Table of Contents

1. OVERVIEW
   1.2 ASSIGN A RISK SCORE AND SET UP A CARE PLAN FOR A PATIENT
   1.3 RISK PROFILE
   1.4 SOCIAL DATA
       1.4.1 AMEND SOCIAL DATA

2. CARE PLAN
   2.1 PREFERENCE OF CARE
   2.2 HEALTH CONCERNS
   2.3 ACTION PLAN
   2.4 INTERVENTIONS
   2.5 Review
   2.6 DISTRIBUTION OF PATIENT POPULATION
   2.7 DISTRIBUTION OF RISKLEVEL ACROSS PATIENT POPULATION

3. KEY NOTES
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.

![Clinicians List](image1)

**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.

1. 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](image2)

**Figure 14: Patient List**

2. 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.

![Figure 15: Last Visit Details](image)

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](image)

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

![Figure 17: Patient Visits List](image)

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.

   ![Figure 18: Clinical Intuition Based RS](image)

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.
3. Click Update data. Refer Figure 20.

A set of questions for each selected domain is displayed in a questionnaire format. Refer Figure 21.

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.

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
1.4.1 AMEND SOCIAL DATA

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

1. In the table, click the Action icon against the domain you want to amend.
   The questionnaire of the selected domain appears.

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

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.

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.
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.

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.
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

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.

<table>
<thead>
<tr>
<th>EMPANELMENT STATUS</th>
<th>Q1</th>
<th>Q2</th>
<th>Q3</th>
<th>Q4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of panels at your Practice</td>
<td>0</td>
<td>17</td>
<td>26</td>
<td>-</td>
</tr>
<tr>
<td>Total number of patients empanelled with a practitioner or care team at your practice</td>
<td>0</td>
<td>11</td>
<td>37</td>
<td>-</td>
</tr>
<tr>
<td>Total number of active patients</td>
<td>21962</td>
<td>21952</td>
<td>21962</td>
<td>-</td>
</tr>
<tr>
<td>% of patients empanelled</td>
<td>0.00</td>
<td>0.05</td>
<td>0.17</td>
<td>-</td>
</tr>
</tbody>
</table>

Figure 31: Distribution of Patient Population

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.

![Distribution Risk Level Across Patient Population](image)

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

<table>
<thead>
<tr>
<th>Risk Level</th>
<th>Below 65</th>
<th>Age 65-70</th>
<th>Age 70-75</th>
<th>Above 75</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low</td>
<td>9</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>9</td>
</tr>
<tr>
<td>Medium</td>
<td>4</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>4</td>
</tr>
<tr>
<td>High</td>
<td>2</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td>Very High</td>
<td>4</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>5</td>
</tr>
</tbody>
</table>

Green Color: Low Risk Level
Yellow Color: Medium Risk Level
Amber Color: High Risk Level
Red color: Very High Risk Level
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,

\[
\text{Age factor} = \frac{(\text{Age} - 40)}{10}
\]

**CCI Factor:**

CCI factor can be calculated as,

\[
\text{CCI Factor} = (1 \times \text{Number of one point conditions} + 2 \times \text{Number of two point conditions} + 3 \times \text{Number of three point conditions} + 6 \times \text{Number of six point conditions})
\]

**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:

\[
\text{Age Factor} = \frac{(60 - 40)}{10}
\]

\[
= 20 / 10
\]

\[
= 2
\]
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:

\[
\text{Age Factored CCI} = \text{CCI} + \text{Age Factor} \\
= 13 + 2 \\
= 15
\]

<table>
<thead>
<tr>
<th>Algorithm Based RS</th>
</tr>
</thead>
<tbody>
<tr>
<td>CCI Score: 13</td>
</tr>
<tr>
<td>Age adjusted CCI Score: 15</td>
</tr>
<tr>
<td>CCI Patient Risk Level: Very High</td>
</tr>
</tbody>
</table>

### 3.1.2 RISK LEVELS BASED ON AGE FACTORED CCI

<table>
<thead>
<tr>
<th>Age Factored CCI Range</th>
<th>Risk Levels</th>
</tr>
</thead>
<tbody>
<tr>
<td>2 ≤ Age factored CCI ≤ 3</td>
<td>Low Risk Patients</td>
</tr>
<tr>
<td>4 ≤ Age factored CCI ≤ 5</td>
<td>Medium Risk Patients</td>
</tr>
<tr>
<td>6 ≤ Age factored CCI ≤ 7</td>
<td>High Risk Patients</td>
</tr>
<tr>
<td>8 ≤ Age factored</td>
<td>Very High Risk Patients</td>
</tr>
</tbody>
</table>

### 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.)