

Research on Medication Use Evaluation (MUE) In Hospitalized Patients: A Preventive Step for Rational Drug Usage

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Abstract

A Medication use evaluation is a performance improvement method that focuses on evaluating and improving Medication-use processes with the goal of improving patient outcomes. A Medication Use Evaluation (MUE) or Drug Use Evaluation (DUE) or Drug Utilization Review (DUR) is a planned, criteria-based systematic process for monitoring, evaluating, and continuously improving medication use, with the ultimate aim of improving medication-related outcomes for a group of patients or consumers. A sum of 600 case studies from various departments of private medical colleges of Hyderabad and Mahabubnagar with therapeutic failure were studied. The highest occurrence of medication errors in various hospitals are found to be mainly due to prescription not specifying interactions (26.75%), wrong dose or frequency (16.5%), duplicate drugs (7.5%) and also caused due to incorrect intravenous administration calculations, wrong route of administration, poor administration techniques etc. remaining all of which together constitute (38%). MUE can be use as problem-identification tool when evaluating a patient experience following prescribing of a drug. As such problems can be identified and solution can be constructed to prevent medication problem in similar population of patients. Enhance the opportunity through standardization to assess the value of innovative medication use practice from both the patient outcome and resources utilization perspective.

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Objectives: Drug Utilization Reviews (DUR), also referred to as Drug Utilization Evaluations (DUE) or Medication Utilization Evaluations (MUE), are defined as an authorized, structured, ongoing review of healthcare provider prescribing, pharmacist dispensing, and patient use of medication.

- For monitoring, evaluating, and continuously improving medication use, with the ultimate aim of improving medication-related outcomes for a group of patients or consumers.

Study Design: It is a prospective, retrospective observational study conducted in a private and institutional hospitals of rural India.

Methods: By lab investigations, ADE's, and other clinical evidences are used to detect medication errors.

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- Bar coding, smart IV infusion pumps, good communication between provider and patient, updating latest medication information can be used to prevent further occurrences.

Summary and Results

The goal of a DUE or MUE is to promote optimal medication therapy and ensure that drug therapy meets current standards of care. Additional objectives may include:

- creating guidelines (criteria) for appropriate drug utilization
- evaluating the effectiveness of medication therapy
- enhancing responsibility/accountability in the medicine use process
- controlling medicine cost
- preventing medication related problems, for example adverse drug reactions, treatment failures, over-use, under-use, incorrect doses and non-formulary medicine use
- identifying areas in which further information and education may be needed by health-care providers.

Once the main problem areas have been identified, (from aggregate data, health facility indicators, qualitative studies, other DUE studies, or even recommendations from DTC members), a DUE system can be established relatively quickly.

A sum of 600 case studies from various departments of private medical colleges of Hyderabad and Mahabubnagar with therapeutic failure were studied. The highest occurrence of medication errors specifying MUE in various hospitals are found to be mainly due to prescription not specifying interactions (26.75%), wrong dose or frequency (16.5%), duplicate drugs (7.5%) and also caused due to incorrect intravenous administration calculations, wrong route of administration, poor administration techniques etc. remaining all of which together constitute (38%).

Conclusion

MUE can be use as problem-identification tool when evaluating a patient experience following prescribing of a drug. As such problems can be identified and solution can be constructed to prevent medication problem in similar population of patients. Enhance the opportunity through standardization to assess the value of innovative medication use practice from both the patient outcome and resources utilization perspective.

Author Statement

The study conducted post approval from IRB/IEC from rural hospitals. This study has a limitation included lack of funding from organizations due to which it was not continued for a limited period of time. With the available funding a broader aspects in rural hospital organization and the methods to improve proactive role of clinical pharmacist could be implemented to minimize the risk of AE's and to improve the quality of life of the patient's.

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