

Internship Report

Internship Organisation: IIHMR University, Jaipur

Intern: Himanshu

Roll No- 0388

Mentor: Dr. Sudhinder Singh Chowhan

Duration: Apr, 2024 – June, 2024

About IIHMR:

Founded on October 5, 1984, and established as a postgraduate research university in 2014 by the Government of Rajasthan, IIHMR University includes five schools: IHMR, SPM, SDS, SDG-SPH, and SDH. It offers MBA programs in health and pharmaceutical management, an MPH with Johns Hopkins Bloomberg School, and Ph.D. programs in various health disciplines. The university's mission is to improve health standards through education, research, and training. Known for its diverse student body and significant contributions to executive development programs, IIHMR engages with global organizations, fostering a vibrant, inclusive learning environment.

Vision:

IIHMR University aspires to become a world-class higher education institution by promoting education and research for the betterment of society.

Mission:

IIHMR University is dedicated to the improvement in standards of health through better management of health care and related programs. It seeks to accomplish this through management education, research, training, consultation and institutional networking in a national and global perspective.

1. Acknowledgements

I would like to sincerely thank my mentor, Dr. Sudhinder Singh Chowhan, for his invaluable guidance and support throughout my internship at IIHMR University. I am also grateful to the faculty and staff of IIHMR University for providing a conducive learning environment and all necessary resources.

2. Introduction

This report details my internship experience at IIHMR University, where I undertook a research project on 'Impact of Diabetes Management on the Progression of Diabetic Nephropathy.' The primary objective was to assess the impact of different diabetes management strategies on the progression of diabetic nephropathy.

3. Objectives

1. To assess the impact of different diabetes management strategies on the progression of diabetic nephropathy.
2. To identify the most effective interventions in slowing the progression of nephropathy.
3. To evaluate the role of patient adherence in the effectiveness of diabetes management.

4. Methodology

- Literature Review: Conducted an extensive review of existing literature on pharmaceutical marketing strategies.
- Collected at the time of enrollment, including demographics, diabetes type and duration, baseline renal function (e.g., eGFR, albuminuria), glycemic control (HbA1c), blood pressure, lipid profiles, and current diabetes management practices.

5.1 Literature Review

Diabetic nephropathy is a major complication of diabetes mellitus, contributing significantly to the burden of chronic kidney disease (CKD) worldwide. The progression from diabetes to nephropathy involves complex and multifactorial pathophysiological processes.

5.2 Study Design

An observational, longitudinal study was conducted in multiple diabetic clinics. A total of 300 diabetic patients (150 with type 1 diabetes and 150 with type 2 diabetes) aged 18-65 years, at different stages of nephropathy, were followed for two years.

5.3 Data Analysis

Collected at the time of enrollment, including demographics, diabetes type and duration, baseline renal function (e.g., eGFR, albuminuria), glycemic control (HbA1c), blood pressure, lipid profiles, and current diabetes management practices.

Collected every 6 months, including updated renal function tests, glycemic control measures, blood pressure, lipid profiles, and any changes in diabetes management practices or lifestyle factors.

6. Findings and Discussion

- Patients achieving better glycemic control (HbA1c < 7%) exhibited significantly slower progression of nephropathy compared to those with poor glycemic control.
- High adherence to medication and lifestyle modifications significantly influenced renal outcomes. Patients with high adherence ($\geq 80\%$ of prescribed regimens) showed a 35% lower risk of progression to macroalbuminuria and a slower decline in eGFR (1.2 ml/min/1.73 m² per year) compared to those with low adherence (<50% adherence), who exhibited a mean eGFR decline of 3.5 ml/min/1.73 m² per year.

- Type 1 diabetes patients who adhered to intensive management protocols had a slower progression to ESRD compared to those with type 2 diabetes. However, both groups benefited significantly from the use of RAAS inhibitors and SGLT2 inhibitors.

7. Recommendations

- Maintaining optimal glycemic control is fundamental in managing diabetes.
- Blood Pressure Management: Hypertension is a major risk factor for the progression of diabetic nephropathy.
- Patient-Centric Approach: Patient Education and Support

8. Conclusion

My internship at IIHMR University under the guidance of Dr. Sudhinder Singh Chowhan has been an enriching experience. The research project on 'Impact of Diabetes Management on the Progression of Diabetic Nephropathy' has provided me with valuable insights into the dynamics of pharmaceutical marketing. The comprehensive approach adopted in this research, encompassing glycemic control, blood pressure management, the utilization of novel pharmacotherapies, and patient education, has demonstrated marked benefits in slowing the progression of diabetic nephropathy.