested expanding the predictor set beyond heart- and liver-specific variables. Dr. Miller agreed and said the team would explore kidney-specific variables for the winter 2025 PSR cycle. Dr. Helgeson and Dr. Jon Snyder emphasized transparency and practical review processes, including potential clinical review of final coefficients by SRTR senior staff before first-time release.

A vote was held to approve the methodology: specifically, the use of separate, LASSO-based, risk-adjusted models for heart-kidney and liver-kidney evaluations. The motion was made by Dr. Parker and seconded by Dr. Joel Adler. The vote passed unanimously with no abstentions or opposition.

Simulation update and match-run analysis

Dr. Nick Wood provided an overview of SRTR's simulation framework and its role in evaluating organ allocation policies. SRTR uses a discrete-event simulation framework where events such as candidate waitlist additions, donor arrivals, and transplants are processed sequentially. Key simulation submodels include history generation (to fill in potential waitlist trajectories for candidates who received transplant historically), placement and utilization mechanisms, and posttransplant outcome modeling. Dr. Wood emphasized the use of real historical candidates and donors to preserve the demographic and clinical realism of the simulation, supplemented by techniques like matching to generate synthetic patient histories.

Dr. Wood described the placement and utilization mechanisms, which determine which match-run offers are accepted or rejected, and when organs go unused. Two utilization models were presented: a peri-placement model (involving thresholds like number of offers or time limits) and a pre-placement model using logistic regression to predict whether an organ would be used based on donor and match-run data. Posttransplant outcomes are typically modeled using Cox regression, although relisting after simulated transplant is generally excluded for simplicity.

The advantages of simulation (such as the ability to model dynamic waitlist changes over time and outputs that may be easier to interpret) were discussed along with challenges (such as project complexity and assumptions about unchanged offer behavior under new policies).

Dr. Wood then presented on a new approach for comparing allocation policies called match-run analysis. He said match-run analysis can be used as a supplement or alternative to simulation that has the advantage of being relatively simple and quick to perform. The approach involves reordering a set of historical match runs under different proposed policies and then describing where different types of candidates are placed on the reordered match runs, by sequence number.

SRTR has now performed match-run analysis for multiple OPTN committees and has received generally positive feedback on this new tool. Pros of match-run analysis compared to simulation include the quick turnaround time and a focus on candidate priority instead of acceptance, which allocation policy cannot control. Limitations include the inability to track waitlist changes over time and calculate key metrics such as waitlist mortality.

Dr. Daw indicated in the chat that the shift to match-run analysis over simulation clarifies what a potential policy change directly controls as opposed to what it indirectly affects, to which Dr. Parker agreed that it makes the trade-offs clear. Dr. Parker also concurred that this tool can be invaluable for rapid diagnostics on what an allocation policy would do to the candidate pool offer experience and make more obvious some of the trade-offs that the allocation algorithm has to deal with. Dr. Parker said he thought that match-run analysis could be used to diagnose big changes in priority quickly and emphasized the importance of this. Dr. Adler questioned how the new policies are so similar rather than original. Dr. Daw noted that this analysis only shows priority for candidates who were not screened from the match run, with which Dr. Adler agreed. Through the chat, Dr. Daw also suggested that, prior to big policy changes, behavioral studies of patients and transplant professionals be conducted to assess how changes to the prioritization scheme might affect offer acceptance and waitlist decisions to create a better informed simulation.

Large language models as a tool for SRTR work

Dr. Miller presented briefly on the use of large language models (LLMs) in SRTR's workflow. He explained how LLMs are being evaluated as tools to assist with tasks such as code generation, summarization of technical documents, and potentially automating aspects of model documentation. The group discussed potential ethical and privacy concerns, including the use of protected health information, and emphasized the need for human oversight and clear boundaries when integrating LLMs into analytical workflows. This portion of the meeting was positioned as an early-stage discussion, with more concrete use cases to be presented in future meetings.

Closing business

With no other business being heard, Dr. Lyden concluded the meeting by thanking all presenters and participants. She noted that the next meeting, for the fourth quarter, will be held on October 29, 2025, from 2-4:30 pm Central Time.