ROTATION DESCRIPTION

ROTATION TITLE
Medication Use Evaluation (MUE) Program (PGY2)

PURPOSE
The Joint Commission (JC) requires the ongoing evaluation of medication use, identification of medication-related problems, and subsequent implementation of corrective actions. The purpose of this program is to evaluate medication usage and subsequently implement measures designed to improve the quality of medication use. The PGY2 resident will gain advanced competency in conducting medication use evaluations.

LEARNING EXPERIENCE DESCRIPTION
A small group of residents is responsible for reviewing the literature, developing or modifying criteria, setting up meetings with the team, seeking clinical pharmacy input, preparing documents/reports for the Pharmacy and Therapeutics Committee, collecting data, analyzing data, and developing recommendations. Additionally the residents will participate in implementation of recommendations, when applicable. The PGY2 resident will take greater responsibility in the process by leading the group and guiding the PGY1 residents.

LEARNING EXPERIENCE ACTIVITIES
Design and implement interventions

- The MUE team will pull the published medical literature, including practice guidelines, to determine the background and rationale for the evaluation. Based on the literature specific criteria will be developed, patient population will be selected and IRB submission will be completed.
    - Ambulatory Care: R3.3.1; R3.3.2; R3.3.3; R3.3.4
    - Critical Care: R4.1.1; R4.1.4
    - Drug Information: R2.1.4; R2.2.3; R2.3.1; R4.1.1; R4.1.2; R4.1.4
    - Family Medicine: R3.3.1; R3.3.2; R3.3.3; R3.3.4
    - Health-System Pharmacy Practice Administration: R1.4.3; R2.1.1
    - Internal Medicine: R1.3.2; R1.5.10; R5.1.1; R5.1.2; R5.1.4; E2.1.1 or E2.1.2
    - Oncology: R3.3.1; R3.3.2; R3.3.3; R7.1.1
    - Pediatrics: R4.3.1; R4.4.2; R4.4.3; R6.1.2; E1.2.1
    - Pharmacotherapy: R1.1.1 (PGY1); R1.1.3 (PGY1); R1.2.4 (PGY1)
    - Psychiatry: R5.3.1; R5.3.2; R5.3.3; R5.4.1; R6.1.1; R6.1.2; E4.1.1
    - Transplant: R1.6.1; R3.2.2; R6.1.3

Criteria development

- MUE criteria will be consistent with published biomedical literature regarding the use of the agent or the treatment of the disease in question. Criteria may be focused to increase the impact of the evaluation
    - Ambulatory Care: R3.3.2; R3.3.3; R3.3.4
    - Critical Care: R4.1.1; R4.1.2
    - Drug Information: R2.1.4; R4.1.1; R4.1.2
    - Family Medicine: R3.3.2; R3.3.3; R3.3.4

- Health-System Pharmacy Practice Administration: R1.4.3; R2.1.1
- Internal Medicine: R1.3.2; R5.1.1; R5.1.2; R5.1.4
- Oncology: R3.3.1; R3.3.2; R3.3.3; R7.1.1
- Pediatrics: R4.4.2; R4.4.3; R6.1.2
- Pharmacotherapy: R1.2.3 (PGY1); R1.2.4 (PGY1); R5.1.4
- Psychiatry: R6.1.1; R6.1.2
- Transplant: R1.6.1; R3.2.2; R6.1.3

Selection of patient population, methodology, and sample size should be considered prior to initiating evaluation

- The MUE team will identify the appropriate patient population to evaluate. If possible, all consecutive patients in the target population receiving the medication or those with the disease state under evaluation will be reviewed. If census sample evaluation is not possible, data may be collected on a representative sample population. If a representative sample is used, the patient selection method must be unbiased and must be determined before starting data collection.
  - Ambulatory Care: R3.3.5
  - Critical Care: R4.1.2
  - Drug Information: R4.1.2
  - Family Medicine: R3.3.5
  - Health-System Pharmacy Practice Administration: R1.4.3; R2.1.1
  - Internal Medicine: R1.3.2; R5.1.1; R5.1.2; R5.1.4
  - Oncology: R7.1.2
  - Pediatrics: R4.3.1; R4.4.2; R6.1.1; R6.1.2; R6.1.4
  - Pharmacotherapy: R5.1.4
  - Psychiatry: R6.1.2; R6.1.4; E1.1.1 or E1.1.2
  - Transplant: R1.6.1; R3.2.2; R6.1.3

Participation in IRB submission

- IRB approval must be obtained if the MUE meets criteria for IRB selection. If the MUE project will be only be used as a quality improvement project, IRB submission is not requires. If the MUE require an intervention or the results will be published, IRB approval must be gained through the exempt or expedited.
  - Ambulatory Care: R3.3.1; R3.3.2; R3.3.3; R3.3.4; 3.3.5
  - Critical Care: R4.1.3
  - Drug Information: R4.1.3
  - Family Medicine: R3.3.1; R3.3.2; R3.3.3; R3.3.4; 3.3.5
  - Health-System Pharmacy Practice Administration: R1.4.3; R2.1.1
  - Internal Medicine: R5.1.3
  - Oncology: R7.1.3
  - Pediatrics: R6.1.1; R6.1.2; R6.1.3
  - Pharmacotherapy: R5.1.3
  - Psychiatry: R6.1.3
  - Transplant: R1.6.1; R3.2.2; R6.1.3

Creation of data collection form/database

- A data collection form will be developed with input from the interdisciplinary team members. Data collection forms provide a systematic and consistent method to collect data.
  - Ambulatory Care: R3.3.6
  - Critical Care: R4.1.2; R4.1.4
  - Drug Information: R4.1.2; R4.1.4
  - Family Medicine: R3.3.6
  - Internal Medicine: R1.3.2; R5.1.1; R5.1.2; R5.1.4
  - Oncology: R7.1.2
  - Pediatrics: R6.1.4
  - Pharmacotherapy: R6.1.2 (PGY1)
  - Psychiatry: R6.1.4
  - Transplant: R1.6.1; R3.2.2; R6.1.3

Participation in data collection

- Data collection should proceed without interruption from initiation until all patients to be evaluated have been identified.
  - Ambulatory Care: R3.3.6; R3.3.7
  - Critical Care: R4.1.2; R4.1.4
  - Drug Information: R4.1.2; R4.1.4
  - Family Medicine: R3.3.6; R3.3.7
  - Internal Medicine: R1.3.2; R5.1.1; R5.1.2; R5.1.4
  - Pediatrics: R4.4.4; R6.1.4
  - Pharmacotherapy: R6.1.2 (PGY1); R6.1.3 (PGY1); R1.2.4 (PGY1)
  - Psychiatry: R6.1.4
  - Transplant: R1.6.1; R3.2.2; R6.1.3

Participation in data analysis and compilation of results summary

- A summary of MUE results will be prepared and presented to the Pharmacy and Therapeutics Committee. In addition to summarizing data, it is helpful to list the primary problems identified. Each primary problem identified should be reviewed in the discussion section of the MUE results summary. In each case, a review of the clinical importance of the problem and the likely cause or contributing factors should be included. This information will help to determine the most appropriate type of corrective action.
  - Ambulatory Care: R3.3.6; R3.3.7
  - Critical Care: R4.1.2; R4.1.4
  - Drug Information: R2.1.4; R2.1.6; R2.3.4; R4.1.2; R4.1.4
  - Family Medicine: R3.3.6; R3.3.7
  - Health-System Pharmacy Practice Administration: R1.4.3; R2.1.1; R6.5.8
  - Internal Medicine: R1.3.2; R5.1.1; R5.1.2; R5.1.4
  - Oncology: R3.2.6; R7.1.5
  - Pediatrics: R6.1.4; R4.3.1; R4.4.4

- Pharmacotherapy: R6.1.2 (PGY1); R6.1.3 (PGY1); R1.2.4 (PGY1)
- Psychiatry: R4.1.6; R6.1.4; E4.1.2
- Transplant: R1.6.1; R3.2.2; R6.1.3

Presentation of Results/Preparation of Manuscript

- Before results are presented to the Pharmacy and Therapeutics Committee, they should be reviewed by and discussed with the Clinical Advisors for each team. The purpose of this discussion is to maintain medical staff involvement throughout the MUE process and to ensure that there is agreement concerning the problems identified and the recommendations made to correct those problems.
  - Ambulatory Care: R3.3.8; R3.3.9
  - Critical Care: R4.1.5; R4.1.6
  - Drug Information: R4.1.5; R4.1.6
  - Family Medicine: R3.3.8; R3.3.9
  - Health-System Pharmacy Practice Administration: R1.4.3; R2.1.1; R6.5.8
  - Internal Medicine: R3.1.4
  - Oncology: R7.1.5; R.7.1.6; R7.1.7
  - Pediatrics: R1.4.1; R1.4.4; R4.3.1; R4.4.4; R6.15.; R6.1.6
  - Pharmacotherapy: R1.1.3 ({PGY1); R5.1.6
  - Psychiatry: R4.1.6; R6.1.4; R6.1.5; R6.1.6
  - Transplant: R1.6.1; R3.2.2; R6.1.3

- Build group participation skills and leadership skills
  - Ambulatory Care: R3.1.4; R3.1.6
  - Critical Care: general comments
  - Drug Information: R2.3.2; R3.1.6; R3.2.3; R3.2.4
  - Family Medicine: R3.1.4;R3.1.6
  - Health-System Pharmacy Practice Administration: R6.1.2; R6.1.3; R6.1.6
  - Internal Medicine: R1.2.1; R4.2.2
  - Oncology: general comments
  - Pediatrics: general comments
  - Pharmacotherapy: R1.2.2; R3.3.3 (PGY1)
  - Psychiatry: R3.3.2
  - Transplant: general comments

REQUIREMENTS OF LEARNING EXPERIENCE

All residents will attend a presentation on MUEs during orientation and a presentation on Residency Group Projects during the first MUE meeting. After MUE teams are selected, residents will attend meetings needed for completion of the MUE. The residents will be allowed an average of 1 hour per day to collect data during the data collection period of the MUE.

LEARNING EXPERIENCE PRECEPTOR

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A clinical liaison will be assigned based on the project chosen and availability of the clinical specialist. The liaison will help guide the resident and will provide feedback to the preceptor.

Method of Evaluation: Evaluation of residents will be based on the learning experience objectives outlined by the residency Program Director (RPD). The RPD will identify the specific goals and objectives on which the resident will be evaluated (available in E-Value). The preceptor and resident will review learning experience objectives at the beginning of the experience. Feedback will include, but not limited to, verbal and written evaluation quarterly, starting with the second quarterly evaluation.