**e-Care Project Plan**

Client: Sonoran Sleep Center, Arizona

# Executive Summary

The Sonoran Sleep Center is facing billing inefficiencies that are causing delays in payment processing and creating more manual work for staff, resulting in lost revenue opportunities. To address these issues, we recommend implementing an API integration between WayStar and InTakeQ, and a referral management system.

These improvements are expected to streamline processes, reduce manual labor, increase accuracy in payment processing and record-keeping, and improve revenue cycle management. Implementing these improvements will help the Sonoran Sleep Center to increase revenue opportunities, improve staff productivity, and streamline its revenue cycle.

By automating the payment posting process, electronic record-keeping, and referral management process, the center can reduce processing time and manual labor, leading to improved financial performance.

The project is expected to take nearly 135 days to complete.

# System Planning Phase Report

# 1.0 Introduction

In today's fast-paced business world, efficient billing systems are essential for managing finances and maintaining customer satisfaction. However, the process of generating and managing invoices can be time-consuming and prone to errors. This is where technology comes in.

By leveraging the power of automation and digital tools, businesses can streamline their billing process, reduce errors, and improve overall efficiency. In this context, our project aims to develop a modern and user-friendly billing software that can simplify the billing process for our client, Sonoran Sleep Center.

This software will not only help save time and money but will also improve the accuracy and transparency of their billing operation, make the insurance claim processing and payments more faster, by implementing a referral management system to automate processes and reduce manual labor.

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### 2.0 Project Justification

The current billing system used by Sonoran Sleep Center is inefficient and prone to errors, causing delays in payment processing and creating manual work for staff. These inefficiencies are resulting in lost revenue opportunities, impacting the financial performance of the center. By developing a modern and user-friendly billing software, our project aims to automate and streamline the billing process for Sonoran Sleep Center, reducing errors, saving time, and increasing transparency.

The implementation of an API integration between WayStar and InTakeQ, along with a referral management system, will further improve the accuracy and efficiency of the billing operation. The automation of payment posting, electronic record-keeping, and referral management processes will reduce manual labor, increase accuracy in payment processing and record-keeping, and improve revenue cycle management. These improvements will help Sonoran Sleep Center increase revenue opportunities, improve staff productivity, and streamline its revenue cycle.

Overall, this project will address the inefficiencies in the current billing system and improve financial performance for Sonoran Sleep Center. By leveraging the power of automation and digital tools, we aim to create a billing system that is efficient, accurate, and transparent, providing a positive impact on the center's bottom line.

## 3.0 Client and Industry Background

Sonoran Sleep Center is a comprehensive sleep medicine clinic and laboratory that specializes in diagnosing and treating various sleep-related conditions, such as insomnia, narcolepsy, restless leg syndrome, circadian rhythm disorder, and parasomnias. The practice is physician-owned and operated and is located in the Phoenix metro area.

The team at Sonoran Sleep Center is led by Dr. Patel, who has extensive experience in sleep medicine and is dedicated to improving the quality of life for individuals suffering from sleep disorders. Dr. Patel takes a patient-centered approach to care and works with each patient to develop a personalized treatment plan that addresses their specific needs and concerns.

One of the unique features of Sonoran Sleep Center is its inviting and comfortable overnight study suites, which are designed to look more like hotel rooms than medical offices. Patients are able to undergo sleep studies on-site, which allows for more accurate diagnosis and treatment of sleep disorders.

Sonoran Sleep Center is committed to providing evidence-based, comprehensive patient care to optimize sleep health. The practice utilizes the latest technologies and research in the field of sleep medicine to provide the best possible care to its patients.

**4.0 Project Scope**

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The scope of this project is to develop a modern and user-friendly billing software for the Sonoran Sleep Center that simplifies the billing process, improves the accuracy and transparency of their billing operation, and streamlines the revenue cycle. The project includes the following specific objectives:

* Implement an API integration between WayStar and InTakeQ to streamline the payment posting process and eliminate manual data entry errors.
* Implement an electronic check scanning system to automate the record-keeping process and reduce manual labor.
* Implement a referral management system to streamline the referral process, verify patient eligibility, and automate appointment scheduling, reducing delays and manual work for staff.
* Develop a user-friendly interface for the billing software to simplify the billing process for the Sonoran Sleep Center.
* Test and debug the billing software to ensure accuracy and efficiency in the billing process.
* Train Sonoran Sleep Center staff on the use of the new billing software and referral management system.

**5.0 Project Methodology**

For the Sonoran Sleep Center billing system project, we will be using the Agile methodology. Agile methodology is being used for this project because it is a flexible and iterative approach to project management that allows for continuous feedback and adaptation throughout the project lifecycle.

With the Agile methodology, the development team can work in small increments, constantly testing and improving the software, which aligns well with the project's goal of creating a modern and user-friendly billing software. Additionally, Agile methodology emphasizes customer collaboration, ensuring that the project meets the customer's needs and requirements.

## 6.0 Project Plan

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| --- | --- | --- | --- | --- |
| **WBS** | **Name** | **Duration (days)** | **Start** | **Finish** |
| **1** | **Billing Information Automation Tool** | **135** | **05 April 2023** | **18 August 2023** |
| **1.1** | **Planning** | **15** | **05 April 2023** | **20 April 2023** |
| 1.1.1 | Plan Project Initiation Meeting | 5 | 05 April 2023 | 10 April 2023 |
| 1.1.2 | Communications Plan | 5 | 12 April 2023 | 17 April 2023 |
| 1.1.3 | Establish Project Steering Committee | 5 | 12 April 2023 | 17 April 2023 |
| 1.1.4 | Identify Stakeholders | 3 | 12 April 2023 | 15 April 2023 |
| 1.1.5 | Charter Approval | 5 | 15 April 2023 | 20 April 2023 |
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| **1.2** | **Analysis** | **41** | **21 April 2023** | **01 June 2023** |
| 1.2.1 | Establish Requirements | 14 | 05 April 2023 | 19 April 2023 |
| 1.2.1.1 | Staff Requirements | 7 | 12 April 2023 | 19 April 2023 |
| 1.2.1.2 | HIPAA Compliance Requirements | 7 | 12 April 2023 | 19 April 2023 |
| 1.2.1.3 | Layout and Front End reuirements | 10 | 12 April 2023 | 22 April 2023 |
| 1.2.2 | Develop Use Cases | 10 | 19 April 2023 | 29 April 2023 |
| 1.2.3 | Review Use Cases | 7 | 20 April 2023 | 27 April 2023 |
| 1.2.4 | Approve Use Cases | 5 | 27 May 2023 | 01 June 2023 |
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| **1.3** | **Design** | **35** | **02 June 2023** | **07 July 2023** |
| 1.3.1 | High Level Design Document | 14 | 02 June 2023 | 16 June 2023 |
| 1.3.2 | Design Review | 7 | 02 June 2023 | 09 June 2023 |
| 1.3.3 | Tool Design | 21 | 09 June 2023 | 30 June 2023 |
| 1.3.3.1 | Develop Front-End Design | 14 | 17 June 2023 | 01 July 2023 |
| 1.3.3.2 | Develop Back-End Design | 14 | 23 June 2023 | 07 July 2023 |
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| **1.4** | **Testing** | **21** | **07 July 2023** | **28 July 2023** |
| 1.4.1 | Reuirement Accomplishment analysis | 7 | 07 July 2023 | 14 July 2023 |
| 1.4.2 | Unit Testing | 7 | 08 July 2023 | 15 July 2023 |
| 1.4.3 | Test Use Cases | 6 | 15 July 2023 | 21 July 2023 |
| 1.4.4 | Sign-Off on Testing | 7 | 21 July 2023 | 28 July 2023 |
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| **1.5** | **Implementation** | **21** | **28 July 2023** | **18 August 2023** |
| 1.5.1 | Training | 14 | 29 July 2023 | 12 August 2023 |
| 1.5.1.1 | Staff Training | 7 | 30 July 2023 | 06 August 2023 |
| 1.5.2 | Deployment | 4 | 30 July 2023 | 03 August 2023 |
| 1.5.3 | Maintenance | 19 | 30 July 2023 | 18 August 2023 |
| 1.5.4 | Operations | 19 | 30 July 2023 | 18 August 2023 |
| 1.5.5 | Track Performance | 19 | 30 July 2023 | 18 August 2023 |
| 1.5.6 | Feedback Analysis | 19 | 30 July 2023 | 18 August 2023 |

# System Analysis Phase Report

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## 7.0 Requirements

***7.1 Fact Finding***

During the fact-finding phase, our team conducted extensive research to gather information on the current state of the client's system. We began by conducting an in-depth interview with the client to gather information on their current processes, challenges, and pain points.

Based on the information gathered from the interview, we documented the client's system status, including their current capabilities, limitations, and areas that require improvement. By deep diving and talking to the larger team we could collect, and analyse their existing state of data and map it with other similar players in the industry.

This helped us bring best industry practices to the table for our client.

Overall, the fact-finding phase provided valuable insights into the client's system status, user requirements, and potential areas for improvement.

***7.2 Business requirements***

* The Billing Information Autofill tool should increase the productivity and efficiency of the hospital staff.
* The Billing Information Autofill tool should reduce data entry errors and improve data accuracy.
* The Billing Information Autofill tool should be cost-effective and provide value for money.
* The Billing Information Autofill tool should integrate seamlessly with existing software Waystar and InTakeQ.

***7.3 User requirements***

* The Billing Information Autofill tool should be customizable to the staff's needs as it should be able to auto-populate patient data to Waystar and eligible patient information into InTakeQ.
* The ability to save/edit the patient information in the database from which the Billing Information Autofill tool retrieves information should be granted to staff.
* The Billing Information Autofill tool should save time and reduce manual data entry.
* The Billing Information Autofill tool should be secure and protect sensitive patient data.
* The Billing Information Autofill tool should suggest possible field entries on Waystar and InTakeQ software with a couple of letters of the patient name typed in.

***7.4 Functional requirements***

* The Billing Information Autofill tool should automatically fill in form fields on Waystar and IntakeQ with appropriate data.
* The Billing Information Autofill tool should support multiple data types, such as text, numbers, dates, and addresses.
* The Billing Information Autofill tool should provide accurate suggestions and predictions for data entry.
* The Billing Information Autofill tool should allow staff to override or manually enter data in Waystar or InTakeQ form fields.
* The Billing Information Autofill tool should validate data entered into Waystar and InTakeQ.

***7.5 Non-Functional requirements***

* The Billing Information Autofill tool should be secure and protect patient data from unauthorized access.
* The Billing Information Autofill tool should be reliable and perform consistently without downtime or errors.
* The Billing Information Autofilltool should perform efficiently and quickly, with minimal delay or lag when filling fields on both software.
* The Billing Information Autofill tool should be user-friendly, with clear instructions and labels.
* The Billing Information Autofill tool should be compatible with a variety of browsers and operating systems.

## 8.0 Data Model – Context Diagram

Diagram

Description automatically generated

***External Entities:***

* ***Patients:*** Patients of Sonoran Sleep Center are individuals of all ages who suffer from various sleep-related disorders. They seek care at Sonoran Sleep Center to improve their sleep quality and overall health.
* ***Employees:*** The Sonoran Sleep Center team consists of healthcare professionals, including sleep technologists, nurses, medical assistants, and administrative staff. They collaborate to provide excellent care to patients and pursue ongoing professional development to stay up-to-date with advances in sleep medicine.