**Design Document**

**Patient Contact Management System**

**For Legend Health**

Draft Version 0.9

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# Introduction

Legend health is in the process of setting up a patient contact management system. This will be used by the call agents and their mangers to track communication with the patients. Dynamics Business Central’s CRM capabilities will be utilized for this purpose. The system will be customized where necessary to tailor it to the patient’s needs.

This document contains an overview of the proposed solution and describes how the different areas will be used for patient contact management system. This document covers phase 1 of the project - integration with Dialpad is not covered.

# User Requirements

**Status Descriptions**

OOB: Out of Box

Custom: To be developed as an extension

Phase II: To be addressed in next phase(s).

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| No | Requirements | Status | Comments | Addressed in the section |
| 1. | Ability for Agents to have work file assigned by Manager for outbound calls/texts—a “work file” is defined as a patient list to be worked on by a specific agent. | OOB | This will be handled out of the box in Business Central via Campaign Segments (segment = work file). These allow a manager to select a group of contacts (patients) for contact for sending out e.g., mail shots etc. See Figure 1 for campaign segments. | Sections 4.3 & 4.4 |
| 2. | Manager needs to be able to query data and assign patients or lists of patients to each agent’s work file for outbound calls/texts.  e.g., All patients with last visit date from XXXX to XXXX with Medicare insurance and diagnosed with diabetes. | OOB/Customization | Custom fields will be added against a patient contact. This will allow an authorized person (manager) to filter (based on different criteria and select the patients who should be contacted) via campaign segments. A segment (work file) will be assigned to a calling agent. | Sections 4.3.2, 4.7, and Section 4.10 |
| 3. | Ability to add notes to patient record for welcome center—ideally as structure data in specific data tables. | OOB/Customization | Notes (comments) can be saved against patient. A customization will make the comments available on the patient grid (see figure 1) to allow them to be added at a single click | Section 4.1.1 |
| 4. | Ability to search all patients by phone number, name, medical record #, or other such field, and bring up record in a popup window for convenience. | OOB | The system provides the ability out of the box for filtering by phone number, name, patient Id etc. | Section 4.7 |
| 5. | Ability to update contact information. | OOB | System provides the ability for authorized user to update patient fields. | Section 4.2.1 |
| 6. | Ability to select disposition code from drop-down box for reporting (reason for completing case).   * + e.g., Cancellation converted to appointment; script refill converted to appointment; current patient scheduled; etc. | Customization | Disposition code will be a custom field that will be added to a segment (work file) and the interaction log. The calling agent will be able to update the disposition code upon a communication with the patient. | Section 4.6 |
| 7. | Ability to pull contact data reports based on disposition codes. | OOB | System query forms allow filtering based on one or more columns. | Section 4.5 |
| 8. | Ability to pull excel format contact files, for mass robo-calling, texting, etc. | OOB | Uploading of csv files that follow a pre-defined excel template is supported by Business Central. The excel template will be provided to the end users. | Section 4.7 |
| 9. | Ability to upload CSV files and append to patient data; e.g., files from Dialpad, 3rd parties like patient pop, simple blast, etc. | OOB | As noted above csv file imports is supported by the system. Same template as above will be provided | Section 4.7 |
| 10. | Ability to select, copy and directly email or call (if to external source, from outlook or dialpad) to patient, to billing, script refills, etc. | Phase II | Dialpad integration is part of next phase. Outlook integration to patient, Billing, Script refills etc. to be quoted for in the next phase | To be addressed/quoted for in Phase II |
| 11. | Ability to query and report on statistics. | OOB | Out of the box reports will be available for users to view. | Section 4.9 |
|  |  |  |  |  |

# Solution Overview

The CRM capabilities of Business Central will be utilized to act as a patient contact management system.

The call center agents will log in and work with the patient data available therein to communicate with the patients and update the status of patient’s appointment etc.

The main business central areas where the agents will work are:

* Patient (System entity: Customer)
* Patient contacts (System entity: Contact)
* Interaction logs
* Campaigns
* Work file (System entity: Segment).

It may be apparent from the above list names that to make the relevant areas look and feel closer to a patient information system, there will be some customizations performed.

These customizations will be of two types:

* Simple customization (field re-labelling)
* Complex customization (functionality extension)

Simple customizations will entail re-labelling or hiding certain fields so that the users only see patients related information

Complex customizations, on the other hand require some coding to be performed and may require additional (custom fields) to be defined.

The sections below define in more detail how the specific areas will be used as a Patient information system.

# Solution Details

# Patients (Customers)

All patients will be mapped against customers and contacts. Customers are a key entity in the application because the receivables and the payments are all recorded against the customers. At any time, the balance outstanding against a customer is available in the system. As mentioned earlier in this section, the Patients will be mapped against the customer (and the contacts). The call center agents will see a patient’s grid. This is a customer grid which has been renamed. This is shown below in figure 1

![Graphical user interface, table

Description automatically generated]()

Figure : Patient view grid

This screen which will display information such as Patient Name, Patient ID, PC Doctor, Last contact date etc. Some of these fields will be relabeled fields from the customer entity whereas several new (custom) fields related to the patient will be added.

This screen will allow the call center agent to take ad-hoc actions related to the patient. For example, the agent will be able to click on the ‘Create Interaction’ button on the menu to send text message, email or make a call to the patient.

# Patient Notes

Notes can be entered against a patient. These comments can be saved as a chronological entry (date against each comment). The comments menu option is visible in the screenshot above.

# Contacts

Each patient (customer) can have one or more contacts associated with it. In our case there will be one contact per patient. Patient specific information being uploaded (e.g., ICD/CPT codes, visit date etc.) will also be saved against the contact. This is needed for work file creation so that bulk actions could be performed against the contacts (such as mass calling, bulk texting/emails etc.)

# Contact updates

Contact information may be updated over the period. For example, address information, contact number etc. However, not all data should be updatable because of potential discrepancies. This needs to be further discussed.

# Campaigns and Work files

# Campaign

The work files are created under the campaign umbrella. A campaign is created for a specific purpose of contacting patients and contains one or more work files. Each of the work files can be associated with an agent. The patient to be contacted are selected inside the work file. All the patient parameters (name, address, ICD codes etc.,) are available as selection criteria in the work file. A sample campaign is shown below. It is important to note that the patients must be created as contacts to be included in a work file.

Graphical user interface

Description automatically generated

Figure : Campaign view

# Work file detail

Work files will be created by the manager inside a campaign. The work files will contain the filters for the patients and will be assigned to an agent. In the example below a work file lists patients to be contacted. This work file has an ID SM00004. This is assigned to the agent ‘PS’ on 8/9/2021. The patients in this work file were selected based on 3 criteria:

1. Last visit date: 4/22/2021
2. Insurer Carrier/Plan Name: United Plan C
3. ICD1: Diabetes Mellitus

Graphical user interface, text, application, email

Description automatically generated

Figure : Workfile with selected patient records

The selection criteria can be changed to different parameters and the patients will be pulled up accordingly.

# Work file Listing

Each agent will view his or her own work files while the manager will be able to view all the work files currently open. In the snapshot below, which is the manager’s view there are 4 work files currently open. Two of them are associated with campaign CP0001 while the other two are associated with CP0002. Agent ES has two work files associated to him. These are highlighted in red. When the agent ES logs into the system he will be able to see only the files assigned to him by the manager. He can click the work file he would like to work on and the work file detail view, described above, will open up.

Graphical user interface, application

Description automatically generated

Figure : Work file listing showing agent assignment

# Dispositions and status tracking

At any time, the disposition codes will be available against a patient record in a work file. This will remind the agent what work has been completed or pending against the patient. This is highlighted in the snapshot below.

Graphical user interface, text, application, email

Description automatically generated

Figure : Disposition codes in a work file

# Disposition Code Update

The disposition codes will be updated when communication takes place between the calling agent and the patient. This may be a phone call, a text message, or an email. At this point an interaction log will be created in the system and the disposition code updated (if needed). This is shown below:

Graphical user interface, application

Description automatically generated

Figure : Disposition code update

The agent code and the disposition code are shown highlighted in red. Please note that the disposition codes will be programmed into the system (this is a customization). The exact disposition codes to be provided will be finalized with the necessary stakeholders at the time of development.

# Data Import

The system will import csv files that follow the import template provided to the end user. A snapshot of the template file is given below. If the CSV files follow the excel upload template, and has valid data, it will be imported into business central. This way files from patient pop, Dialpad, and outlook etc., can be uploaded. ![Graphical user interface, application, table, Excel

Description automatically generated]()

Figure : Excel template for CSV upload with sample data

Once data is populated in the excel file the import will start when the publish link is clicked. This is shown below, highlighted in yellow.

Graphical user interface, application, Word

Description automatically generated

Figure : Publish option to upload data into Business Central

# Searching

The calling agents and the manager will be able to search for patients based on different criteria. For example, in the screen shown filters have been applied on 3 fields (Last Visit Date, ICD1 code, and Insurer). Further columns on the grid can be filtered upon by the user as needed.

Graphical user interface, text, application, email

Description automatically generated

Figure : Patient record search based on ad-hoc criteria

# Reporting

Out of the box inquiries and reporting will be available in the system. Any custom reporting will be separately estimated and quoted for.

# Security and data view

Patient data will be segregated based via permissions and filters so that a call center agent is able to view their own data (patients and work files) only. The manager will assign work files to the agents and when the agents log into the system, they will view the data that relates to them only. This is because custom filters will be created that will pull data associated with the logged in user only.