

Rotation Name: Inpatient - Rogers - Renal

Rotation Site Leader: Anna Burgner

Date: 5/5/2021

Updated: 7/3/2021 - mapped to 2.0 milestones (sm)

Goal:

The purpose of this educational unit is for residents to be exposed to a wide range of renal pathology, diagnosis, treatment and management mostly in the setting of taking care of patients who have a kidney transplant. They will have the ability to distinguish between acute and chronic kidney injury. They will be able to classify each kidney problem as pre-renal, intrinsic or post renal. They will develop a robust differential diagnosis within each category. They will develop initial management plans for renal problem in each of these categories. They will have some experience with different type of renal replacement therapy and have a framework to choose which is most appropriate in certain contexts.

Objectives:

By the end of this educational block, learners in this rotation will be able to:

1) Patient Care

- a. Perform a detailed and accurate nephrologic history and physical exam including the renal review of systems, relevant examination features, and relevant chart review.
- b. Assess the medication list and diet daily for appropriateness for level of renal function
- c. Generate a differential for acute renal failure in the setting of kidney transplant.
- d. Recognize and diagnose the non-rejection complications that can occur post renal transplant.
- e. Distinguish between acute and chronic kidney injury
- f. Adjust doses medications correctly for patients with renal disease
- g. Define an initial work up for new AKI that is complete and relevant for each clinical scenario
- h. Accurate describe volume status based on appropriate physical exam

2) Medical Knowledge

- a. List a broad and complete differential diagnosis for pre-renal, intrinsic and post renal cause of AKI
- b. Describe the immunology and immunosuppressants of renal transplant anti-rejection medication.
- c. Describe different types of rejection and the immunology behind them.
- d. Identify mimickers of AKI
- e. Describe renal replacement therapies and discuss which is most appropriate in a given clinical scenario

3) Interpersonal and Communication Skills

- a. Demonstrate profession communication with nursing staff
- b. Demonstrate professional communication with peers

4) Professionalism

- a. Conduct patient centered bedside rounds
- b. Complete documentation in a timely and efficient manner

5) Systems based practice

- a. Engage social work and case management in discharge needs for kidney transplant patients.

- b. Describe how the team assembles for emergent dialysis and describe the roles each team member plays

6) Practice-based learning and improvement

- a. Describe one learning goal at the beginning of each day

Educational Strategies:

Educational Strategy	Skills (taught and/or assessed)
Bed side rounds	Interpreting acute vs. chronic kidney injury Adjusting doses of medicines correctly for patients with renal disease and accounting for interactions with immunosuppressants Define an initial work up for new AKI that is complete and relevant for each clinical scenario Accurate description of volume status
Didactic lecture	Kidney transplant Rejection Immunosuppression Infectious complications of kidney transplant Renal replacement therapy
Attending eliciting learning goals at the start of rounds each day	Residents drive self-learning by identifying one learning goal for each consult day
Attending/Fellow observations with staff	Conduct patient centered bedside rounds Complete documentation in a timely and efficient manner Describe how the team assembles for emergent dialysis and describe the roles each team member plays
Attending review of documentation when attesting	Complete documentation in a timely and efficient manner

Required Reading:

Vanderbilt Nephrology Faculty and Fellows, “Vanderbilt Nephrology Renal Consult Primer (PDF)” last edited 2019

Chandraker, Anil, Yeung, Melissa, “Kidney transplant in adults: Overview of care of the adult kidney transplant recipient” In: UpToDate, Post TW (Ed), UpToDate, Waltham, MA.

Hardinger, Karen, Brennan, Daniel, “Kidney transplant in Adults: Maintenance immunosuppression” In: UpToDate, Post TW (Ed), UpToDate, Waltham, MA.

Suggested Reading and/or Resources:

Voorra, Santhi, and Deborah B. Adey. "Management of kidney transplant recipients by general nephrologists: core curriculum 2019." *American Journal of Kidney Diseases* 73.6 (2019): 866-879.

Hricik, Donald E. "Transplant immunology and immunosuppression: core curriculum 2015." *American Journal of Kidney Diseases* 65.6 (2015): 956-966.

Avery, Robin K. "Infectious disease following kidney transplant: Core curriculum 2010." *American journal of kidney diseases* 55.4 (2010): 755-771.

Virmani, Sarthak, and William S. Asch. "The Role of the General Nephrologist in Evaluating Patients for Kidney Transplantation: Core Curriculum 2020." *American Journal of Kidney Diseases* (2020).

Evaluations:

Current Assessment Form:

1. Please identify 3 skills you observed the resident do well? (Text Box)
2. Please identify 3 skills the resident needs to improve or should do differently. How should they do it differently? (Text Box)

(Ideally, limit to 8-10 skills that you ask your faculty to assess)

For the remaining items, please rate 1-5 (or did not observe):

1 = cannot do this skill

2 = can do this skill only with direct supervision (some needs to be there to supervise)

3 = can do this skill with indirect supervision (an attending or fellow is close by or available by phone)

4 = can do this skill unsupervised (they are ready to graduate for this skill)

5 = has achieved mastery of this skill (They can teach others how to do this skill well)

3. Perform a detailed and accurate nephrologic history and physical exam including the renal review of systems, relevant examination features, and relevant chart review. PC-1, PC-2
4. Generate a differential for acute renal failure in the setting of kidney transplant. PC-3
5. Engage social work and case management in discharge needs for kidney transplant patients. SBP-2
6. Assess the medication list and diet daily for appropriateness for level of renal function. PC-4, MK-2
7. Describe the immunology and immunosuppressants of renal transplant anti-rejection medication. MK-1, MK-2
8. Describe different types of rejection and the immunology behind them. MK-1
9. Recognize and diagnose the non-rejection complications that can occur post renal transplant. PC-3, MK-4
10. Demonstrate profession communication with nursing staff. Prof-1, ICS-2