POLICY AND PROCEDURE MANUAL
PHARMACY SERVICES

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APPROVED:	Thinh Tran, Pharm. D.
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SECTION: **CLINICAL PHARMACY SERVICES**

SUBJECT: **MEDICATION USAGE EVALUATION**

POLICY

Medication Usage Evaluation is a process in which the medications are monitored to analyze, evaluate and promote continuous improvement of the prescribing of appropriate medications, the preparation and dispensing of medications, administration of medication and the monitoring of medication effects so that appropriate modifications may be undertaken in a timely manner.

Medication Usage Evaluation is performed by the medical staff as a criteria-based, ongoing, planned and systematic process designed to continuously improve the appropriate and effective use of drugs.

The process of monitoring and evaluating the use of drugs is performed by the medical staff in cooperation with as required, the pharmaceutical department, the nursing department, management and administrative staff and other departments/services and individuals. The monitoring and evaluation is based on the use of objective criteria that reflects current knowledge, clinical experience and relevant literature. The screening process may be used to identify areas that are problematic or provides opportunities to improve the use of a specific drug or category of drugs.

Written reports of the findings, conclusions, recommendations, actions taken, and results of actions taken are maintained and reported through channels established by the medical staff. When an individual has performance problems that he/she is unable or unwilling to improve, modifications are made in the clinical privileging or job assignments as indicated or some other appropriate action(s) are taken.

PROCEDURE FOR COMPLETING A MUE

I. Selection of Drug, Drug Category or Disease Entity

A. Selection of the drug therapy for evaluation is based on volume of use, cost, toxicity, and the potential likelihood for misuse; areas of concern include but are not limited to:
   1. Drugs that are known or suspected to cause serious adverse reactions or interactions with other drugs.
   2. Drugs prescribed for patients who are at an increased risk for adverse drug reactions due to age, underlying disease state and poly-pharmacy.
   3. Antibiotics, especially those having a high cost, which are used frequently, and/or have toxic side effects.

4. Drugs that are inappropriately monitored for the therapeutic outcome and potential adverse effects.
5. Drugs that are among the most frequently prescribed within the hospital.
6. Disease entities that require high cost drug therapies.
7. Intravenous drugs that are equally effective when given orally should be given orally whenever possible (e.g., levofloxacin).
8. A focus review on an appropriate topic maybe selected in addition to the ongoing MUE drugs and/or topics.

II. Defining Screening Criteria

A. The screening criteria, developed and approved by the medical staff, is necessary for the evaluation of the drug utilization. The criteria should reflect a clearly stated objective whose outcome is measurable. The information on the criteria is agreed upon by knowledgeable professionals in the field and is also supported by medical literature when appropriate. The criteria will be evaluated on an ongoing basis to ensure that appropriate drug usage is being monitored. Modification of the criteria will be performed as deemed necessary by the results of the monitoring and evaluation process.

III. Obtain Approval of Criteria by Medical Staff

A. The criteria, with documentation in the appropriate committee(s) minutes, must be approved by the medical staff. The Pharmacy and Therapeutics Committee (P & T) is responsible for this approval. When statements in this document refer to the Committee, the P & T Committee is implied.

B. A copy of the MUE criteria will be placed on the intranet and sent to the service chief under the department in which the physicians responsible for care of the patients is likely to be affected by the evaluation. This serves to notify the services that data collection will occur.
   1. Data collection responsibility: Pharmacy Department.
      a. The pharmacist will be actively involved in the MUE process through the following mechanisms:
         1) Preparing in cooperation with the medical staff, drug use criteria and standard.
         2) Reviewing medication orders against drug use criteria and standards and consulting the prescriber as needed.

3) Obtaining quantitative data on drug use.
   a) The electronic heath records are reviewed either retrospectively or concurrently. Concurrent review is preferred because this allows for contact with prescribing physician and nurses caring for the patient if clarification of information found in the chart is necessary.
   b) A MUE criteria form will be filled out addressing all of the indicator criteria for each chart reviewed. This form should also be filled out with every new drug added to formulary. (Attachment 1)
   c) A MUE work sheet will be filled out or direct entry into the computerized notebook will be made with each chart reviewed.
4) Participating in follow-up activities.
   a) The pharmacist reviewer, when so deemed necessary, will contact the prescribing physician when identified criteria failures are deemed to be potentially dangerous to the patient to facilitate correction of the situation.
   b) Monitoring of adverse drug reaction reporting will also be addressed if deemed necessary.
5) The number of reviews of drugs will be based on priorities in which the number of patients affected by the drug's use, degree of risk and the degree to which the drug is known or suspected to be problem prone.
   a) Sampling - initially a total review of orders written is documented in order to have sufficient data available to enable reviewers to take logical steps in setting up an appropriate sampling and review process.
      1) The minimum sample size is usually 5% or 30 cases, whichever is larger.

2) There must be evidence that the screening or intense evaluation encompasses 91-100% of cases of the drugs chosen for review.

2. Analysis and summarization of data responsibility: Pharmacist
   a. Once the review process has been completed based on sampling or 100% review of the patients being evaluated, the observations will be analyzed by comparing the drug use data collected for each patient to the previously established criteria to determine if the standard was met.
   b. The findings observed are numerically tabulated and converted to percentage for comparison against the standard.
   c. The reviewing pharmacist will prepare a list of recommendations based on observations of substandard practice, (e.g., drug indication absence, physician practice outside accepted criteria), or adverse drug reaction. These recommendations will be submitted to the P & T Committee for review, approval, revisions, etc.
3. Presenting findings to Pharmacy and Therapeutics Committee for evaluation:
   a. The reviewing pharmacist will submit a report for the P & T agenda by the third week of the month for inclusion into the P & T agenda.
   b. Reports are submitted in a concise and organized format. (Attachment 2).

IV. Review of MUE Data

A. The report submitted by the pharmacy reviewer will be discussed. The Pharmacy reviewer will be present at each meeting to answer any question or clarification of data or recommendations.
B. The Committee will review all deviations and determine a course of action.
C. If deemed appropriate (i.e., not criteria failure), no action needed.
D. If deemed criteria failure, then action may be one or more of the following:
   1. A Physician MUE Response letter (Attachment 3) will be sent to the prescribing physician. If the prescribing physician is not a staff member of this facility, the physician response letter will be sent to the staff attending with the not-staff physician prescribing the drug therapy identified on the form.

a. This will serve to monitor the supervising and/or teaching skills of the attending staff when they are responsible for fellows, residents, and medical students.
b. This may also be used by the attending physicians in evaluating the medical students, residents, fellows for the medical school.

2. MUE results defined:
   a. Pass: all criteria met upon first review.
   b. Fail: any one of the criteria not met upon first review.
   c. Justified Fail: physician MUE response deemed appropriate by the Committee.
3. Following is a description of the criteria failure justification process:
   a. If the prescriber agrees with pharmacy reviewer, response is returned to the pharmacist within 10 working days.
   b. If the prescriber disagrees with the pharmacy reviewer, the prescriber may indicate justification on Physician MUE Response Letter and forward it to the MUE pharmacist within 10 working days for review by P & T Peer Advisor.
   c. If the prescriber does not respond within 10 working days, the lack of response will be deemed a failure and the physician response letter will thereafter be forwarded to the prescriber's Department Chair by the MUE staff. There will be an accompanying letter sent, explaining the reason why the Department Chair was contacted.
   d. If the advisor agrees with prescriber's justification, then it is not a criteria failure.
   e. If the advisor disagrees with prescriber's justification, then the prescriber's response is forwarded to the Department Chair by the advisor.
      1) If Department Chair agrees with prescriber's justification, response should be forwarded to the MUE pharmacist within 10 working days for consideration at the next scheduled P & T Committee meeting. If the Committee agrees with the justification, then it is not a criteria failure. If the Committee disagrees with the justification, then it is a criteria failure.
      2) If Department Chair disagrees with prescriber's justification, response will be forwarded to MUE pharmacist within 10 working days. The MUE record will then reflect that the case is deemed inappropriate and is a criteria failure.

V. Report Response to the P & T Committee for Evaluation

A. Completed physician response letters received by MUE pharmacist, which disagree with pharmacy advisor's conclusion as criteria failure will be forwarded to the designated peer advisor for that month.
   1. Medical staff members of the P & T Committee are on a rotating peer review process to review physician response.
   2. The peer advisor will review the response to determine validity of physician justification.
      a. If accepted, the physician will be notified by marking the "approved as submitted" section and initialing. The letter will be sent back to pharmacist reviewer to be sent to the physician.
      b. If the physician's response is determined to be out of compliance, the peer advisor will send the response letter to the appropriate Department Chair or Service Chief for review.
      c. The pharmacist reviewer will report to the Committee the total number of response letters received, and the number approved by the P & T Peer Advisor.
         1) Peer advisor will be identified by their assigned QRM number.

VI. Follow-Up to Determine Effectiveness of Action Chosen

A. Quarterly review of the MUE pattern will be presented to P & T Committee.
B. A determination of trends will be made as deemed necessary by the P & T Committee.
C. Any corrective action will be documented in the minutes.
   1. This corrective action will include but may not be limited to:
      a. Focus review on a particular aspect of the MUE criteria.
      b. Special notification to a particular service for continued non-compliance.
      c. Special inservice for the medical staff.
      d. Modification of the MUE criteria.

VII. Documentation of Completion of MUE and Follow-Up on Grid

A. The annual MUE plan should be agreed upon by the P & T Committee and an annual MUE grid will record the progress made toward documenting an ongoing improvement of the MUE process. The grid will document the current drugs being evaluated and any focus reviews and follow-up evaluation.

VIII. Written Reports to the Medical Staff on At Least a Quarterly Basis

A. On a quarterly basis, the MUE pharmacist/Pharmacy reviewer in conjunction with the P & T Committee, will submit quarterly reports to the department on the results of the MUE process.
B. These reports will be department-specific.
C. Reports will indicate the total number of MUE'S for the quarter, the percent of compliance and the physicians who were reviewed.
    1. The report will indicate the criteria failures by physician QRM number.
    2. The physicians response to the failure (if required) by the P & T Committee.
    3. The P & T Committee's decision regarding the physician's response to the failure.
D. The department service will document their review of the report in their department service level minutes.
    1. This documentation will include the total number of reviews, overall department compliance, and corrective action deemed necessary to improve the care provided to the patients under the care of the physicians.
    2. Follow-up documentation will occur quarterly by the department to ensure that performance improvement is occurring related to MUE.