Quality Training Program

Project Title: Reduce the waiting time from arrival at the hospital until the administration of immunotherapy in an oncology unit.

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HOSPITAL UNIVERSITARIO DE CANARIAS-SAN CRISTOBAL DE LA LAGUNA-TENERIFE

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Institutional Overview

- Hospital Universitario de Canarias, founded in 1971.
- Tertiary care referral center
- 655 bed-hospital, 1 million population area of influence
- Teaching hospital for Faculty of Medicine, La Laguna University.
- The work team is formed by 11 oncologists, 9 physicians residents, numerous specialized nurses, various nursing assistants, a Nursing Manager, large administrative staff, 3 data managers, a team of clinical pharmacists and medical students who participate in service activities.
- Our outpatient oncology unit have 17 places for outpatient patients to manage chemotherapy/immunotherapy treatment daily (5 beds and 13 armchairs). The schedule is from 8 am to 9 pm, from Monday to Friday.
Problem Statement

- Many oncology patients at our hospital are admitted for scheduled outpatient immunotherapy administration, really short-term infusions for established diagnoses.
- These patients frequently experience delays in starting immunotherapy average many hours after their arrival on the outpatient oncology unit. Delays are made known by patient complaints.
- These delays negatively impact healthcare resource utilization, length of stay, may delay other patients’ admissions and decrease patient satisfaction.
- In addition, this delay also leads to a disproportionate amount of immunotherapy assigned to the same shift, affect patient safety and may result in increased immunotherapy related errors.
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<th>Team member</th>
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<td>DATA MANAGER</td>
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**Process Map**

**PHASE I: OUTPATIENT ARRIVAL**
- Patient reception
- Shift assignment for blood collection
- **PATIENT IDENTITY CHECK FOR NURSING**
  - blood draw
  - Wait in waiting room for results

**PHASE II: OUTPATIENT ARRIVAL**
- **LAB RESULTS**
- Evaluation of the patient and analytical results by the doctor

**PHASE III: EVALUATION OF RESULTS**
- New shift assignment
- Admission and new Identity Check
- Pharmacist check
- Treatment
  - OK
    - **YES**
      - Administration of the treatment and monitoring
    - **NO**
      - Review
  - **NO**
    - Catheter removal
- **YES**
  - New appointment

**PHASE IV: INPATIENT AND TREATMENT ADMINISTRATION**
- Treatment Approval
- **NEW HOSPITALизация**
  - **YES**
    - New shift assignment
    - Admission and new Identity Check
  - **NO**
    - Catheter removal
  - New appointment

ADMINISTRATION OF THE TREATMENT AND MONITORING
Unnecessary delay in administration of immunotherapy

**ENVIRONMENT**
- Armchair or bed not available
- The appointment call system does not work
- The information system of the medical record falls

**WORK TEAM**
- Nurse not available to care for the patient
- Patient arrival time is not communicated
- High workload
- Nursing assistant not available to take blood to the lab

**PROCESS**
- No time set to begin medical consultation
- Wait time for lab draw and result
- All patients are referred at the same time
- Delays in the shift for immunotherapy preparation due to work overload
- New unplanned treatments
- Work overload due to holidays

**TECHNOLOGY**
- The appointment call system does not work
- The information system of the medical record falls

**ORGANIZATION**
- Delays in the shift for immunotherapy preparation due to work overload
- New unplanned treatments
- Work overload due to holidays

**PEOPLE**
- Oncologist is not available
- Patient does not deliver the treatment order
- Patient is not in the waiting room
- Work overload due to holidays
Diagnostic Data - Time between...

1. Arrival and medical assessment
2. Medical assessment and treatment administration
3. Arrival and treatment administración
**Diagnostic Data**

**TIME BETWEEN ARRIVAL AND MEDICAL ASSESSMENT**

Median time: 2:20 h  
Range: minimum 1:22h - maximum 5:28 h

- Patient Nº
TIME BETWEEN ARRIVAL AND TREATMENT ADMINISTRATION

Median time: 6:38 h
Range: minimum 2:28 h - maximum 11:03 h
Diagnostic Data

TIME BETWEEN MEDICAL ASSESSMENT AND TREATMENT ADMINISTRATION

Median time: 4:17 h
Range: minimum 0:24 h - maximum 8:41 h

Delay Time

Patient Nº
We aim to reduce the waiting time in the waiting room by 20% in those patients who come for the administration of immunotherapy from the time their treatment is approved until it is administered.
Measures

• Measure: Time lag in the administration of immunotherapy in outpatients

• Patient population: Patients receiving immunotherapy.

• Calculation methodology: We are measuring difference in time between admission and key measures. i.e
  – Time from admisión to immunotherapy is authorized
  – Time from immunotherapy authorized to administered by the nurse

• Data source: Electronic history data.
• Data collection frequency: Every three weeks
• Data quality (any limitations): Admission time/date is based in the electronic record, which may not be reflective of time patient arrives to the floor.
We propose a change of management in the appointment of patients who go to the outpatient oncology unit to receive immunotherapy, avoiding wait time in the hospital waiting room.

The blood test was doing the day before in their health centre or the same day of the consultation but without staying to wait the results in hospital.

The doctor contacts the patient by phone with the approval of the drug administration and a specific time to come to the outpatient oncology unit.
Action Priority Matrix (List og changes)

- **Impact**
  - High
    - Analysis the day before
    - Immunotherapy administration the next day
  - Low
    - Review the patient`s list the day before
    - Reorganized the Day hospital
      - Homogeneize schedules

- **Effort**
  - Easy
  - Difficult
Study population

Period 1: 22 patients of 69 pts

Period 2: 135 patients

Period 2: 90 patients were analyzed

The same day
PDSA Cycles

Cycle 1

• Time period analyzed:
  – Between November 1 - December 31, 2019

• Measure:
  – Time lag in the administration of immunotheraphy in outpatients (22 patients). The blood test was doing the same day.
    • Time from admisión to immunotherapy is authorized
    • Time from immunotherapy authorized to administered by the nurse
PDSA Cycles

Cycle 2

• Time period analyzed:
  – Between September 1 - November 30, 2020

• Measures (90 patients):
  – Time lag in the administration of immunotherapy in outpatients with the blood test was done the same day.
    • Time from admisión to immunotherapy is authorized
    • Time from immunotherapy authorized to administered by the nurse

• Various factors differentiate the periods evaluated:
  – COVID-19 PANDEMIC
  – A change in the performance of medical visits: telephone consultations (75-80%)
Change Data

N= 90 pts  
Sep-Nov 2020  
Median: 62 years (34-84 y)

Tipo de neoplasia

- Pulmón: 52%
- vejiga: 15%
- renal: 12%
- melanoma: 12%
- mama: 12%
- otros: 4%

Fármaco

- pembrolizumab: 35%
- nivolumab: 28%
- avelozumab: 37%
Change Data
Time between arrival and medical assessment

Period 1
- Median time: 3.1 hours
- Between 2-4 hours: 83% patients were evaluated

Period 2
- Median time: 3.37 hours
- Between 2-4 hours: 79% patients were evaluated

$t\text{-student : } p = 0.091$
no statistically significant differences
Change Data
Time between medical assessment and treatment administration

Period 1
• Median time: 3.89 hours

Period 2
• Median time: 3.93 hours

t-student : $p = 0.884$
no statistically significant differences
RESULTS

OUR AIM STATEMENT

We aim to reduce the waiting time in the waiting room by 20% in those patients who come for the administration of immunotherapy from the time their treatment is approved until it is administered.

WHAT WE OBTAINED

No statistically significant differences between the times evaluated in both periods
  Between arrival and medical assessment
  Between medical assessment and treatment administration
Nevertheless....

Not good news could be good news

- Despite the health crisis that we are currently experiencing: COVID-19
  - significant work overload
  - changes in patient profile: worse clinical situation in many cases

- A new way of caring and evaluating patients: telephone consultations (more difficult than a face-to-face assessment)

- We have managed to ensure that there are no significant delays in the care of outpatients treated to receive immunotherapy
Conclusions

• Telephone assistance as an alternative to consultation can become a useful tool in exceptional situations. However, it takes more time and requires training.

• Despite the existing health crisis we have managed to ensure that there are no significant delays in the care of outpatients treated to receive immunotherapy.

• We must try to continue looking for alternatives in the outpatient management of patients to minimize their waiting times.

Thank you