

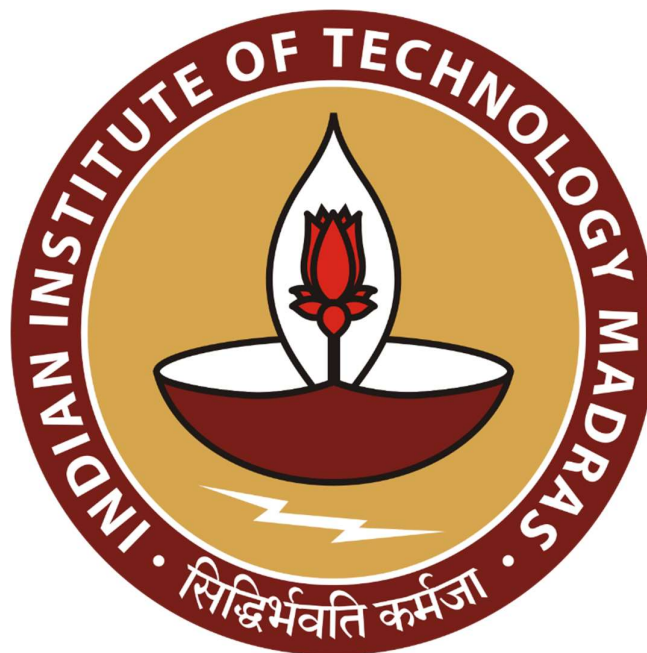
Streamlining Clinical Operations and Financial Management at RD Dental Care

A Proposal report for the BDM Capstone Project

Submitted by

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Declaration Statement

I am working on a Project titled "Streamlining Clinical Operations and Financial Management at RD Dental Care". I extend my appreciation to **RD Dental Care**, for providing the necessary resources that enabled me to conduct my project.

I hereby assert that the data presented and assessed in this project report is genuine and precise to the utmost extent of my knowledge and capabilities. The data has been gathered from primary sources and carefully analyzed to assure its reliability.

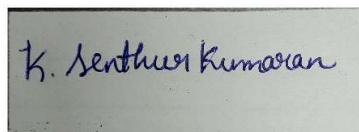
Additionally, I affirm that all procedures employed for the purpose of data collection and analysis have been duly explained in this report. The outcomes and inferences derived from the data are an accurate depiction of the findings acquired through thorough analytical procedures.

I am dedicated to adhering to the principles of academic honesty and integrity, and I am receptive to any additional examination or validation of the data contained in this project report.

I understand that the execution of this project is intended for individual completion and is not to be undertaken collectively. I thus affirm that I am not engaged in any form of collaboration with other individuals, and that all the work undertaken has been solely conducted by me. In the event that plagiarism is detected in the report at any stage of the project's completion, I am fully aware and prepared to accept disciplinary measures imposed by the relevant authority.

I understand that all recommendations made in this project report are within the context of the academic project taken up towards course fulfillment in the BS Degree Program offered by IIT Madras. The institution does not endorse any of the claims or comments.

Signature of Candidate: (**Digital Signature**)

A rectangular box containing a handwritten signature in blue ink that reads "K. Senthur Kumaran".

Name: K Senthur Kumaran

Date: 09-06-2024

1 Streamlining Clinical Operations and Financial Management at RD Dental Care

Executive Summary:

RD Dental Care is the leading clinic for dental surgery located in Chennai provides all general dentistry, orthodontic surgery, aesthetic and restorative surgery and many dental implants. Established by Dr. Santhosh Kumar and Dr. Nandhini the clinic focuses on delivering excellent service through innovative techniques and in a more unique approach.

The following are the management issues affecting this clinic that affect the clinic's efficiency and its financial management in particular. Firstly, these include inadequate documentation and record-keeping of clinical notes for patients seen by junior doctors. This has implications for the continuity of care and accuracy in diagnosis and treatment by making it hard to access details of previous procedures conducted. Secondly, the clinic faces difficulties in computation since the patients pay for the treatment in instalments. This kind of payment system entails unbearable disparity between the overall income out of treatment services and charge on clinical lab tests and instruments which sometimes the Clinic has to meet from its expenses. Thirdly, the in-clinic pharmacy does not have an organized filing system for inventory control, it becomes challenging to check on the sales made, stock received and compute profits hence affecting its financial health. Finally, the procedure of shifting billing dates to match patients' insurance claim submission schedules adds another layer of trouble when it comes to tracking and reconciling financial aspects among the contracted doctors.

To cope with these matters, we shall utilize some practical measures that improve financial and operational efficiency. To address the issue of incomplete clinical notes, a standardized digital documentation system will be introduced to ensure that all patient interactions are captured consistently. Our payment reconciliation approach will encompass developing a single billing platform for real-time payment tracking as well as automated reminders for any remaining balances. As regards the pharmacy's inventory control, we will put in place an inventory tracking mechanism that captures each incoming and outgoing product thereby enabling accurate profit calculations and reorder management. To expedite insurance billing at RD Dental Care, there should be protocols and timelines on billing that conform to the requirements of insurers resulting in fewer processes with better financial accuracy. These solutions are anticipated to advance Operation Efficiency in addition to easing Financial Bottlenecks thus increasing the overall profitability of RD Dental Care.

The anticipated result is the introduction of proper inventory management procedures, timely billing procedures, and effective clinical documentation solutions. These changes will improve the daily running of the business as well as the management of finances leading to a higher profit ratio as well as overall satisfaction in the business for patients visiting RD Dental Care.

2 Organization Background

RD Dental Care has its base in Chennai and has garnered a reputation as a leading group of dental clinics that are dedicated to delivering high-grade dental care services. There is a variety of treatments available such as general dentistry, orthodontic, aesthetic surgery or restorative surgery and dental

implants at these clinics. Situated close up to Kodambakkam Railway Station, the location of RD Dental Care ensures that it is easy for its clients to locate them.

Dr. Santosh Kumar and Dr. Nandhini founded the clinic. The clinic has a team of experienced specialists who are dedicated to the care of patients. Dr Santosh Kumar, who is a senior and has vast experiences accumulated over a period exceeding fifteen years in dentistry, majors in cosmetic and endodontics. He is the brain behind setting high-level hygiene in dental treatment. Dr Nandhini, another veteran in the dental profession specializing in kiddies and preventive dentistry offers all-round care for any individual regardless of his or her age.

Advanced dental technologies are employed by RD Dental Care- in order to enhance patient care. This clinic is famous for its patient-centred nature which guarantees the patient's easiness and gratification achieved through custom-made treatment plans as well as modern dental techniques.

3 Problem Statement

- 3.1 Problem statement 1: There is a lack of clinical notes and records for patients treated by assistant doctors. This leads to a difficulty in retrieving details of the patient in critical times which leads to inefficient continuity in care and treatment accuracy
- 3.2 Problem statement 2: Most of the patients delay their payments through instalment-based payments that create dissimilarities between treatment revenue and clinical lab expenses, which the clinic has to meet from its pocket.
- 3.3 Problem statement 3: Since there is no inventory management system for the in-clinic pharmacy, they face a problem in tracking the profit and the goods count in pharmaceutical goods.
- 3.4 Problem statement 4: Another issue is that because of requests from the patients to manipulate the billing dates in order to align them with the insurance claim due dates, through this practice, they increase the workload for another employee in terms of tracking and reconciling of the accounts and, at the same time they also burden themselves with extra work.

4 Background of the Problem

RD Dental Care faces several tangled management issues that hinder's the functional and operational efficiency. The primary cause of the problem is the lack of a standardized business management system and protocols.

I. Major cause of problems:

The problem of incomplete clinical records results from poor record-sharing tendencies among junior professionals. This is because of the fact that there is an inconsistency that is experienced when it comes to the retrieval of patient history. Thus, this reduces the quality of patient care in terms of continuity of care and this is experienced only when there is a need to review the patient records during or before the treatment.

II. Internal problems

Internally, the clinics fragmented payment systems, where patients pay in instalments. This causes a very big challenge in auditing the total treatment income. This often results in differences between the received amount and the billed amount. Also during this period, if the patient's samples had to be sent to the lab for testing and results, at that moment, the clinic management had to pay the fee from their pocket rather than paying them from the treatment income. Additionally, the absence of an internal inventory management system results in tallying errors and causes confusion among the doctors and the clinic staff. They may have a notebook tally or a mental count, but that tends to fade away. Unless proper inventory management software is in place, the problem will continue to persist. Additionally, the altering of billing dates according to the patients' requirements to satisfy their insurance claims will cause trouble in tallying the monthly income.

III. External problems

Externally, unpredictable patient payments and varied insurance claims' demands worsen the realism. Patients' irregularity in payment is because the insurance companies set the time for claims which makes the clinic change its billing system. This results in hindrances in the clinic's administration and financial sectors.

5 Problem Solving Approach

To effectively approach the mentioned issues faced at RD Dental Care, we can implement several data-driven approaches as follows:

I. Standardized Digital Documentation

To ensure the proper maintenance of clinical notes and patient records, the management has to subscribe to or prepare a platform where digital documentation of patients can be stored. This system will centralize patient records making it easier for doctors to retrieve previous treatment procedures and also enable a better and clearer continuity of care. Also through this system, using a data analytic team, a gap or mistake it can be found and they can ensure completeness.

II. Consolidated Billing Platform

A solution to the problem of divided payments is to create a central system that monitors payments in real time. This system will also send out automated reminders for unpaid balances, making sure that the debtors acknowledge their obligations. The clinic is planning to employ data analysis to monitor payment trends and speculate future funding gaps, thus, they can govern cash flow more effectively.

III. Inventory Management System

Using the inventory management concept portal from my college projects at VIT Vellore, we can design a batched inventory system that the clinic can use to schedule new purchases of stock, bill items, and monitor the amount of remaining items and products in the clinic. This system will make use of real-time data to evaluate information such as which products are selling the most and what stocks will be coming in, therefore, it will have exact profits counting and assist in stocking management. The tool will use data to plan the procurement of this year's supplies according to expected needs and optimally manage stock inventories.

To address the management issues at RD Dental Care, data collection will use the existing Healcon website platform where appointment details, financial records and patients' phone numbers, their ages (only for few are stored), and last appointment dates are saved.

Surveys and informal interviews will be done with patients, doctors, and clinical staff to get an understanding of what is going on now in terms of processes as well as operational difficulties. Similarly, Healcon's patient's files together with financial information will be gone through to pick out any numerical information about payment transactions. Therefore, we also shall examine Google review details stored on the platform for patient impression and improvement areas required.

Interviews with doctors and administrative staff will provide insightful qualitative data that could enable a better understanding of the root causes of these problems.

The data collected from the clinic management is stored in the Google Drive link

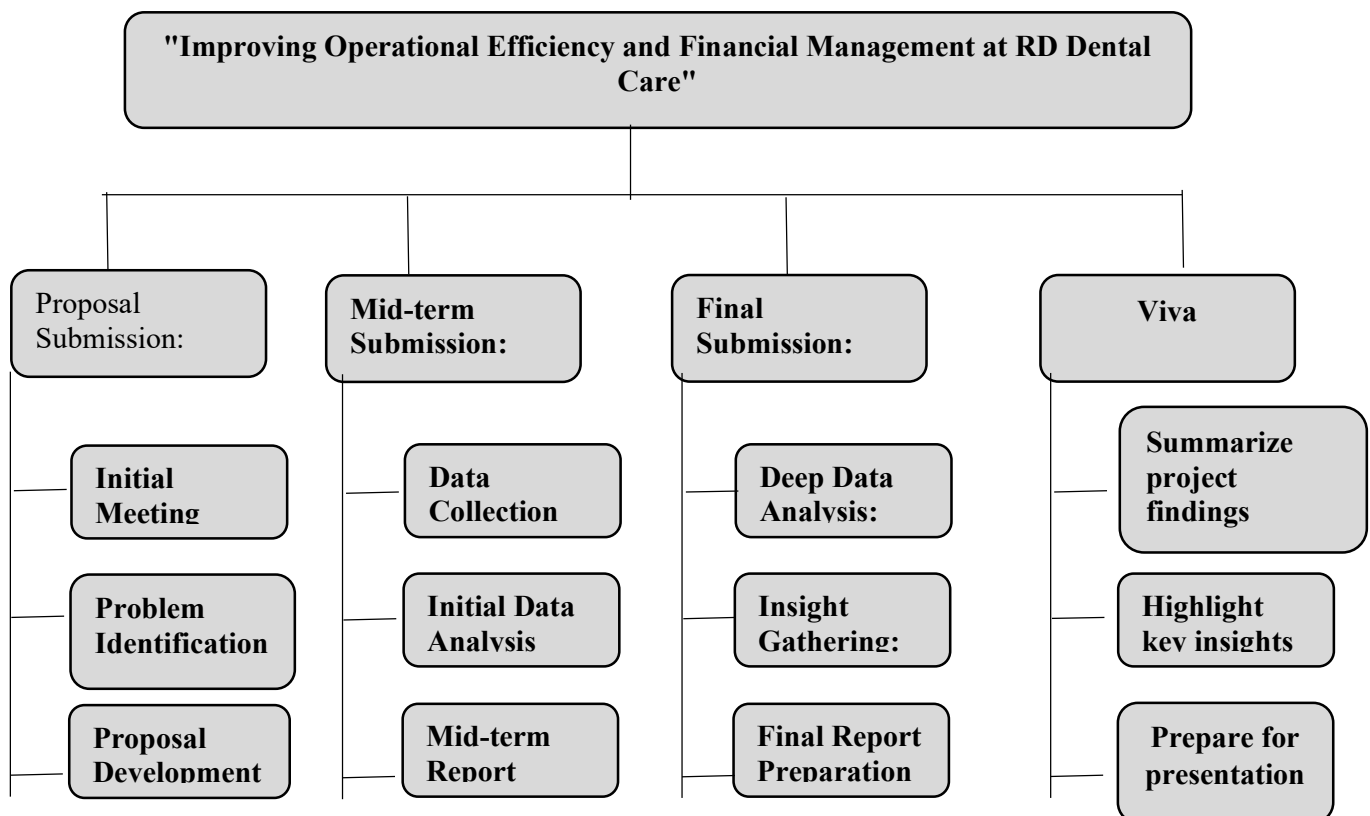
<https://drive.google.com/drive/folders/1DI7entMSA-juZDPftSWLQYqU7r6KhhRE?usp=sharing>

The discussion with the head doctors of RD Dental Clinic is stored in Google Drive link

<https://drive.google.com/drive/folders/1W9RL390SEL1c0rsc-zQkfOn mmVJf1CL?usp=sharing>

6 Expected Timeline

6.1 Work Breakdown Structure:



6.2 Gantt chart

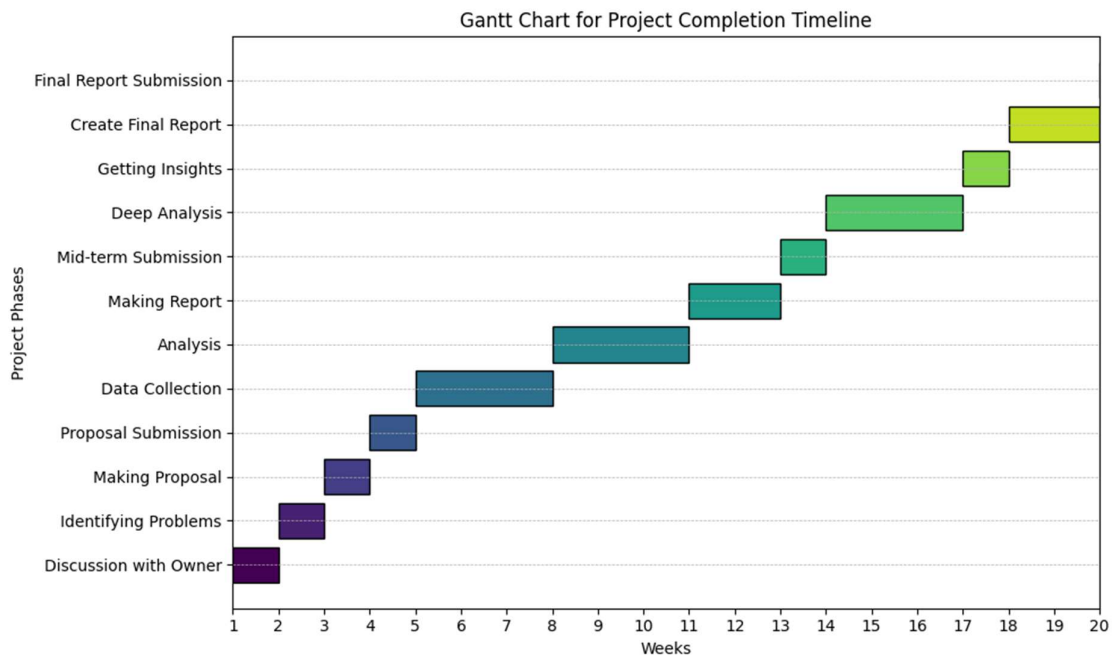


Figure 1 Expected timeline for completion of project.

7 Expected Outcome

The expected outcomes of the project are:

7.1 The introduction of the above-mentioned strategies will hopefully help RD dental care clinic to perform better in terms of business management effectiveness and financial management.

7.2 A standardized digital documentation system will help to ensure continuity of care as all patient interactions and treatment details will be systematically documented, which makes the patients comfortable with the doctors, giving them a better experience, and making it more likely that they return for other treatments.

7.3 Additionally, an integrated billing platform will help to ensure that all bills are centralized to provide for fast and secure transactions by ensuring that there is always real-time checking of payments and the least possible mistakes made during payments. This will in turn enable proper cash flow management therefore reducing the clinics' financial burden on the clinic.

7.4 If an inventory management system is introduced, it would help them keep to track of their in-clinic pharmaceutical products. It will help them understand how many products have been purchased, how many have been sold out and what profit has been gained from this.