

# **Using Clinical Trial and Real World Data: A Comprehensive Guide for Researchers and Practitioners**

The pharmaceutical and healthcare industries are undergoing a profound transformation, with the advent of big data, artificial intelligence (AI), and other advanced technologies. This has led to a growing need for professionals who can effectively use clinical trial and real-world data (RWD) to make informed decisions and improve patient outcomes.

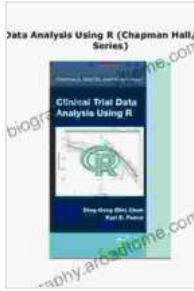
## **What is Clinical Trial and Real World Data?**

Clinical trial data is collected during clinical trials, which are research studies that evaluate the safety and efficacy of new medical treatments. RWD, on the other hand, is collected from real-world settings, such as electronic health records (EHRs), claims data, and patient surveys.

## **Why is Clinical Trial and Real World Data Important?**

The combination of clinical trial data and RWD provides a more comprehensive view of a treatment's effectiveness and safety than either source alone. Clinical trial data provides high-quality evidence from controlled settings, while RWD provides insights into real-world use and patient outcomes. By combining these data sources, researchers and practitioners can make more informed decisions about treatment selection, dosage optimization, and patient management.

**Economic Evaluation of Cancer Drugs: Using Clinical Trial and Real-World Data (Chapman & Hall/CRC)**



## Biostatistics Series) by Marios Loukas

★★★★☆ 4.8 out of 5

Language : English

File size : 18244 KB

Screen Reader: Supported

Print length : 442 pages



### Using Clinical Trial and Real World Data

There are a number of challenges associated with using clinical trial and RWD. These include data integration, data quality, and statistical analysis. However, there are a number of strategies that can be used to overcome these challenges.

One common approach is to create a common data model that can be used to harmonize data from different sources. This can be a complex and time-consuming process, but it is essential for ensuring that data can be easily combined and analyzed.

Another important consideration is data quality. Clinical trial data is typically of high quality, but RWD can be more variable. It is important to carefully assess the quality of RWD before using it for analysis. This includes checking for missing data, outliers, and potential biases.

Finally, statistical analysis of clinical trial and RWD requires specialized expertise. There are a number of statistical methods that can be used to analyze these data, and the choice of method will depend on the specific research question being investigated.

## **Benefits of Using Clinical Trial and Real World Data**

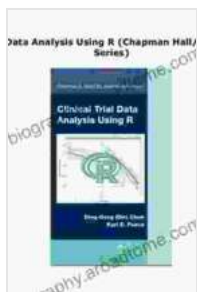
There are a number of benefits to using clinical trial and RWD. These include:

- **Improved treatment selection:** By combining clinical trial and RWD, researchers and practitioners can get a better understanding of which treatments are most effective for different patients. This can help to ensure that patients are receiving the best possible care.
- **Dosage optimization:** Clinical trial and RWD can be used to optimize drug doses. This can help to improve efficacy and reduce side effects.
- **Patient management:** Clinical trial and RWD can be used to track patient outcomes and identify patients who are at risk for adverse events. This information can be used to develop personalized treatment plans and improve patient safety.
- **Pharmacovigilance:** Clinical trial and RWD can be used to monitor the safety of new and existing drugs. This information can be used to identify potential risks and take steps to mitigate them.
- **Clinical research:** Clinical trial and RWD can be used to design and conduct clinical trials. This can help to improve the efficiency and effectiveness of clinical research.

Clinical trial and RWD are essential for improving patient outcomes and advancing the pharmaceutical and healthcare industries. By using these data sources effectively, researchers and practitioners can make more informed decisions about treatment selection, dosage optimization, patient management, pharmacovigilance, and clinical research.

## About the Book: Using Clinical Trial and Real World Data

This book provides a comprehensive guide to using clinical trial and RWD. It covers all aspects of the topic, from data integration and quality assessment to statistical analysis and interpretation. The book is written by a team of leading experts in the field, and it is essential reading for anyone who wants to use clinical trial and RWD to improve patient outcomes and advance the pharmaceutical and healthcare industries.



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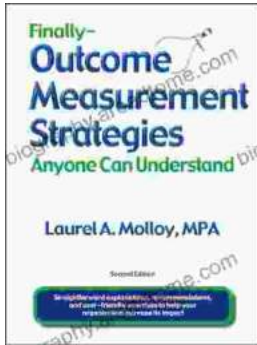
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