Dissertation Synopsis

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1. **TITLE: Optimizing Clinical Pharmacy Efficiency: A Time Motion Analysis in Medanta Hospital**

2. **INTRODUCTION:** Efficient management of clinical pharmacy services is vital for enhancing patient care and optimizing resources in healthcare facilities. Time motion analysis offers a comprehensive method to understand workflow patterns, identify bottlenecks, and improve operational efficiency in clinical pharmacy settings. This dissertation focuses on conducting a comprehensive time motion analysis within the clinical pharmacy department at Medanta Hospital, a leading healthcare institution renowned for its commitment to excellence in patient care. By leveraging the principles of time motion analysis, this study seeks to elucidate the current workflow dynamics, assess resource utilization, and identify opportunities for optimization. Through meticulous observation and data collection, the research aims to uncover bottlenecks, streamline processes, and propose targeted interventions to enhance the overall efficiency and effectiveness of clinical pharmacy services.

3. **RESEARCH QUESTION:** How can time motion analysis be utilized to optimize workflow and resource allocation in clinical pharmacy services at Medanta Hospital?

4. **OBJECTIVES:**

   - To assess the current workflow and time allocation in clinical pharmacy services.
   - To identify inefficiencies and bottlenecks in the existing workflow.
   - To propose strategies for optimizing resource allocation and workflow efficiency.
   - To evaluate the impact of proposed interventions on workflow and resource utilization.

5. **HYPOTHESIS:**

   Implementation of optimized workflow strategies based on time motion analysis will lead to improved efficiency and resource utilization in clinical pharmacy services at Medanta Hospital.

6. MATERIAL AND METHODS:

STUDY DESIGN: Prospective Study Time Motion Analysis.

SETTING: Clinical pharmacy department at Medanta- the Medicity Gurugram.

STUDY POPULATION : Patients admitted in IPD Wards.

- **Inclusion criteria:** Stat and urgent orders for indentation.
- **Exclusion criteria:** Routine orders for indentation.
- **Study tools:**
- Time Motion Analysis Software or Data Collection Sheets:
- Time motion analysis software or data collection sheets are the primary tools used to record observations of activities and time intervals within the clinical pharmacy department.
- Time motion analysis software may include specialized applications or programs designed to facilitate real-time data collection, allowing observers to input data directly into electronic databases.
- Data collection sheets, on the other hand, are manual forms used to document observations of workflow activities, including the type of activity, start and end times, and any additional notes or comments

DURATION OF STUDY: 18.03.2024 – 18.06.2024

SAMPLE SIZE: 150 patients.

SAMPLING TECHNIQUE: Purposive Sampling of Patients with Urgent or New Medication Orders. Purposive sampling involves selecting participants based on specific criteria that are relevant to the research objectives. In your case, the criteria are patients admitted to IPD wards who have been prescribed urgent or new medication orders.

Define Selection Criteria: Clearly define the criteria for selecting participants, including:

Admission to the IPD wards: Patients currently admitted to the IPD wards at Medanta Hospital.

Prescription of urgent or new medication orders: Patients who have been prescribed medications classified as urgent or new, indicating a recent change in their treatment regimen.

DATA COLLECTION PROCEDURE: Observational recording of activities using time-motion software and manual data collection sheets.

OPERATIONAL DEFINITIONS:

- **Clinical Pharmacy:-**

  The American College of Clinical Pharmacy (ACCP) defines clinical pharmacy as an area of pharmacy concerned with the science and practice of rational medication use. Clinical pharmacy is a health science discipline in which pharmacists provide patient care that optimizes medication therapy and promotes health, and disease prevention.

- **STAT Medication:-**

  The word 'STAT' comes from the Latin word "STATim", which translates to "immediately", and it means that order should be prioritised first as it's needed urgently. A STAT medication order should generally be administered within 30 minutes of it being ordered. However, many hospitals face challenges in consistently administering stat medications within this time frame.

- **Medication Turnaround Time**:

  Medication turnaround time is defined as the interval from the time a medication order is written (manually or electronically) to the time the medication was administered.

7. **DATA ANALYSIS PLAN:** Quantitative analysis of time spent on each activity, identification of bottlenecks, and comparison of pre- and post-intervention data.

8. **ETHICAL CONSIDERATIONS:** Approval from the hospital's ethics committee and informed consent from participants.

9. **IMPLICATIONS OF RESEARCH:** The study aims to provide actionable insights for optimizing clinical pharmacy workflow and resource allocation, ultimately leading to improved patient care and operational efficiency.

10. **REFERENCES:**

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