The Needs of Transplant Patients
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Disclosure
• I have no financial disclosures

Liver Transplantation
• Approved Surgical Treatment for End Stage Liver Disease (ESLD)
• Stringent Candidate Selection Criteria
• Organ Allocation
• Management of Listed Patients
• Post Transplant Management of Recipients
  • Immediate Post Transplant (<3 months)
  • Long-term Post Transplant (3 months or more)

Objectives for the Case Manager:
• Provide background statistics on transplantation of liver, kidney, and pancreas transplantation in the United States
• Requirements for eligibility of potential candidates
• Demonstrating the different needs of each abdominal transplant patient
• Understanding the transplant event
• Defining the post-hospital needs for the patients

Liver Transplantation
Adult Centers: US

**ADULT WAIT LIST: LIVER**

**PEDiatric WAIT LIST: LIVER**
ADULT WAIT LIST TIME: LIVER

PEDIATRIC WAIT LIST TIME: LIVER

WAIT LIST DEATH: LIVER

LIVER TRANSPLANT VOLUME

PAYOR MIX: LIVER

MELD SCORE

Number based on disease severity

LIVER TRANSPLANT
VOLUME

PAYOR MIX: LIVER

Insurance coverage among pediatric liver transplant recipients at time of transplant
Patients receiving a transplant in 2014 were allowed to continue their primary insurance
Patients receiving a transplant in 2015 were required to enroll in the transplant
Insurance

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LIVER TRANSPLANT
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Patients receiving a transplant in 2015 were required to enroll in the transplant
Insurance
Renal Transplantation

- Approved surgical therapy for End Stage Renal Disease (ESRD)
- Stringent candidate selection criteria
- Organ Allocation
- Post Transplant Management of Recipients
  - Immediate Post Transplant (<3 months)
  - Long-term Post Transplant (3 months or more)
### Kidney Waitlist

<table>
<thead>
<tr>
<th>Year</th>
<th>Number of Patients</th>
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</thead>
<tbody>
<tr>
<td>2009</td>
<td>79,265</td>
</tr>
<tr>
<td>2010</td>
<td>79,397</td>
</tr>
<tr>
<td>2011</td>
<td>81,919</td>
</tr>
</tbody>
</table>

### Time to Kidney Transplant

- Median time to transplant: 1 year
- Percent of patients on transplant list: 90%

### Living Donation (Kidney)

#### Characteristics of Living Donors

- Age distribution:
  - 18-34: 10%
  - 35-44: 20%
  - 45-54: 30%
  - 55-64: 20%
  - 65+: 10%

- Race distribution:
  - White: 50%
  - Black: 20%
  - Hispanic: 10%
  - Asian: 10%
  - Other: 10%

### Paired Kidney Donation

- Number of paired donations increasing over time

### Kidney Transplant Numbers

- Total adult kidney transplants (includes kidney-pantecy)

### Payor Mix: Kidney

- Percent of patients by payor:
  - Medicare: 40%
  - Private: 30%
  - Medicaid: 20%
  - Other government: 10%
**Outcomes: Kidney**

- **Delayed graft function among adult kidney transplant recipients**
  - Delayed graft function is defined as requiring dialysis within the first post-transplant week.

- **Half-lives for adult kidney transplant recipients**
  - Half-lives are estimated as the time at which the rate of graft failure reaches 50%.

**Readmissions: Kidney**

- **Reported cumulative incidence of rehospitalizations among 1-year post-transplant recipients**
  - Cumulative incidence of readmissions post-transplantation is calculated from the time of transplant. Recipients aged 65–85 years were identified from the core Transplant Recipient Follow-up Form.

**Pancreas Transplantation**
Pancreas Transplantation

- Approved Surgical Therapy for selected Diabetics
- Stringent candidate selection criteria
- Organ Allocation
- Post Transplant Management of Recipients
  - Immediate Post Transplant (<3 months)
  - Long-term Post Transplant (3 months or more)

WAIT LIST: PANCREAS

TIME TO TRANSPLANT: PANCREAS

VOLUME OF PANCREAS TRANSPLANTS
PAYOR MIX: PANCREAS

GRAFT FAILURE: PANCREAS

GRAFT SURVIVAL: PANCREAS

READMISSIONS: PANCREAS

Pre Transplant Phase
“You are not listed yet.....”
Placement on Transplant List

1. Application completion
2. Financial approval for evaluation
3. Medical and Psychosocial Evaluation
4. Institutional Selection Committee approval
5. Financial approval to be listed
6. Placement on waitlist

Evaluation Process

- Lab Tests
  - Blood Type
  - Tissue Typing
- Medical Tests
  - Radiology
  - Cardiac
- Consults
  - Transplant Nephrologist
  - Transplant Surgeon
  - Social Worker

Evaluation Process

- Other possible patient specific consults:
  - Cardiologist
  - Hepatologist
  - Oncologist
  - Hematologist
  - Pulmonologist
  - GI
  - Urology

*Other patient specific testing may be necessary.

Patient Compliance

- **Crucial** during evaluation, while waiting for transplant and after transplant.
  - Patients must attend all scheduled appointments and dialysis sessions
  - Patients must take all medications prescribed
  - Notify transplant center coordinator if compliance is a concern

Consequences of Non-compliance

- During evaluation
  - Possible denial by transplant selection committee
- While waiting for a transplant
  - Possible denial of transplant if testing is not current
- After transplant
  - Risk loss of kidney transplant
Possible reasons Selection Committee may not approve patients

- Comorbidities (i.e. cardiovascular disease)
- Active or recent cancer
- Active infection
- Severe obesity
- Psychological issues or substance abuse
- Non-compliance

Wait List Maintenance

- Monthly PRA drawn by HD Center:
  - Percentage of antibodies in bloodstream
  - Range is 0-100%
  - Higher the percentage, the harder it is to match patient to a donor
  - Previous pregnancies, recent blood transfusions, or previous transplants can affect PRA

Dual Listing

- Patients are allowed to dual list if possible
- Maintenance on list dependent on institutional policies and requirements

Wait List Maintenance

- Annual Testing
  - Consult with Transplant Nephrologist/Surgeon
  - TB testing
  - Guaiac stool cards
  - Labs
  - Cardiac Consult
  - EKG, Echocardiogram, Stress Test
  - Chest X-ray
  - Other Consultants as needed

Length of Stay

- Length of stay is dependent on:
  - Patient condition at time of transplant
  - Success of transplant
  - Complications of transplant
  - Social Support
  - Coordination of care from inpatient to outpatient
Patient Condition

- Age
- Illness Severity
- MELD
- Length on Hemodialysis
- Comorbidities
- Disabilities
- Dependence on support systems
  - Skilled Nursing Facility
  - Nursing Home
  - Adult Home
- Success of Transplant

- Transplant operation
- Primary failure
  - Need for retransplant (liver)
  - Removal of transplant
- Delayed Graft Function
  - Dialysis continues after transplant
  - Prolonged inpatient stay

Complication of Transplant

- Surgical Complications
  - Reoperation
  - Infection
- Medical Complications
  - Myocardial infarction
  - Stroke
- Medication Side effects
  - New onset Diabetes Mellitus

Social Support

- Discharge is dependent on support systems available to the patient
  - Identified prior to transplant listing, however things change while listed
  - Condition of patient may exceed what the support system can provide
  - Authorization of medications may be difficult

Coordination of Care

- Definitely Impacts
  - Patient Outcomes
  - Patient Satisfaction
  - Inpatient Length of Stay
  - Readmission Rates
  - Emergency Room visits

Coordination of Care

- Medications
  - Home Health Care
  - Physical Therapy
  - Occupational Therapy
  - Extended Care Facilities
  - Transportation
  - Follow up appointments
  - Laboratory
  - Imaging
  - Clinics
  - Multidisciplinary Meetings
Coordination of Care

- Transplant care is lifelong.
- First and most important is the transfer to the outpatient setting.
- Coordination after the readmission is as important as new needs develop.

We Have Lift Off!

Everyone plays an important role in the success of transplant patients.

Data:

SRTR.ORG
Scientific Registry of Transplant Recipients

Informational Websites

UNOS (United Network of Organ Sharing)
- www.unos.org
- 888-894-6361