

**Drug Utilization Research: Methods and Applications**

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Drug utilization research has evolved over the years to become a cross-disciplinary science that explores the medical, social, and economic consequences of drug utilization. The European Drug Utilization Research Group and the International Society for Pharmacoepidemiology's Special Interest Group in Drug Utilisation / Health Service Research developed this text to provide a comprehensive introduction and advanced discussion of topics in drug utilization research and pharmacoepidemiology.

The book is organized in 3 parts: Introduction, Methodology, and Applied Drug Utilization Research. The Introduction defines drug utilization research and provides the historical context. The Methodology section begins with basic concepts in study design, data collection, drug measurement units, and ways to graphically represent drug utilization data. This section continues with some advanced statistical methods, covering multilevel analyses and quality indicators and addressing the emerging field of qualitative methods in drug utilization research. The applied research section includes comparative drug utilization research, health policy applications, and research in specific populations (e.g., children, older people) and specific pharmacotherapeutic areas (e.g., infectious diseases, cancer). This section presents the determinants of drug utilization from different perspectives (those of the health system, the prescriber, and the patient), as well as information about adherence research, pharmacoepidemiology, and the assessment and improvement of the quality of medicine use. A brief epilogue provides insights into the future of drug utilization research.

The textbook has several strengths. It spans the entirety of drug utilization research in such detail that the reference should be of value to researchers, academics, and policy-makers. It is a comprehensive resource with information that is easy to access,

and would be a useful text for both junior and senior researchers. The reference is not meant to be an all-inclusive source for statistical methods, but the statistics are described in sufficient detail to assist researchers in developing their own drug utilization research projects. A unique feature of this text is the chapter on visualization of drug utilization data, which provides practical hints and tools for displaying data. The editors have taken a global view of drug utilization research; therefore, the book is not dominated by one country or health system. Comparative data across multiple countries are provided to allow a better understanding of other health care systems and their respective drug utilization data. The examples of published research are a notable strength of the textbook; the reader is able to review real examples of drug utilization research to better understand the methodologies described. However, references are not provided in the text; they must be downloaded separately, which is an inconvenience. Colour graphs are not available within individual chapters; instead, the reader is directed to the colour plates section in the middle of the book.

In conclusion, this textbook supports basic drug utilization studies but also provides the experienced researcher with a better understanding of the complexities of designing drug utilization research. Interested individuals, from clinicians to policy-makers, may also use this as a reference for appraisal and application of research findings to improve the quality of medication use at a local and societal level.

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