Electronic Symptom Management for Medical Oncology Patients (eSyM)

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**Problem/Impact Statement**

Medical oncology patients are at high risk for ED utilization and hospitalization due to complications of their cancer and cancer-directed therapies.

**Scope**

1. To evaluate the percentage of MaineHealth Cancer Care South Portland (MHCC SP) patients on active treatment who have an ED visit or hospital admission per quarter
2. To assess whether patients participating in the eSyM study have lower rates of ED and hospital utilization.

**Goal/Objective**

Our initial aim is to establish the baseline percentage of patients in our practice who have an ED visit or hospitalization per quarter. Once the eSyM study starts in March 2020, we will also monitor the percentage of patients participating in the eSyM study (eSyM+ patients) who have an ED visit or hospitalization per quarter. Our goal is to reduce the relative number of ED visits and hospital admissions in eSyM+ patients compared to the total patient population by 20% over the next two years.

**Baseline Metrics/Current State**

- MaineHealth Cancer Care is participating in the National Cancer Institute (NCI) Cancer Moonshot “eSyM” Electronic Symptom Management for Cancer Patients Trial (NCT03850912)
- eSyM is an electronic symptom reporting module within MyChart that allows patients starting a new medical oncology treatment plan to report symptoms via automated questionnaires
- Patients will be directed to symptom management tip sheets for mild-moderate symptoms and instructed to call their care team in case of severe symptoms. Epic will automatically alert care teams of any severe symptom report.
- The goal of eSyM is to prevent ED visits and hospitalizations through proactive outpatient symptom management. ED utilization will be assessed as a primary objective of the study.
- Initial eSyM launch will be limited to thoracic, gastrointestinal, and gynecologic cancer patients as per trial protocol, but could expand to include all medical oncology patients over time at the discretion of the clinical trial site.
- Dana Farber site initiation visit: February 6, 2020
- eSyM go-live date: March 16, 2020

**Results**

<table>
<thead>
<tr>
<th>Date Range</th>
<th>No. of MHCC SP patients with an ED visit</th>
<th>No. of MHCC SP patients with a hospital admission</th>
<th>No. of patients on active treatment</th>
<th>Percentage of patients with an ED visit</th>
<th>Percentage of patients with a hospital admission</th>
</tr>
</thead>
<tbody>
<tr>
<td>10/1/19-12/31/19 (Q1)</td>
<td>57</td>
<td>45</td>
<td>316</td>
<td>18.04%</td>
<td>14.24%</td>
</tr>
<tr>
<td>01/01/20-3/31/20 (Q2)</td>
<td>82</td>
<td>63</td>
<td>407</td>
<td>20.15%</td>
<td>15.48%</td>
</tr>
<tr>
<td>04/01/20-6/30/20 (Q3)</td>
<td>83</td>
<td>60</td>
<td>459</td>
<td>18.08%</td>
<td>13.07%</td>
</tr>
<tr>
<td>07/01/20-9/27/20 (Q4)</td>
<td>109</td>
<td>72</td>
<td>503</td>
<td>21.67%</td>
<td>14.33%</td>
</tr>
</tbody>
</table>

**Countermeasures**

<table>
<thead>
<tr>
<th>By When</th>
<th>Deliverables</th>
</tr>
</thead>
<tbody>
<tr>
<td>End Q1</td>
<td>Determine percentage of MHCC SP patients on active treatment who had an ED visit or hospital admission during Q1.</td>
</tr>
<tr>
<td>End Q2</td>
<td>Determine percentage of MHCC SP patients on active treatment had an ED visit or hospital admission during Q2.</td>
</tr>
</tbody>
</table>
| End Q3  | • eSyM launches throughout the MaineHealth Cancer Care Network on March 16, 2020  
|         | • Determine percentage of MHCC SP patients on active treatment had an ED visit or hospital admission during Q3  
|         | • Determine percentage of MHCC SP patients had an ED visit or hospital admission during Q3 |
| End Q4  | • Determine percentage of MHCC SP patients on active treatment had an ED visit or hospital admission during Q4  
|         | • Determine percentage of MHCC SP patients had an ED visit or hospital admission during Q4 |

**Outcomes**

- The percentage of eSyM+ patients who had an ED encounter in Q3 and Q4 is comparable to the total population of MHCC SP patients on active treatment.
- The percentage of eSyM+ patients who were hospitalized increased between Q3 and Q4.

**Next Steps**

- eSyM trial will continue at all MaineHealth Cancer Care sites through September 2022
- We will continue to monitor the rates of ED and hospital utilization of eSyM+ patients and all MHCC SP patients on active treatment through September 2022
- We will promote MyChart activation and eSyM usage amongst all eligible MHCC SP patients