OPTN Organ Procurement Organization Committee
Technology Tools Workgroup
Meeting Summary
May 5th, 2021
Conference Call

David Marshman, Workgroup Chair

Introduction

The OPTN Technology Tools Workgroup (the Workgroup) met via Citrix GoToMeeting teleconference on 05/05/2021 to discuss the following agenda items:

1. Review of Previous Workgroup Recommendations
2. Review of OPO Committee Discussion
3. Review Recommendations: Scheduled Work and Future Projects

The following is a summary of the Workgroup's discussions.

1. Review of Previous Workgroup Recommendations

The Workgroup reviewed feedback provided in previous meetings for DonorNet® Mobile, in-app notifications, chat capabilities, and UNet℠ imaging sharing initiatives.

Summary of discussion:

The Workgroup had no questions or comments

2. Review of OPO Committee Discussion

The Workgroup reviewed input and prioritization of potential projects given by the OPTN OPO Committee during their April Committee meeting.

Data summary:

The OPO Committee identified several projects discussed by the Tech Tools Workgroup as high priority:

- DonorNet Mobile
  - Ability to upload multi-page documents
  - Easy-entry for key recovery dates and times
- In-App Notifications
  - Donor develops a positive infectious disease result
  - Donor entering the operating room and timing of crossclamp
  - Donor after circulatory death (DCD donor) has experienced cardiac arrest
  - Transplant center provisional yes becomes a refusal or decline
  - Prioritization of higher ranking, near expiration of offer time limit, and close to recovery offers within front page list of offers to assist in offer management

Summary of discussion:

The Workgroup had no questions or comments.

3. Review Recommendations: Scheduled Work and Future Projects

The Workgroup reviewed information technology (IT) projects recently rolled out, currently in progress, and slated as future work, and discussed prioritization and requirements for those projects still in the early stages of development and requirements gathering.

Data summary:

Released:

- DonorNet Mobile
- Ability to view DICOM images in DonorNet Mobile
- UNet Image Sharing

Currently in Development

- Securelink image sharing for non-UNet users
- Ability for integration of picture archiving and communication (PAC) systems and interpretation services
- In-app notifications, including post-crossclamp test results
- Deceased donor case progression for in-app notifications
- DonorNet attachment categories
- DonorNet chat capabilities
- Ability to upload multiple page documents and images to DonorNet Mobile

Pending Design:

- DonorNet time zone clarifications
- DonotNet Mobile single-nodal entry of key procurement dates and times
- DonorNet clinical data collection – including updated medications/fluids, infectious disease, etc.
- UNet image sharing for biopsies, including interpretation services

Summary of discussion:

A member remarked that updating basic data collection would vastly improve DonorNet and transplant communications. Currently, certain aspects of DonorNet are insufficient to communicate all the appropriate information. Echocardiograms (echo) are on example of this – there is no designated space for the vasopressors the donor was on at the time of the test, nor is there room for multiple interpretations of the same test, as sometimes occurs. Because of this, OPO staff have to enter the echocardiogram data twice – once in to the electronic medical record (EMR) and then into DonorNet, with most of the necessary information in the text field. The member continued, pointing out that DonorNet also lacks data fields specific to DCD withdrawal processes, including time of flush and pulselessness. Instead, crossclamp is used as the reference time, despite variations in pre-crossclamp vs post-crossclamp perfusion. The member also remarked that most EMRs collect medication and fluid information as a flow sheet, but DonorNet does not.

One member agreed, and shared that the OPTN OPO Committee's discussions about updating the Deceased Donor Registration form (DDR) revealed that much of the data required in the DDR is critical to donor and organ evaluation and should be collected up front in DonorNet. The member pointed to vital sign data associated with DCDs in the DDR as an example of data that is well collected in the DDR, but not as abundantly available in DonorNet. For DCD withdrawal information, DonorNet could be updated to provide text and visual summations for when blood pressure dropped below a certain level, allowing the clinicians to see the true trend of the vital signs.

A member added that it would be critical for the information to flow from EMRs into DonorNet, so there isn't a duplication of effort. Another member agreed, and noted that constant re-entry of data increases risk for error.

Staff remarked that this effort could also include defining certain data elements such as warm ischemic time and crossclamp, which would involve policy work as well. One member disagreed that the Workgroup should try to define such elements, as these definitions can vary depending on organ systems, and it is more critical to provide the necessary information to surgeons and physicians to enable them to make these clinical decisions. Several members agreed.

Staff asked if that information is required in the DDR because it's more available at the end of the case, or if that information is better to have up front for the transplant center to evaluate with. A member remarked that DDR information is typically collected for research, and that the DDR has so many required elements because it had historically been the most logical place to report and consolidate such information. As UNet and other systems evolve, the information is more logically reported up front in DonorNet.

Staff asked the Workgroup to expand on the kinds of DCD information should be collected in DonorNet. One member listed time of extubation or withdrawal of support, time of pulselessness, declaration of death time, flush and incision time, flush quality and type, heparin administration time, and reintubation time for lung donors. The member noted that flushes occur at different times for various organs, which should be considered in documenting and collecting flush information. Another member reiterated that the Workgroup should focus on including and providing necessary clinical information, as opposed to defining certain aspects such as agonal or warm ischemic time.

The Workgroup shifted discussion to appropriate information to collect regarding Echocardiograms. Currently, DonorNet separates ejection fraction from the echocardiogram; ejection fraction is not required to run matches, but it is required to send out notifications. One member remarked that several ejection fractions are measured, and that DonorNet updates should include the option to report multiple ejection fraction results. Similarly, DonorNet should have the ability to report several interpretations of the same echocardiogram and other donor evaluation tests. The member also noted that the echocardiogram should include the capability to report specific data points, including ejection fraction, blood pressure, heart rate, rhythm, cardiac output, cardiac index, wet pressure, shortening fraction for pediatric donors, pulmonary artery pressure, variability of blood pressure, and specific vasopressors the donor is on at the time of exam. The member added that this list should also include measures for left ventricular function, diastolic measures, end-systolic dimensions, end-diastolic dimensions, septal wall thickness, and posterior wall thickness. One member pointed out that while this data would be a new addition to DonorNet reporting, the relative data burden is extremely small, as OPOs already collect and share this information. The member also added that organ-specific feedback will be required to best develop appropriate donor information reporting.

A member remarked that the medications and fluids section of DonorNet lacks specificity and flexibility, and that such information is better shared in a flowsheet format. The medication type, dose, and administration time over the course of donor management is much more useful information. Another member agreed. A member added that the medications and fluids information could potentially be streamlined to flow into other areas where that information was relevant, such as for echocardiogram reporting. The member noted that a text field or "other" option will always be necessary for medications and fluids, as advances are made and donor management situations vary.

One member noted that DonorNet infectious disease results reporting is insufficient, and only provides OPOs the opportunity to report a singular result for each type of test. In practice, many donors have

infectious disease testing done before OPO involvement, and many OPOs complete multiple testing. The member provided an example – if a donor receives a positive HIV serology followed by several negative HBV serology and nucleic acid tests (NATs), all results must be reflected and a determination must be made about which result should impact the match run. The member explained that in this scenario, the donor matches must be run as HIV positive, but there should be a clear and streamlined method of informing transplant centers of both the match impacting results and any prior or subsequent disease testing results. The member emphasized that infectious disease results reporting should flexibly allow reporting of multiple results for each test type, along with time of testing. Repeated NATs testing further demonstrates this need. The member also added that the "other infectious disease testing" option only provides COVID-19 testing, and should allow for additional testing such as Flu A. Another member recommended collaborating with the OPTN Disease Transmission Advisory Committee (DTAC) for additional information on key infectious disease testing and reporting information. Others agreed.

A member pointed out that DTAC is working on moving away from classifying donors as "increased risk" and instead conveying specific risk factors, which could also potentially inform specific DonorNet information sharing fields.

One Workgroup member asked how updated DonorNet data collection fields would fall into IT implementation timelines. Staff clarified that new data collection projects like this must go through public comment, board approval, and office of management and budget approval processes, and therefore have a variable timeframe.

The Workgroup reached consensus that items discussed and those pending design were important projects likely needing further work.

Upcoming Meetings

- TBD

Attendance

- **Workgroup Members**
  - David Marshman
  - Bruce Nicely
  - Christopher Curran
  - Debra Cooper
  - Diane Brockmeier
  - Erica Simonich
  - Kenny Laferriere
  - Kurt Shutterly
  - Peter Abt
  - Diane Alonso
- **HRSA Representatives**
  - Adriana Martinez
  - Raelene Skerda
  - Vanessa Arriola
- **SRTR Staff**
  - Matthew Tabaka
- **UNOS Staff**
  - Alice Toll
  - Robert Hunter
  - Kayla Temple
  - Kerrie Masten
  - Lauren Mauk
  - Lloyd Board
  - Matthew Prentice
  - Randall Fenderson