Transplant Rotation Handbook

Introduction to the Transplant Rotation

Pediatric urology is a specialized field within urology that focuses on the diagnosis, treatment, and management of genitourinary conditions in infants, children, and adolescents. These conditions range from congenital anomalies like hypospadias and vesicoureteral reflux to functional disorders such as enuresis and neurogenic bladder, as well as pediatric urologic emergencies and malignancies. For a urology resident, gaining experience in pediatric urology is essential not only to understand the unique anatomical and physiological aspects of the developing urinary tract but also to develop skills in communicating with children and their families, managing complex multidisciplinary cases, and tailoring surgical approaches to younger patients. Exposure to pediatric urology enhances a resident's versatility, broadens their clinical and surgical knowledge base, and is critical for those considering fellowship training or comprehensive urologic practice.

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Rotation Specific Objectives

Medical Knowledge

1. Demonstrates the ability to perform a focused urological history and physical exam relevant to the urological care of the patient in an organized and timely manner.

2. Demonstrates appropriate clinical judgement and decision-making skills to establish a comprehensive and patient-centered management plan, including potential complications for general urological disease processes.

3. Demonstrates the ability to competently perform selected urological procedures, as defined by rotation objectives and achievable EPA document, in a skillful and safe manner, adapting to unanticipated findings or changing clinical circumstances.

4. Demonstrate an understanding of the etiology, natural history, histopathology (including grading), investigation, classification, diagnosis, staging of renal failure and end stage renal disease (ESRD)

5. Demonstrate an understanding of the treatment options, including the role for multidisciplinary care and indications for transplantation for patients with ESRD.

6. Demonstrate an understanding of the principles of immunosuppression including the indication and adverse effects of immunosuppressive drugs.

7. Develop an approach to infections, malignancies, and complications in renal transplant patients

8. Demonstrate an understanding of the ethical issues of human organ procurement for transplantation

9. Develop an approach to the postoperative care and management of complications following transplantation.

Surgical Skill and Knowledge

10. Demonstrate an understanding of the principles of renal transplantation surgery and develop the technical skills for renal transplantation surgery

Achievable EPAs during Pediatric Rotation

Transition to Discipline	Foundations	Core
TD4	F2, F4, F5, F6, F7, F8	C1, C2, C12, C15

Potential Diagnostic and Surgical Procedures Exposure

Common	Less Common	Diagnostic
Renal transplantation	Cystoscopy	
Open Nephrectomy: simple, radical		

Expectations and Responsibilities

A week prior to the start of the rotation please contact the Transplant fellow for Urology. The contact information can be obtained from the Urology Program Administrator.

Rounding

Time	Inpatient	Notes
Morning 7:00 AM – 8:00 AM	Required to round on all urology-specific patients -Write Progress Note -Formulate Plan Discussion with Nephrology	Ensure all emails are sent to Faculty **AND** orders are in **BEFORE** clinical activities ***Discuss start time with Transplant Fellow***

Transplant Weekly Schedule – please note the schedule changes from week to week

Day	Time	Dr. Luke	Dr. Sener	Transplant Clinic
Monday	AM			Clinic – Transplant
	PM		Clinic – Assessment	
Tuesday	AM	*AHD*	*AHD*	*AHD*
	PM	Clinic – Assessment		
Wednesday	AM			Clinic – Transplant
	PM	Living Donor	Living Donor	
Thursday	AM			Clinic – Transplant
	PM	Clinic – Assessment		
Friday	AM			Clinic – Transplant
	PM		Clinic – Assessment[1]	

[1]Friday PM Dr. Sener Clinic is ONLY once a month

Outpatient Clinics

Location:
Dr. Sener/Luke:
Transplant Clinic:

Start:
Dr. Sener/Luke: 8:00 AM; 1:00 PM
Transplant Clinic: 8:30 AM
Punctuality is a must, and tardiness will be considered unprofessional.

If sick, post-call or post overnight transplant/retrieval, then contact either the fellow or the faculty you will be working with that day. Please ensure the Urology Program Administrator is aware.

Operating Room

Dr. Luke/Sener: Living Donor Transplants on Wednesday, discuss with urology transplant fellow to see if one is going on. As a transplant resident, you are only observing these.

You will be assisting on overnight transplants and organ retrieval. On average:

1. 10 – 12 transplants per month including living donor
2. 5 – 8 retrievals per month

Please ensure that the urology transplant fellow has your contact and that they are made aware of contacting you if one is going to be occurring.

<u>Call Expectations</u>
Given the nature of transplant medicine, overnight transplant procedures are unpredictable and cannot be pre-scheduled. To maximize resident learning and clinical exposure, call shifts will not be scheduled in advance. Instead, residents will be notified as soon as possible when a transplant is anticipated overnight and are expected to attend when it occurs.
If there are specific dates during the rotation when a resident is not available for overnight call, they should notify the rotation supervisor, Dr. Luke, at the start of the rotation.
Call expectations will correspond with PARO guidelines, and residents will not be scheduled for more than nine (9) home-call call shifts over the course of the block.
Residents are expected to take a post-call day and are entitled to claim an in-hospital call stipend if they:

- *Work in the hospital between 12:00 AM and 6:00 AM,* ***or***
- *Work for at least 4 consecutive hours, with at least one of those hours after midnight.*

Useful Resources & References

1. **Please READ the attached Kidney Transplant Manual Prior to the Rotation**

(A NON EXHAUSTIVE) GLOSSARY OF TERMS IN RENAL TRANSPLANTATION

By Adam Forster, Nephrology Fellow

Panel Reactive Antigen (PRA): A measure of the reactivity that a recipient has against a pool of antigens present in the population. Given as a value out of 100, with lower values equating to less reactivity.

Kidney Donor Profile Index (KDPI): An estimate of the quality of the donor kidney in deceased donation. Based on age, BMI, ethnicity, hypertension, diabetes, cause of death, predonation serum creatinine, and Hep C status. The value estimates the percentage of kidneys that will last longer after transplant (ie, lower KDPI values tend to incur more lengthy graft function).

Donor Specific Antibody (DSA): Antibodies that the recipient creates against the HLA proteins present on the donor graft. Presence of DSA increases the risk of rejection.

Donation after cardiac death (DCD): Donor is deceased due to circulatory causes

Neurological determined death (NDD): Donor is deceased due to cessation of neurologic function

Standard criteria donor (SCD): Deceased donor that does not meet expanded criteria

Expanded criteria donor (ECD): Deceased donor that is over the age of 60 or is between the age 50-59 with at least two of the following: hypertension, serum creatinine >133, or death from CVA.

Increased risk donor (IRD): Deceased donor who is Hep B, Hep C, HIV positive; deceased donor who tests negative for any of these viruses but is at risk for transmitting via the graft; increased risk for any of these viruses due to higher risk lifestyle behaviours.

BK Polyomavirus: A virus that if present increases the risk of BK nephropathy, which can lead to rejection. There is no specific treatment for BK; generally speaking immunosuppression is reduced and IVIG may be considered, however data are limited to support IVIG efficacy.

Activated thymoglobulin (ATG): A rabbit derived protein used for immunosuppression induction.

Basiliximab: An IL-2 inhibitor used for immunosuppression induction. Generally more appropriate in patients with lower risk of rejection.

EBV: Epstein-Barr virus

CMV: Cytomegalovirus

Post Transplant Lymphoproliferative Disease (PTLD): Lymphoproliferative malignancy that occurs following transplant. Risk is increased in recipients who are EBV mismatched (ie EBV positive donor into an EBV negative recipient) and in patients who receive ATG for induction.

Tacrolimus: A calcineurin inhibitor used in immunosuppression.

Cyclosporin: A calcineurin inhibitor used in immunosuppression.

Myfortic/Mycophenolate: An antimetabolite that inhibits purine synthesis and leads to lymphocyte depletion. Used in immunosuppression.

Sirolimus: An mTOR inhibitor used in immunosuppression.