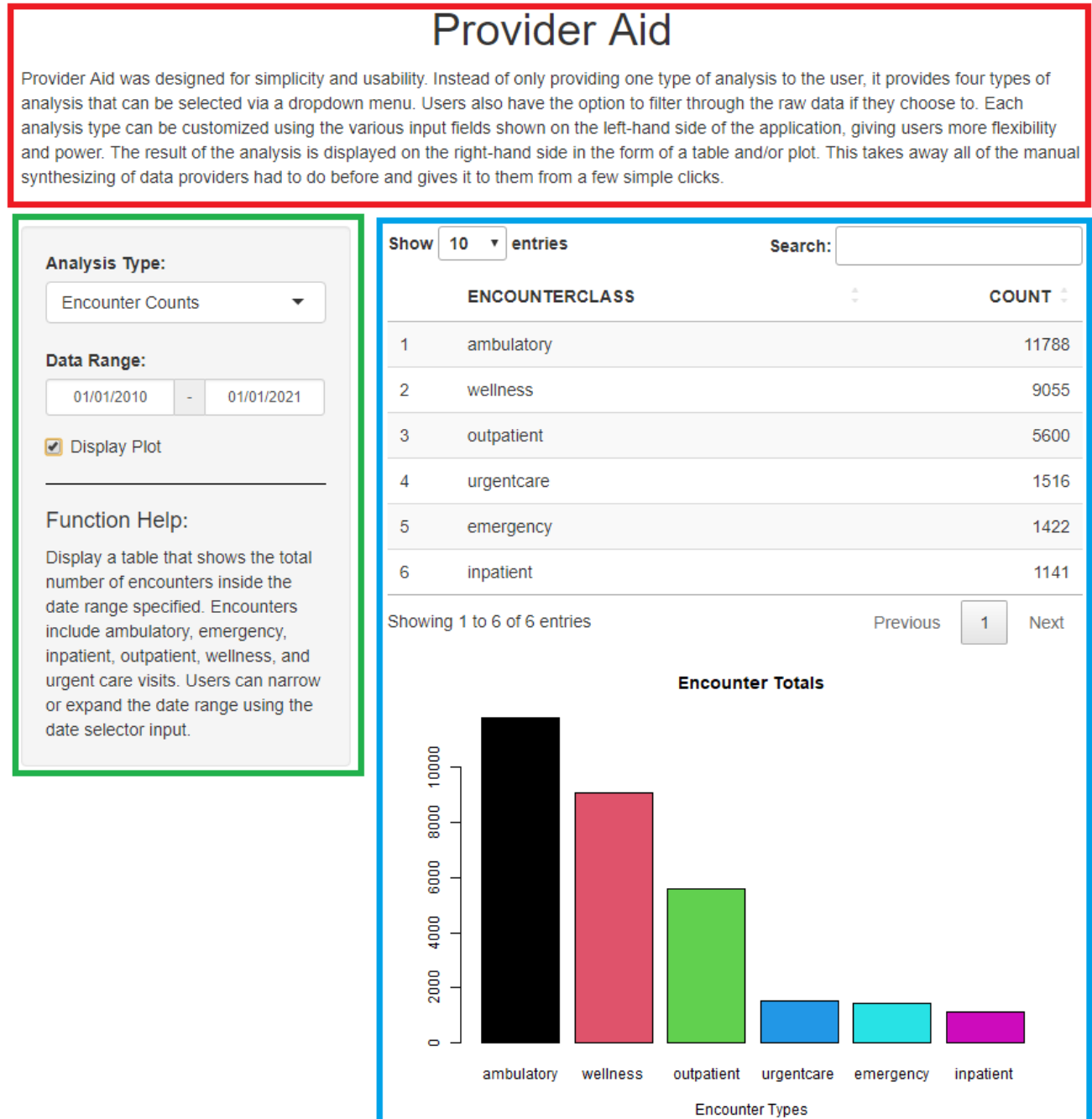# Provider Aid Help Document

Provider Aid was designed for simplicity and usability. Instead of only providing one type of analysis to the user, it provides four types of analysis that can be selected via a dropdown menu. Users also have the option to filter through the raw data if they choose to. Each analysis type can be customized using the various input fields shown on the left-hand side of the application, giving users more flexibility and power. The result of the analysis is displayed on the right-hand side in the form of a table and/or plot. This takes away all the manual synthesizing of data providers had to do before and gives it to them from a few simple clicks.

Prepared by:

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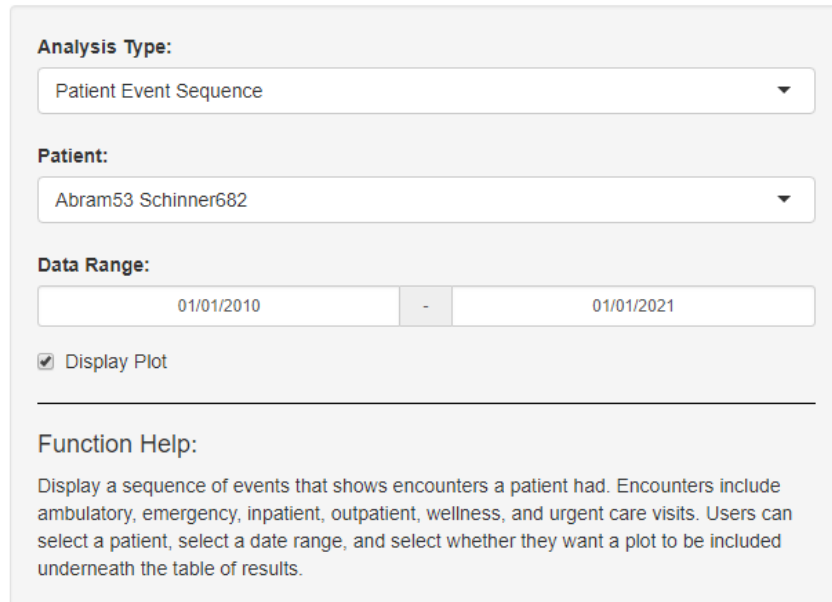
1.0 Getting Started

The application is separated into three different sections. Top section boxed in red holds information that does not change. The left side of the application holds user options. The right side of the application holds the results of the analysis.

The side panel (boxed in green) is where the user will make selections as to what exactly they want to analyze. A closer look at the options available to the user will be discussed in a later section. The results panel (boxed in blue) will show the results of the analysis in the form of a table and a plot (if applicable).

2.0 Side Panel Options

The side panel holds different options for the user. The user can update these inputs to reflect the data they are trying to obtain.

Analysis Type Dropdown:

> The user can select what type of analysis he wants to do. Options include Raw Data, Returning Patients, Encounter Counts, Patient Event Sequence, and Top 10 Medications. These will be described in detail in a later section. This dropdown will determine which other options are available to the user.

Patient Dropdown:

> The user can select what patient they want the analysis to be performed for. This dropdown contains all the patients from the raw data.

Data Range Filter:

> Some of the analysis allow the user to focus on a certain time range. A user can click on the input box and a calendar will appear that allows for the user to select a date easily. Users can also type a date directly onto the box.

Display Plot Checkbox:

> Some analysis display a plot along with the table. This checkbox allows the user to toggle whether they want to see the plot or not.

Function Help Section:

> This section provides a small summary of the analysis the user picked to run. It also explains the options that are available to the user when doing that type of analysis.

3.0 Results Panel

The results panel is simple and easy to interpret. All the analysis types available will produce results in the form of a table. The columns displayed and column names have been updated to make it easier for the user to understand the results of the analysis. Tables have certain options that can change what it displays. Users can limit the number of entries they want to show (boxed in red), can search the table for text (boxed in green), and can change pages to see the rest of the data (boxed in blue). Users can also sort the data by clicking on the column names.
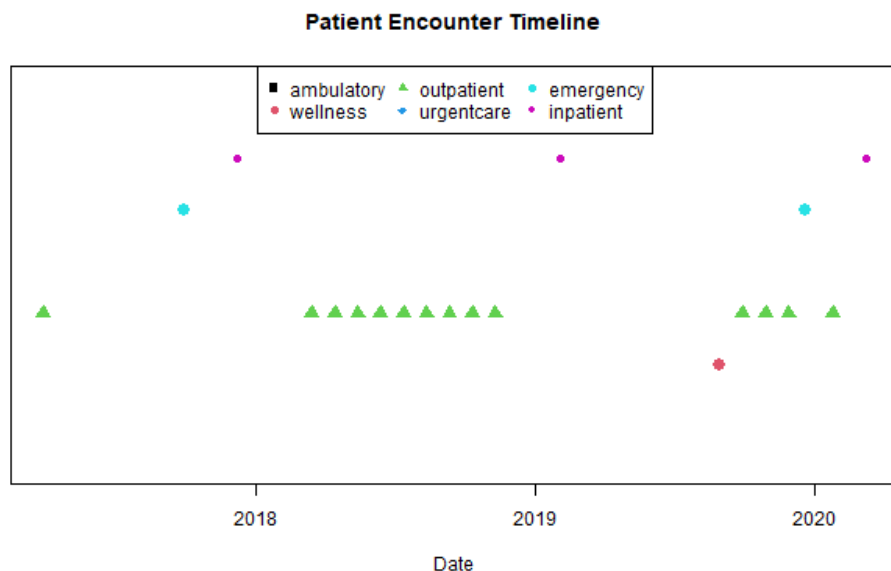
Show 10 ▾ entries		Search:	
	START	**ENCOUNTERCLASS**	**ID**
1	2017-03-27T16:42:42Z	outpatient	3
2	2017-09-27T16:42:42Z	emergency	5
3	2017-12-06T16:42:42Z	inpatient	6
4	2018-03-14T16:42:42Z	outpatient	3
5	2018-04-13T16:42:42Z	outpatient	3
6	2018-05-13T16:42:42Z	outpatient	3
7	2018-06-12T16:42:42Z	outpatient	3
8	2018-07-12T16:42:42Z	outpatient	3
9	2018-08-11T16:42:42Z	outpatient	3
10	2018-09-10T16:42:42Z	outpatient	3

Showing 1 to 10 of 20 entries   Previous 1 2 Next

The analysis types that can show a plot will display it under the table. Plots are not interactable like the tables are and are there to provide a different look to the data.

Patient Encounter Timeline

4.0 Analysis Type Details

The Analysis Type dropdown allows the user to select what they want to do. Options include Raw Data, Returning Patients, Encounter Counts, Patient Event Sequence, and Top 10 Medications.

Raw Data:

> Displays the raw data tables to the user. Data is not modified or synthesized in any way. It is displayed directly to the user. Users can see all four raw data tables, Patient Data, Encounter Data, Condition Data, and Medication Data.

Returning Patients:

> Software will calculate and display which patients have received care for the same condition during different encounters. It will take the date range supplies and iterate through all encounters that are within that range. If a patient happens to be seen more than once for the same condition, they will be added to the list of results. The results will include the patient's name, the condition they were seen for, how many times they were seen for that condition, and the dates that they were seen.

Encounter Counts:

> Software will count the different type of encounters that patients are seen for. Patients in Massachusetts can have an encounter type of ambulatory, wellness, outpatient, urgent care, emergency, and inpatient. A date range is supplied by the user and the software will count all the encounters that fall within that range. A count of each type of encounter is displayed to the user.

Patient Event Sequence:

> Software will take a single patient and provide all the encounters that patient has had. A date range is supplied by the user and only encounters that patient had in that date range will be included in the results. This provides a timeline for patient care that can be used to display a plot for that patient.

Top 10 Medications:

> Software will calculate the top 10 medications that were prescribed during a certain date range. A table will be displayed that contains the medication name, medication count, and medication code. A bar graph can be displayed to visually represent this data.