Great Ideas Strategy Guide

Strategies and Solutions identified during the 2018 National Critical Issues Forum Idea Labs

national critical issues forum
INNOVATION IN ACTION
presented by The Alliance

Guide Instructions

To facilitate navigation, all hyperlinks in this guide as well as this table of contents are dynamic. Click on the page numbers and links to skip to the areas of interest.

Table of Contents

About the National Critical Issues Forum: Innovation-in-Action

The primary goal of The Alliance's 2018 National Critical Issues Forum was to provide a dynamic and interactive event to spur novel ideas and actions to increase organ donation, utilization and transplantation. Design thinking was utilized to keep the flow of ideas and solutions fast-paced and actionable.

Background

The National Critical Issues Forum is one of The Alliance's signature educational events, offered every two years. In 2016, The Alliance hosted its first National Critical Issues Forum: "Disrupting the Status Quo." Expert leaders discussed the science of decision-making as it relates to organ utilization and analyzed how existing practice patterns may limit the number of transplants performed. Successful practices and unconventional strategies were presented and discussed. The 2018 forum drew upon the discussions and outcomes from the previous one, but shifted its focus to innovation and how to apply innovative ideas in order to increase organ donation, utilization and transplantation.

The 2018 Forum Idea Labs

At the 2018 forum, attendees participated in idea lab sessions and, by employing innovative methodology, identified high impact interventions to enhance critical phases of organ donation, utilization and transplantation, such as behavioral economics, organ procurement organization (OPO) and transplant center practices, communication, utilization of data, transportation logistics, and organizational culture.

The idea labs were divided into three distinct areas of organ utilization and transplantation:

1. [Expedited and effective communication of information](#)
2. [Utilizing data analytics and improving systems utilization to increase organ acceptance](#)
3. [Using technology and systems to overcome barriers to transplantation and improve upon logistics](#)

Attendees were asked to formulate problem statements and then ideate potential solutions to address the problems.

About this Guide

This guide is intended to serve as a record of the problems and proposed solutions discussed within each idea lab. The top solutions voted on by the forum attendees for each idea lab will be highlighted and a detailed outline of problem statements and all solutions identified by idea lab will follow.

Call to Action

The purpose of sharing the innovative solutions from the forum idea labs is to help the organ donation and transplantation community to continue the dialogue and take action on these solutions.

For anyone interested in learning how to get involved in follow-up activities, please contact The Alliance at info@odt-alliance.org.

Summary of Top Solutions from Idea Labs

During the forum idea labs, participants engaged in dynamic discussions to identify problems in relation to the theme of each idea lab and to ideate solutions. At the end of the forum, all solutions identified for each idea lab were presented and the attendees voted on the solutions that they deemed to be most <u>impactful</u>, <u>feasible</u>, and <u>innovative</u>.

The remainder of the document outlines the idea labs in more detail. Summarized here are the top 3 solutions voted on by the forum attendees. The attendees were then asked to make commitments to one or more of the top 3 solutions. In follow-up to the forum, the attendees who made commitments are being invited to continue the discussions and ideation of turning the solutions into actions through participating in virtual townhall meetings and an online discussion board.

For information on how to get involved in the discussion, contact The Alliance at info@odt-alliance.org.

Top 3 Solutions Identified for Each Idea Lab

Idea Lab #1: Expedited and effective communication of information

1. Incorporate an instant messenger tool between OPO and transplant center through DonorNet to allow for 2-way communication and accountability.
2. Develop a platform, such as an app, that can be used to document all communications and patient information in real time. This platform could be used by all the hospital, OPO, transplant center and the donor's family and would provide consistency in communication and sharing of information.
3. Talk to leaders from other industries to identify the best methods for connecting disparate systems.

Idea Lab #2: Utilizing data analytics and improving systems utilization to increase organ acceptance

1. Allow OPOs to know which centers will take 'like' organs based on decision history – skip those centers that never take those organs.
2. Build decision support tools into DonorNet - center specific parameters, time to next organ offer, predicted survival.
3. Batch organ offers at regular time intervals with emergency offer capability – permits better staffing predictably.

Idea Lab #3: Using technology and systems to overcome barriers to transplantation and improve upon logistics

1. Standardize organ recovery techniques and practices and encourage all surgeons (abdominal and thoracic organs) to procure organs locally to send to accepting transplant centers.
2. Develop an adaptable DonorNet allocation system that promotes high organ utilization rates by prioritizing transplant programs whose acceptance practices are consistent with their listing practice. Transplant programs with a history of low utilization rates for certain types of donors will be automatically filtered out unless they narrow their acceptance criteria to a range where they will routinely accept and allow them to gradually increase criteria as long as utilization stays at acceptable levels.
3. Offer live-streaming during organ procurement to increase transplant surgeons' comfort level with accepting organs procured by local teams. System must be standardized to ensure it is UNet accessible, secure, portable and can be recorded for future teaching opportunities.

Idea Lab #1: Expedited and effective communication of information

The following are the problem statements defined and solutions identified by the forum attendees. The solutions are listed in order of votes (highest to lowest) among the idea lab attendees.

Problem Statement 1:

Transplant centers/transplant surgeons need a way to receive information in a standardized way that allows the right organs to be placed with the right recipients.

Solutions:

1. Partner with neuroscience experts to get a better understanding of adult learning and how others best receive and process information. This way, information is communicated in a way that the 'listener" (i.e. transplant centers and transplant surgeons) understand and receives best.
2. Standardize communication through the hospital electronic medical record (EMR) database.
3. Partner with some non-industry logistic experts (e.g. Amazon-Go, Google, etc.) to learn more about the technology they use to solve their own logistical nightmares. Seek their assistance to possibly improve DonorNet (i.e. make it user-friendly and interactive, immediate/live-updating, etc.).
4. Considering the constant change in criteria, utilize an app to list recipient organ offer criteria to streamline communication as those changes occur.
5. Partner with TESLA to get them engaged in some possible approaches/solutions.
6. Develop a platform for transplant surgeons and OPOs to communicate. This will allow transplant surgeons to convey their needs directly to their designated OPO.

Problem Statement 2:

Transplant centers need a way to accurately and effectively (in real time) share information (beyond what is available in DonorNet) in a manner that is both convenient and efficient – in the content of mission-critical activities. *Try to bear in mind the reality that most of these calls/communications occur in the middle of the night.*

Solutions:

1. Survey transplant surgeons to get a better understanding of their experiences and needs and find commonalities. Need to gain a better understanding of what we are trying to resolve as far as the scope is concerned. Must take into account the varying distances of organ inquiries and identify the differences that exist between transplant surgeons (ex. Some transplant surgeons are more aggressive than others are with organ acceptance). From there, we'll gain a better understanding of what solutions can address this problem.

Problem Statement 3:

OPOs need to provide the most current and complete donor information to transplant center to avoid suboptimal organ utilization.

Solutions:

1. Push out real-time notifications and updates through DonorNet of specific parameters (e.g. high BP, low BP, urine output, etc.) that have changed in the donor.
2. Utilize predictive decision-making to help effectively relay information to transplant centers.

Problem Statement 4:

The ICU Healthcare Team needs a way to effectively explain brain death to a family while maintaining their confidence and trust in the care team.

Solutions:

1. Have designated hospital staff that have gone through brain death training (using Virtual Reality 'VR' and other resources/tools) that can effectively explain brain death to families through incorporation of videos and other visual aids that illustrate the various pathways to brain death.
2. Utilizing videos and other visual aids to help illustrate the various pathways to Brain Death which will ultimately give the viewer (i.e. the family) a better understanding of what brain death looks like.
3. VR enabled training for hospital staff that would incorporate real organ donation scenarios/family conversations. By immersing them in real life experiences, they will gain a better understanding of what to do, what to say, when, etc. These designated staff members would provide real time education to families in a way that would address their questions and concerns about the brain death declaration.
4. Create an online destination for hospital staff to go to for questions and needs (include brain death resources, training content, videos/materials for families, etc.).
5. Tech-Automation – Incorporate key clinical triggers in the hospital's EMR system that would auto-notify the OPO of patient status.

Problem Statement 5:

OPOs/Transplant Centers need a way to deploy concise and consistent messaging that is scalable.

Solutions:

1. Key message mapping using the 3, 9, 27 rule (3 points, 9 secs, 27 words). Similar to Twitter where there is a character/word restriction forcing individuals to be clear and direct with their message.
2. Wrap your "key message" into a story. Tie in both sides of these powerful donation and transplant stories. Consider wrapping a story within education to increase recall engagement.
3. Incorporate dual perspective (get information from the source; don't rely on perception).

Problem Statement 6:

ALL stakeholders (shift to shift, pre-recovery teams to post-recovery teams, etc.) need to find a way to have instantaneous, real-time communication with one another.

Solutions:

1. Develop a platform, such as an app, that can be used to document all communications, patient information, etc. as they occur. This platform could be used by all stakeholders (hospital, OPO, etc.) and their patient's families and would provide real-time communication to all involved.

Problem Statement 7:

OPOs need a way to expedite the donation process.

Solutions:

1. Incorporate an instant messenger tool between OPO and transplant center through DonorNet to allow for 2-way communication and accountability. (This is in relation to the organ allocation process and the concern that there is too much time wasted from the minute a transplant center accepts an offer and recovery – Due to transplant center's specific needs, allocation process is prolonged).
2. Incorporate more "human checkpoints" throughout the process to allow for technological variation.
3. Implement real-time text message updates in an effort to be more proactive and less reactive.

Problem Statement 8:

To empower care team at donor hospital and OPO teams with the resources they need to handle the infrequent and high acuity situation of a potential organ donor.

Solutions:

1. Talk to leaders from other industries to identify the best methods for connecting disparate systems.
2. Have triggers built into hospital EMRs that address both donation after circulatory death (DCD) and brain death cases. The idea is to expeditiously provide patient information to OPOs to give them the opportunity to determine their next steps (e.g. dispatch a team, rule out patient, etc.).
3. Work with hospital systems rather than the individual hospitals on the adoption of communication strategies to standardize their practices.

Problem Statement 9:

OPOs, Donor Hospitals, and Transplant Centers need a way to engage in true health information exchange.

Solutions:

1. Get OPOs and Transplant centers to the national table on HIE/HiTech discussions. Additionally, our community needs to be part of true health information exchange.
2. Partner with the banking industry to get their input on issues of privacy and security to identify the appropriate methods of sharing data securely.

Idea Lab #2: Utilizing data analytics and improving systems utilization to increase organ acceptance

The following are the problem statements defined and solutions identified by the forum attendees. The solutions are listed in order of votes among the idea lab attendees. The most popular solutions are listed first.

Problem Statement 1:

OPO and transplant centers need a way to identify uniform data points outside the current continuum to identify potential.

Solutions:

1. Develop a mobile visualization tool that makes it easy for transplant centers to enter key data points that can be shared and reviewed.
2. Create methods for transplant centers identify new data and potential data sources in a standardized manner.
3. Develop data collection mechanisms to permit analysis of outcomes of exported organs.

Problem Statement 2:

OPO and transplant centers need a way to get the right organ to the right recipient in the least amount of time.

Solutions:

1. Automate acceptance criteria and create smart listing profiles based on transplant center acceptance history.
2. Refresh match runs and acceptances within DonorNet as new information is added to remove those that would automatically decline.
3. Refine language related to refusals.
4. Click a link/screen to see what the chances are to see the offer.

Problem Statement 3:

OPOs and OPTN need a way to communicate directly with an effective decision-maker within the transplant center.

Solutions:

1. Batch organ offers at regular time intervals with emergency offer capability – permits better staffing predictability.
2. Create mechanisms for coding out for multiple patients but allow designation of provisional yes for specific patients.

3. Develop outcomes models that take into account donor and recipient and can be communicated at time of offer.

Problem Statement 4:

Remove financial and regulatory barriers.

Solutions:

1. Mechanism in DonorNet that screens-out offers by center based on center acceptance history.
2. Create and share center utilization history.
3. Create a tool to help manage multiple offers.

Problem Statement 5:

All stakeholders need a more efficient placement system.

Solutions:

1. Allow OPOs to know which centers will take 'like' organs based on decision history – skip those centers that never take those organs.
2. Create better acceptance criteria for patients and require quarterly updates.
3. Eliminate the provisional yes.
4. Disincentivize centers from turning down organs after they are provisionally accepted. Incentivize those that are reliable.

Problem Statement 6:

Transplant surgeons need real time data-driven decision support to optimize acceptance decision-making.

Solutions:

1. Build decision support tools into DonorNet - center specific parameters, time to next organ offer, predicted survival.
2. Intelligent screening of donors by DonorNet – that would screen centers off the match run but provide the capability for centers to look at every offer. Create mechanism to screen out centers intelligently to enhance expedited placement.
3. Make DonorNet more customizable for the organ specific end user to make offer review and decision more efficient.

Problem Statement 7:

Transplant centers need a way to obtain real time data and retrospective outcomes risk analysis, O:E, etc., to evaluate impact of acceptance decisions on center outcomes.

Solutions:

1. Provide UNOS or OPO access to recipient outcome data in transplant center EMRs to inform and promote timely transplant outcome data reviews between OPO and transplant center.
2. OPO and transplant center case and organ offer reviews to understand.
3. More predictive modeling.
4. Provide timely data to the transplant center at the time of offer, for direct recovery surgeon to accepting surgeon interaction.

Problem Statement 8:

Donor evaluation – using logic to eliminate user decision-making.

Solutions:

1. Revise DonorNet to efficiently summarize or present data to facilitate rapid decision-making.
2. Develop a standardized way to look at donor acceptance patterns with case follow-up and review.
3. Create data system integration (EPIC/other EMRs and DonorNet); data warehousing with crosswalks.

Problem Statement 9:

Way for donation community to collaborate to use common standard definitions to leverage better process

Solutions:

1. Have AOPO gather primary terminology, how its defined collectively, standardize primary definitions, and create a central data source that permits DSA comparison.
2. Create common, standardized definitions to improve the process for approach and authorization.

Idea Lab #3: Using technology and systems to overcome barriers to transplantation and improve upon logistics

The following are the problem statements defined and solutions identified by the forum attendees. The solutions are listed in order of votes among the idea lab attendees. The most popular solutions are listed first.

Problem Statement 1:

OPOs and Transplant programs need a way to reduce the number of organs wasted and to reduce the time it takes to distribute organs.

Solutions:

1. Develop an adaptable DonorNet allocation system that promotes high organ utilization rates by prioritizing transplant programs whose acceptance practices are consistent with their listing practice. Transplant programs with a history of low utilization rates for certain types of donors will be automatically filtered out unless they narrow their acceptance criteria to a range where they will routinely accept and allow them to gradually increase criteria as long as utilization stays at acceptable levels.
   - Flip energy from acceptance range to offer range. E.g. if program does not accept offer from age > 50 years old, system will give offers slightly above but no more, however if they accept a 50-55-year-old, then the system can reset and broaden the range. – an adaptable system / rewarding good behaviors.
   - Offer is 25% more/higher risk offer than they currently accepted and not beyond and reset every 6 months – 1 year.

Problem Statement 2:

Electronic organ placement system potentially creates barriers to organ utilization / placement of challenging and marginal donors.

Solutions:

1. Uberize it – put in criteria for desired organ system auto matches with available supply, a dynamic supply / matching algorithm.
2. OPO and transplant center utilization outcome reviews as a standard to establish acceptance accountability, OPOs developing relationships with aggressive centers.
3. Develop patterns for centers using historical data – centers would receive offer most likely use.
4. Study and manage the late and in-OR turndowns.
5. Developing patterns for centers based on historic utilization.
6. Improve listing criteria filters for transplant centers.
7. More automation of system-based on established criteria.
8. "Car Fax" for organ donors

9. DonorNet filtering options for both varying donor types and recipient specific needs.

Problem Statement 3:

OPOs and Transplant programs need a way to consistently and accurately interpret biopsy and CT imaging.

Solutions:

1. Requirement and expectation that all biopsy readings and slides uploaded to the UNet.
2. ECHO-type training to increase consistency in readings of biopsy and radiology reading
3. In-house biopsy reads.
4. All OPO's using same pathologist (upload to UNet).
5. Artificial Intelligence (AI) to read slides.

Problem Statement 4:

The transplant community needs a way to connect the recipient team to the procurement team utilizing technology to improve efficiencies and trust and organ recovery.

Solutions:

1. Fully accessible virtual seamless entry into donor recovery, utilizing live streaming, image sharing, google glasses, standardized across industry.
2. AI decision supported tool that reads visual images, pathology data, radiology data, etc. to improve decision support, which would lead to better outcome prediction.
3. Require comprehensive local strategy for recovery of most organs, increasing trust, through communication, developing a platform, potentially an app that has profiles of all transplant surgeons, provide a rating mechanism, similar to Uber, done by peers. Recovery certification to improve standardization across the industry.
4. Increasing trust through communication early and often.
5. More utilization of perfusion technology – allocation post recovery.
6. Regional recovery teams.
7. Digital pathology – centralized reading.

Problem Statement 5:

OPOs and Transplant programs need a way to identify uniformity in the application of technology and decision-making in relation to data, donor selection, and recipient selection.

Solutions:

1. Standardize organ recovery techniques and practices and encourage all surgeons (abdominal and thoracic organs) to procure organs locally to send to accepting transplant centers.
2. A network of regional pumping labs to facilitate the use of pumps.
3. Why not drone? (organ and/or pump)

4. Recover then allocate.
5. Disposable pumps.

Problem Statement 6:

Systems need a more consistent mechanism to supply organs to recover support, treat, including ex- vivo and allowing efficient allocation.

Solutions:

1. Regional procurement centers with virtual tools and regional pumping centers.
2. Make sure there is pump availability. Requires a national transportation logistics approach. Physically and fiscally available. Amazon organ prime, Google organ.
3. Need a better recovery surgeon technician availability (surgeons for hire, locally). Use other country models that already exist, UK.

Problem Statement 7:

OPOs and Transplant programs need a way to reduce reliance on biopsy as a decision factor by acting on evidence that shows biopsies are poor indicators of kidney function.

Solutions:

1. Must be studied – Scientific Registry of Transplant Recipients (SRTR) has a study in the works that biopsies not needed in context of allocation.
2. Create a centralized biopsy network to increase data pool on biopsies.
3. Use Extension for Community Healthcare Outcomes (ECHO) model to create physician peer evaluations to learn impact of biopsies.

Problem Statement 8:

OPOs, transplant centers and donor hospitals need real-time communication solutions.

Solutions:

1. Offer live-streaming during organ procurement to increase transplant surgeons' comfort level with accepting organs procured by local teams. System must be standardized to ensure it is UNet accessible, secure, portable and can be recorded for future teaching opportunities.

Summary

The Alliance's 2018 National Critical Issues Forum elicited many great ideas and created a wonderful forum for multi-disciplinary discussion and idea exchange. There is much strength in gathering and collaborating as a community representing all areas of expertise rather than attempting to combat the challenges individually.

However, great ideas are only exactly that – ideas – until someone takes action and implements them. In the words of Margaret Mead, "Never doubt that a small group of thoughtful, committed citizens can change the world; indeed, it's the only thing that ever has."

It is The Alliance's hope that some of these ideas will be realized. The Alliance commits to providing forums and avenues to allow for the continued dialogue and collaboration to work toward the accomplishment of the proposed solutions.