OPTN Organ Procurement Organization Committee
Technology Tools Workgroup
Meeting Summary
February 9th, 2021
Conference Call

David Marshman, Workgroup Chair

Introduction

The OPTN Technology Tools Workgroup (the Workgroup) met via Citrix GoToMeeting teleconference on 02/09/2021 to discuss the following agenda items:

1. Chat and Notifications
2. Imaging Functionality
3. Wrap up, Adjourn

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

1. UNet™ Chat and Notification Functions

The Workgroup briefly reviewed the key concepts of both the UNet℠ Chat and Notification initiatives and some of the initial feedback provided. The Workgroup provided additional feedback on these potential functionalities.

Data Summary:

Improved In-Application Notifications: Key Concepts

- Concise, relevant, and actionable user awareness of events occurring in the system related to the user
- Inform on what the user needs to see, update on what the user would like to see
- Context based – UNet℠ user permissions considered, specifications at organ/center level
- Status: Idea/Concept

Chat Capabilities: Key Concepts

- Ability for organ procurement organizations (OPOs) and transplant centers to securely communicate during the offer evaluation process
- Transplant hospital staff, at the same center, with access to the organ offer can communicate with each other within the context of the offer
- OPO can broadcast communication to multiple transplant centers on the match run

Feedback Requested:

- What type of communications are transplant centers having with the OPO during organ offers?
- What about amongst their peers at their own center?
- What kind of information is most relevant to be floated to the surface?

Comments Collected by Workgroup Members:

- Too many chats and notifications may overload donor coordinators
- Notifications alerting accepting surgeons to changes in organ recovery schedule and updates
- Ability to view intraoperative images in real time, like live stream
- Not sure that internal communication is needed between staff within the same transplant center
- Direct OPO to transplant center and OPO to multiple transplant centers are excellent options. Secure and timely communication is vital between OPOs and transplant centers in order to maximize efficiency, minimize the change of organ discard, and increase utilization, especially when things go south
- There should be safeguards in place regarding communication once the organ is placed
- The in-app notification is in keeping with all other mobile applications, and customizability would be an excellent feature
- Keeping the app as user friendly as possible is key for an event as important as organ allocation. Every coordinator will have certain preferences regarding notifications, so giving options is very insightful and useful

Summary of discussion:

One member noted that it would be helpful to see, with each donor organ offer, the rank of the highest ranking patient on the match run. The member explained this would allow transplant center users to prioritize organ offer evaluation.

The member also contributed that the ability to view digital imaging and communications in medicine (DICOM) and digital biopsy images on the phone application would be helpful, particularly for utilizing the measurement tools in computed tomography (CT) scans and other imaging. Staff explained that they plan to include DICOM image viewing on the mobile platform with a limited set of tools, and appreciated feedback on which viewing tools were critical.

The member added that having the capability to securely share imaging with medical professionals who don't normally have access to UNet^{SM} for consultation would be critically helpful. Another member agreed. Staff shared that this functionality is currently being finalized for the desktop platform, and still in early concept and development phases for the mobile platform.

The Workgroup Chair remarked that chat communication capabilities would require parameters in order to avoid overwhelming OPO staff, which could create inconsistencies in approach and chat tool usage across OPOs and transplant centers, leaving potential for frustration with some users.

The Workgroup Chair shared a number of concerns about chat communications overwhelming OPO staff. The Workgroup Chair remarked that this potential for overwhelm could create inconsistencies in chat communication use across OPOs and transplant centers, which would lead to inconsistencies in offer evaluation experiences, causing frustration with some users. Another member noted that an effective notification tool that automatically shared relevant information would significantly reduce the need for chat communication and thus the burden on donor coordinators. The member continued that these tools will be integrated into pre-established communication pathways between OPOs and transplant centers, and that the potential for overwhelm will vary based on these pathways. The member noted that for population-dense areas like the northeast, where many centers are involved in a single organ offer, chat functions could easily become overwhelming. UNOS Information Technology (IT) staff agreed that more granular notifications around donor information will reduce the need for direct one to one communication, and offered potential parameters for the chat capability, including

restricting chat functionality between transplant centers and OPO staff only to centers that have received an organ offer.

The Workgroup Chair suggested requesting feedback from the Refusal Codes & Late Turndowns Workgroup, as there may be cross over in efficient information sharing, particularly with recovery and post-clamp information.

The Workgroup Chair clarified previously collected feedback about safeguards in organ placement, suggesting that communication becomes locked in between the accepting center and OPO once the organ is placed.

A member recommended that notification alerts be customizable, so that various users can opt in depending on which notifications are relevant to them. IT staff clarified that they intended to set required notifications for certain users based on their permissions, and allow users to opt in on other notifications. Staff asked if allowing users to opt into notifications regarding certain donors would help reduce potential for overwhelm. A member clarified that they would want to follow notifications for any donor offer for which their patient holds rank 3 or higher, and that individually selecting each donor for granularity is too laborious. The member added that coordinators may need this type of granularity.

Staff asked the Workgroup what kinds of notifications are most critical, noting that they are constrained by data currently collected by the system. One member suggested notifications that discerned between uploads, such that there would be notification for CT scan uploads, but not for an electrocardiogram (EKG) report. The Workgroup Chair agreed. The member also recommended that notifications be parameterized by patient rank, so that changes in donor recovery times are notified to transplant centers with the highest ranking patients. The member continued that some users may to control notification parameters themselves.

The Workgroup Chair recommended including the capability to selectively channel notifications to another user, so that surgeons could channel notifications to coordinators, or coordinators to the oncoming shift. Another member agreed, and noted that this functionality would be useful when a surgeon or coordinator is no longer on call or otherwise unavailable, such as in the operating room. The member continued that they would like the capability to disable all notifications for a set period of time, like a sleep setting.

The Workgroup Chair recommended a single nodal for dates and times for OPO users on DonorNet Mobile[SM], noting that organizing pronouncement of death, organ recovery, and cross clamp date and time data fields in a user-friendly way will allow OPO users to effectively notify accepting centers of these times.

A member asked if DonorNet Mobile[SM] would include streaming capabilities for organ recovery, and shared that many transplant centers had requested intraoperative videos of the organ in situ. Another member agreed that this functionality would be helpful for the recipient center. One member commented that some OPOs broadcast or live conference call the recovery procedures from the operating room. Another member agreed that direct streaming from the OR with secure line communication allows a surgeon to see the organ in real time. A member noted that the quality of these videos can be very poor, but that this functionality would be helpful if video quality was guaranteed. One member noted that the videos taken by their OPO were very high quality, and taken from their recovery center.

A member remarked that many OPOs have information security policies that prevent donor teams from texting images or videos from the operating room to recipient teams, but that streaming directly removed the threat of broader sharing. The Workgroup Chair agreed, and expressed concern about both

the availability of necessary streaming equipment in donor hospitals and whether hospital security policies would allow such information transmission.

One member asked if DonorNet Mobile^{SM} currently had direct upload capabilities, and Staff clarified that the DonorNet Mobile^{SM} app allows OPO users to take photos within the application and upload directly, but that there was no video capability. The member recommended developing a notification for these uploads to alert accepting transplant centers. The member also suggested that any accepting transplant center team or donor team member could upload so that the photo can be shared securely. Another member agreed, and noted that DonorNet Mobile^{SM} should expand current direct upload technology to include real-time streaming.

Staff asked whether the recovery video stream would only occur live or if the stream should be saved for other centers to revisit. Multiple members agreed that is open to opinion, noting some photo information is important for quality analyses at a transplant center and OPO level, but that it could be complicated to store videos in perpetuity. Another member added that the streams could have a time limit of around 12 hours, so back-up centers could review the video in case of late decline.

2. Image Sharing Functionality

The Workgroup briefly reviewed the UNet^{SM} Image Sharing functionality and provided additional feedback on improving this functionality in its current and future states.

<u>Data summary:</u>

UNet^{SM} Image Sharing – consistent, secure, and reliable access to high-quality medical image studies during the organ allocation process

- National Rollout in progress, with 30 OPOs actively using in production
- Future State:
    - Download of studies for Volumetric Assessment
    - Mobile access to imaging studies
    - Secure Link
    - Receive image studies directly from donor hospitals
    - Biopsy imaging – sharing and interpretation.

<u>Summary of discussion:</u>

The Workgroup Chair shared that many of his OPO's donor hospitals are already pushing imaging studies directly, and that the current DICOM workflow's requirement of a disk is a step back from their current processes. Staff noted that there is current planning to eliminate the need for a disk and streamline the DICOM Image study workflow, but that the timeline for this project has not been finalized.

Staff asked the Workgroup if any members currently used interpretive services for their imaging studies, either by a third party or in-house at their center or hospital. One member shared that their center and OPO utilizes these services, but that it is ideal for the image to include a report already. The Workgroup Chair added that most OPOs get clinical interpretation for their imaging, either within the donor hospitals or outsourced via other systems. Both the Workgroup Chair and other members agreed that interpretive reports should not be required for imaging study upload.

3. Wrap Up & Next Steps

The Workgroup discussed appropriate next steps and adjourned.

The Workgroup Chair suggested that first iterations of the notification model should utilize pre-existing information fields in DonorNet® and keep a narrow scope, in order to allow the tool to evolve through the addition of necessary capabilities.

The meeting was adjourned.

<u>Next Steps</u>

Staff will begin developing potential first iteration models of notification and chat functions and bring them back to the workgroup for further discussion and collection of feedback.

Upcoming Meetings

- TBD

Attendance

- **Workgroup Members**
  - David Marshman
  - Diane Alonso
  - Kenny Laferriere
  - Debra Cooper
  - Helen Irving
  - Charles Strom
  - Peter Abt
  - Ben Schleich
  - Chris Curran
  - Erica Simonich
- **HRSA Representatives**
  - Jim Bowman
  - Ralene Skerda
  - Vanessa Arriola
  - Shannon Taitt
  - Marilyn Levi
  - Adriana Martinez
- **SRTR Staff**
  - Katie Audette
- **UNOS Staff**
  - Alice Toll
  - Robert Hunter
  - Rob McTier
  - Randall Fenderson
  - Ben Wolford
  - Leah Slife
  - Nicole Benjamin
  - Melissa Lane
  - Kerrie Masten
  - Bonnie Felice
  - Sara Moriarty
  - Pete Sokol
  - Lloyd Board
  - Lauren Motley