Implementation of the Edmonton Symptom Assessment Scale to Improve Integration of Palliative Care Services in Ambulatory Oncology Settings

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Introduction
The American Society of Clinical Oncology (ASCO) has recommended early concurrent palliative care in advanced cancer patients and cancer patients with high symptom burden. Palliative care has been found to improve quality of life, symptom management, and care satisfaction.1,2,5,6 Additionally, more recent studies have demonstrated improved overall survival,5,6 and even reduced cost of care.7,8 Nationally, cancer centers are working to integrating palliative services, however, the absence of standardized symptom screening tools and criteria for referral continue to pose a challenge to timely integration of care.9,10,11

Objectives
- Describe symptom burden of patients in ambulatory oncology clinics at a National Cancer Institute (NCI) designated Cancer Center in South Texas
- Detect discrepancies between symptom burden and referral to palliative services
- Design a trigger based system for referral of patients with cancer to palliative services

Procedure and Measurements
The Edmonton Symptom Assessment System (ESAS) is one of the most widely used screening tools for cancer patients in research and clinical practice with inter and intra-facility validity. It consists of 10 questions regarding symptom burden and quality of life (Figure 1). For the purposes of this quality improvement (QI) pilot project, five ambulatory oncology clinics at our NCI-designated cancer center integrated the ESAS tool into their clinic visits.

Figure 1. ESAS Form

Table 1. Demographics and ESAS Results

<table>
<thead>
<tr>
<th>Symptom</th>
<th>N=607</th>
<th>Mean Age in years (Std; range)</th>
<th>Male, no. (%)</th>
<th>Ethnicity, no. (%)</th>
<th>Non-Hispanic/Latino White</th>
<th>≥ 9</th>
</tr>
</thead>
<tbody>
<tr>
<td>Head and Neck</td>
<td></td>
<td>59.9 (11.9; 27-95)</td>
<td>254 (41.6%)</td>
<td>Hispanic or Latino</td>
<td>329 (54.2%)</td>
<td></td>
</tr>
<tr>
<td>Gastrointestinal</td>
<td></td>
<td></td>
<td></td>
<td>Other/Unknown</td>
<td>267 (44.0%)</td>
<td>11</td>
</tr>
<tr>
<td>Lung</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>&gt; 30</td>
</tr>
<tr>
<td>Breast</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>&gt; 30</td>
</tr>
<tr>
<td>Cancer Diagnosis, no. (%)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>&gt; 30</td>
</tr>
<tr>
<td>Other</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mean Initial ESAS (Std; range)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Patients rating a severe symptom of 7 or &gt;, no. (%)</td>
<td>20.0 (18.1; 0-83)</td>
<td>251 (41.4%)</td>
<td>Patients referred to palliative care, no. (%)</td>
<td>21 (3.5%)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Outcomes
- Between October 2015 and February 2016, 607 patients completed an ESAS questionnaire at least once (Table 1).
- The mean ESAS score for the initial visit was 20.0 (range 0-83, maximum range possible 0-100), while 41.4% (N=251) of patients rated at least one symptom as severe (7 or above) and only 3.5% (N=21) of all patients were initially referred to palliative care (Table 1).
- To assess potential triggers, we looked at total ESAS scores (Figure 2) and severe symptom burden (Figure 3). We found that a total score of 31 or greater indicated a patient in the upper most quartile and about 20% of patients reported a score of 9 or higher on any of the symptoms. Approximately 14.3% of all patients had a total ESAS score over 30 and at least one score of 9 or greater (Figure 3).

Conclusions
This QI project revealed approximately 40% of patients with cancer in our NCI center described severe symptoms (≥7) which may be appropriate for palliative care referral based on ASCO recommendations.
- These data, however, highlight the low (3.5%) palliative care consultation rate and the under-utilization of services by most oncologists at the cancer center despite using a symptom assessment tool.
- Based on these QI data, it would be reasonable to define an electronically triggered provider alert which captures the population of patients with the highest symptom burden therefore promoting referral to palliative services.
- We are further evaluating an electronic medical record alert that combines the total ESAS score of over 30 with any single assessment score of 9 or greater to notify providers of patients with the highest distress (top 15%) in an effort to facilitate palliative referrals.

References

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