Proyecto de implantación de PROMs en Oncohematología

Quality Training Program
Madrid 2020
ASCO’s Quality Training Program

Project Title: Implementation of a PROM tool in patients with hematological malignancies in the Lymphoma and Chronic Lymphocytic Leukemia program

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Institution: Fundacion Jimenez Diaz University Hospital, Madrid, Spain

Date of Storyboard Presentation: 14 December 2020
Fundacion Jimenez Diaz is an academic hospital linked to University Autonomous Madrid.

The facilities include an Adult Daycare Hospital, Department of Hematology and Hospital Pharmacy, certified by ASCO-QOPI in 2019, ISO 9001:2015 since 2018, EFQM since 2017 and Ad Qualitatem since 2016.

The Department of Hematology has:
- 20 hematologist consultants
- 8 residents (2 residents each year)

Day Hospital: 17 armchairs, all with programmable pumps, with 31,000 i.v. annual treatments

Hospitalization: 680 beds

24 hours, 7 days a week hematology on call & 14 hours, 7 days a week hospital pharmacist on call

Emergency unit:
- 20 boxes
- 35 emergency doctors
- 19 doctors on duty
Institutional Overview

- **Department of Hematology:**
  - Lymphoma Unit
  - Myeloma Unit
  - Myeloid malignancies Unit
  - Stem Cell Transplant Unit
  - Diagnostic Unit
  - Blood Service Unit
  - Coagulation Unit
Problem Statement

In a 3 months period (March-May 2019) we have analyzed 24 patients with lymphoid malignancies (Lymphoma, CLL), treated with antineoplastic agents in our Lymphoma Unit.

We have detected 117 moderate-severe Aes (4%), related and not related to the treatment leading to ER consultation or unscheduled hospitalization.

GRADE 2-3 AE IMPACT ON QUALITY OF CARE

- Delay or disminution of dosis in treatment: 4.27 % of total Aes
- Unscheduled visits: 25.64 % of total Aes (emergency room and visits without annotation)
- Serious complications and hospitalizations: 6.84 % of total AEs
Team Members

- Sponsor: Dr. Jesus Garcia-Foncillas: Project Manager
- Medical Team: Raul Cordoba, Daniel Morillo, Marian Perez, Javier Cornago, Laura Solan, Jose Luis Lopez Lorenzo: diagnosis, treatment and information about treatment toxicities
- Nurse Team: Sara Raba, Auxiliadora Galvan, Emilio González, Cristina Elez: treatment administration, triage call, information about treatment toxicities
- Pharmacist Team: Eva Castillo, María Arias, Elena Tortajada: information about treatment toxicities, treatment dispensation
- Receptionist: Isabel Benito, Estrella Pacheco, Pilar Pelaez: call reception
- Informatic team: Susana Cruz: solve computer problems, form creation
**Data source**

- **EMR Casiopea:** medical information system that provides the features of Electronic Medical History that includes all the information regarding the patient and his attention. It integrates with the Pharmacy, Laboratory and Medical Imaging systems.

- **Farmis Oncopharm:** Departmental hospital application with interdisciplinary and multiprofessional development, among health professionals for the care of onco-hematological patients. It guarantees the coordination and structuring of functions. Equipped with warning systems and support for the clinical decision.

- **IMDH:** is a comprehensive hospital management system that responds to the needs of operation, clinical, economic-financial and management control, integrating with the rest of the Center's systems.
PATIENT

Inadequate patient knowledge
Too much information to process
Sociocultural features
Anxiety / Fear
need for contact between queries

HOSPITAL

Non-specialist access in ER
Lack of procedures in Hematology admission
Lack of information about hospital guidelines
new policies and lack of information by staff

INFORMATIC TECNICIAN

Hybrid workflow problems to achieve the total transition to electronic records
Latitude of layout in the application management platform

PHARMACISTS

Lack of communication with patients between visits
Misinformation due to multiple stakeholders giving the same information
Low human resources
Short time duration of visits to give information

HEMATOLOGISTS

No scheduled treatments agenda
Delay in treatment administration
Difficult in patient aggressiveness management

NURSE

No hematology on duty 24/7
lack of access to nurse day hospital reports
lack of access to pharmacy clinics
Information overload in first visit after diagnosis

COMMON HEALTH CARE PROVIDER

lack of access to pharmacy clinics
lack of access to nurse day hospital reports
lack of physical space
lack of access to writing in the clinical history

UNSCHEDULED ER VISITS AND HOSPITALIZATIONS
## Diagnostic Data

<table>
<thead>
<tr>
<th>Diagnosis Data</th>
<th>Lymphoma (intravenous/oral)</th>
<th>CLL (intravenous/oral)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total #</td>
<td>19</td>
<td>5</td>
</tr>
<tr>
<td>Aes Grade 2-4</td>
<td>100</td>
<td>11</td>
</tr>
<tr>
<td>Unscheduled Encounters</td>
<td>6</td>
<td>1</td>
</tr>
<tr>
<td>Emergency Service Visits</td>
<td>17</td>
<td>6</td>
</tr>
<tr>
<td>Hospitalization</td>
<td>7</td>
<td>1</td>
</tr>
<tr>
<td>Treatment Delay</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>Dose reduction</td>
<td>1</td>
<td>0</td>
</tr>
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</table>
## Baseline Data

<table>
<thead>
<tr>
<th>Category</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>HEMATOLOGICAL</td>
<td>45</td>
</tr>
<tr>
<td>CARDIOVASCULAR</td>
<td>2</td>
</tr>
<tr>
<td>GI</td>
<td>18</td>
</tr>
<tr>
<td>GENERAL/IRR</td>
<td>19</td>
</tr>
<tr>
<td>INFECTIONS</td>
<td>8</td>
</tr>
<tr>
<td>METABOLIC</td>
<td>6</td>
</tr>
<tr>
<td>MUSCULOSKELETAL</td>
<td>6</td>
</tr>
<tr>
<td>CNS</td>
<td>7</td>
</tr>
<tr>
<td>RESPIRATORIES</td>
<td>1</td>
</tr>
<tr>
<td>CUTANEOUS</td>
<td>5</td>
</tr>
</tbody>
</table>
Pareto chart
Aim Statement

Reduce **20%** of unscheduled visits to ER and hospitalizations due to AEs by means of a PROM tool to identify early side effects of treatments in patients with lymphoma and CLL
Measures: Outcome

• Measure:
  • Adverse events level 2-4 related and not related to antineoplastic treatments defined by Common Terminology Criteria for Adverse Events (CTCAE) Version 4.0
  • Number of ER visits
  • Number of hospitalizations
  • Number of nurse calls
  • Number of unscheduled visits

• Patient population:
Patients with lymphoma and CLL attendend in FJD University Hospital in a 3 month period who started to receive active treatment for their malignancy
Measures: Outcome

- **Calculation methodology**: data compilation of patients who enter in the program and contrast them with the data recorded in 2019

- **Data source**: patient’s clinical charts

- **Data collection frequency**: weekly

- **Data quality (any limitations)**: visits not recorded

- **Process Measurement**:
  - # of times patient education sessions occur/# of patient visits
  - # of scheduled visit between treatment visits
  - % of phone calls/weekly questionnaires received
  - % of patients with patients portal
  - % of cumplimented questionnaires
Process Map Currently

FUTURE RECOGNITION-REPORTING-MANAGEMENT OF AEs

- Diagnosis of Lymphoma / CLL
  - Visit to Hematology Clinic
    - Need of treatment? No → Follow-up
      - Patient Educational Program about how to use the Patient Portal and the use of PROMs tools
      - Check Patient-reported symptoms through the EMR
  - Visit to Nurse Clinic
    - Need of further assessment? Yes → Refer to other specialists
    - Tumor Board
      - Need of intravenous treatment? Yes → Stay Hospital
        - Patient Educational Program about how to use the Patient Portal and the use of PROMs tools
      - No → Visit to Physician clinic
        - Treatment
          - Any adverse event? Yes → Triage call?
            - Yes → ER
              - Has it been solved? Yes → Discharge
              - No → Admission to hospital
            - No → ER
              - Has it been solved? Yes → Discharge
              - No → Admission to hospital
          - No → Follow-up
            - Need hospitalization? Yes → Admission to hospital
            - No → Discharge
## Prioritized List of Changes (Priority/Pay–Off Matrix)

<table>
<thead>
<tr>
<th>Impact</th>
<th>Ease of Implementation</th>
<th>Task Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>High</strong></td>
<td></td>
<td>Team involvement</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Team meetings</td>
</tr>
<tr>
<td><strong>Low</strong></td>
<td></td>
<td>Team meetings</td>
</tr>
<tr>
<td><strong>Easy</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Difficult</strong></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- **Team involvement**: Completition of PROMs questionnaires, Patient involvement, Data collection and analysis of patient information
- **Team meetings**: Push messages texting to remind the completion of questionnaires

### Ease of Implementation
# PDSA Plan (Test of Change)

<table>
<thead>
<tr>
<th>Date of PDSA Cycle</th>
<th>Description of Intervention</th>
<th>Results</th>
<th>Action Steps</th>
</tr>
</thead>
<tbody>
<tr>
<td>January 2020</td>
<td>Design of PROMs questionnaires</td>
<td>Identification of main problems</td>
<td>Information to the team about the use of questionnaires in virtual consultation</td>
</tr>
<tr>
<td>March 2020</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mach 2020</td>
<td>Starting the use of PROM questionnaires by the patient</td>
<td>Start of non-face-to-face consultations associated with PROMs questionnaires</td>
<td>Periodic meetins and staff training</td>
</tr>
<tr>
<td>May 2020</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ongoing</td>
<td>Use of Patient Portal to complete PROM questionnaires by the patient</td>
<td>Adapt questionnaires to patient needs</td>
<td>Analyze results in a similar period to the first data collection</td>
</tr>
</tbody>
</table>
Data source

- EMR Casiopea
- Farmis Oncopharm
- IMDH
- Patient Portal (Hospital App)
- PROMs questionnaires (ePROMs)
**Data source**
Change Data

- Implementation of PROMs forms through a hospital app

- Very few patients started therapy (only 4 patients) due to the COVID-19 pandemic

- Raw data collected but specific subanalysis of done due to the COVID-19 pandemic

- Analyze results in a period similar to that of data collection (probably between March and May 2021)
<table>
<thead>
<tr>
<th>Resumen General</th>
<th>Detalle Formularios Cerrados/Respondidos</th>
<th>Tiempos de Respuesta Alertas HEM</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>TOTAL PACIENTES</td>
<td></td>
</tr>
<tr>
<td></td>
<td>PACIENTES NUEVOS</td>
<td>PACIENTES TRABAJADOS</td>
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<tr>
<td>PREMs y PROMs HEMATOLOGIA</td>
<td>593</td>
<td>593</td>
</tr>
<tr>
<td>2020012</td>
<td>8</td>
<td>472</td>
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<tr>
<td>2020004</td>
<td>33</td>
<td>90</td>
</tr>
<tr>
<td>2020003</td>
<td>41</td>
<td>137</td>
</tr>
<tr>
<td>2020002</td>
<td>69</td>
<td>70</td>
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<td>2020001</td>
<td>81</td>
<td>207</td>
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<td>2019012</td>
<td>126</td>
<td>126</td>
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</table>

FECHA de EMISIÓN: 11/12/2020
<table>
<thead>
<tr>
<th>Centro</th>
<th>Total Alertas</th>
<th>Alertas Pendientes</th>
<th>Contestadas</th>
<th>&lt;12h</th>
<th>12-24</th>
<th>&gt;24</th>
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<tbody>
<tr>
<td>FJD</td>
<td>689</td>
<td>5</td>
<td>684</td>
<td>62</td>
<td>9,06%</td>
<td>298</td>
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<tr>
<td>HCV</td>
<td>122</td>
<td>0</td>
<td>122</td>
<td>0</td>
<td>0,00%</td>
<td>72</td>
</tr>
<tr>
<td>HRJC</td>
<td>188</td>
<td>0</td>
<td>188</td>
<td>21</td>
<td>11,17%</td>
<td>62</td>
</tr>
<tr>
<td>HUIE</td>
<td>220</td>
<td>0</td>
<td>220</td>
<td>21</td>
<td>9,55%</td>
<td>118</td>
</tr>
<tr>
<td></td>
<td><strong>1219</strong></td>
<td><strong>5</strong></td>
<td><strong>1214</strong></td>
<td><strong>104</strong></td>
<td><strong>8,57%</strong></td>
<td><strong>550</strong></td>
</tr>
</tbody>
</table>

FECHA de EMISIÓN: 11/12/2020
## Change Data

**FECHA de EMISIÓN 11/12/2020 8:00:50**

<table>
<thead>
<tr>
<th>Centro</th>
<th>Paciente</th>
<th>NHC</th>
<th>Edad</th>
<th>Nombre</th>
<th>Texto Indicador</th>
<th>Valor</th>
<th>Fecha Toma</th>
<th>Marcar LECTURA</th>
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</thead>
<tbody>
<tr>
<td>FUNDACION</td>
<td>PROMs <em>Portal</em> PROCTCAE</td>
<td>19</td>
<td>PROMs <em>Portal</em> PROCTCAE</td>
<td>¿Con qué FRECUENCIA Tuvo VÓMITOS?</td>
<td>A menudo</td>
<td>10/12/2020 11:11:03</td>
<td></td>
<td></td>
</tr>
<tr>
<td>JIMENEZ DIAZ</td>
<td>PROMs <em>Portal</em> PROCTCAE</td>
<td>19</td>
<td>PROMs <em>Portal</em> PROCTCAE</td>
<td>¿Con qué FRECUENCIA Tuvo DOLORES?</td>
<td>Casi siempre</td>
<td>10/12/2020 11:11:03</td>
<td></td>
<td></td>
</tr>
<tr>
<td>FUNDACION</td>
<td>PROMs <em>Portal</em> PROCTCAE</td>
<td>19</td>
<td>PROMs <em>Portal</em> PROCTCAE</td>
<td>¿Con qué FRECUENCIA Tuvo NÁUSEAS?</td>
<td>A menudo</td>
<td>10/12/2020 11:11:03</td>
<td></td>
<td></td>
</tr>
<tr>
<td>JIMENEZ DIAZ</td>
<td>PROMs <em>Portal</em> PROCTCAE</td>
<td>19</td>
<td>PROMs <em>Portal</em> PROCTCAE</td>
<td>¿Con qué FRECUENCIA Tuvo SENTIMIENTOS DE TRISTEZA o DE NO ESTAR FELIZ?</td>
<td>Casi siempre</td>
<td>10/12/2020 11:11:03</td>
<td></td>
<td></td>
</tr>
<tr>
<td>FUNDACION</td>
<td>PROMs <em>Portal</em> HMPRO</td>
<td>19</td>
<td>PROMs <em>Portal</em> HMPRO</td>
<td>Mi ritmo de sueño ha cambiado</td>
<td>Mucho</td>
<td>10/12/2020 10:45:53</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**ASCO Quality Training Program**

**Fundación para la Excelencia y la Calidad de la Oncología eCO**
An example

76 y.o. male. Mantle-cell lymphoma treated with Ibrutinib (an oral targeted therapy)
An example

76 y.o. male. Mantle-cell lymphoma treated with Ibrutinib (an oral targeted therapy)
ACTION TAKEN

Refer the patient to the Blood Bank for pretransfusional testing and schedule a blood transfusion

Check availability in Day Hospital for Packed Red Blood Cells (PRBC) transfusion

We solved patient’s SAE without referring him to the ER or an unscheduled hospital admission
Conclusions

• PROM tools have decreased the number of non-scheduled consultations with the doctor and calls to the nursing or pharmacy of patients, however due to the pandemic, this information could be misinterpreted due to the fear of the patient to go to the hospital.

• The value-based healthcare program in Hematology is consolidated.

• We will increase the period of analysis to include more patients in the analysis and without the bias of COVID-19 outbreak.
Implementation of a PROM tool in patients with hematological malignancies

**AIM:**

Implementation of PROMs forms through a hospital app

Reduce 20% of unschedule visits to ER and hospitalizations due to AEs by means of a PROM tool to identify early side effects of treatments in patients with lymphoma and CLL

**RESULTS:**

- We think that the forms have decreased the number of non-programmed consultations with the doctor and calls to the nursing or pharmacy of patients, however due to the pandemic, said information could be altered due to the fear of the patient to go to the hospital
- The use of forms is underway in our hospital
- The comparative data has not been analyzed since the situation in dates was not comparable and will be done in the future

**CONCLUSIONS:**

We think that the forms have decreased the number of non-programmed consultations with the doctor and calls to the nursing or pharmacy of patients, however due to the pandemic, said information could be altered due to the fear of the patient to go to the hospital

The use of forms is underway in our hospital

The comparative data has not been analyzed since the situation in dates was not comparable and will be done in the future

**NEXT STEPS:**

- Analyze results in a period similar to that of data collection (probably between March and May 2021)
- Collection and analysis of patient information