ASCO’s Quality Training Program

Navigating Stage IV Patients to Reduce Emergency Room admissions

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Shubham Pant, MD – QTP Improvement Coach

Instituto de Oncologia do Vale

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Private Medical Group with **6 outpatient facilities** in two cities covering outpatient cancer care for ~ 60% of our metropolitan area with 2.4 M inhabitants. Accreditation by Brazilian National Accrediting Organization with Excellence, by Accreditation Canada and **one QOPI® Certified Practice**.

- ~200 employees and associates;
- 18 physicians: Clinic Onc, Rad Onc, Hem Onc;
- ~ 60,000 medical appointments/year;
- ~ 650 patients procedures/day.
In 2016, Stage IV Patients at IOV-SJC had a monthly average ratio* of 3.8 admissions to Emergency Room (ER).

More than 70% of these complaints are potentially manageable. These ER admissions worsen patients’ experience of care, increase global costs and can impact their quality of life (QoL).

Pain, constipation, fever, fatigue, nausea/vomiting, diarrhea and dehydration are the clinical conditions that we consider as “manageable or preventable ER admissions”.

* Stage IV Patients ER Admission / Total Chemo Patients (monthly)
<table>
<thead>
<tr>
<th>Role</th>
<th>Name</th>
<th>Job Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project Sponsor</td>
<td>Leo Altoé, RN, MBA</td>
<td>Site Manager IOV-SJC</td>
</tr>
<tr>
<td>Team Leader</td>
<td>Carlos (Fred) Pinto, MD</td>
<td>Executive Director IOV Group</td>
</tr>
<tr>
<td>Core Team Member</td>
<td>Henrique Z. Fernandes, MD</td>
<td>Medical Director IOV Group</td>
</tr>
<tr>
<td>Facilitator</td>
<td>Stela Maris Coelho, MS, MBA</td>
<td>Lean Office Mngr IOV Group</td>
</tr>
<tr>
<td>Core Team Member</td>
<td>Fernanda Loiola, MD</td>
<td>Palliative Care, IOV</td>
</tr>
<tr>
<td>QTP Improvement Coach</td>
<td>Shubham Pant, MD</td>
<td>Provides remote support to the team</td>
</tr>
<tr>
<td>Operational Members</td>
<td>Elisangela Romano, RN, Michele Felix, RN, Laura Gomes, RN</td>
<td>Members involved in developing and testing change</td>
</tr>
<tr>
<td>Operational Members</td>
<td>Janaina Ferreira, MBA, Luiz Artur Correa, MD</td>
<td>Insurance Company (SulAmerica) support team</td>
</tr>
<tr>
<td>Patient/Family</td>
<td>Margarete and Eduardo Camurça</td>
<td>Patient and husband</td>
</tr>
</tbody>
</table>
Processes are executed in large batches

Information is provided only at the beginning (later forgotten)

Vaccine /Dentist ( "When can I? When I can’t?")

Protocols are not followed by doctors
  Reconciliation ("can I use this new medication?")

More frequent checks after chemo shot (to know how well you are)

Care Delivery Problem
  “What day I need to do the blood test?”

We provide a lot of information at the same time

Information delivered is different from the processes (patient has to understand alone the connection of both)

We provide information about the effects of treatment but not about what to do and antidotes

“Which vaccine can I take?”

Methods

IOV support available only during business hours

“Some nurses provide too much information, and some not that much”

Nurses and patients cannot remember E-learning detailed information

“When I’m suffering I don’t care about the e-learning or the Guia Bem Viver”

“I call because I want to be sure”

“I call because I’m not sure how bad can I get”

People

Nurse need to call back to check medical record

Paper work for high cost home medication authorization

“E-learning too long and I do not know where my problem is (witch minute)”

E-learning improved process time for patient assessment (30% less), but timing is not good (immediately before chemo)

Guia Bem Viver conflicts with some processes
  “Guia Bem Viver has all the information I need”

Prescriptions refills for support drugs

Patient does not know which drug use when checking for drug side effects (“side effects looks worse than what I’m feeling”)

Materials Equipment

I don’t know what to do when I’m not doing well
Comments:

a. The most frequently identified complaint at ER is Pain. We have no data to better define “supportive care” admission, in some occasion it is also related to pain;

b. Data quality is weak, it was collected during patient appointments.
Diagnostic Data 2
(Voice of the Customer)

- We conducted several VOC sessions to identify:
  - How we could provide better care?
  - If patients are willing to pay for 24/7 phone services?
  - What leads patients to an ER?
  - Brainstorm with nurses: what patients complaint most by phone?
  - Clearly define what problem we are trying to solve to our patients

- The patient problem defined by the customer:
  “I don’t know what to do when I’m not doing well”
Diagnostic Data 3
Patients Treated Monthly:
Potential bias to evaluate ER admissions

![Chemo Patients at IOV 2016 - 2017](image)

**Comments:**

a. The median number of monthly chemo patients from 2016 to 2017 increased by 16%;
b. This variation can introduce bias in future measurements and should be considered.
Diagnostic Data 4
Timeline of Data Collection

Cohort 1
(control)
Jan 2016 – Aug 2016
Data Collected:
• ER admissions for Stage IV deceased patients between Jan 16 and Aug 16
• Symptoms associated with ER admission

Cohort 2
(pain management)
Aug 2016 - Aug 2017
Data Collected:
• ER admissions for Stage IV deceased patients
• Symptoms associated with ER admission

Cohort 3
(palliative care management)
Sep 2017 – Apr 2018
Data Collected:
• ER admissions for Stage IV deceased patients
• Symptoms associated with ER admission

Project Launch:
• VOC
• Data collect
• Standards
Baseline Data
Stage IV ER admissions/total chemo patients

Comments:

a. Evaluate Stage IV ER admission ratio to total chemo patients can be one way to reduce bias due to total chemo patients fluctuation.

b. We will use this ratio as our baseline data.
CURRENT PROCESS MAP  
(Cohort 2)

PAIN MANAGEMENT FOR IOV PATIENTS

**INPUT:**
- FHS-6 Survey
- Doctor/Triage/Chemo

**PROCESS:****
1. **Initial Assessment at Coord Care**
2. **Opioid use?**
   - Yes: **Initial Assessment Day 1 (Care Plan)**
   - No: **In pain with current analgesia?**
     - Yes: **Physician Reassessment if needed**
     - No: **Using two or more drugs for analgesia?**
       - Yes: **Unplanned Adjustment if needed**
       - No: **End of this process**
3. **In pain with current analgesia?**
   - Yes: **Using two or more drugs for analgesia?**
     - Yes: **Unplanned Adjustment if needed**
     - No: **End of this process**
4. **Opioid assessment 48h Problems?**
   - Yes: **Review Current Treatment**
   - No: **Reassessment Day 7**
5. **Follow up Problems?**
   - Yes: **Reassessment Day 15**
   - No: **Follow up Problems?**
     - Yes: **Reassessment Day 30**
     - No: **Follow up Problems?**
       - Yes: **Process Input: Patients being managed by our Patient Navigation System**
         - Eligibility:
           1. Opioid prescription
           2. Team requirement for patients in pain but not using opioids.
           3. Initial/Follow Up Assessment positive for moderate/severe pain
       - No: **Process Output:**
         1. Patient not requiring analgesia
         2. Discharged (death, transferred to other practice, other)
         3. Patient Refusal

**BLUE BOXES:**
- Standard procedures are followed with physician or other team members intervention if needed.

**ORANGE BOXES:**
- No Standard procedures available at this point. Physicians or other team members are frequently involved.
FUTURE PROCESS MAP: (Cohort 3)

PALLIATIVE CARE MANAGEMENT FOR IOV PATIENTS

PROCESS INPUT:
Patients being managed by our Patient Navigation System will be indicated by two team members to the program considering the following eligibility conditions:
1. Patients with stage IV disease in second line treatment and/or
2. Patients with any diagnosis with ECOG III

BLUE BOXES:
Standard procedures are followed by physician or other team members, interventions as needed.

ORANGE BOXES:
No Standard procedures available at this point. Physicians or other team members are frequently involved.

PROCESS OUTPUT:
1. Transferred to other practice
2. Deceased
3. Patient Refusal
Aim Statement

By April 2018 we expect to reduce by 30% ER admissions for Stage IV Patients when comparing cohort 1 to 3.
Measures

• **Measure:**
  - Number of ER admissions

• **Patient population:**
  - Stage IV patients;
  - 3 comparison cohorts.

• **Calculation methodology:**
  - Average ER admissions ratio for the above patient population.

• **Data collection frequency:**
  - Monthly, using deceased patient charts + reported triggers and Coordinated Care notes for ER admissions.

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Data source:

• Retrieve active report for ER admissions in patient charts
• Patient Navigation System records

Data Quality (limitations):

• ER admission data is weak: it is manually collected during medical appointments.
• There is no integrated EMR with ERs, and our patients can go to more than 5 different ERs.
• An increasing number of patients are being admitted for chemo at IOV.
## Action Plan

<table>
<thead>
<tr>
<th>Date of PDSA Cycle</th>
<th>Description of Intervention</th>
<th>Results</th>
<th>Action Steps</th>
</tr>
</thead>
</table>
| **PDSA #1:** 06/12/2017 08/23/2017 | • NURSE EDUCATION & TRAINING  
• Standard Work Protocols (SW) to manage symptoms:  
• Review current SW and create new ones: Pain, Mucositis, Nausea and Vomiting, Fever, Diarrhea, Mental Confusion and Syncope, Fatigue, Dyspnea and Inappetence; | SW tested and ok: Pain, Mucositis, N&V, Fever, Fatigue, Diarrhea, SW not feasible: Inappetence (merged with fatigue)  
Dyspnea (too complex – treat as special variation) | • PDSA: trial use with 10 patients – pain in a separated flow (ongoing since Aug 2016);  
• Education/training material will be provided to PDSA cycle 4 |
| **PDSA #2:** 06/22/2017 08/31/2017 | • PATIENT EDUCATION MATERIAL  
• Reviewing the patient educational materials: printed, online and verbal. | Not fully developed, still ongoing | • Education material will be provided to PDSA cycle 4 |
| **PDSA #3:** 06/22/2017 08/31/2017 | • CHAT  
• Define tool and create a CHAT;  
• Use SW (PDSA 1+2) and Test chat;  
• Provide pilot access for 10 patients. | Patients considering too complicated to access chat. Chat robots are not being helpful. | • Create a new channel for phone service (cellular) for patients.  
• **ABANDONED** |
| **PDSA #4:** 09/01/2017 09/30/2017 | • Go live with SW developed in PDSA 1+2 and provide dedicated access by phone to all patients.  
• Evaluate working hours of services and Weekend support  
• Improve data quality | Regular working hours seem to be enough to provide proposed care. Developing a special plan for Fridays and holidays | • All stage IV patients (pain included)  
• Plan to Fridays and holidays  
• Change data collection methods |
### Prioritized List of Changes (Priority/Pay –Off Matrix)

<table>
<thead>
<tr>
<th>Impact</th>
<th>Ease of Implementation</th>
<th>Change Description</th>
<th>PDSA Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>High</td>
<td></td>
<td>New Nurse Education &amp; Training: New Standard Work for Nurses/Physicians</td>
<td>PDSA #1 08/23/17</td>
</tr>
<tr>
<td></td>
<td></td>
<td>New Patient Education Material: develop flyers and folders for patients</td>
<td>PDSA #2 08/23/17</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Change current data collection methods</td>
<td>PDSA #4 09/01/17</td>
</tr>
<tr>
<td>Low</td>
<td></td>
<td>Go Live with materials / remote access: Include all IOV Stage IV patients</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Evaluate a patient orientation chat for remote access: Chat test use completed</td>
<td>PDSA #3 08/31/17</td>
</tr>
</tbody>
</table>
Development: 8 weeks
Test period: 06/22/17 to present
• New standards to be used in all patient contact referring complaints;

Results:
• Nurses refers they are easier to use than the ones used before:
  • Faster to identify critical issues;
  • Single paged, straight flow of care
  • All needed steps included as one cycle of care;
  • Most frequent prescribed countermeasures and procedures included.
PDSA #1 + #2: Materials in use/Developed (samples)

Segmented E-learning + Printed materials
PDSA #3: Chat with patients to evaluate symptoms/complaints

Test period: 06/22 to 08/31/17
Live: 3 weeks for patients

Results:
• Customers considered chats too complicated to access.
• Chat robots developed were not being helpful, nurses always needed to call back.
• Abandoned.
Test period: 8 weeks (09/01 – 10/31/17)
Results:
• 12 h availability might not be needed, evaluation ongoing.
• Most calls come in before noon.
• New complaints are being tracked to consider new standards, if needed.
Ongoing:
• IMPROVE DATA COLLECTION METHODS
PDSA #4: Dedicated Phone Access

Initial Data

Comments:
- Most calls are until noon;
- No calls after 6 PM (no need for after hours availability?).
PDSA #4 Data Analysis
Patient symptoms/complaints phone calls

Number of Calls for Coordinated Care
05/29/17 to 09/22/17

Comments:
• This data includes pain navigation system calls;
• Some new complaints emerged like “cough (flu?)” and “urinary tract infection”.
Conclusions (where we are now)

Achievements:

• **Improved, safer and simplified standards** for symptoms/side effects management;

• **Better integration** between care nurse, triage and coordinated care (Navigation System);

• Better understanding of customers needs;

• **Faster and easier patient access to manage symptoms and other complaints.**
Lessons Learned (up to this point)

- Include patient and husband was critical to establish our real AIM, many of our assumptions were not relevant to patients;
- Provide good quality informations sometimes means: “prove less, but critical information”, sometimes patients get confused with too much information;
- Active education and clear standards helped to improve care provided by all IOV teams;
- Small paced changes/pilots gave us opportunity to save resources and provide services as demanded by the customer.
Next Steps/Plan for Sustainability

- EXECUTE PDSA #4
  - Evaluate the extent of services provided (12h or 8h?; weekends?);
  - **Improve data collection methods** to get more accurate information about ER admissions;
  - **Adjust current standards**: exclude/include/merge actual ones as needed;
  - Standardize improvements into daily safety and flow huddles.
Project Title: Navigating Palliative Care Patients to Reduce Emergency Room admissions

AIM: By December 2017 we expect to reduce 30% ER admissions Stage IV Patients

TEAM: Instituto de Oncologia do Vale: Carlos F. Pinto, MD
Henrique Z. Fernandes, MD
Stela Maris Coelho, MS, MBA
Fernanda Loiola, MD
SulAmerica: Janaina Ferreira, MBA, Luiz A. Correa, MD
IOV Patients: Margarete and Eduardo Camurça

PROJECT SPONSORS: Leo Altoé, RN, MBA, Site Manager

INTERVENTION:
1. Standard Work for Nurses/Physicians to manage common symptoms/complaints, PDSA #1+2
2. Educational material for patients, PDSA #1+2
3. Patient Chat for online management, PDSA #3 (abandoned)
4. Dedicated phone access to stage IV patients following new standards, PDSA #4, data collection from 09/01/17 to 04/30/18.

RESULTS: Should be related to your AIM statement. Be sure to title the graph, identify the SPC chart used, label the x & y axis, include a legend

CONCLUSIONS:
- Dedicated phone access improved pain management and reduced ER admissions pain associated.
- PDSA #4 is evaluating if managing other symptoms by phone can reduce even further ER admissions

NEXT STEPS:
- Consider to include ALL IOV chemo patients
- Improve quality of ER admissions data using the involved team (current data is confusing)
- Update SW (standards) for all patients

Graph title

Insert graph