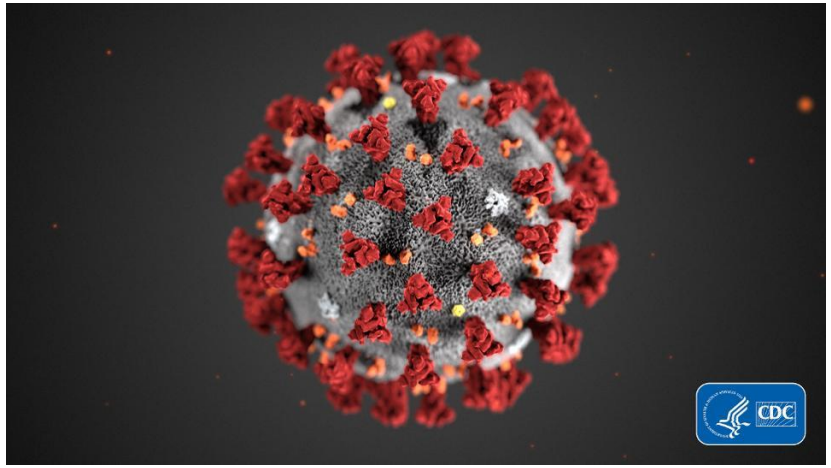
Kidney Transplantation During the Pandemic at Virtua OLOL and Psychosocial Considerations



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Transplant Nephrologist

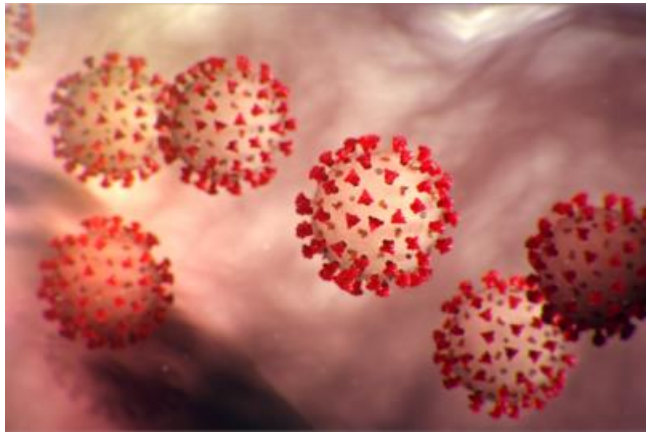
Objectives:

1.) To discuss/understand how the covid-19 pandemic has affected the landscape of kidney transplantation in the U.S.

2.) To discuss the Virtua Our Lady of Lourdes approach to kidney transplantation during the pandemic, recognizing that each transplant center has unique approaches.

3.) To review strategies for waitlisted patients to stay safe and ready for transplantation during the pandemic.

Terminology



SARS-CoV-2: the virus

(previously referred to as 2019-nCoV)

Coronavirus Disease 2019 (**COVID-19**): the disease

Pandemic: an epidemic occurring worldwide, or over a very wide area, crossing international boundaries and usually affecting a large number of people

Last JM. Oxford University Press. 2001.

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Coronavirus disease in humans

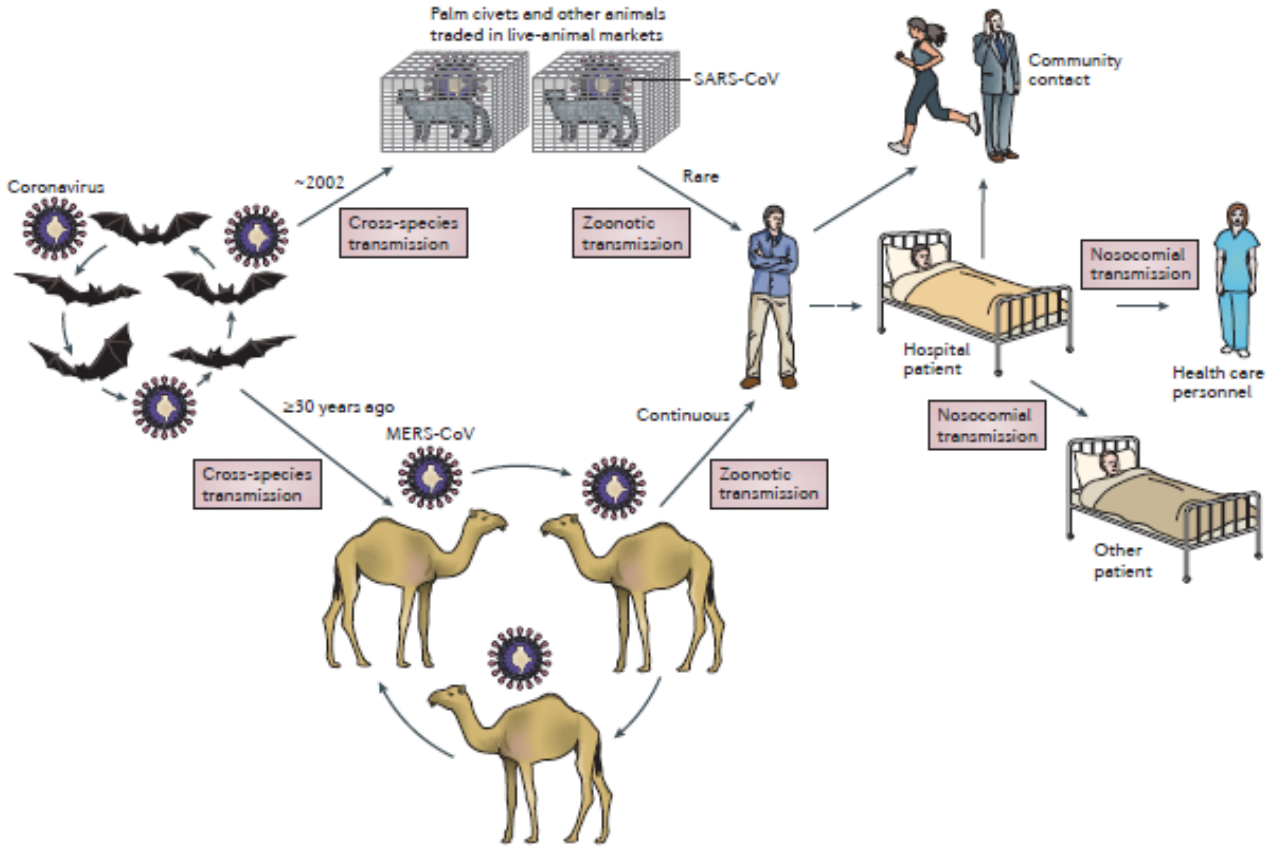
Common human coronaviruses

- HCoV-229E
- HCoV-NL63
- HCoV-HKU1
- HCoV-OC43

Novel coronaviruses

- Severe Acute Respiratory Syndrome Coronavirus (SARS-CoV) - 2003
- Middle East Respiratory Syndrome Coronavirus (MERS-CoV) - 2012
- **Severe Acute Respiratory Syndrome Coronavirus-2 (SARS-CoV-2) - 2019**

Novel coronaviruses emerge from animal reservoirs



Spillover events: bats → intermediate host → humans

Wit Nature Review Micro 2016

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SARS-CoV-2 First Identified in Wuhan, China

SARS-CoV-2 first isolated from BAL samples obtained on December 30, 2019

Initial cases linked to the Huanan Wholesale Seafood Market

https://www.sciencemag.org/news/2020/01/novel-human-virus-pneumonia-cases-linked-seafood-market-china-stir-concern
https://www.nytimes.com/2020/01/25/world/asia/china-markets-coronavirus-sars.html
https://www.nature.com/articles/d41586-020-00364-2

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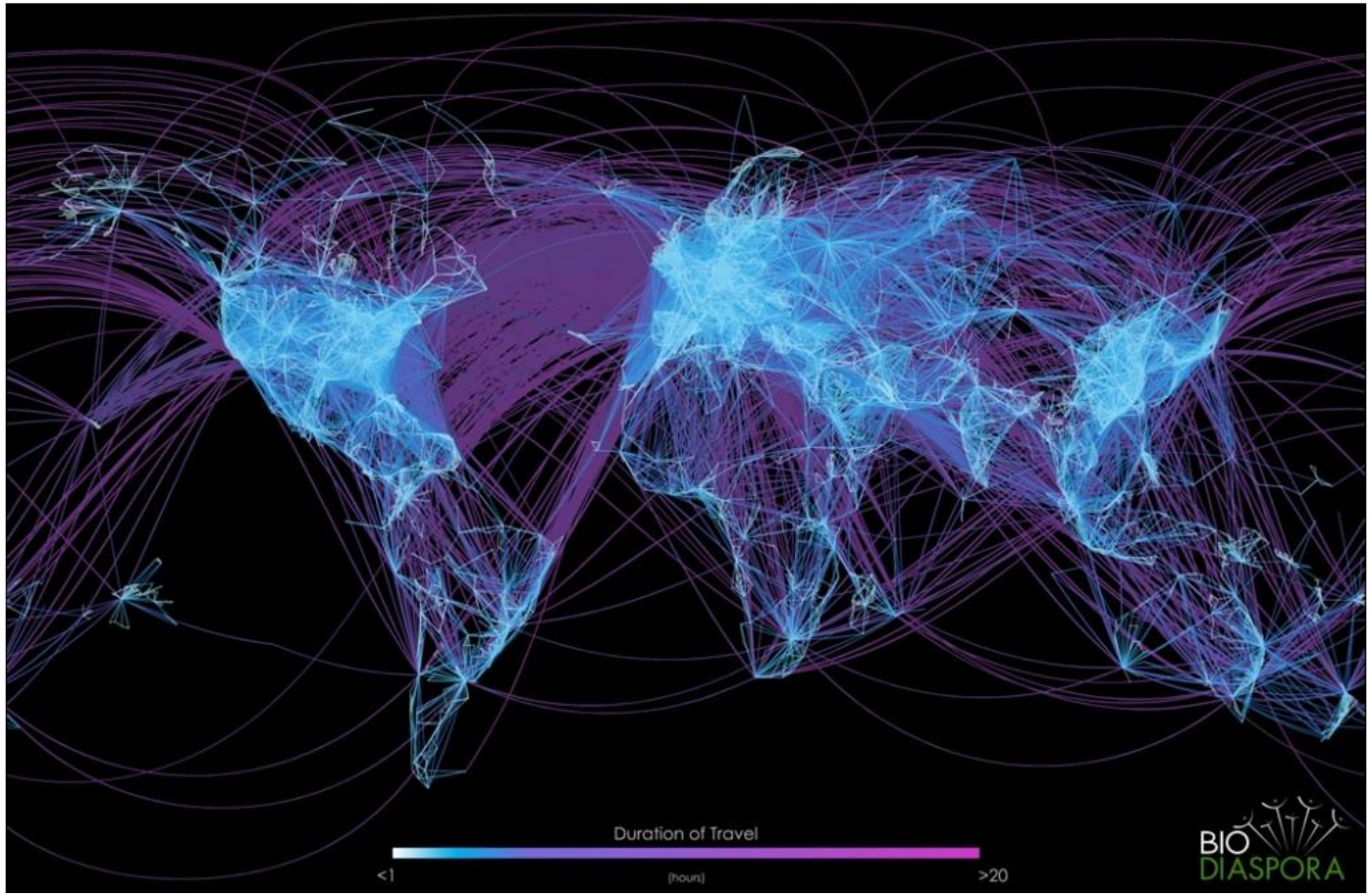
Our urban and global society increases opportunities for dissemination



https://bluedot.global/

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COVID-19 Timeline

Date	Event
December 8, 2019	First case in China
December 30, 2019	BAL samples collected from which the virus was first isolated
January 7, 2020	Novel virus identified
January 16, 2020	First case reported outside of China
January 30, 2020	WHO declares a “Public Health Emergency of International Concern”
February 29, 2020	First death in US
March 9, 2020	NJ Governor declares a State of Emergency

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Transmission of SARS-CoV-2 is largely by close person-to-person transmission

Respiratory droplets (primary)

Contact

Airborne transmission over very long distances was initially thought not to be likely, but there is growing evidence that droplets and airborne particles can remain suspended in the air and be breathed in by others, and travel distances beyond 6 feet

Estimated reproduction number (r_o): ~2-2.5

www.cdc.gov/coronavirus/2019-ncov/

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Covid-19 CDC Case/Death Data

- As of September 21, 2020, there have been 6,786,352+ total cases in the US with 199,024+ deaths
- 2051 cases per 100,000 people
- Peak mortality was in mid-April, largely driven by NY and NJ
- https://covid.cdc.gov/covid-data-tracker/index.html#trends_dailytrends

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Transplantation During Covid-19

- The landscape of solid organ transplantation has dramatically changed since the COVID-19 pandemic unfolded.
- The transplant workforce has implemented several changes in response to rapidly changing circumstances with the aims of preserving personal protective equipment, maintaining hospital capacity during an anticipated surge in COVID-19 cases and minimizing the risk of virus transmission.
- There is immense uncertainty about the adequacy of available SARS-CoV-2 testing and concerns about the potential risk of transmitting a virulent disease to heavily immunosuppressed transplant recipients and otherwise healthy live donors.

Impact of Covid-19 on Transplant Rates/Listing

- Although CMS categorizes solid organ transplantation as a Tier 3b procedure, meaning that it should not be postponed, the majority of transplant centers in the US have reduced their numbers of kidney transplant procedures in response to the COVID-19 pandemic.
- In late March 2020, a survey of 88 US transplant institutions reported that 71.8% had completely suspended live donor kidney transplantation and 84% had implemented restrictions for deceased donor kidney transplantation (i.e. transplanting only highly sensitized patients, higher acuity patients and those who did not have access to dialysis).

Boyarsky et al, *AJT* 20,1809-1818 (2020)
Loupy et al, *Lancet* 395, e95-e96 (2020)
Boyarsky et al, *AJT* https://doi.org/10.1111/ajt.16167 2020

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Impact of Covid-19 on Transplant Rates/Listing

- Another study reported a 51% reduction in solid organ transplant procedures in the US, mostly driven by reductions in kidney transplantation.
- An analysis of US registry data showed that between 15 March and 30 April 2020, the numbers of deceased donor and live donor kidney transplant procedures were, respectively, 24% and 87% lower than would be expected based on pre-epidemic data. In addition, the number of new registrants for the deceased donor kidney transplant waiting list decreased by 18%, likely reflective of delays in the evaluation of kidney transplant candidates.
- These statistics demonstrate the devastating effect of the pandemic on patients awaiting kidney transplantation.

Boyarsky et al, *AJT* 20,1809-1818 (2020)
Loupy et al, *Lancet* 395, e95-e96 (2020)
Boyarsky et al, *AJT* https://doi.org/10.1111/ajt.16167 2020

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Should we be transplanting during the pandemic?

- With the goal of assisting transplant centers in making difficult decisions, researchers have developed a simulation calculator that uses the characteristics of transplant candidates and regional COVID-19 parameters to identify those who could potentially benefit the most from kidney transplantation during the pandemic.
  - In most scenarios, the simulations showed potential immediate survival benefits of kidney transplantation, particularly in areas where the case fatality rate from COVID-19 among the general population was low.

Massie, A. B. et al. *Am. J. Transplant.* https://doi.org/10.1111/ajt.16117 (2020)

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Donor Covid-19 Testing: AST Guidelines

- The American Society of Transplantation (AST) has recommended epidemiological, clinical and laboratory assessment of potential deceased donors.
  - Epidemiological assessment includes identification of factors such as residence in or travel to high incidence areas and recent exposure to individuals with COVID-19.
  - Clinical assessment includes assessment of COVID-19 symptoms and laboratory assessment comprises nucleic acid testing of at least one sample from the upper or lower respiratory tract for SARS-CoV-2 within 3 days of organ procurement.
- Guidelines recommend against accepting donors with active COVID-19.
- Donors with recent COVID-19 might be considered for donation if they had repeated negative nucleic acid testing at least 24 h apart and resolution of symptoms more than 28 days before organ procurement.
- Similar guidelines were issued for living donors with the addition of providing counselling about infection prevention.
- In addition, the AST recommends temporary suspension of living donor kidney transplantation during periods of high local transmission of COVID-19 to minimize infection risk for live donors.

American Society of Transplantation. *AST COVID-19 Information*, https://www.myast.org/covid-19-information (14 May 2020)

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Our approach to kidney transplantation during the pandemic

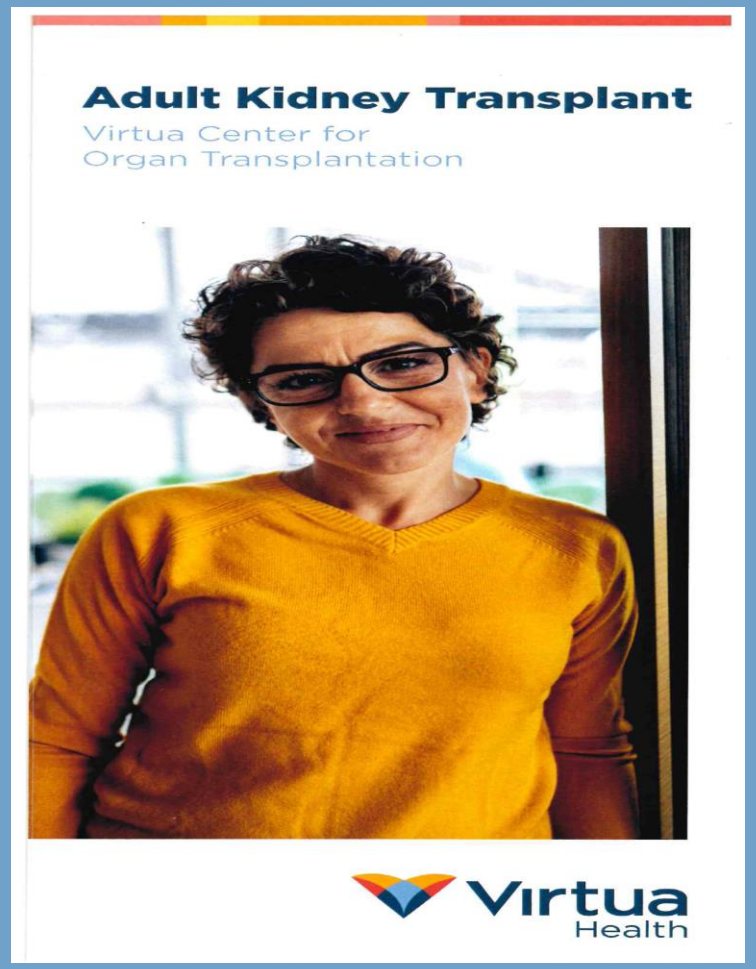
- We had suspended living donor kidney transplants during the spring when all elective surgical procedures were suspended in the state of NJ, but have since resumed those procedures.
  - During that time, we had also inactivated older patients (>70 years old) and those with underlying cardiopulmonary conditions. These patients are now all currently active (unless they wish to remain inactive by choice due to the ongoing pandemic).
- At the peak of the surge in our region, we were using non-lymphocyte depleting induction therapy (Simulect) on a case-by-case basis, but have since returned to using Thymoglobulin as our primary induction agent.
- We have been performing deceased donor kidney transplants throughout the pandemic with appropriate informed consent.

Our approach to kidney transplantation during the pandemic, continued

- All potential recipients are evaluated over the phone at the time of organ offer for risk factors for covid-19 (travel, contact, etc) as well as for signs/symptoms of covid-19 infection prior to admission.
- Potential recipients are told they must wear a mask to enter the hospital.
- After admission, potential recipients undergo rapid PCR-based testing (NP swab) upon admission to the hospital prior to transplantation.

What should waitlisted patients be doing during the pandemic?

- Potential and actual **transplant recipients are by definition an at-risk population**.
- They should minimize exposure and practice **"social distancing,"** staying at home whenever possible.
- Healthcare visits by **telemedicine and increased use of phone consultations** should be considered for routine follow-up care whenever possible.
- For in-person clinics that MUST go on (like dialysis), the general rule should be to **minimize the exposure/risk to** patients and providers by implementing safety measures such as **temperature checks**, **mandatory mask-wearing**, use/availability of **hand-sanitizers**, etc.
- Sufficient space needs to be available to **enforce patient separation**.
- It is important to follow local protocols for suspected patient infections.



https://www.virtua.org/articles/special-delivery-organ-transplant-gives-amazon-employee-second-chance

Questions?

Resources

- National Kidney Foundation: https://www.kidney.org/covid-19
- American Kidney Fund Covid-19 Resources for Kidney Patients: https://www.kidneyfund.org/coronavirus/
- UNOS Covid-19 Resources for Organ Transplants and Donations: https://unos.org/covid/
- CDC Covid-19 Homepage: https://www.cdc.gov/coronavirus/2019-ncov/index.html
- NJ Covid-19 Information Hub: https://covid19.nj.gov/index.html
- World Health Organization (WHO): https://www.who.int/emergencies/diseases/novel-coronavirus-2019

Psychosocial issues in Transplant

How has this changed with COVID-19

Margaret Goodfellow MSW,LSW,NSW-c

Kidney/Pancreas Transplant Social Worker

Disclosure Information

Margaret Goodfellow MSW, LSW,NSW-c
has no financial relationships to disclose.

Objectives:

- For the participant to be able to identify psychosocial factors related to transplant.
- For the participant to be able to identify ways that health professionals can support individual patients in overcoming psychosocial barriers to transplant.
- For the participant to be able to identify the impact that COVID-19 has had on transplant, so that they can better support their patients through the transplant process.

What is Transplant?

Pros

- No more dialysis
- Less time spent on medical care?
- Can Improve Quality of Life and longevity
- Easier to travel

Cons

- It's a treatment not a cure
- Have to take expensive medications for the rest of my life.
- Eligibility for benefits can end after 3 years
- Increased risk of infection

Psychosocial Factors In Transplant
Emotional Impact

- Depression
- Anxiety
- Can exacerbate pre-morbid mental health concerns
- Substance Abuse

Psychosocial Factors in Transplant

Financial

- Uncertainty about employment
- Insurance- how to pay for treatment
- Planning for the Future-What if I'm not here to provide for my family?
- How will I pay for my medicines when I lose Medicare?

Psychosocial Impact of ESRD
Practical

- Transportation
- Child/Dependent Care while at appointments or receiving treatments
- Household chores

Psychosocial Factors in Transplant

Health Literacy

- ***Personal Health Literacy*** is the degree to which individuals have the ability to find, understand, and use information and services to inform health-related decisions for themselves and others.

- **Organizational Health Literacy** is the degree to which organizations equitably enable individuals to find, understand, and use information and services to inform health-related decisions for themselves and others.

https://www.cdc.gov/healthliteracy/learn/index.html

Psychosocial Factors in Transplant

Personal Health Literacy

- Cognitive/intellectual concerns
- Educational issues
- Cultural/ Language Concerns
- Poverty

Psychosocial Factors In Transplant

Organizational Health Literacy

- Is written material understandable?
- Are interpreters used?
- Are we sensitive to cultural differences?
- Are we sensitive to the reality that accessing health care can be more difficult for poor, immigrant, and minority individuals?

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Psychosocial Factors in Transplant

Removing Obstacles

Emotional

- Educating about how physical symptoms can impact emotion
- Normalizing
- Assessing and Referring
- Providing opportunities for patients to support each other
- Helping patients recognize their strengths. How have they dealt with stress/problems in the past?
- Instilling Hope

Psychosocial Factors in Transplant

Removing Barriers

Financial

- Education about coverage for Medications and procedure
- Education about Community, State and Federal resources available to assist with pre and post-transplant care
- Educate about FMLA and STDI to protect employment and provide income when out of work at time of transplant, or if there is a complication.
- Educate about accommodations through the Americans with Disabilities Act

Psychosocial Factors in Transplant

Removing Barriers

Practical Concerns

- Refer to resources
- Help patients consider potential avenues for support
- Encourage them to build their team
- Helping patients consider non-traditional supports

Psychosocial Factors in Transplant

Removing Barriers

Personal Health Literacy

- Assess patient's educational, intellectual, and cognitive status, and present information in an understandable manner.
- Do not assume that an individual understands, just because they are nodding or agreeing. Ask the patient to paraphrase.
- Use relatable analogies to illustrate.
- Do not assume that education is a one-time thing.
- Confirm a patient's ability to read and write.
- Confirm the language that the patient is most comfortable getting complicated information in.

Psychosocial Factors in Transplant

Removing Barriers

Organizational Health Literacy

Five Talking Points on Health Literacy:

- Nine out of 10 adults struggle to understand and use health information when it is unfamiliar, complex or jargon-filled.
- Limited health literacy costs the healthcare system money and results in higher than necessary morbidity and mortality.
- Health literacy can be improved if we practice clear communication strategies and techniques.
- Clear communication means using familiar concepts, words, numbers and images presented in ways that make sense to the people who need the information.
- Testing information with the audience before it is released and asking for feedback are the best ways to know if we are communicating clearly. We need to test and ask for feedback every time information is released to the general public

https://www.cdc.gov/healthliteracy/shareinteract/TellOthers.html

How has COVID impacted patient's psychosocially?

Pre Transplant

- Many Centers were not transplanting from March to July
- Change in appointments, from in person to TeleHealth or Zoom
- Delays in getting testing scheduled
- Uncertainty

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How has COVID impacted patients psychosocially?

Post Transplant

- Initially fear and concern for immediate safety.
- Support and Direction about work, school, normal activities.
- Currently helping patients consider risk as more services are opened. How to live, as an immunocompromised person, in a world where COVID is a reality.
- Checking in with patients, in person and by phone, to find out how they were coping.

How has COVID impacted patient's psychosocially?

New Transplant Patients

- Initially no visitors
- Concerns about going to the hospital in the midst of a pandemic
- Having an experience different from the one they expected.
- For the team adjusting practices so we could adhere to policy and protocol, and still support patients.
- For some patients COVID presented an opportunity to be transplanted
- Helping patients adjust to a new normal in a crazy world

What has it really been like?
Some stories

I want to share a few examples of how COVID has impacted individuals. The stories are not being presented as case examples and no identifiers, such as age (I will refer to older, middle, or young) race or geographic location are being used.

This information is anecdotal and is being used only to illustrate different impacts of the pandemic.

Questions?

My email is
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