Transplant Ambassadors

Presented by:

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Multi-Organ Transplantation Division
Beaumont Health System
Learning Objectives

1. Improve understanding of the transplant process
2. Enhance knowledge of Beaumont Health System’s Selection Criteria for Transplantation
3. State standard transplant work-up requirements
4. Increase awareness of Listed patient follow-up Protocols
5. State advantages of kidney transplantation
End Stage Renal Disease

- In **2008**, 547,982 Americans were suffering from ESRD. The ESRD population was expected to grow to **785,000** by 2020.
- The annual cost of treating ESRD in 2008 was **$32 billion**.
- Approximately **46,000** ESRD patients die each year, making kidney disease America’s **ninth leading cause of death**.
- Diabetes and hypertension alone account for **65-70%** of kidney disease in the U.S.

*data obtained from www.asn-online.org*
End Stage Renal Disease

- In 2010, 871,000 Americans were suffering from ESRD.
- The annual cost of treating ESRD is over $40 billion.
- About 90,000 ESRD patients die each year, making kidney disease America's eighth leading cause of death.
- Diabetes and hypertension (high blood pressure) account for 65-70% of kidney disease in the U.S.

http://www.cdc.gov/mmwr/preview/mmwrhtml/mm6208a8.htm
Treatment for Renal Failure

- **Peritoneal Dialysis**
  Done through a catheter that is surgically placed in your abdomen

- **Hemodialysis**
  Done through a surgically created graft or fistula usually in the arm
  Usually performed at a dialysis unit 3x/week

- **Transplantation**
  Surgical procedure to remove a healthy, functioning kidney from a living or brain-dead donor and implant it into a patient with non-functioning kidneys.

  NOT A CURE
TYPES OF TRANSPLANTS

- Living-Related Transplant
  - A living-related donor is blood related such as a mother, father, sister, brother, son, daughter, cousin, aunt, or uncle

- Living Non-Related Transplant
  - A living non-related donor is a person who is living, but not blood related

- Deceased Donor Transplant
  - Deceased donors are individuals who have been declared brain dead and the individual’s family has consented to organ and tissue donation
Phases of Transplant Care

- Referral
- Evaluation
- Listing
- Transplant
- Post-Transplant
When to Refer?

- Patients GFR falls to 20%.
- Vein Mapping for fistula placement and referral to transplant center should be done concurrently.

The majority of patients, however, are referred to a transplant center by their renal social worker, RN or nephrologist after dialysis initiation.
Selection Criteria

- Generally between 18-75 yrs old (Beaumont does not have an age limit but has a functional status requirement)
- Cancer free
- Infection free
- Body Mass Index (BMI) generally \(<\ 40\) (normal: 18.5-24.9, Obesity>30)
- Glomerular Filtration Rate (GFR) \(<\ 20\)
- Adequate psychosocial systems
- Appropriate insurance
Major Contraindications

- Active malignancy or metastatic cancer
- Chronic or untreated current infections
- Persistent non-adherence to treatment
- Active substance abuse
- Active mental illness
- HIV
- Severe cardiac disease (i.e.: stage IV CHF or cardiac ischemia)
- Severe peripheral vascular disease
- Irreversible lung disease
- Poor social support system

Referral Form

Please include copies of:

- CMS 2728 Form
- Insurance cards
- Recent CBC, CMP
- H & P/radiology reports
- Vaccination records
- Current medication list
- Signed Medical Release
Referral Phase

- Appointment scheduled with multi-disciplinary transplant team upon receiving referral form/call
- Pre-screening phone interview preformed by Pre-Nurse Coordinator 1-2 weeks prior to evaluation appointment
- Obtain medical records for review
- Educate patient on standard work-up items that may be completed prior to evaluation appointment
THE EVALUATION PROCESS

- To evaluate and determine the safest and best possible treatment option for a patient's ESRD.
- To advise if a kidney transplant option is the right course of treatment.
- A successful transplant procedure should improve both the quality and length of life.
Evaluation

Multi-disciplinary approach

- Financial Representative
- Social Worker
- Pre-Transplant Assistant
- Pre-Transplant Nurse Coordinator
- Transplant Nephrologist
- Transplant Surgeon
- Lab work
- Attend Transplant Education Session
Multi-disciplinary Team Meeting

- Reviews medical records
- Discusses any concerns identified by Team members
- Determines if patient is a potential transplant candidate
- Formulates individual work-up requirements for listing
Pre-Transplant Testing

STANDARD
- EKG (within a yr)
- Chest X-Ray (within a yr)
- Mammogram (women ≥ 40 yr annually)
- Pap Smear (women ≥ 21)
- PSA (men ≥ 40)
- Pneumonia Vaccine (every 5 yrs)
- TB Skin Test (every 2 yrs)
- Hepatitis B Vaccination
- Viral Studies
- Attend Transplant Evening Seminar

ADDITIONAL ITEMS
- Stress test (≥ 50 or Diabetic)
- 2D Echocardiogram
- Abdominal US
- Colonoscopy (AA >45 : Cauc > 50)
- Lower Extremity Doppler
- Carotid Doppler
- Specialty Clearance (i.e., cardiology, urology, oncology, vascular)
- Dental Clearance
Active on Waiting List

- Monthly HLA or transplant blood work is drawn
- Update testing (ex. stress test, mammograms/pap)
- Follow-up appointment with Team every 6 months to one year to reassess appropriateness for transplant.
Multi-Listing

- The number of Organ Procurement Organization (OPO) in a given state indicates how many waiting lists that state has within its borders. This number varies from state to state.
- Michigan only has one Organ Procurement Organization (OPO) The Gift of Life which is headquartered in Ann Arbor. Therefore, MI only has ONE list.
- Patients must travel to other states in-order get multi-listed.
Hold Status

- Medically unsuitable
- Current active infection
- Prohibitive BMI
- Insurance changes
- Change in support system
- Drug eluding stent placement
- Non-compliance
National Waiting List

Gap in Organ Availability

Source: UNOS January - May 2010 Data
National Wait list Facts

Number of people waiting for an organ  119,547
Number of people waiting for kidney  97,668

Organ Transplants performed in 2012  28,052
Kidney Transplants performed in 2012  16,485
  *Deceased Donor Transplants  10,868
  *Living Donor Transplants  5,619

Organ Transplants January- Sept 2013  14,105
Kidney Transplants January – Sept 2013  8,211

Based on UPTN/HRSA data as of 9-13-2013 @ 11:09
Michigan Wait List Facts

Number of people waiting for All Organs 3,193
Number of people waiting for Kidney 2,620
Number of kidney transplants performed in 2012 566
  * Deceased Donor Transplants 356
  * Living Donor Transplants 210

Number of kidney transplants Jan – Sept 13, 2013 277
  * Deceased Donor Transplants 164
  * Living Donor Transplants 113

Based on UPTN/HRSA data as of 9-13-2013 @ 2:58pm
<table>
<thead>
<tr>
<th>NAME</th>
<th>DOB</th>
<th>PHASE OF CARE</th>
<th>REFERRAL DATE</th>
<th>EVALUATION APPOINTMENT</th>
<th>LIST DATE</th>
<th>FOLLOW-UP APPOINTMENT</th>
<th>OUTSTANDING WORK-UP</th>
<th>NURSE COORDINATOR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sheldon Cooper</td>
<td>1/1/2000</td>
<td>Referral</td>
<td>8/15/2012</td>
<td>9/20/2012 @ 0900</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lenard Hofstadter</td>
<td>01/01/00</td>
<td>Non-candidate</td>
<td>7/1/2012</td>
<td>8/2/2012</td>
<td></td>
<td></td>
<td>Multi-co morbidities making pt to high risk to under go kidney transplant surgery.</td>
<td>Jesse Syring</td>
</tr>
<tr>
<td>Penny Bang</td>
<td>1/1/2000</td>
<td>Evaluation</td>
<td>7/1/2012</td>
<td>8/8/2012</td>
<td></td>
<td></td>
<td>PAP Smear, dental</td>
<td>Sharon Berman</td>
</tr>
<tr>
<td>Howard Wolowitz</td>
<td>01/01/00</td>
<td>Listed</td>
<td>5/25/2011</td>
<td>6/30/2011</td>
<td>8/2/2011</td>
<td>7/16/2012 @ 1300</td>
<td>Annul mammo, pap. Update colonoscopy 6/2012</td>
<td>Renautta Wojtylo</td>
</tr>
<tr>
<td>Rajesh Koothrappali</td>
<td>01/01/00</td>
<td>Hold</td>
<td>7/2/2010</td>
<td>8/2/2010</td>
<td>10/10/2010</td>
<td>10/23/2011 @ 0930</td>
<td>Must be cleared by cardiologist</td>
<td>Renautta Wojtylo</td>
</tr>
<tr>
<td>Amy Fowler</td>
<td>01/01/00</td>
<td>Post-Transplant 8/22/2012</td>
<td>8/4/2009</td>
<td>9/5/2009</td>
<td>11/1/2009</td>
<td></td>
<td>Pt doing well. Creatinine down 1.2. Will transition back to primary nephrologist in 6-9 months.</td>
<td>Post Transplant Nurses</td>
</tr>
<tr>
<td>Stuart Bloom</td>
<td>01/01/00</td>
<td>Removed</td>
<td>5/2/2009</td>
<td>7/2/2009</td>
<td>11/5/2009</td>
<td></td>
<td>Pt health deteriorated to point that transplant is no longer a safe treatment option. Pt removed from Transplant waiting list 8/23/2012.</td>
<td>Renautta Wojtylo</td>
</tr>
</tbody>
</table>
Communicate

- Changes in contact information
- Changes in dialysis center or Modality
- Insurance changes
- Hospitalizations
- Adherence or non-compliance issues with Rx
- Active infection
- Death
Transplant Surgery

- An incision about 8 inches long is made in patients lower abdomen.
- The new (donor) kidney is attached to the Iliac vessels (an artery and a vein).
- The new kidney is supplied with blood and often will begin to produce urine immediately.
- The ureter which carries urine from the new kidney is attached to the bladder.
- The transplant is then complete and abdomen is closed.
- The operations typically takes 3-4 hours.
Post - Transplant

- Immune System ↓ Risk for Infection ↑
- Post-discharge follow-up
  - Clinic/lab visits twice a week for a minimum of 6 weeks
  - Visits gradually taper with the ultimate goal of returning patient to primary care nephrologist for management within 3-6 months
- Monitoring and detection of rejection
  - Required to take immunosuppressant medication for the rest of life
- Post-op restrictions (no baths, no swimming, no lifting > 10lbs)
- 2 to 6 month recovery
- COMPLIANCE TO TREATMENT REGIMEN IS A MUST TO ENSURE A SUCCESSFUL OUTCOME
Advantages of Kidney Transplant

- Freedom from dialysis and diet or fluid restrictions
- Greater likelihood of improved functional status
- More normal kidney function
- Freedom to travel
- Ability to become pregnant and bear children (female recipient)
- Increased employment/education opportunities

- LONGER LIFE
Potential Risks for Kidney Transplantation

- Cardiopulmonary Complications: heart attack, congestive heart failure, stroke, blood clots, pulmonary embolism
- Bleeding
- Infection
- Arterial or Venous Thrombosis
- Ureter/Urine Leak
- Delayed Graft Function
- Lymphocele
- Wound Complications
Patient Survival

- Live donor
- Deceased donor
- Dialysis
STRATEGIES TO SHORTEN WAIT TIMES (AND IMPROVE PATIENT OUTCOMES)

- Aggressive wait-list management
- Spirited Education of patients and families
- Paired exchange, altruistic donor programs, positive cross-match, desentization protocols
- Energetic screening and acceptance of organ offers by Transplant Nephrologists
Average Time to Transplant for Patients at Beaumont Hospitals vs. State & National Times

Shorter by more than a year

Beaumont Health System: 2.8 years (33.8%)
Michigan: 3.9 years (47.3%)
National: 4.4 years (53%)

Years to transplant

www.SRTR.org  July 2012
Southeast Michigan Hospitals with Adult Kidney Transplant Centers

<table>
<thead>
<tr>
<th>Hospital</th>
<th>Number of Candidates on Waiting List</th>
<th>Average Wait Time to Receive a Transplant</th>
</tr>
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<tbody>
<tr>
<td>William Beaumont Hospital, Royal Oak</td>
<td>258</td>
<td>34 months</td>
</tr>
<tr>
<td>Harper University Hospital Detroit Medical Center, Detroit</td>
<td>159</td>
<td>&gt; 72 months</td>
</tr>
<tr>
<td>Henry Ford Hospital, Detroit</td>
<td>413</td>
<td>51 months</td>
</tr>
<tr>
<td>St John Hospital and Medical Center, Detroit</td>
<td>299</td>
<td>50 months</td>
</tr>
<tr>
<td>University of Michigan Medical Center, Ann Arbor</td>
<td>933</td>
<td>59 months</td>
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### Average Time to Transplant for Patients at Beaumont Hospitals vs. Metro-Detroit Hospitals

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<td>4.2 years</td>
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<td>4.1 years</td>
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*Shorter by about 2 years...*
# Southeast Michigan Hospitals with Adult Kidney Transplant Centers

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<th>Living Donor Kidney Recipients</th>
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<tr>
<td></td>
<td>Patient Survival at 1 Year</td>
<td>Patient Survival at 3 Years</td>
</tr>
<tr>
<td>William Beaumont Hospital, Royal Oak</td>
<td>97%</td>
<td>100%</td>
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<tr>
<td></td>
<td>94%</td>
<td>96%</td>
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<tr>
<td>Harper University Hospital Detroit Medical Center, Detroit</td>
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<td></td>
<td>89%</td>
<td>100%</td>
</tr>
<tr>
<td>Henry Ford Hospital, Detroit</td>
<td>96%</td>
<td>95%</td>
</tr>
<tr>
<td></td>
<td>86%</td>
<td>92%</td>
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<td>St John Hospital and Medical Center, Detroit</td>
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<td>100%</td>
</tr>
<tr>
<td></td>
<td>92%</td>
<td>95%</td>
</tr>
<tr>
<td>University of Michigan Medical Center, Ann Arbor</td>
<td>97%</td>
<td>97%</td>
</tr>
<tr>
<td></td>
<td>90%</td>
<td>95%</td>
</tr>
<tr>
<td>United States</td>
<td>97%</td>
<td>99%</td>
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<tr>
<td></td>
<td>92%</td>
<td>96%</td>
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<tr>
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<td>Kidneys Functioning at 1 Year</td>
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<td>85%</td>
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Honors/Recognitions

- Recognized as a Center of Excellence for adult kidney transplant by OptumHealth
- Recognized as provider of choice for transplant services by National Research Corporation
- Ranked 99th percentile in patient satisfaction scores for transplant Specialty by Press Ganey
- Beaumont Hospital, Royal Oak, Named Among top 10 Academic Medical Centers for Quality Leadership by UHC (University Health System Consortium)
- US News reports Best Hospital - Beaumont Hospital, Royal Oak, - 10 Nationally Ranked Specialties, including Nephrology; 2 High-Performing Specialties
Excellent Web Sites

American Society of Transplantation
  http://www.a-s-t.org/content/patient-information
  http://www.healthytransplant.com/
  http://www.healthy-donor.com/

United Network for Organ Sharing (UNOS)
  http://www.transplantliving.org/
  http://www.unos.org/

U.S. Department of Health and Human Services – Human Resources and Services Administration (HRSA)
  http://optn.transplant.hrsa.gov/about/
  http://organdonor.gov

U.S. National Library of Medicine, NIH

National Kidney Foundation
  http://www.kidney.org/transplantation/

Gift of Life, Michigan
  http://www.giftoflifemichigan.org/
join hands and save a life
QUESTIONS

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