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**

Presenter's Name: **Eva Castillo, Raul Cordoba**

Institution**: Fundacion Jimenez Diaz University Hospital, Madrid, Spain**

Date of Storyboard Presentation: 14 december 2020

Institutional Overview

- **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)

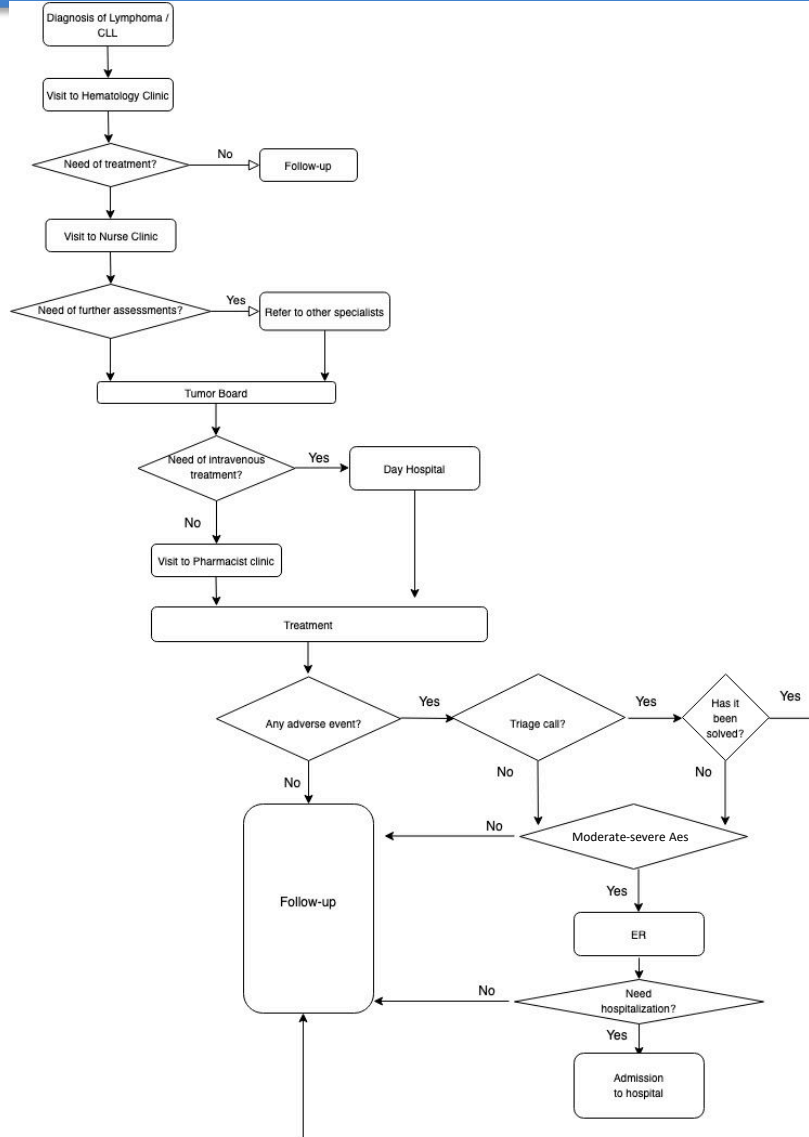- Serious complications and hospitalizations: 6,84 % of total AEs

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**
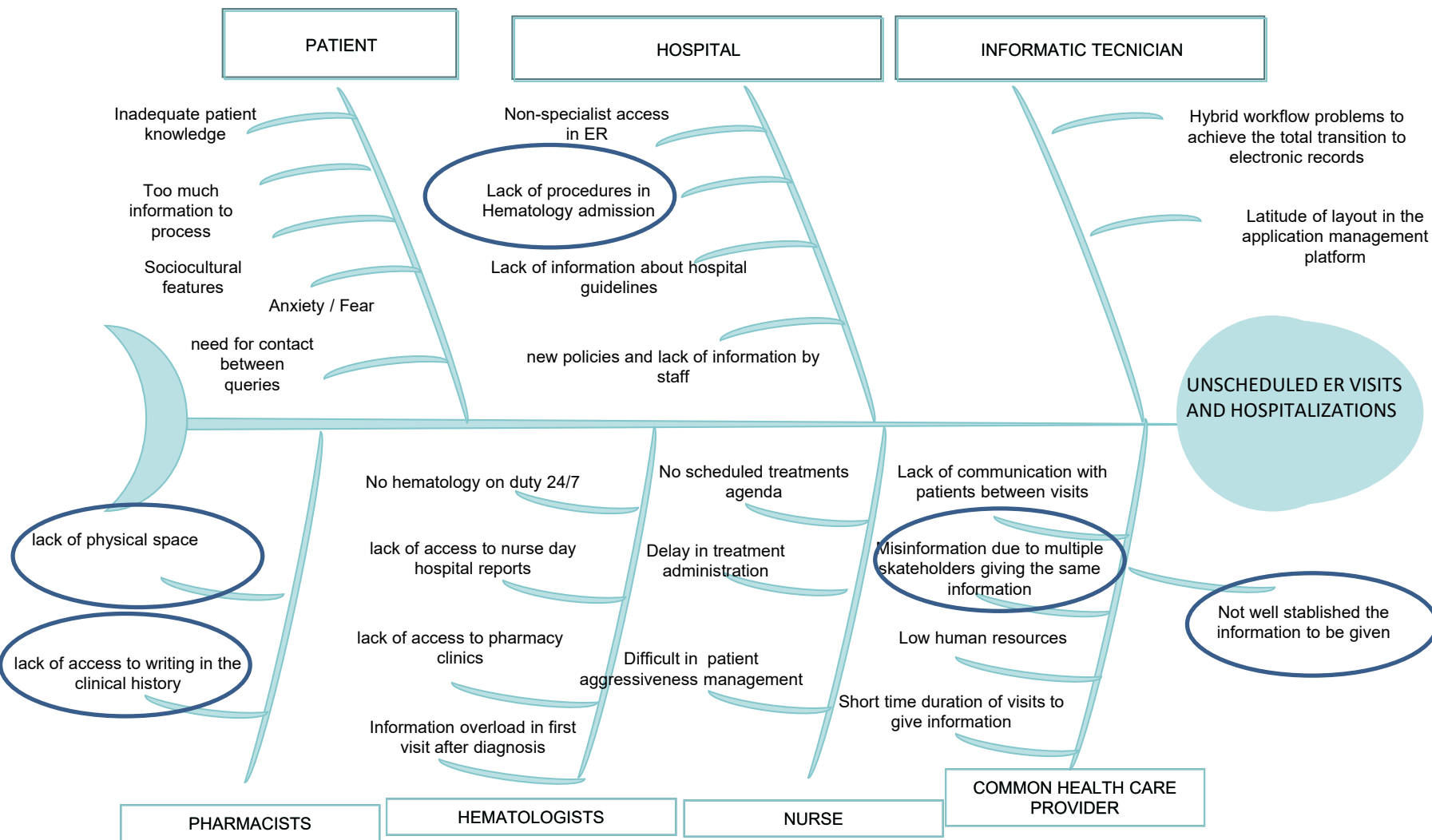- **Informatic team: Susana Cruz: solve computer problems, form creation**

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.

Process Map Current State

Cause & Effect Diagram

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

UNSCHEDULED ER VISITS AND HOSPITALIZATIONS

- lack of physical space
- lack of access to writing in the clinical history

PHARMACISTS

- 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

HEMATOLOGISTS

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

NURSE

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

COMMON HEALTH CARE PROVIDER

- Not well stablished the information to be given

Diagnostic Data

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

Baseline Data

HEMATOLOGICAL	45
CARDIOVASCULAR	2
GI	18
GENERAL/IRR	19
INFECTIONS	8
METABOLIC	6
MUSCULOSKELETAL	6
CNS	7
RESPIRATORIES	1
CUTANEOUS	5

Pareto chart
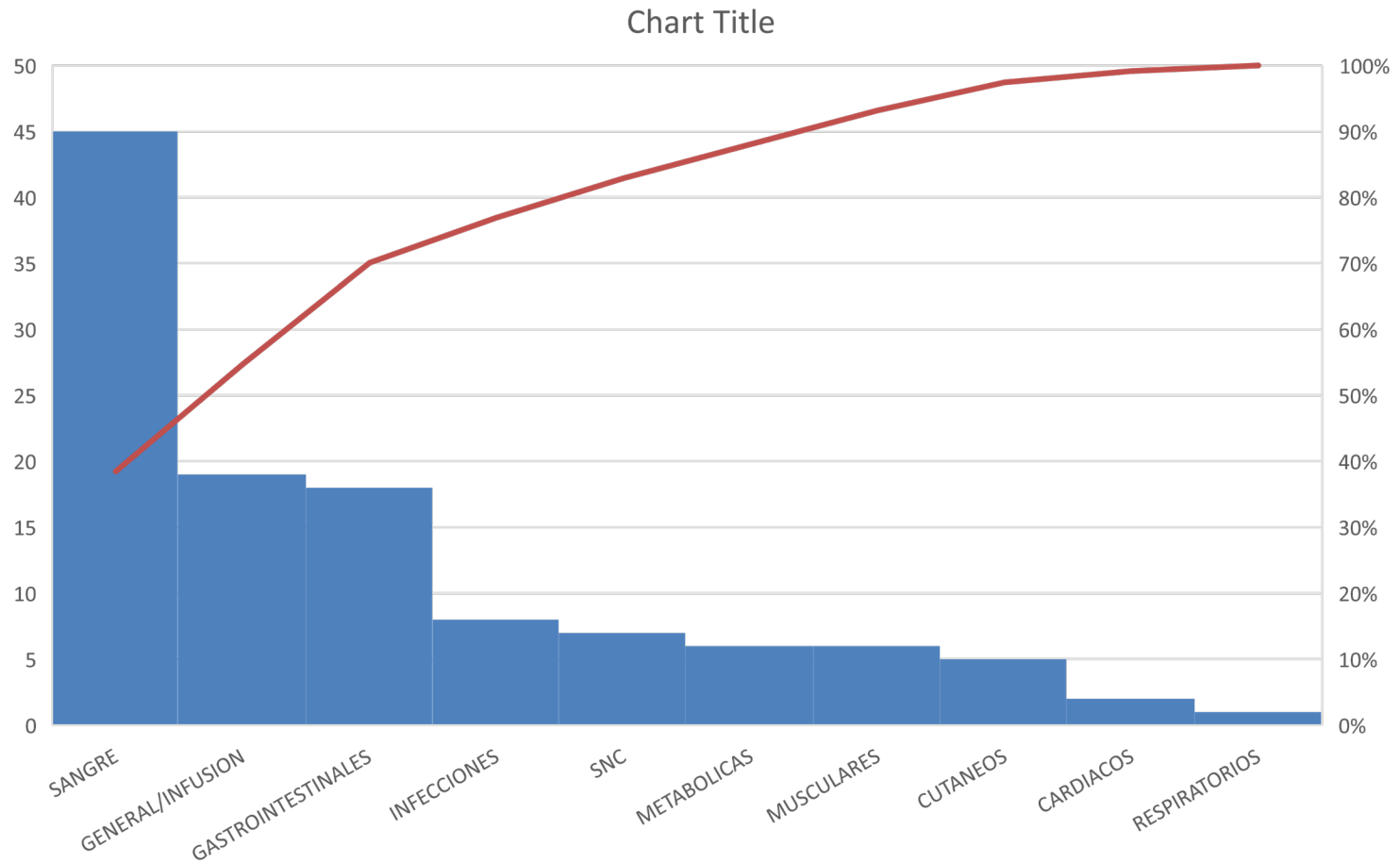
Aim Statement

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

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 uncheduled visits**

- **Patient population**:

Patients with lymphoma and CLL attendend in FJD University Hospital in a 3 month period who started to recibe 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
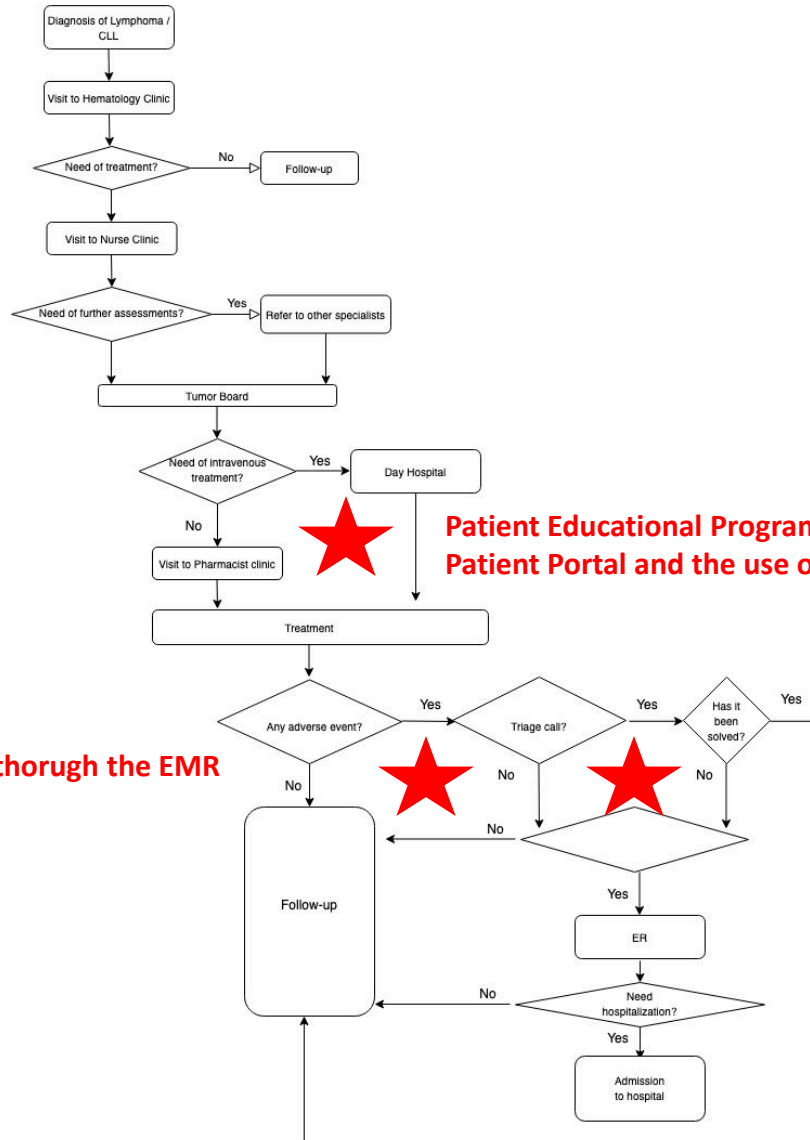
Patient Educational Program about how to use the Patient Portal and the use of PROMs tools

Check Patient-reported symptoms thorugh the EMR

Give recommendations for mild AEs and pro-active nurse phone call in case of moderate-severe AEs to give help in the aim to avoid the ER or hospitalization

Prioritized List of Changes (Priority/Pay –Off Matrix)

|	**Easy**	**Difficult**
High (Impact)	Team involvement	Completition of PROMs questionnaires Patient involvement Data collection and analysis of patient information
Low	Team meetings	Push messages texting to remind the completition of questionnaires

Ease of Implementation

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PDSA Plan (Test of Change)

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

Data source

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

Data source
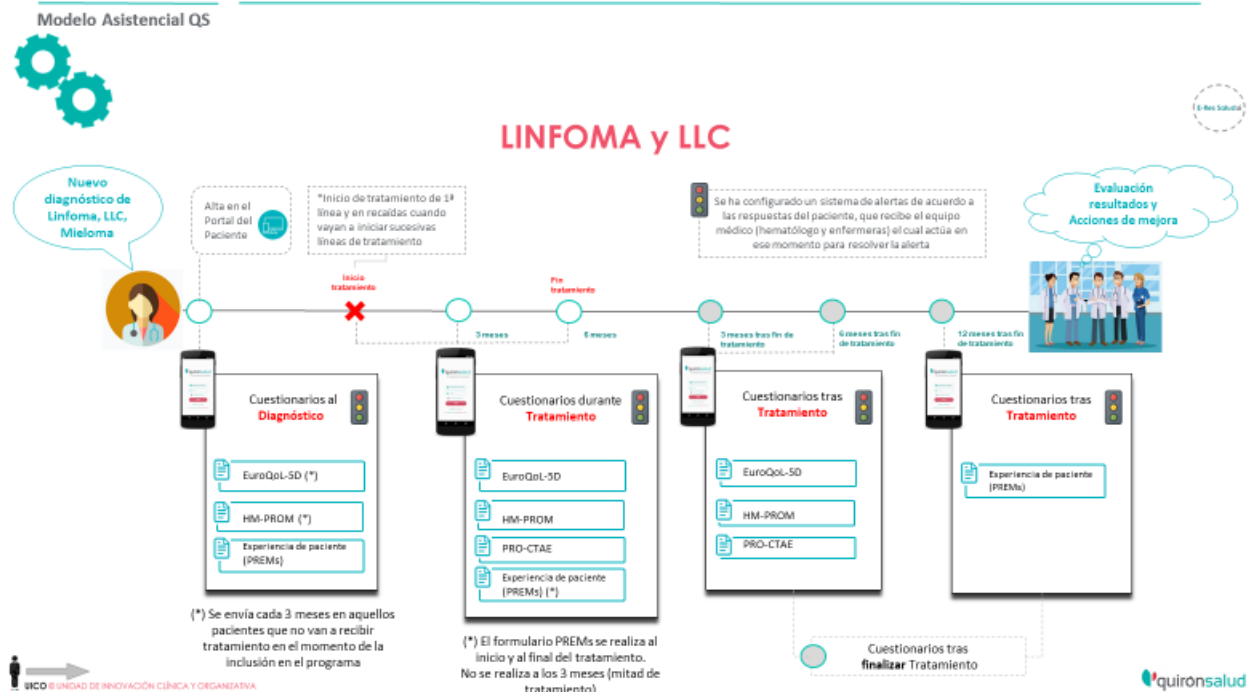
Change Data

- 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)

Change Data

FECHA de EMISIÓN: 11/12/2020

Resumen General	Detalle Formularios Cerrados/Respondidos		Tiempos de Respuesta Alertas HEM						
Resumen General		**TOTAL PACIENTES**							
	PACIENTES NUEVOS	PACIENTES TRABAJADOS	PACIENTES con PORTAL		PACIENTES RESP 100%		PACIENTES RESP < 100%		PACIENTES RESP 0%	
PREMs y PROMs HEMATOLOGÍA	593	593	520	87,69%	63	12,12%	279	53,65%	167	32,12%
202012	8	472	418	88,56%	79	18,90%	0	0,00%	5	1,20%
202011	30	512	447	87,30%	128	28,64%	8	1,79%	294	65,77%
202010	34	455	401	88,13%	117	29,18%	11	2,74%	273	68,08%
202009	31	446	396	88,79%	126	31,82%	13	3,28%	257	64,90%
202008	35	428	378	88,32%	106	28,04%	9	2,38%	263	69,58%
202007	28	371	336	90,57%	104	30,95%	16	4,76%	216	64,29%
202006	38	110	103	93,64%	31	30,10%	11	10,68%	61	59,22%
202005	39	100	88	88,00%	22	25,00%	12	13,64%	54	61,36%
202004	33	90	80	88,89%	17	21,25%	6	7,50%	57	71,25%
202003	41	137	119	86,86%	55	46,22%	17	14,29%	47	39,50%
202002	69	70	62	88,57%	20	32,26%	13	20,97%	29	46,77%
202001	81	207	190	91,79%	76	40,00%	19	10,00%	95	50,00%
201912	126	126	115	91,27%	51	44,35%	21	18,26%	43	37,39%

Change Data

FECHA de EMISIÓN: 11/12/2020

Resumen General   **Detalle Formularios Cerrados/Respondidos**   **Tiempos de Respuesta Alertas HEM**

Centro	Total Alertas	Alertas Pendientes	Contestadas	<12h		12-24		>24	
FJD	689	5	684	62	9,06%	298	43,57%	324	47,37%
HCV	122	0	122	0	0,00%	72	59,02%	50	40,98%
HRJC	188	0	188	21	11,17%	62	32,98%	105	55,85%
HUIE	220	0	220	21	9,55%	118	53,64%	81	36,82%
	1219	5	1214	104	8,57%	550	45,30%	560	46,13%

Change Data

FECHA de EMISIÓN 11/12/2020 8:00:50

Centro	Paciente	NHC	Edad	Nombre	Texto Indicador	Valor	Fecha Toma	Marcar LECTURA
FUNDACION JIMENEZ DIAZ			19	PROMs_Portal_PROCTCAE	¿Con qué FRECUENCIA Tuvo VÓMITOS?	A menudo	10/12/2020 11:11:03	➡
FUNDACION JIMENEZ DIAZ			19	PROMs_Portal_PROCTCAE	¿Con qué FRECUENCIA Tuvo DOLOR?	Casi siempre	10/12/2020 11:11:03	➡
FUNDACION JIMENEZ DIAZ			19	PROMs_Portal_PROCTCAE	¿Con qué FRECUENCIA Tuvo NÁUSEAS?	A menudo	10/12/2020 11:11:03	➡
FUNDACION JIMENEZ DIAZ			19	PROMs_Portal_PROCTCAE	¿Con qué FRECUENCIA Tuvo SENTIMIENTOS DE TRISTEZA O DE NO ESTAR FELIZ?	Casi siempre	10/12/2020 11:11:03	➡
FUNDACION JIMENEZ DIAZ			19	PROMs_Portal_HMPRO	Mi ritmo de sueño ha cambiado	Mucho	10/12/2020 10:45:53	➡

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)

Recuento	22/07/20 40125194	21/07/20 40125163	20/07/20 40174467	19/07/20 40174468	18/07/20 40452603	17/07/20 40993275	03/02/20 40926141	27/12/19 41082526
LEUCOCITOS (x 10³ µl)	5.77	5.85	11.16	14.30	12.85	13.95	8.28	7.48
HEMATIES (x 10^6 µl)	1.0	1.1	1.0	1.1	1.2	1.5	4.6	4.7
HGB (g/dl)	4.1	4.2	4.1	4.5	4.5	5.5	15.2	15.6
HTO (%)	11.5	11.8	11.9	13.4	13.5	16.6	44.3	45.2
VCM (fl)	113.9	111.3	117.8	125.2	114.4	113.7	96.3	95.6
HCM (pg)	40.6	39.6	40.6	42.1	38.1	37.7	33.0	33.0
CHCM (g/dl)	35.7	35.6	34.5	33.6	33.3	33.1	34.3	34.5
RDW (%)	22.4	23.8	19.7	22.0	17.8	17.1	13.9	14.2
PLAQ (x 10³ µl)	123	120	144	150	138	146	140	107
VPM (fl)	13.0	12.7	12.8	12.8	12.9	13.4	12.1	12.7
RETI (%)	7.460							
RETI_ABS (x 10³ µl)	0.075							
RETI (%)		7.240						
RETI_ABS (x 10³ µl)		0.077						
RETI (%)			8.790					
RETI_ABS (x 10³ µl)			0.089					
RETI (%)						5.250		
RETI_ABS (x 10³ µl)						0.077		

An example

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 de 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

Eva Castillo,   **Onco-hematology pharmacyst**
Raul Cordoba,   **Hematologist**

Hospital FJD Madrid

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

TEAM:
- Nursery: Sara Raba
- Informatic team: Susana Cruz:

PROJECT SPONSORS:
- Dr. Jesus Garcia-Foncillas

RESULTS:
- We think that the forms have decreased the number of non-programmed consultations with de 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 de 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

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