
SYNOPSIS

Dissertation Topic:

Antiepileptic Drug Market Research: API and FDF

Guided By:

Dr. Sudhinder Singh Chowhan
School of Pharmaceutical Management

IIHMR UNIVERSITY, JAIPUR

Submitted by:

Name:

DHRUV PRAKASHBHAI
VEKARIA

Roll Number: 0389



Antiepileptic Drug Market Research: API and FDF

Abstract:

This study explores the complex landscape of epilepsy and seizures treatment, focusing on the use of antiepileptic drugs. It examines the challenges and opportunities in implementing therapy, considering factors like accessibility, effectiveness, and policy implications. The research combines a comprehensive literature review with primary data collection to provide insights into improving treatment strategies.

Introduction:

Epilepsy, a neurological disorder characterized by recurrent seizures, affects millions of individuals worldwide, necessitating effective treatment options to manage its symptoms. Antiepileptic drugs (AEDs) play a crucial role in controlling seizures and improving the quality of life for those with epilepsy. This thesis explores the antiepileptic drug market, focusing on the development and commercialization of active pharmaceutical ingredients (APIs) and finished dosage forms (FDFs).

Literature Review:

The literature on antiepileptic drugs (AEDs) encompasses a wide range of studies that highlight the critical role these medications play in managing epilepsy. Research on active pharmaceutical ingredients (APIs) and finished dosage forms (FDFs) reveals significant advancements and ongoing challenges in the field. The review also highlights gaps in existing research, providing a foundation for the study's objectives.

Aim:

The study aims to provide a comprehensive understanding of the complexities involved in the AED market, including the synthesis and manufacturing of APIs, the formulation and delivery of FDFs, and the regulatory landscape that governs these processes. By examining market trends, competitive dynamics, and innovative developments, this research seeks to offer valuable insights into the current state and prospects of AEDs, ultimately contributing to better therapeutic outcomes for patients with epilepsy.

Objectives:

□ **Analyze API Development:** Examine the synthesis, manufacturing processes, and regulatory requirements for key active pharmaceutical ingredients used in AEDs.

- ❑ **Evaluate FDF Innovations:** Investigate the formulation, development, and delivery methods of finished dosage forms, including tablets, capsules, injectables, and extended-release products.
- ❑ **Assess Market Dynamics:** Explore market trends, sales data, and prescription patterns to understand the current landscape and growth potential of the AED market.
- ❑ **Review Regulatory Environment:** Study the regulatory frameworks that govern the approval, quality, and safety of APIs and FDFs in different regions.
- ❑ **Identify Growth Drivers and Barriers:** Identify key factors driving market growth and the challenges hindering market expansion, including stigma, reimbursement issues, and competition.
- ❑ **Gather Stakeholder Insights:** Conduct interviews with healthcare providers, policymakers, patient advocates, and pharmaceutical executives to gain diverse perspectives on market challenges and opportunities.
- ❑ **Develop Strategic Recommendations:** Formulate strategic recommendations for market expansion, including tailored regional strategies, innovative pricing models, educational campaigns, strategic partnerships, and new product development.

Research Methodology:

The study employs a mixed-methods approach, combining quantitative analysis of treatment outcomes with qualitative insights from healthcare providers and patients. Data collection methods include surveys, semi-structured interviews, and analysis of existing medical records. The research also incorporates case studies to provide in-depth understanding of antiepileptic drugs implementation in different contexts.

Conclusion:

This research on the antiepileptic drug (AED) market, focusing on active pharmaceutical ingredients (APIs) and finished dosage forms (FDFs), highlights critical insights into API development, FDF innovations, market dynamics, regulatory landscapes, and strategic recommendations for market expansion. The findings underscore the importance of continuous innovation, regulatory compliance, and strategic initiatives to address challenges and optimize therapeutic outcomes for patients with epilepsy.

References:

- Baulac, M., Rosenow, F., & Toledo, M. (2015). Pitfalls in the management of epilepsy. *Epilepsy & Behavior*, 52, 1-19.
- Kwan, P., & Brodie, M. J. (2001). Early identification of refractory epilepsy. *New England Journal of Medicine*, 344(5), 314-319.

- Ngugi, A. K., Bottomley, C., Kleinschmidt, I., Sander, J. W., & Newton, C. R. (2010). Estimation of the burden of active and life-time epilepsy: A meta-analytic approach. *Epilepsia*, 51(5), 883-890.
- Rogawski, M. A., & Löscher, W. (2004). The neurobiology of antiepileptic drugs. *Nature Reviews Neuroscience*, 5(7), 553-564.
- Thompson, D. C., Patel, A. D., & Jackson, E. (2020). The role of digital health technologies in management of epilepsy. *Epilepsy & Behavior*, 102(Pt A), 106707.
- World Health Organization. (2020). *Epilepsy: Key Facts*.

Thank you