Solid Organ Transplantation Rotation PGY1

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Learning Experience Description
The primary responsibility of the PGY1 resident is to provide comprehensive pharmaceutical care for all patients admitted to the specific abdominal organ transplant service they are following. At all times the resident will be under the direct supervision of the concurrent preceptor and medication management decisions will be a combined effort. This rotation will allow the PGY1 resident to enhance their knowledge base and develop the pharmacotherapeutic skills necessary for the provision of care to adult abdominal transplant recipients. The resident will start to become familiar with literature regarding transplant pharmacotherapy, develop a rapport with a multidisciplinary team, participate in transplant selection meetings and attend transplant clinics.

Vanderbilt University Medical Center consists of 832-beds between Vanderbilt University Hospital and Children's Hospital. The medical center campus includes a free standing psychiatric hospital and rehabilitation hospital in addition to several general and specialty clinic offices. The medical center is a level 1 trauma center for the Middle Tennessee region and is integrated with the teaching and training programs of the Vanderbilt University School of Medicine.

It has been 45 years since Vanderbilt performed its first kidney transplant. Over those four decades, Vanderbilt has performed more than 7,000 transplants, including all solid organs and stem cells. Vanderbilt has developed the reputation of one of the nation's premier centers in transplantation, with many patients receiving a second gift of life. Vanderbilt usually performs over 200 abdominal organ transplant per year. This rotation will provide the PGY1 resident with the opportunity to develop the advanced patient-care management skills necessary to care for the complex medical issues associated with adult abdominal transplant recipients.

Common disease states which the resident may encounter and be responsible to understand are:

**Renal/Pancreas:**
- Hypertension
- Diabetes – Types I and II
- Polycystic Kidney Disease
- IgA Nephropathy
- Chronic Glomerulonephritis
- Systemic Lupus Erythematosus
- Focal Segmental Glomerulosclerosis
- Chronic Glomerulonephritis
- Membranous Glomerulonephritis
- Chronic Pyelonephritis/Reflux

**Liver:**
- Fulminant Hepatic Failure
- Hepatitis B
- Hepatitis C
- Nonalcoholic Steatohepatitis
- Alcoholic Cirrhosis
- Drug Induced Cirrhosis
- Autoimmune Hepatitis
- Budd-Chiari
- Alpha 1 Antitrypsin Deficiency
Wilson’s Disease  Primary Sclerosing Cholangitis  
Biliary Atresia  Primary Biliary Cirrhosis  

Transplant specific areas that the resident may encounter and will be responsible to understand are:

- **CMV**  
- **Polyoma Virus**  
- **Chronic Rejection**  
- **Fungal Infections**  
- **Induction Agents**  
- **Humoral Rejection**  
- **PCP**  
- **Maintenance**  
- **Immunology**  
- **PTLD**  
- **Immunosuppression**  
- **TTP/HUS**  
- **Acute Rejection**

The preceptor (Clinical Transplant Pharmacist or PGY2 Transplant Pharmacy Resident) will be available to the resident throughout the rotation for consultation, patient review, topic discussions, etc. The resident’s learning is predicted not only on the above responsibilities but also dedication to patient care and professional interaction.

**Learning Experience Goals**

- **R1.4:** Demonstrate ownership of and responsibility for the welfare of the patient by performing all necessary aspects of the medication-use system.
- **R1.5:** Provide concise, applicable, comprehensive, and timely responses to requests for drug information from patients and healthcare providers.
- **R2.1:** As appropriate, establish collaborative professional relationships with members of the health care team.
- **R2.2:** Place practice priority on the delivery of patient-centered care to patients.
- **R2.3:** As appropriate, establish collaborative professional pharmacist-patient relationships.
- **R2.4:** Collect and analyze patient information.
- **R2.5:** When necessary, make and follow up on patient referrals.
- **R2.6:** Design evidence-based therapeutic regimens.
- **R2.7:** Design evidence-based monitoring plans.
- **R2.8:** Recommend or communicate regimens and monitoring plans.
- **R2.9:** Implement regimens and monitoring plans.
- **R2.10:** Evaluate patients’ progress and redesign regimens and monitoring plans.
- **R2.11:** Communicate ongoing patient information.
- **R2.12:** Document direct patient care activities appropriately.
- **R3.1:** Exhibit essential personal skills of a practice leader.
- **R6.1:** Utilize medical informatics.
- **E6.1:** Identify a core library, including electronic media appropriate for the practice setting.
- **E2.5:** Resolves conflicts through negotiation.
- **E7.2:** Communicates effectively.
- **E7.3:** Balance obligations to one-self, relationships; and work in a way that minimizes stress.
- **E7.4:** Manage time to effectively fulfill practice responsibilities.

**Daily Schedule**

The resident spends 3 weeks with liver transplant and 3 weeks with renal transplant. During liver transplant the resident’s rounds with the hepatobiliary team daily at 7am and with the transplant team on Fridays at 11am. The resident will also work in liver transplant clinic on Wednesdays from 8-12pm. Liver conference is attended weekly at 4pm on Wednesdays.

The renal section of the rotation includes rounding with the renal medicine team daily at 8am. Renal transplant clinic once weekly and renal conference once weekly.
The resident will be responsible for rounding on each patient either with their team or individually depending on the service in the morning. Identification of potential drug therapy problems, design and modification of drug regimens, identification of adverse drug reactions, therapeutic drug monitoring, provision of drug information, identification of drug interactions and patient counseling are core components of the rotation. The resident will discuss patients daily with the preceptor in the afternoons.

Learning Experience Requirements/Responsibilities
- Effectively use the institution’s technology and automation systems (StarPanel, HEO, HMM, AdminRx) to collect, analyze, and monitor patient data relating to pharmacotherapy (R1.4, R2.4, R2.6)
- Attend transplant selection committee, renal conference and other meetings as appropriate (R2.1, R2.4)
- Actively participate in transplant rounds (R2.1, R2.2, R2.3, R2.8, R2.9, R2.10, R3.1, RE2.5, E8.2)
- Participate in the education of team members with regards to pharmacotherapy-related questions/issues (R1.5, R2.1, R3.1)
- Review profiles for patients and communicate therapy recommendations to the team (R2.1, R2.2, R2.3, R2.8, R2.9, R2.10, R2.11, RE2.5, E7.4, E8.2)
- Discuss patient cases and disease topics with preceptor (R2.5, R2.6, R2.9)
- Assist with precepting PharmD students who may be concurrently training on the service (R3.1)
- Actively participate in the ADR reporting program (Veritas) (R1.4)
- Complete projects/in-service presentations as requested by preceptor (E7.4)
- Attend transplant clinic (R1.5, R2.1, R2.2, R2.3, R2.4, R2.5, R2.6, R2.8, R2.9, R2.10, R2.11)

Topic Discussion:
These informal discussions will be held biweekly (alternating weeks) with the transplant pharmacist and/or transplant specialty resident. The selected topic is to be chosen by the resident based on a question received or interest area. The topic should address a transplant related disease or a pharmacotherapeutic transplant related topic. A brief outline/PowerPoint of the topic is to be completed.

Required Criteria Based Assessments and Rotation Assignments:
- Care Plan with Self Evaluation (R2.1-2.10; E7.2; E6.1)

Optional
- Drug Therapy Problem Solving with Self Evaluation (R1.2; R1.4; RE 2.5)
- Patient Counseling with Self Evaluation (E7.2)
- Documentation with Self Evaluation (R2.12)
- Researched Drug Information (R1.5)

Method of Evaluation
Evaluation of residents will be based on the Resident Learning System (RLS). Evaluation will consist of a summative evaluation upon rotation completion, in addition to any criteria-based checklists submitted by the resident. The specific goals and objectives, on which the resident will be evaluated, will be provided at the beginning of the rotation. Residents will be requested to complete a self-evaluation for all evaluations. Residents will also be required to complete a learning experience evaluation and a preceptor evaluation. Evaluations are completed in the evaluation database. All work to be evaluated on rotation must be turned in for review no later than the last day of the rotation.