Quality Training Program

Systematic assessment of symptoms in oncology outpatient with advanced disease

Almudena Martín & Cristina Pangua

Infanta Leonor Hospital

Madrid, September 14th 2020
University hospital belonging to the Madrid Health Service, located in the municipal district of Villa de Vallecas in Madrid.

Provides coverage to a reference population of more than 307,000 people.

Oncology Department is made up of 8 medical oncologists, 12 nurses, 6 nursing assistants and 2 administratives.

The Daytime Hospital is equipped with 27 chemotherapy administration posts: 10 beds and 17 armchairs.

886 new outpatients were assisted in 2019.
Problem Statement

● Patients with advanced cancer spectrum of symptoms that encompasses the physical, psychic and social sphere. The lack of systematic evaluation of these symptoms in clinical practice may lead to an inappropriate medical attention that negatively impacts on the well-being and quality of life of patients, entails an increase in the use of health resources and can even compromise survival.

● By January 2020, we did not use any standardized method to document the symptoms experienced by patients in the Oncology department at Infanta Leonor Hospital. We only collected the most prevalent ones according to the type of tumor or those that the patient reported spontaneously which it involved that a lot of valuable information was missed.
Team Members

Project Sponsor: Miguel Angel Lara
Team leaders: Almudena Martín, Cristina Pangua
  - Design a survey with possible causes of the problem.
  - Retrospective analysis of medical records to identify and quantify the problem.
  - Statistical data analysis.

Team Members:
Nurse staff: Mª Angeles Rodríguez-Calderita, Victorino Díez, Paloma Villoslada, Elizabeth Valencia, Leonor Mª Domenech, Raquel Fernández, Noelia Varona, Leticia Ramos.
  - Fill out a survey in order to identify possible causes of the problem.
  - Patient registry.
  - Deliver and fill out the questionnaire with the patient on the first visit to the nursing room.
  - Transcribe the results in the medical record.
Team Members:

Medical staff Mª del Mar Pérez, Ana López, Gloria Serrano, Berta Obispo, Jacobo Rogado (team leaders included):

- Fill out a survey in order to identify possible causes of the problem.
- Identify the patient with advanced disease starting intravenous treatment and refer them to the nursing room.
- Collect demographic data and ECOG scale.

QTP improvement coach: Paloma Gómez
Cause & Effect Diagram

PATIENT
- Doesn’t remember
- Cultural / Language barrier
- Fear
  - Disease
  - Family
  - Doctor
- Lack of knowledge
- Lack of confidence

STAFF
- Communication problems
- Lack of practice
  - Prioritize other aspects of clinical attention
- Not enough time
- Underestimation of symptoms
- Doctor-Nurse
- Staff-- Patient

ENVIRONMENTAL FACTORS
- Lack of space
- Lack or privacy

RESOURCES
- Absence of questionnaire
- Care overload
- Difficult accessibility to clinical staff
- Shortage of staff
- Lack of psychological assistance

NO SYSTEMATIC EVALUATION OF SYMPTOMS
Diagnostic Data

Reasons why symptoms are not recorded

Staff survey responses
From December 2nd 2019 to February 28th 2020, 106 patients were attended in the nurse’s office.

33 patients with advanced or recurrent disease starting first line therapy were identified.

Taking symptoms collected in ESAS and HADS as a reference we reviewed these 33 medical records:

- 91% of these patients have reported, at least, one symptom.
- An average of only 2 symptoms per patient were documented.
- No symptoms were noted down in 3 charts.

High prevalence of symptoms in cancer patients according to patient-reported outcomes (PRO) standardized questionnaires (Bubis Lev D. 2018; Walsh D. 2000)
Baseline Data

Documented Symptoms

<table>
<thead>
<tr>
<th>Symptom</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>pain</td>
<td>26</td>
<td>7</td>
</tr>
<tr>
<td>Asthenia</td>
<td>10</td>
<td>23</td>
</tr>
<tr>
<td>Nausea</td>
<td>10</td>
<td>23</td>
</tr>
<tr>
<td>Anorexia</td>
<td>10</td>
<td>23</td>
</tr>
<tr>
<td>Dyspnea</td>
<td>4</td>
<td>29</td>
</tr>
<tr>
<td>Sad/Depressed</td>
<td>3</td>
<td>30</td>
</tr>
<tr>
<td>Nervous/Anxious</td>
<td>3</td>
<td>30</td>
</tr>
<tr>
<td>Constipation</td>
<td>5</td>
<td>28</td>
</tr>
<tr>
<td>Sleep well</td>
<td>4</td>
<td>29</td>
</tr>
<tr>
<td>Well-being</td>
<td>1</td>
<td>32</td>
</tr>
<tr>
<td>Afraid</td>
<td>1</td>
<td>32</td>
</tr>
<tr>
<td>Worried</td>
<td>1</td>
<td>32</td>
</tr>
</tbody>
</table>
Aim Statement

By October 30th, we plan to assess and document physical and emotional symptoms in the medical records of 35% oncology patients starting first line chemotherapy for advanced disease, using the Edmonton Symptom Assessment System (ESAS) and the Hospital Anxiety and Depression Scale (HADS).
Measures

- **Measure**: percentage of medical charts where patients’ physical and emotional symptoms are recorded.

- **Patient population**: patients starting intravenous therapy for recurrent or advanced disease.

  **Exclusion patient**: patient on oral therapy.

- **Calculation methodology**:
  - **Numerator**: documentation of intervention.
  - **Denominator**: all patients starting iv therapy for recurrent or advanced disease.

- **Data source**:
  - ESAS scale
  - HAD scale
  - Medical record review

- **Data collection frequency**: daily (Monday to Friday)

- **Data quality (any limitations)**: patient missed- no identified/ patient refuses to fill out the survey / different people collect the data each week (learning curve) / low number of patients.
## Prioritized List of Changes (Priority/Pay –Off Matrix)

<table>
<thead>
<tr>
<th>Impact</th>
<th>Low</th>
<th>High</th>
</tr>
</thead>
</table>
|        | Translator device | Staff training  
|        |                  | Standardized method (questionnaire)  
|        |                  | Patient screening  
|        |                  | Incorporate data into medical chart |
| Ease   | More / proper room | Increase nursing staff  
|        |                   | Full time nurse  
|        |                   | Clinicians and nurses involvement  
<p>|        |                   | Electronic version of questionnaire |
|        | Remind nurses to collect data regularly |
|        | Remind physicians of patient screening regularly |</p>
<table>
<thead>
<tr>
<th>Date of PSA</th>
<th>Description of Intervention</th>
<th>Results</th>
<th>Action Steps</th>
</tr>
</thead>
<tbody>
<tr>
<td>Feb 17, 2020</td>
<td>Project presentation</td>
<td>Questionnaire (ESAS-r, HAD)</td>
<td>Educate staff</td>
</tr>
<tr>
<td>Feb 17 - Feb 28, 2020</td>
<td>Fill out a survey by staff</td>
<td>Identify possible causes</td>
<td>Completed</td>
</tr>
<tr>
<td>Feb 17 – March 13, 2020</td>
<td>Train nurses on the implementation of the tool</td>
<td>Learning the method</td>
<td>Continuous education</td>
</tr>
<tr>
<td>March 2 - Aug 31, 2020</td>
<td>Patient screening by physicians</td>
<td>Low screening</td>
<td></td>
</tr>
<tr>
<td>March 2 – Aug 31, 2020</td>
<td>Data collection in the medical records by nurses</td>
<td>Not meeting goals</td>
<td></td>
</tr>
<tr>
<td>Jul 13 – Aug 31, 2020</td>
<td>Retrospective analysis of medical records</td>
<td>Quantify the problem</td>
<td>Completed</td>
</tr>
</tbody>
</table>
# PDSA Cycle 2 (Test of change)

<table>
<thead>
<tr>
<th>Date of PDSA</th>
<th>Description of Intervention</th>
<th>Results</th>
<th>Action Steps</th>
</tr>
</thead>
</table>
| Sep 1 - Oct 30, 2020  | **Physicians**
Reminder whatspps
Verbal reminder        | Improved screening                           | Review previous results
Evaluation the process |
| Sep 1 - Oct 30, 2020  | **Nurses**
Reminder emails
Personal reminder      | More compliance
Increase in reported symptoms | Review previous results
Evaluation the process |
Data scatter plot

First line therapy patients for advanced disease (March-October)
Change data

Percentage of patients with documented symptoms in medical record

- March, 55.00
- April, 25.00
- May, 0.00
- June, 50.00
- July, 0.00
- August, 42.00
- September, 67.00
- October, 30.00

Intervention
Change data: PDSA Cycle 1 & 2

Patients attended

March-August
- CYCLE 1 PDSA: 29% (18 patients)
- CYCLE 2 PDSA: 44% (62 patients)

September-October
- TOTAL: 32% (78 patients)
- Patients with questionnaire: 25 patients
Materials Developed
### Characteristics of patients

<table>
<thead>
<tr>
<th>Characteristics patients</th>
<th>N=25</th>
<th>n (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>66</td>
<td>(45 – 86)</td>
</tr>
<tr>
<td>Sex</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>13</td>
<td>(52%)</td>
</tr>
<tr>
<td>Female</td>
<td>12</td>
<td>(48%)</td>
</tr>
</tbody>
</table>

### Tumor

<table>
<thead>
<tr>
<th>Tumor</th>
<th>N=25</th>
<th>n (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pancreas</td>
<td>6</td>
<td>(24)</td>
</tr>
<tr>
<td>Lung</td>
<td>5</td>
<td>(20)</td>
</tr>
<tr>
<td>Bladder</td>
<td>4</td>
<td>(16)</td>
</tr>
<tr>
<td>Kidney</td>
<td>2</td>
<td>(8)</td>
</tr>
<tr>
<td>Breast</td>
<td>2</td>
<td>(8)</td>
</tr>
<tr>
<td>Mesothelioma</td>
<td>1</td>
<td>(4)</td>
</tr>
<tr>
<td>Colorectal</td>
<td>1</td>
<td>(4)</td>
</tr>
<tr>
<td>Occult primary</td>
<td>1</td>
<td>(4)</td>
</tr>
<tr>
<td>Head &amp; Neck</td>
<td>1</td>
<td>(4)</td>
</tr>
<tr>
<td>Endometrium</td>
<td>1</td>
<td>(4)</td>
</tr>
<tr>
<td>Prostate</td>
<td>1</td>
<td>(4)</td>
</tr>
</tbody>
</table>
Materials Developed: ESAS-r

Documented Symptoms
Materials Developed: ESAS-r

Intensity of symptoms

- Pain: 3.12
- Tired: 3.68
- Drowsiness: 2.56
- Nausea: 1.56
- Lack of appetite: 4.2
- Shortness of breath: 1
- Depression: 3.32
- Anxiety: 3.52
- Well-being: 4.42
- Dry mouth: 3.6
- Diarrhea: 1.12
- Constipation: 1.64
- Sleep: 4.04
### Materials Developed: HADs

#### Hospital Anxiety and Depression Scale (HADS)

**Instructions:** Doctors are aware that emotions play an important part in most illnesses. If your doctor knows about these feelings he or she will be able to help you more. This questionnaire is designed to help your doctor know how you feel. Read each item and circle the reply which comes closest to how you have been feeling in the past week. Don’t take too long over your replies; your immediate reaction to each item will probably be more accurate than a long thought out response.

<table>
<thead>
<tr>
<th>Score</th>
<th>Anxiety n (%)</th>
<th>Depression n (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-7</td>
<td>12 (50)</td>
<td>15 (62)</td>
</tr>
<tr>
<td>8-10</td>
<td>6 (25)</td>
<td>4 (17)</td>
</tr>
<tr>
<td>≥ 11</td>
<td>6 (25)</td>
<td>5 (21)</td>
</tr>
</tbody>
</table>
Conclusions

- A rate of 29% of patients with documented symptoms was reached after the first intervention, which increased to 44% after the second.
- Well-being and sleep disturbances, lack of appetite and tiredness were the symptoms that reached the highest intensity on the ESAS scale.
- Almost a quarter of patients scored $\geq 11$ on the HAD scale.
- The incorporation of a standardized method allows a more accurate and comprehensive assessment of the patient.
Next Steps/Plan for Sustainability

- Continue to remind clinical staff of the implementation of the tool.
- Increase the rate of patients with documented symptoms.
- Electronic form of the scales to facilitate the collection of data.
- Evaluate the process regularly and provide feedback to staff to achieve greater involvement.
- Develop procedures to refer patients with high scores for clinical evaluation.
Systematic assessment of symptoms in oncology outpatient with advanced disease

AIM: By October 30th, we plan to assess and document physical and emotional symptoms in the medical records of 35% oncology patients starting first line chemotherapy for advanced disease, using the Edmonton Symptom Assessment System (ESAS) and the Hospital Anxiety and Depression Scale (HADS).

TEAM: Oncology Department. HUIL: • Medical stall • Nurse Staff

PROJECT SPONSORS: • Dr. Miguel Angel Lara

INTERVENTION:
PDSA 1 (Feb 17-Aug 31, 2020):
- Fill out a survey by staff
- Train nurses on the implementation of the tool
- Patient screening by physicians
- Data collection in the medical records by nurses

PDSA 2 (Sep 1-Oct 30, 2020)
- Reminder to physicians and nurses: verbal, whatsapps, e-mails

RESULTS:
- PDSA 1: 29% of patients with documented symptoms
- PDSA 2: 44% of patients with documented symptoms

CONCLUSIONS:
- A rate of 29% of patients with documented symptoms was reached after the first intervention, which increased to 44% after the second.
- Well-being and sleep disturbances, lack of appetite and tiredness were the symptoms that reached the highest intensity on the ESAS scale.
- Almost a quarter of patients scored ≥ 11 on the HAD scale.
- The incorporation of a standardized method allows a more accurate and comprehensive assessment of the patient.

NEXT STEPS:
- Continue to remind clinical staff of the implementation of the tool.
- Increase the rate of patients with documented symptoms.
- Electronic form of the scales to facilitate the collection of data.
- Evaluate the process regularly and provide feedback to staff to achieve greater involvement.
- Develop procedures to refer patients with high scores for clinical evaluation.