



PRIME REGISTRY™

Improving America's Health

Risk Stratification & Care Plan

Quick Start Guide

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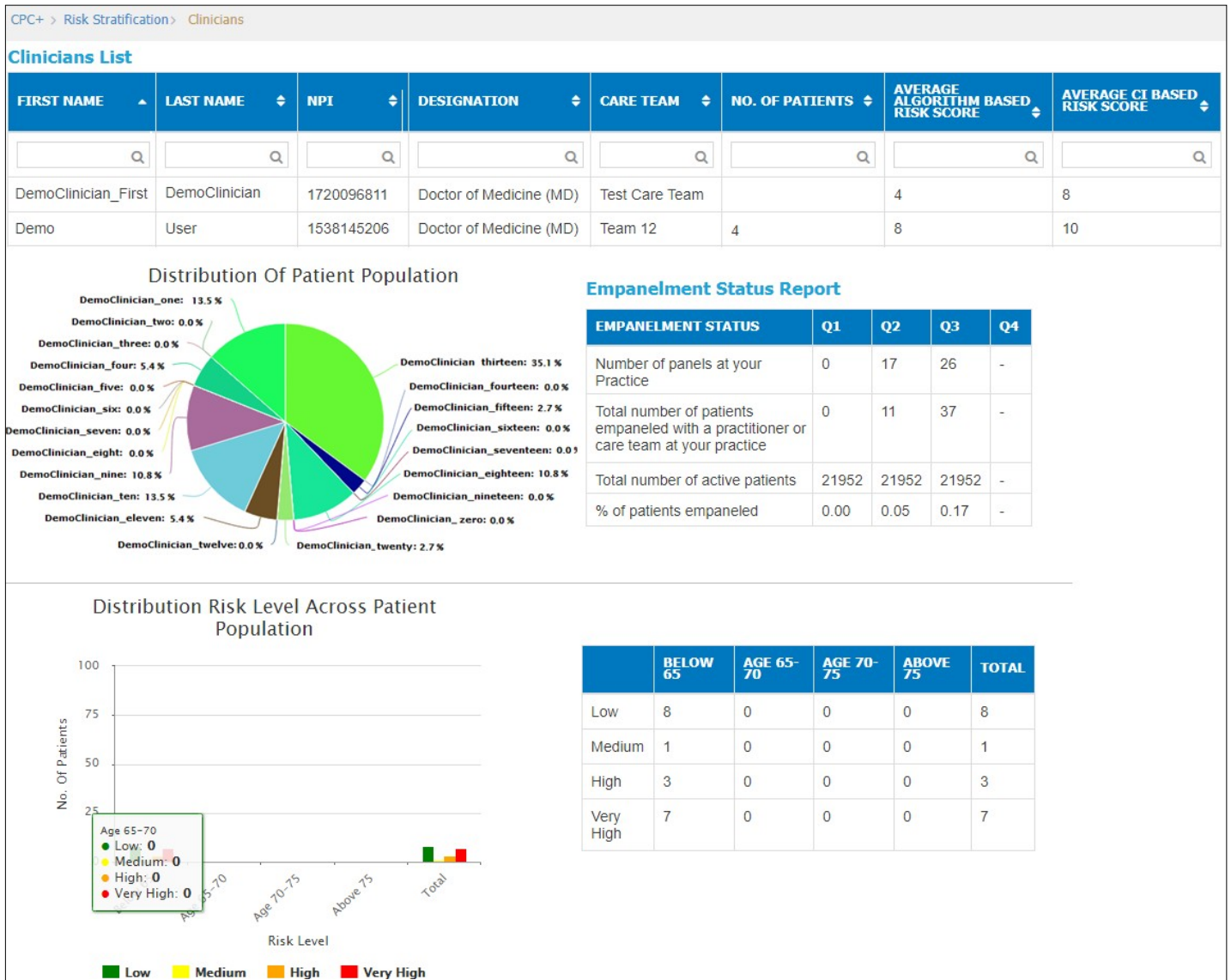
Risk Stratification is accessible to both practice admins and clinicians. This guide explains the features and functions accessible to admins and clinicians within Risk Stratification.

1. Overview

Risk Stratification calculates the health risk score of each patient and creates an action plan for patients.

The Risk Stratification dashboard is divided into the following 3 sections:

1. [Clinicians List](#)
2. [Distribution of Patient Population](#)
3. [Distribution of Risk Level Across Patient Population](#)



This section displays a table listing clinicians with their demographics, the total number of patients assigned to each clinician, and the average patient risk score.

CPC+ > Risk Stratification > Clinicians

Clinicians List

FIRST NAME	LAST NAME	NPI	DESIGNATION	CARE TEAM	NO. OF PATIENTS	AVERAGE ALGORITHM BASED RISK SCORE	AVERAGE CI BASED RISK SCORE
Ann	Williamson	1720096811	Doctor of Medicine (MD)	Test Care Team		4	8
Demo	User	1538145206	Doctor of Medicine (MD)	Team 12	4	8	10
Demoabcd	NewClinician	1194921635	Occupational Therapist	Team 1	0	0	0
democlinician_seven	democlinician	1417952342	Nutrition Professional	Mycare11	0	0	0
DemoClinician_First	DemoClinician	1487691556	Clinical Psychologist	Test Team	0	0	0

Records 1 - 5 of 45 << < 1 2 3 4 5 > >>

Figure 13: Clinicians List

1.2 ASSIGN A RISK SCORE AND SET UP A CARE PLAN FOR A PATIENT

Use the following steps to specify risk scores for patients.

- Click on the clinician record in the clinician list table. (See **Figure 13**)

The table displays the patients assigned to the selected clinician.

Patient List

Denotes Low Risk Patient
 Denotes Medium Risk Patient
 Denotes High Risk Patient
 Denotes Very High Risk Patient

	PATIENT FIRST NAME	PATIENT LAST NAME	MRN	RISK LEVEL	PATIENT RISK LEVEL (AGE FACTORED CCI)	PATIENT RISK LEVEL (CIB)	PCP ASSIGNED	CARE TEAM
	fname9974	Iname9974	MRN9974	Low	3	1	Demo	Team 12
	fname9952	Iname9952	MRN9952	Very High	13	11	Demo	Team 12
	fname9715	Iname9715	MRN9715	High	5	6	Demo	Team 12
	fname9708	Iname9708	MRN9708	Medium	8	5	Demo	Team 12

Total Records : 4

Figure 14: Patient List

- Click on the patient record whose risk profile needs to be defined.

The **Last Visit Details** page opens. (Refer **Figure 15**). If there were any previous visits, they are displayed in the table.

It has three tabs to capture patient information.

- Risk Profile
- Social Data
- Care Plan

1.3 RISK PROFILE

3. Click **Add Risk Profile** to create a new record.

The **Last visit and Page Info** page opens.

The screenshot displays the 'Last Visit Details' page. At the top, there are tabs for 'Risk Profile', 'Social Data', and 'Care Plan'. Below these is a table with the following data:

LAST VISIT DATE	RISK SCORE (AGE FACTORED)	RISK SCORE (CI BASED)	PCP ASSIGNED	CARE TEAM ASSIGNED
12-18-2018	19	16	clinician, Master	Xyz

Below the table, the 'Patient Name' is listed as 'fname9531 lname9531'. To the right of the patient name is a red circle with the number 3 and an arrow pointing to the 'Add Risk Profile' button.

The 'Demographics' section contains the following information:

Date Of Birth	10-31-1988
Gender	NA
Medical Record Number	MRN51873
Blood Group	NA
Date Of Death	NA
Race/Ethnicity	NA
Zip Code	08540
Allergies (as per last visit on 01-05-2017)	NA
Medical Co-Morbidities (as per last visit on 01-05-2017)	NA
Relevant Family History (as per last visit on 01-05-2017)	NA
Age (as on last visit on 01-05-2017)	30
BMI (as per last visit on 01-05-2017)	28.988132

Figure 15: Last Visit Details

You can add risk factors related to the patient using this page. The following two milestones set the risk factor:

- [Algorithm Based RS](#) (Based on the Charleson Comorbidity Index, or CCI) Click to learn more)
 - [Clinical Intuition Based RS](#) (Click to learn more) is an optional step
4. Select the **Visit Date**.
 5. Select the medical condition the patient is suffering from in the **Algorithm Based RS** milestone. The score is calculated as the number of points for each section, times the selection in that section.

6. Click **Save**.

Figure 16: Add Risk Factor

A record with the current visit date and the calculated algorithm based risk score is added to the table below.

Patient Visits List							
LAST VISIT DATE	CHARLSON COMORBIDITY INDEX	AGE ADJUSTED RISK SCORE	ONE YEAR SURVIVAL CCI SCORE	TWO YEAR SURVIVAL CCI SCORE	CLINICAL INTUITION RISK SCORE	CCI RISK LEVEL	COMMENT
07-25-2018	2	4	89±8.8	80±10.4			
07-24-2018	1	3	98±3.1	95±5.3			

Total Records : 2

Figure 17: Patient Visits List

7. Click **Next**.

The second milestone, **Clinical Intuition based RS** opens.

The visit date cannot be a future date.

Points are calculated based on a predefined algorithm.

This is an **optional** step, but if you continue with the step, the risk score associated with the patient will be based on the score assigned in this milestone. (It will override the generated Algorithm based score.)

8. Select the checkbox next to the medical condition to add the Clinical Intuition Based Risk Score.

Back to Patient Profile

Patient Name: Iname9531 fname9531

Visit Date: * 07-26-2018

1 Algorithm Based RS 2 Clinical Intuition Based RS

PLEASE ASSIGN THE APPLICABLE/CLINICAL/SOCIAL RISK FACTORS TO THE PATIENT:

☒ Chronic Pain	☐ Substance abuse
☒ Behavioral health diagnosis	☐ Terminal illness
☒ Advanced age with frailty	☐ Pre-term delivery of newborn
☐ Patient with special needs	☐ Lack of financial support
☐ Lack of family support that impacts care	☐ Unemployed
☐ Homelessness	☐ No health Insurance
☐ Low health literacy	☐ Divorced
☐ Major procedure in last year	☐ High risk medications
☐ Depressed	☐ Expensive medication
☐ Other	

Algorithm Bases RS

CCI Score: 13

Age adjusted CCI Score: 15

CCI Patient Risk Level: Very High

Clinical Intuition Based RS

Risk Score: * 8 **9**

CCI Patient Risk Level: Very High

Comment: * Risk Level **10**

11 Save Previous Cancel

Figure 18: Clinical Intuition Based RS

9. Select the risk score from the **Risk Score** drop down list.

The [CCI Patient Risk Level](#) is calculated by the system and is displayed as read-only.

10. Enter supporting comments in the **Comment** field.

11. Click **Save**.

The CCI score is updated in the Patient Visit list table below.

From the **Patient Empanelment** submenu, select the **Patient Management** tab to view the flag status.

The risk factor flags for the patient are updated based on:

- System generated Algorithm Based RS score
If Clinical Intuition Based RS milestone is updated by the clinician, this defined value overrides the Algorithm Based RS score
- Last Visit Date

1.4 SOCIAL DATA

To determine an ideal care plan for a patient, the risk profile can be further assessed by adding the psycho-social data of a patient.

Use the following steps to recorded social data for the patient:

1. Click the **Social Data** tab.

Predefined domains that relate to the social, psychological, and behavioural data of a patient are listed in a table.

Figure 19 displays the default values for the following table columns:

- **DID THE PATIENT SPECIFY DATA:** No
- **STATUS:** Not Started
- **SCORE AND INTERPRETATION:** Not available
- **LAST MODIFIED ON:** Not available

After the social data are saved for a domain, the **Action** icon is made available for amendment.

2. Select the domains that are applicable to the patient from the **Select Domain to update data** drop-down list.

The selected domains are indicated by checkmarks to the right.

For example, in **Figure 20**, the two selected domains, **Alcohol Use** and **Education** are selected.

DID THE PATIENT SPECIFY DATA	STATUS	SCORE AND INTERPRETATION	LAST MODIFIED ON	ACTION
Alcohol Use	No	Not Started		
Depression	No	Not Started		
Education	No	Not Started		
Employment	No	Not Started		
Exposure to violence	No	Not Started		
Finance Strain	No	Not Started		
Food Insecurity	No	Not Started		
House Instability	No	Not Started		
Interpersonal Safety	No	Not Started		
Physical Activity	No	Not Started		

Figure 19: Social Data

MODIFIED ON	ACTION
2/2018	
2/2018	

Figure 20 Select Domains to Update Data

3. Click **Update data**.
Refer **Figure 20**.

A set of questions for each selected domain is displayed in a questionnaire format.

Refer **Figure 21**.

Risk Profile Social Data Care Plan

Patient fname9531 lname9531
Name: Visit Date: 12-18-2018

Please read out the below questions to your patients. Add/ update social, psychological and behavioral data after consenting the patient.

Alcohol Use

Alcohol Use Disorder Identification Test - Consumption [AUDIT-C]

Is patient ready to specify alcohol use? ☒ Yes ☐ No

How often do you have a drink containing alcohol? ☐ Never ☐ Monthly or less ☐ More than half the days ☒ 2-3 times a week ☐ 4 or more times a week

How many standard drinks containing alcohol do you have on a typical day? ☒ 1 or 2 ☐ 3 or 4 ☐ 5 or 6 ☐ 7 or 9 ☐ 10 or more

How often do you have 6 or more drinks on 1 occasion? ☐ Never ☐ Less than monthly ☐ Monthly ☐ Weekly ☐ Daily or almost daily

Total score [AUDIT-C] 3

Next Cancel

Figure 21 Alcohol Use Questionnaire

4. Select appropriate answers to the questionnaires based on the patient's response.

Ensure that you read out the questions from each domain to your patient and get their consent to the answers.

5. Click **Next** to move to the questionnaire from the next domain.

Refer **Figure 22**, which displays a questionnaire for the **Education** domain.

6. Select the appropriate answers in each domain. When you reach the last domain, the **Next** button changes to **Save**.
7. Click **Save**.

Risk Profile Social Data Care Plan

Patient fname9531 lname9531
Name: Visit Date: 12-18-2018

Please read out the below questions to your patients. Add/ update social, psychological and behavioral data after consenting the patient.

Education

Is patient ready to specify education? ☒ Yes ☐ No

What is the highest grade or level of school you have completed or the highest degree you have received? [NHANES]

6th grade

Back Save Cancel

Figure 22 Education Domain Questionnaire

The message, **Success! Data Successfully Added** appears.

The following table columns are updated with social data of the patient (Refer **Figure 23**):

- **DID THE PATIENT SPECIFY DATA:** Yes
- **STATUS:** Completed
- **SCORE AND INTERPRETATION:** 3 (score calculated based on the provided responses)
- **LAST MODIFIED ON:** 19/12/2018

Risk Profile

Social Data

Care Plan

Patient: fname9531 lname9531
 Name: Visit 12-18-2018
 Date:

Social, Psychological and Behavioral data details

Select Domain to update data

Nothing selected

Update data

Archive

DOMAIN NAME	DID THE PATIENT SPECIFY DATA	STATUS	SCORE AND INTERPRETATION	LAST MODIFIED ON	ACTION
Alcohol Use	Yes	Completed	3	19/12/2018	
Depression	No	Not Started			
Education	Yes	Completed		19/12/2018	
Employment	No	Not Started			

Figure 23 Social Data Added

1.4.1 AMEND SOCIAL DATA

Use the following steps to amend the psycho-social data answers and upload supporting documents:

- In the table, click the **Action** icon against the domain you want to amend.

The questionnaire of the selected domain appears.

Select Domain to update data

Alcohol Use, Education

Update data

Archive

DOMAIN NAME	DID THE PATIENT SPECIFY DATA	STATUS	SCORE AND INTERPRETATION	LAST MODIFIED ON	ACTION
Alcohol Use	Yes	Completed	5	18/12/2018	
Depression	Yes	Completed	2	26/12/2018	
Education	Yes	Completed		26/12/2018	
Employment	Yes	Completed	2	19/12/2018	
Exposure to violence	No	Not Started			
Finance Strain	No	Not Started			
Food Insecurity	No	Not Started			

Figure 24 Social Data Added

- Select the correct option for the amendment.
A popup requesting the reason for the modification appears.

Alcohol Use

Alcohol Use Disorder Identification Test - Consumption [AUDIT-C]

Is patient ready to specify alcohol use? ☒ Yes ☐ No

How often do you have a drink containing alcohol?
☐ Never ☐ Monthly or less ☐ More than half the days ☒ 2-3 times a week ☐ 4 or more times a week

How many standard drinks containing alcohol do you have on a typical day?
☐ 1 or 2 ☐ 3 or 4 ☒ 5 or 6 ☐ 7 or 9 ☐ 10 or more

How often do you have 6 or more drinks on 1 occasion?
☒ Never ☐ Less than monthly ☐ Monthly ☐ Weekly ☐ Daily or almost daily

Total score [AUDIT-C] 5

Save

Cancel

Figure 25 Social Data Modified

3. If the amendment is not being done due to the patient's request, enter an appropriate comment and optionally upload the supporting document that provisions the amendment.

If the amendment is being done due to the patient's request, then upload a supporting document that supports the amendment, specify the amendment status as **Accepted** or **Rejected**, and an appropriate comment.

Do not click **Cancel** if you upload an incorrect document. Click the **X** sign adjacent to the **Upload** button to delete the uploaded document, and re-upload the correct document.



Figure 26: Specify amendment reason

4. Click **Save**.

2. CARE PLAN

Depending upon the risk profile score and the social data of a patient, a clinician recommends a health care plan, considering the preferences of the patient. This health care plan is recorded and updated to keep tabs on the patient's health.

The **Care Plan** tab has two parts:

1. The upper part of the **Care Plan** tab displays existing data about the patient, such as demography, risk score, and family history.
2. The lower part of the **Care Plan** tab displays the **Start Care Plan** section. This section displays the type of information the clinician wants to include in the care plan details.

Use the following steps to initiate a care plan for the patient:

1. Click the **Care Plan** tab.
2. In the **Start Care Plan** section, a clinician can choose the applicable information types to include in the care plan.

Ensure that you click the PDF icon to save the selections for future reference.

3. Click **Start Care Plan**.

The lower section of the screen displays five sub-tabs.

Figure 27: Care Plan tab

The **Visit Log** button displays the patient's last visit details.

After initiating a care plan, the lower part of the **Care Plan** tab displays the following five sub-tabs:

- **Preference of Care**
- **Health Concerns**
- **Action Plans**
- **Interventions**
- **Review**

A care plan is generally valid for a three-month period. A clinician can customize a care plan and create a new care plan after the previous one becomes invalid. Therefore, it is possible to skip the sub-tabs in order to customize a care plan.

Figure 28: Preference of Care sub-tab

2.1 PREFERENCE OF CARE

This sub-tab records information about the patient's liking and religious beliefs, so that a clinician can recommend an appropriate care plan.

Use the following steps to initiate a care plan for the patient:

1. From the **Preference of Care** tab, upload the patient's **Advance Directive**, which is the living will of the patient.
2. Specify other social details of the patient.
3. Click **Save**.
The message, **Data Successfully Saved** appears.
4. Click the **Health Concerns** tab.

2.2 HEALTH CONCERNS

This sub-tab records health risk factors that can be controlled to reduce the risk score.

5. In the **Concerns** drop-down list, select significant health concerns of the patient.
6. Enter additional information, as applicable.
7. Click **Save**.
The message, **Data Successfully Saved** appears.
8. Click the **Action Plans** tab.

Care Plan Archives

Preference of Care Health Concerns Action Plans Interventions Review

Modifiable risk factors

Comorbid conditions N/A

Concerns

High Blood Sugar

Please tell us anything else about you that you'd like to share.

252 characters left

Save

Figure 29: Health Concerns sub-tab

2.3 ACTION PLAN

This sub-tab maps the patient's health goals with an action plan.

The **Action Plan** tab has the following columns:

- **Health Concerns:** displays the concerns recorded in the **Concerns** drop-down list of the **Health Concerns** tab.
- **Goals:** displays parameters necessary to monitor the specified health concern. You can specify accurate goals to control the parameters, in accordance with the suggested care plan.
- **Action:** records an accurate daily plan that the patient must follow, as per the suggested care plan.
- **Management:** records answers to patient's daily self-management activities.

If **No Concerns** is selected in the **Concerns** drop-down list, the **Goals**, **Action**, and **Management** columns will be unavailable.

Figure 30: Action Plans sub-tab

9. In the **Goals** column, specify accurate measures to control each health concern.
10. Click **Save**.

The message, **Data Successfully Saved** appears.

2.4 INTERVENTIONS

The **Interventions** sub-tab records the reasons for interventions, specifics of other care, post-discharge follow-up, mode of contact, and services provided post-discharge.

The reasons for interventions can be new triggers or diagnosis, life-changing events, and deranged clinical markers of the patient.

11. Click the **Interventions** tab and select the intervention details.
12. Click **Save**.

The message, **Data Successfully Saved** appears.

2.5 REVIEW

The **Review** sub-tab records care gaps identified after follow-ups, significant causes, check-up schedules, and an action plan to counter.

13. After implementing the care plan, in the **Review** tab, specify the care plan review details.
14. Click **Save**.

The message, **Data Successfully Saved** appears.

To view all the archives from the **Care Plan** sub-tabs, click the **Archives** icon , select the **Module**, **Sub module**, the date range in **From** and **To**, and then click **Go**.

2.6 DISTRIBUTION OF PATIENT POPULATION

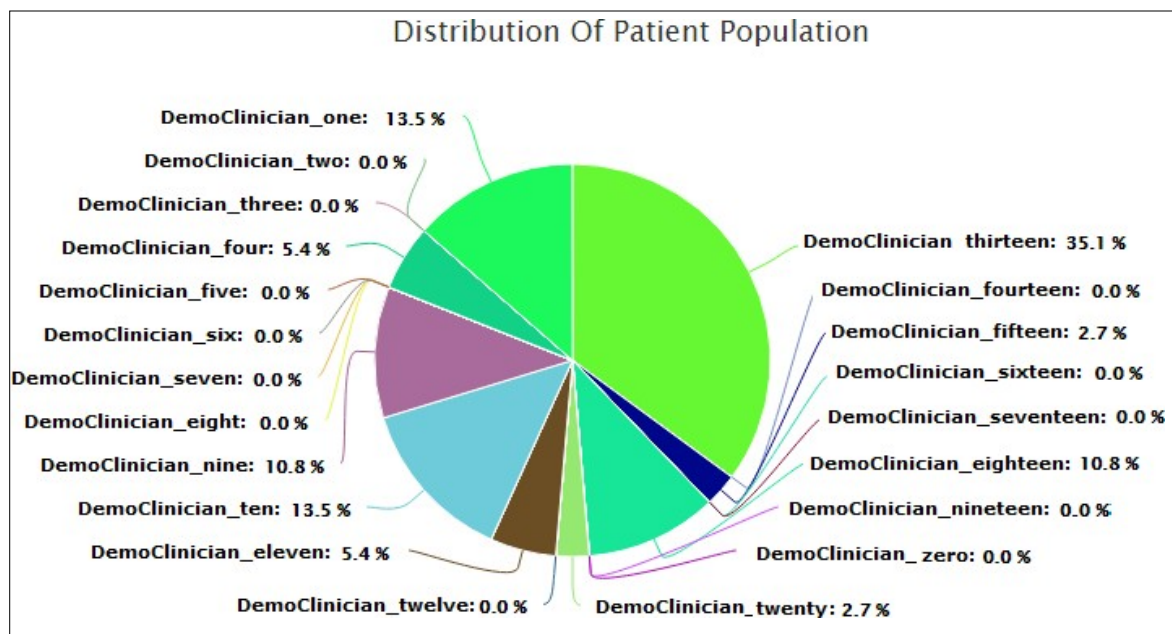


Figure 31: Distribution of Patient Population

The pie chart represents the percentage of the practice's patients each individual clinician attends to. 0% means that no patients are assigned to that particular clinician.

Empanelment Status Report

The report displays values for each quarter for the following empanelment status:

1. Number of panels at your practice.
2. Total number of patients empanelled with a practitioner or care team at your practice.
3. Total number of active patients.
4. % of patients empanelled.

Empanelment Status Report				
EMPANELMENT STATUS	Q1	Q2	Q3	Q4
Number of panels at your Practice	0	17	26	-
Total number of patients empaneled with a practitioner or care team at your practice	0	11	37	-
Total number of active patients	21952	21952	21952	-
% of patients empaneled	0.00	0.05	0.17	-

Figure 32: Empanelment Status Report

2.7 DISTRIBUTION OF RISK LEVEL ACROSS PATIENT POPULATION

The bar graph displays the Number of Patients and the Risk Level associated with patients of different age groups. The X-axis represents the Risk Level while the Y-axis denotes the Number of Patients of different age groups.

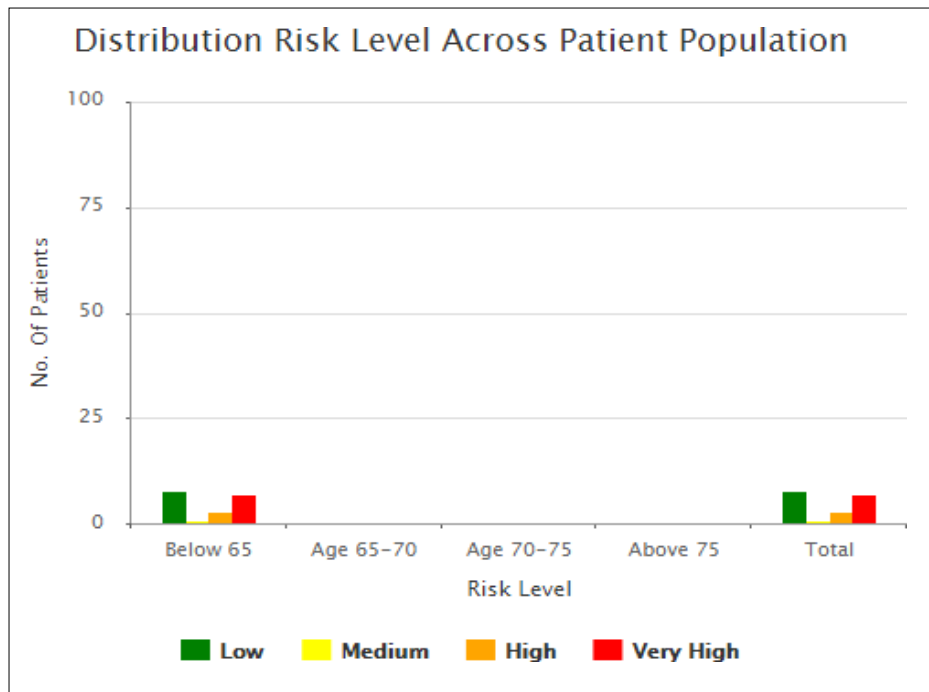


Figure 33: Distribution Risk Level Across Patient Population

The table below displays the Risk Level of different age groups across the patient population.

Green Color: Low Risk Level

Yellow Color: Medium Risk Level

Amber Color: High Risk Level

Red color: Very High Risk Level

	BELOW 65	AGE 65-70	AGE 70-75	ABOVE 75	TOTAL
Low	9	0	0	0	9
Medium	4	0	0	0	4
High	2	0	0	0	2
Very High	4	1	0	0	5

3. KEY NOTES

3.1. ALGORITHM BASED RISK SCORE

The Algorithm Based Risk Score is calculated based on the Charlson Comorbidity Index (CCI). It helps to measure the co-morbid disease status or case mix in health care databases. A weighted score is assigned to each of 17 comorbidities, based on the relative risk of mortality. Accordingly, the sum of the index score is an indicator of disease burden, and a strong estimator of mortality.

The Charlson score depends on the inputs provided for the patient. The inputs typically would be:

- Age
- Condition Counts

Based on the CCI score, the system will then display the risk category or risk status.

3.1.1 CALCULATION OF ALGORITHM BASED RISK SCORE:

Age Factor:

If the Age < 40, Age Factor = 0

If the Age > 40, Age Factor can be calculated as,

$$\text{Age factor} = (\text{Age} - 40) / 10$$

CCI Factor:

CCI factor can be calculated as,

$$\begin{aligned} \text{CCI Factor} = & (1 \times \text{Number of one point conditions} + 2 \times \text{Number of two point conditions} \\ & + 3 \times \text{Number of three point conditions} + 6 \times \text{Number of six point conditions}) \end{aligned}$$

Age Factored CCI:

The age factored CCI can be calculated as,

$$\text{Age Factored CCI} = \text{CCI} + \text{Age Factor}$$

Example:

If the age of a patient is 60 years then the age factor calculated by using the formula:

$$\begin{aligned} \text{Age Factor} &= (60 - 40) / 10 \\ &= 20 / 10 \\ &= 2 \end{aligned}$$

For instance, if the Algorithm based CCI factor of the patient is 13 (Refer **Figure 16**), then the Age factored CCI can be calculated as:

$$\begin{aligned}\text{Age Factored CCI} &= \text{CCI} + \text{Age Factor} \\ &= 13 + 2 \\ &= 15\end{aligned}$$

Algorithm Based RS

CCI Score:	13
Age adjusted CCI Score:	15
CCI Patient Risk Level:	Very High

3.1.2 RISK LEVELS BASED ON AGE FACTORED CCI

Age Factored CCI Range	Risk Levels
$2 \leq \text{Age factored CCI} \leq 3$	Low Risk Patients
$4 \leq \text{Age factored CCI} \leq 5$	Medium Risk Patients
$6 \leq \text{Age factored CCI} \leq 7$	High Risk Patients
$8 \leq \text{Age factored}$	Very High Risk Patients

3.2. CLINICAL INSTITUTION BASED RS

To refine the algorithm's risk identification process, practices can add clinical intuition/care team perception. They should work together to review their patient's risk assignments to ensure alignment with information they know about the patient. The care team should have the ability to update and edit a risk score based on professional judgment or concern. It may be helpful to start with your highest and next highest risk levels.

Note:

This is an **optional** step, but if you continue with the step, the risk score associated with the patient will be based on the score assigned in this milestone. (It will override the system-generated Algorithm based score.)