PARAGONIX®

WEBINAR SERIES

1

HEART TRANSPLANTATION IN A VIRAL PANDEMIC

SUMMARY NOTES – EPISODE 1 / 7 APRIL 2020

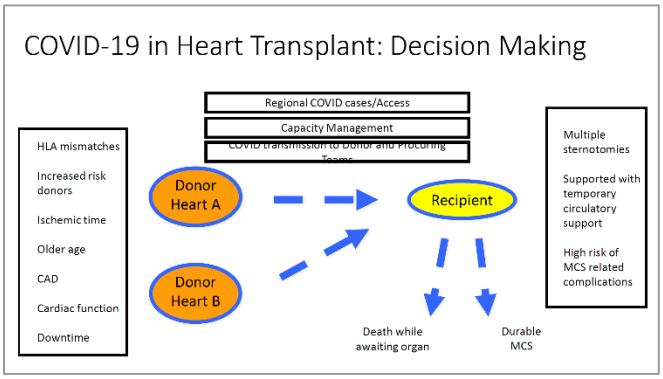
Over 400 attendees from over 300 institutions and 22 countries joined the webinar on April 7th. Below is a brief summary of the results of that event.

ON-DEMAND RECORDING

Full recording of the April 7th webinar is available at the following link:
https://zoom.us/rec/share/38BLMYjdz39OUquU5R_jAJwuH4XcX6a823VM-aEIyB3ILnjTMfR_y6fncwWX05RD

CHETAN PATEL, MD

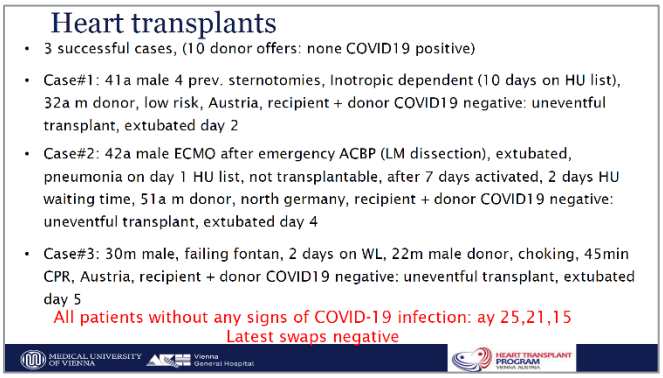
Medical Director, Cardiac Transplant Program / Duke University



Decision making on heart transplantation during COVID-19 needs the following considerations: Tx patient – high resource utilization; Organ Tx is by definition a hospital to hospital transfer; regional COVID cases/access; capacity management; COVID transmission to donor/procuring team/recipient; projected ICU and hospital LOS; ventilator/OR space/staff/blood bank. No recommendations to cease Tx, but focus is on highest status patients with no infection. Risk-Benefit analysis is critical. Outlook: Beginning stages of seeing the impact of this pandemic. COVID-19 will likely persist longer, unless we see seasonal behavior.

ANDREAS ZUCKERMANN, MD

Director, Cardiac Transplantation / Medical University of Vienna – AKH Vienna



Austria's early preparation is paying off. Country shut down as of March 15th (Except for grocery stores, banks, post offices, and hospitals). Preparation for pandemic impact critical for in-patient care, including: designated COVID hospitals; regular screening of medical staff; shut down of all elective procedures and all routine visits – averaging 30-40 per week; donor testing and pre-testing 24 hours pre-admission of recipients. Challenges faced: telemedicine between medical teams to manage heart transplant recipients (different treatment philosophies). Considerations: travel to COVID hotspots; minimal procurement team; protective equipment; and closure of airports can impact total ischemic time.

SCOTT SILVESTRY, MD

Surgical Director, Thoracic Transplant Programs / AdventHealth Orlando

Safety FIRST. HF can be stabilized in other places than heart Tx centers. Cancelations are okay; transplant the most urgent cases if possible. Ethical considerations of the fair allocation of scarce medical resources in the time of COVID-19 (NEJM March 23 2020). Critically important in managing current situation: balancing of resources, don't always push the envelope, safety is essential. Collaborations with peers and other centers → build bridges where there were none → build local networks to support each other: "Adversity does not build character, It reveals it."

Fair Allocation of Scarce Medical Resources in the Time of Covid-19 NEJM March 23, 2020

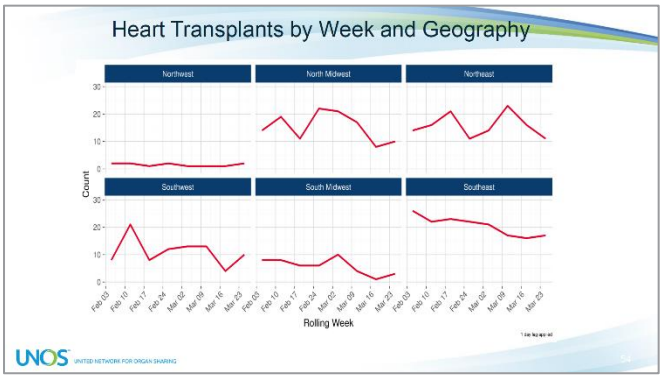
Table 2. Ethical Values to Guide Rationing of Absolutely Scarce Health Care Resources in a Covid-19 Pandemic.

Ethical Values and Guiding Principles	Application to COVID-19 Pandemic
Maximize benefits	
Save the most lives	Receives the highest priority
Save the most life-years — maximize prognosis	Receives the highest priority
Treat people equally	
First-come, first-served	Should not be used
Random selection	Used for selecting among patients with similar prognosis
Promote and reward instrumental value (benefit to others)	
Retrospective — priority to those who have made relevant contributions	Gives priority to research participants and health care workers when other factors such as maximizing benefits are equal
Prospective — priority to those who are likely to make relevant contributions	Gives priority to health care workers
Give priority to the worst off	
Sickest first	Used when it aligns with maximizing benefits
Youngest first	Used when it aligns with maximizing benefits such as preventing spread of the virus

DAVID KLASSEN, MD

Chief Medical Officer / UNOS

OPTN data shows a decrease in heart transplant procedures by ca. 50% (as of early April 2020). Region-specific decrease in transplantation. Heart waitlist registrations remain stable; several programs with wait list inactivations. Sharp drop (50%) in deceased donor recoveries. Plans for wait time continuation for inactivated candidates due to COVID-19. Mandatory COVID-19 donor disease transmission reporting; organ procurement by local recovery teams re commended.



SUMMARY OF POLLING DATA

Despite the unprecedented impact of Covid-19 on hospitals, transplant centers and national transplant organizations, transplant centers continue to serve the critical need for heart transplantation for patients on the waitlist. Key factors in management of active heart transplant programs are:

- **Local capacity management**
- **Mandatory donor testing**
- **Complete PPE for donor heart procurement**

As of April 7, 2020, most centers focus on high-urgency patients on the waitlist, while over 25% continue normal operations, with most centers currently not facing any governmental restrictions regarding organ procurement.

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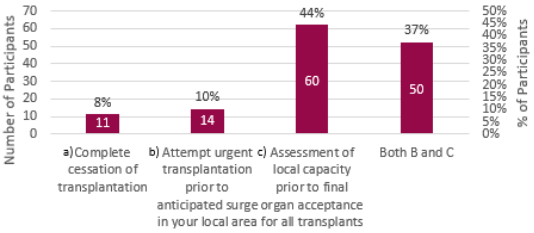
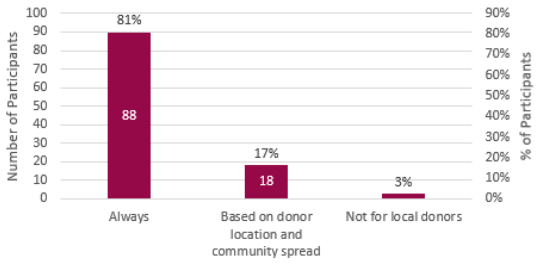
DETAIL RESULTS OF POLLING DATA

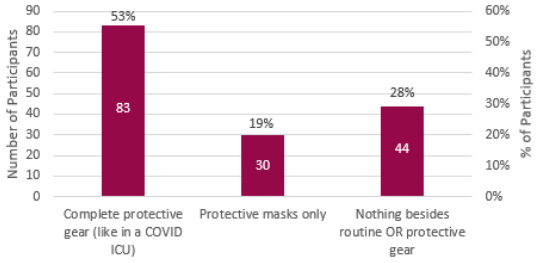
Capacity management: how has your heart transplant program responded to the expected surge in COVID-19 infection?



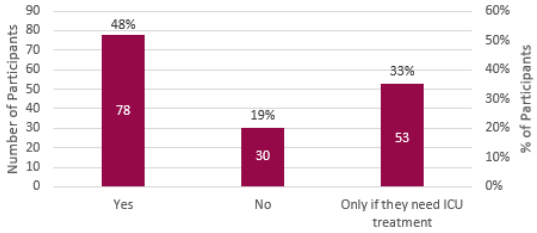
Transmission risk: prior to organ acceptance, do you require COVID-19 testing on the donor?



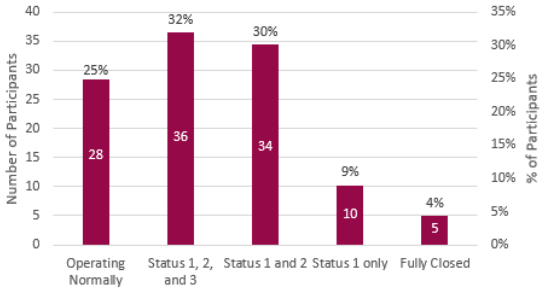
Do you have any protection for your procurement team available?



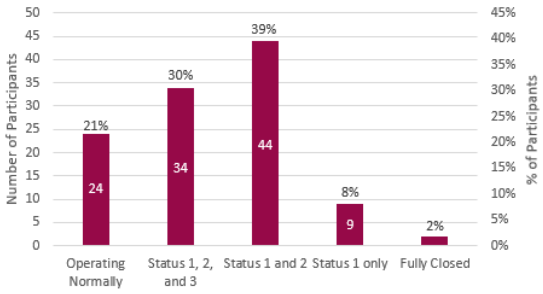
Should COVID-19 infected heart transplant patients be transferred to the transplant center for treatment?



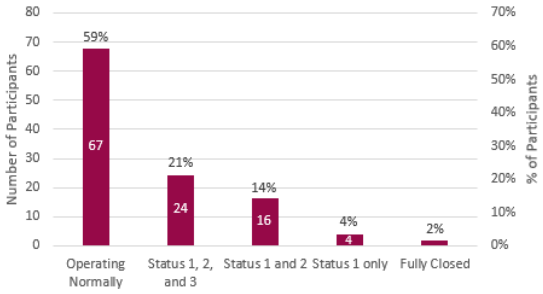
How are programs conducting business now?



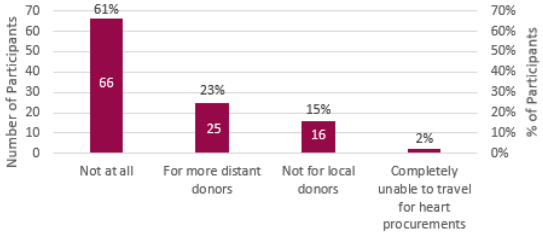
How are programs running in one month?



How are programs running post surge?



Have governmental or institutional travel restrictions impaired heart procurement by your center?



JOIN THE NEXT EVENT

15 April 2020 / 3PM ET
Register Here:
https://zoom.us/webinar/register/4615863597158/WN_upgJyjX3QJ6IOOrCJlPD5Q

These notes are a summary of the talks presented and do not represent recommendations of medical practice from Paragonix Technologies. Many of clinical practices discussed are from limited individual experience from the COVID-19 crisis and are not based on large scale randomized trial evidence based medicine.