

# ASCO's Quality Training Program

## Navigating Stage IV Patients to Reduce Emergency Room admissions

Carlos F. Pinto, MD

Fernanda Loiola, MD

Henrique Fernandes, MD

Stela Coelho, MS, MBA

Shubham Pant, MD – QTP Improvement Coach

Instituto de Oncologia do Vale

October 4, 2017



# IOV GROUP Overview



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.



# Problem Statement

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)*

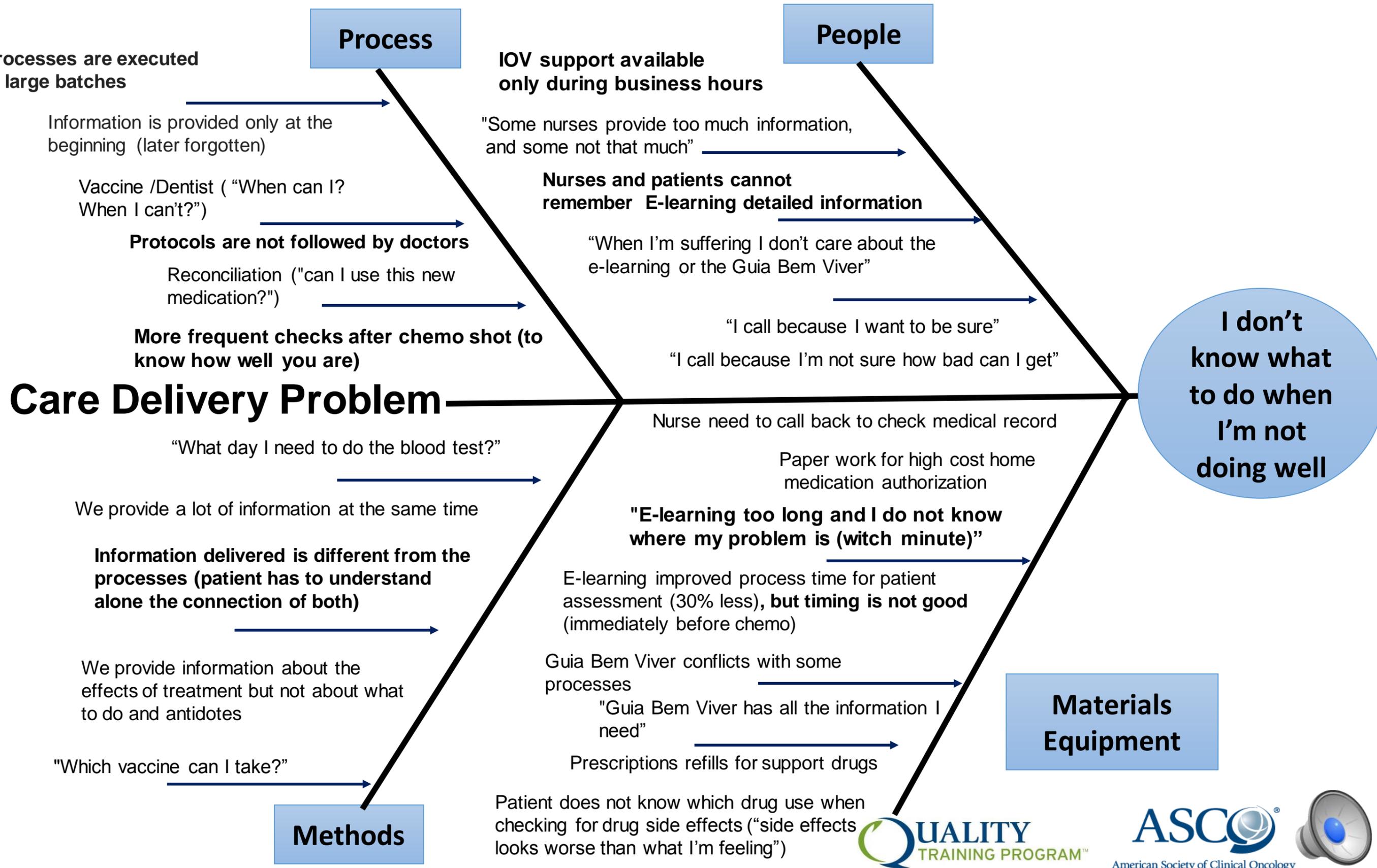


# Team Members

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



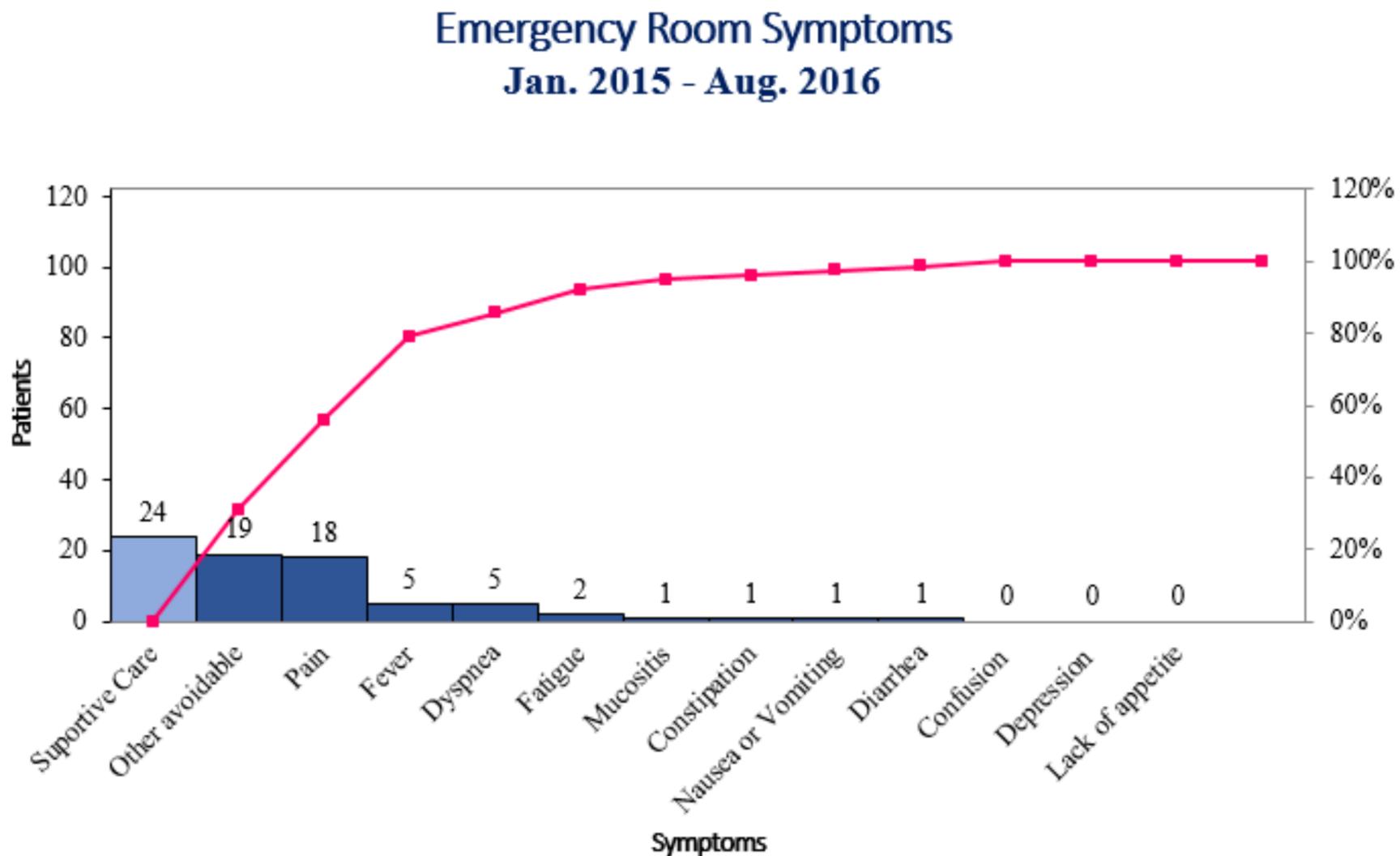
# Cause & Effect/ Fishbone Diagram



# Diagnostic Data 1

Pareto for ER admissions: symptoms and complaints

Symptoms	Visit	Cumulative %
Supportive Care	24	31%
Other avoidable	19	56%
Pain	18	79%
Fever	5	86%
Dyspnea	5	92%
Fatigue	2	95%
Mucositis	1	96%
Constipation	1	97%
Nausea or Vomiting	1	99%
Diarrhea	1	100%
Confusion	0	100%
Depression	0	100%
Lack of appetite	0	100%



## Comments:

- 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;
- Data quality is weak**, it was collected during patient appointments.

# Diagnostic Data 2

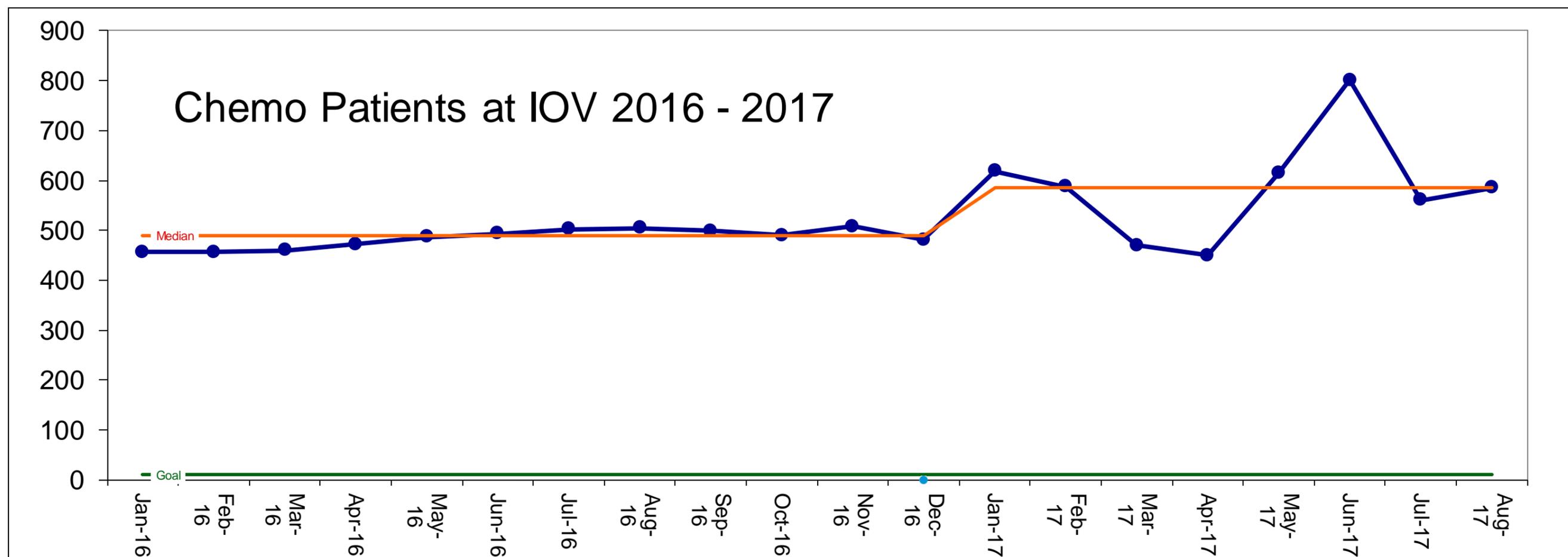
## (Voice of the Customer)

- 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

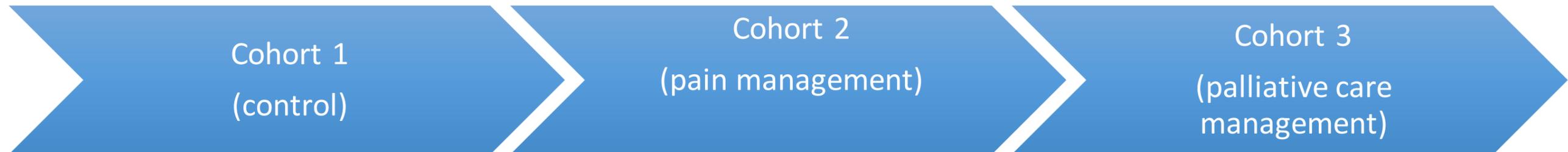


### Comments:

- 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



Jan 2016 – Aug 2016

Data Collected:

- ER admissions for Stage IV deceased patients between Jan16 and Aug16
- Symptoms associated with ER admission

Aug 2016 - Aug 2017

Data Collected:

- ER admissions for Stage IV deceased patients
- Symptoms associated with ER admission

Project Launch:

- VOC
- Data collect
- Standards

Sep 2017 – Apr 2018

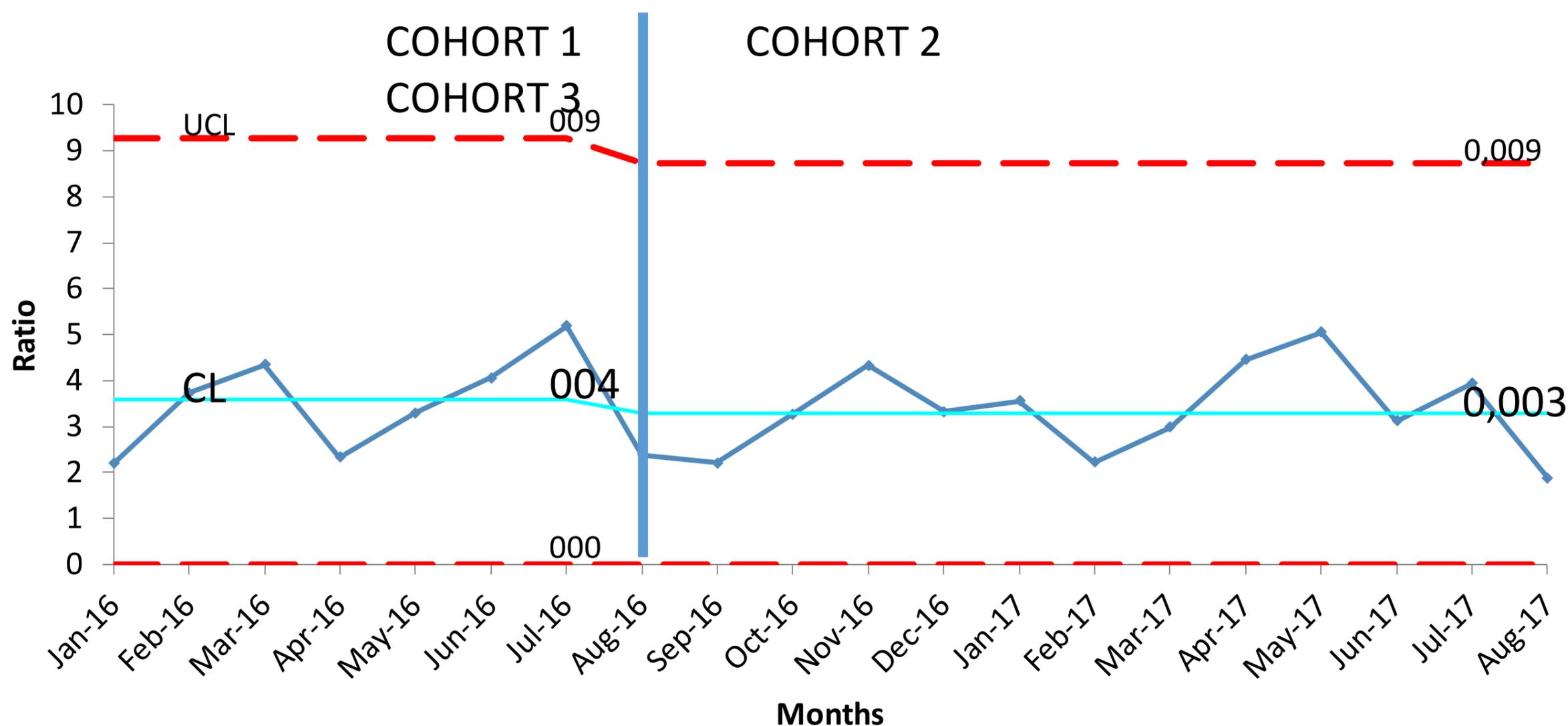
Data Collected:

- ER admissions for Stage IV deceased patients
- Symptoms associated with ER admission



# Baseline Data

## Stage IV ER admissions/total chemo patients



### Comments:

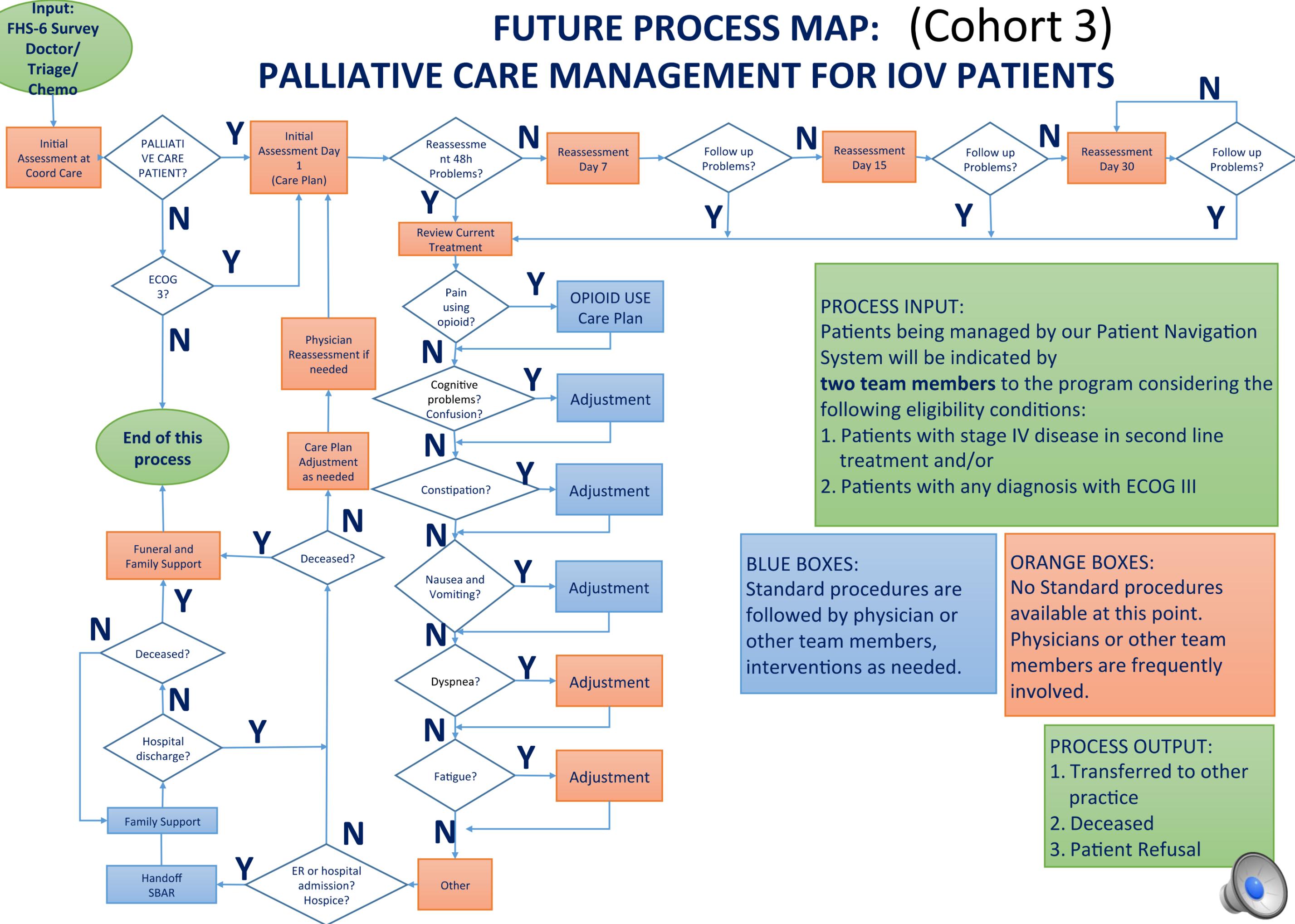
- Evaluate Stage IV ER admission ratio to total chemo patients can be one way to reduce bias due total chemo patients fluctuation.**
- We will use this ratio as our baseline data.**





# 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.

## 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

Date of PDSA Cycle	Description of Intervention	Results	Action Steps
PDSA #1: 06/12/2017 08/23/2017	<ul style="list-style-type: none"> <li>NURSE EDUCATION &amp; TRAINING</li> <li>Standard Work Protocols (SW) to manage symptoms:</li> <li>Review current SW and create new ones: Pain, Mucositis, Nausea and Vomiting, Fever, Diarrhea, Mental Confusion and Syncope, Fatigue, Dyspnea and Inappetence;</li> </ul>	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)	<ul style="list-style-type: none"> <li>PDSA: trial use with 10 patients – pain in a separated flow (ongoing since Aug 2016);</li> <li>Education/training material will be provided to PDSA cycle 4</li> </ul>
PDSA #2: 06/22/2017 08/31/2017	<ul style="list-style-type: none"> <li>PATIENT EDUCATION MATERIAL</li> <li>Reviewing the patient educational materials: printed, online and verbal.</li> </ul>	Not fully developed, still ongoing	<ul style="list-style-type: none"> <li>Education material will be provided to PDSA cycle 4</li> </ul>
PDSA #3: 06/22/2017 08/31/2017	<ul style="list-style-type: none"> <li>CHAT</li> <li>Define tool and create a CHAT;</li> <li>Use SW (PDSA 1+2) and Test chat;</li> <li>Provide pilot access for 10 patients.</li> </ul>	<b>Patients considering too complicated to access chat.</b> Chat robots are not being helpful.	<ul style="list-style-type: none"> <li>Create a new channel for phone service (cellular) for patients.</li> <li><b>ABANDONED</b></li> </ul>
PDSA #4: 09/01/2017 09/30/2017	<ul style="list-style-type: none"> <li>Go live with SW developed in PDSA 1+2 and provide dedicated access by phone to all patients.</li> <li>Evaluate working hours of services and Weekend support</li> <li>Improve data quality</li> </ul>	Regular working hours seem to be enough to provide proposed care. Developing a special plan for Fridays and holidays	<ul style="list-style-type: none"> <li>All stage IV patients (pain included)</li> <li>Plan to Fridays and holidays</li> <li>Change data collection methods</li> </ul>







# PDSA #1 + #2: Materials in use/Developed (samples)

Segmented E-learning + Printed materials

**PASSO 4: Orientações realizadas**

RECOMENDAÇÕES NUTRICIONAIS GERAIS	<input type="checkbox"/> Evite alimentos duros, salgados, ácidos, picantes ou secos e vegetais crus <input type="checkbox"/> Utilize alimentos à temperatura ambiente, fria ou gelada <input type="checkbox"/> Modifique a consistência da dieta de acordo com o grau de mucosite
<b>MUCOSITE GRAU 1</b> <b>1</b>	<input type="checkbox"/> Oncion A em Orabase - passar 3-4x/dia <input type="checkbox"/> Cloridrato de benzidamida - colutório 3 ou + bochechos/dia - 1 medida pura ou diluída em pouca água. <input type="checkbox"/> Lidocaína 2% spray - aplicar antes das refeições se tiver dor ao se alimentar. <input type="checkbox"/> Laser de Baixa Potência - CCP em RT e QT
<b>MUCOSITE GRAU 2</b> <b>2</b>	<input type="checkbox"/> Recomendações nutricionais e medidas para grau 1 <input type="checkbox"/> Analgésicos - Dipirona 500mg ou Paracetamol 500mg de 6/6h <input type="checkbox"/> Prednisona 10-20mg/dia por 4 dias <input type="checkbox"/> Laser de Baixa Potências - CCP
<b>MUCOSITE GRAU 3</b> <b>3</b>	<input type="checkbox"/> Recomendações nutricionais e medidas para grau 1 e 2 <input type="checkbox"/> Solicitado ao médico avaliação para associar opióide (Codeína/morfina). Qual: <input type="checkbox"/> Solicitado ao médico avaliação da necessidade de nutrição enteral <input type="checkbox"/> Solicitado ao médico avaliação para realização de hemograma.
<b>MUCOSITE GRAU 4</b> <b>4</b>	<input type="checkbox"/> Orientado para procurar pronto socorro e solicitar avaliação de internação hospitalar

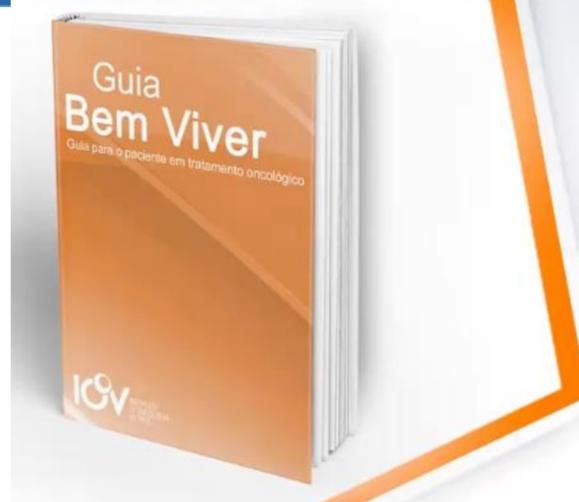
**PASSO 5: seguimento**

Contato	Avaliação	Conduta
<b>24 Horas</b> / /	Dor: <input type="checkbox"/> sim <input type="checkbox"/> não Dieta: <input type="checkbox"/> normal <input type="checkbox"/> modificada Aumento das Lesões: <input type="checkbox"/> sim <input type="checkbox"/> não	
<b>48 Horas</b> / /	Dor: <input type="checkbox"/> sim <input type="checkbox"/> não Dieta: <input type="checkbox"/> normal <input type="checkbox"/> modificada Aumento das Lesões: <input type="checkbox"/> sim <input type="checkbox"/> não	
<b>72 Horas</b> / /	Dor: <input type="checkbox"/> sim <input type="checkbox"/> não Dieta: <input type="checkbox"/> normal <input type="checkbox"/> modificada Aumento das Lesões: <input type="checkbox"/> sim <input type="checkbox"/> não	

Enfermeira Responsável

Observações:

O Guia Bem Viver



Efeitos Colaterais dos Medicamentos



**NÁUSEAS E VÔMITO**

- ⇒ Faça refeições pequenas;
- ⇒ Tome líquidos em quantidades fracionadas;
- ⇒ Chupe pedras de gelo;
- ⇒ Siga a prescrição do seu médico;



**Constipação**

- Alimentos ricos em fibras;
- Ingestão de água;
- Atividade física;
- Não use laxante por conta própria;
- Informe ao médico.

# 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.**

The image shows two screenshots. The top screenshot is a browser window displaying the IOV patient support page. The URL is [www.iov.med.br/atendimento/suporte.php](http://www.iov.med.br/atendimento/suporte.php). The page features a banner with a smiling female doctor and the text "IOV. SAÚDE DE PRIMEIRO MUNDO PARA VOCÊ.". A "Chat Online" form is visible on the right, with fields for "NOME" (Seu nome completo), "TELEFONE" (+55 Bra: (99) 9 9999-9999), and "E-MAIL" (Seu melhor e-mail). The bottom screenshot is a PowerZAP chat management dashboard. The dashboard has a blue header with "PowerZAP" and a search bar. Below the header, there are navigation tabs: "Clientes", "Atendimentos", "Relatórios", "Utilidades", and "Configurações". The main area displays a list of chat sessions. Each session includes a patient profile (name and phone number), a status (e.g., "Respondeu 2 meses atras atras", "Primeiro atendimento", "Finalizou o atendimento"), and a symptom tag (e.g., "Nausea / Vômito", "Dor").

# PDSA #4: Dedicated Phone Access

**Test period: 8 weeks  
(09/01 – 10/31/17)**

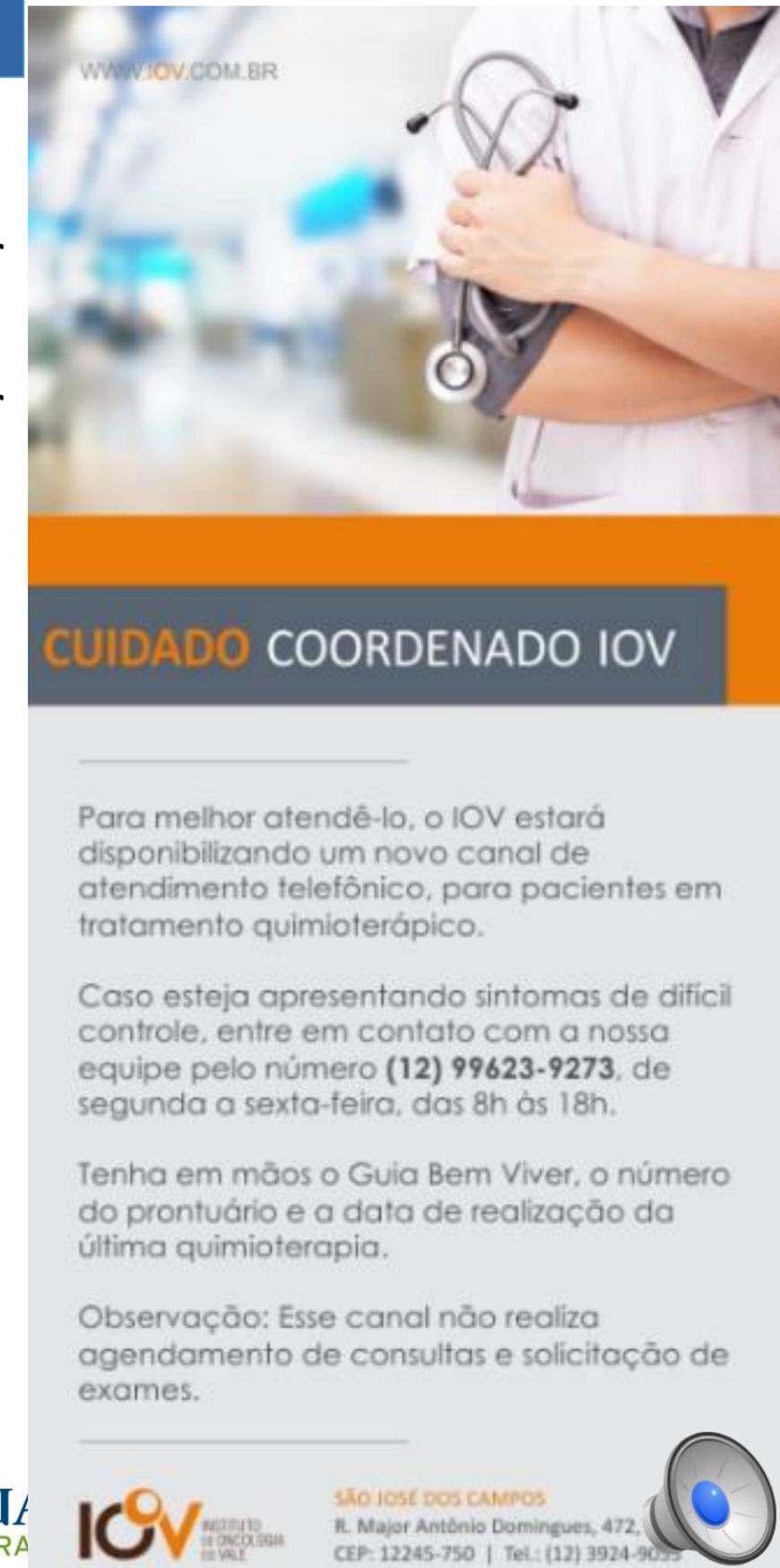
## **Results:**

- 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 COLLECTON METHODS**

Project flyer  
w/ Dedicated  
Phone number



WWW.IOV.COM.BR

**CUIDADO COORDENADO IOV**

Para melhor atendê-lo, o IOV estará disponibilizando um novo canal de atendimento telefônico, para pacientes em tratamento quimioterápico.

Caso esteja apresentando sintomas de difícil controle, entre em contato com a nossa equipe pelo número **(12) 99623-9273**, de segunda a sexta-feira, das 8h às 18h.

Tenha em mãos o Guia Bem Viver, o número do prontuário e a data de realização da última quimioterapia.

Observação: Esse canal não realiza agendamento de consultas e solicitação de exames.

**QUA** TRA

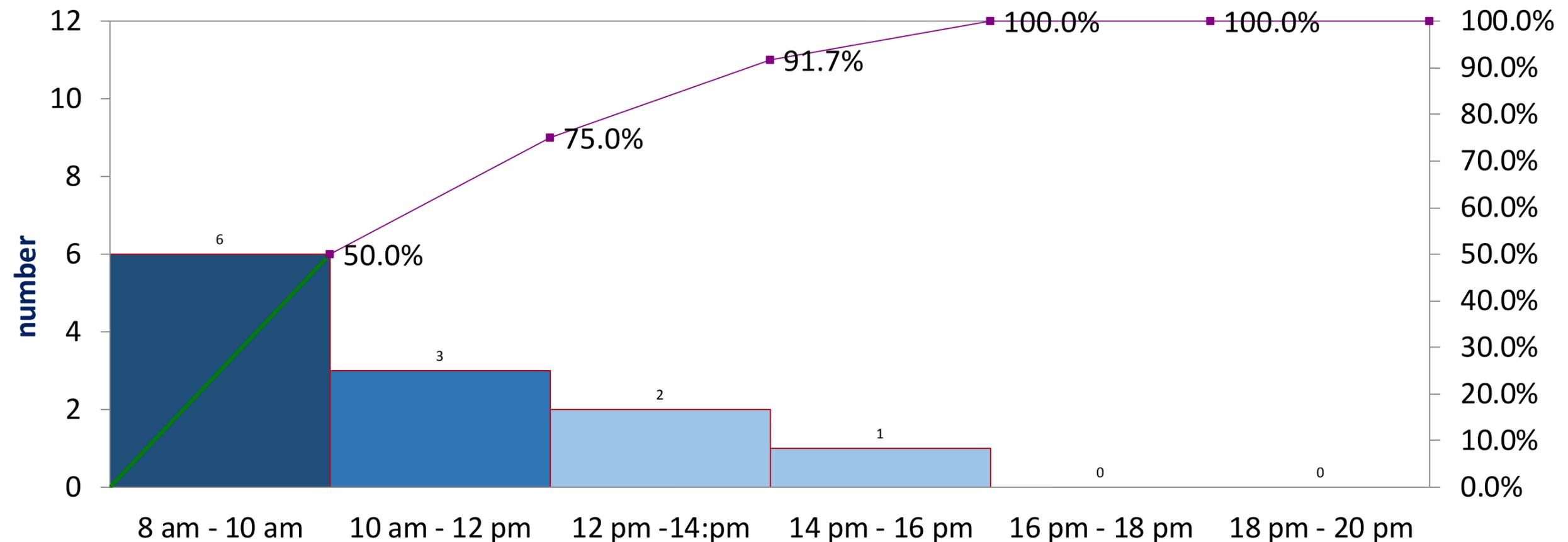
**IOV** INSTITUTO DE ONCOLOGIA DO VALE

**SÃO JOSÉ DOS CAMPOS**  
R. Major Antônio Domingues, 472,  
CEP: 12245-750 | Tel.: (12) 3924-9033



# PDSA #4: Dedicated Phone Access Initial Data

### Number of calls 09/01/2017 - 09/22/2017



### Comments:

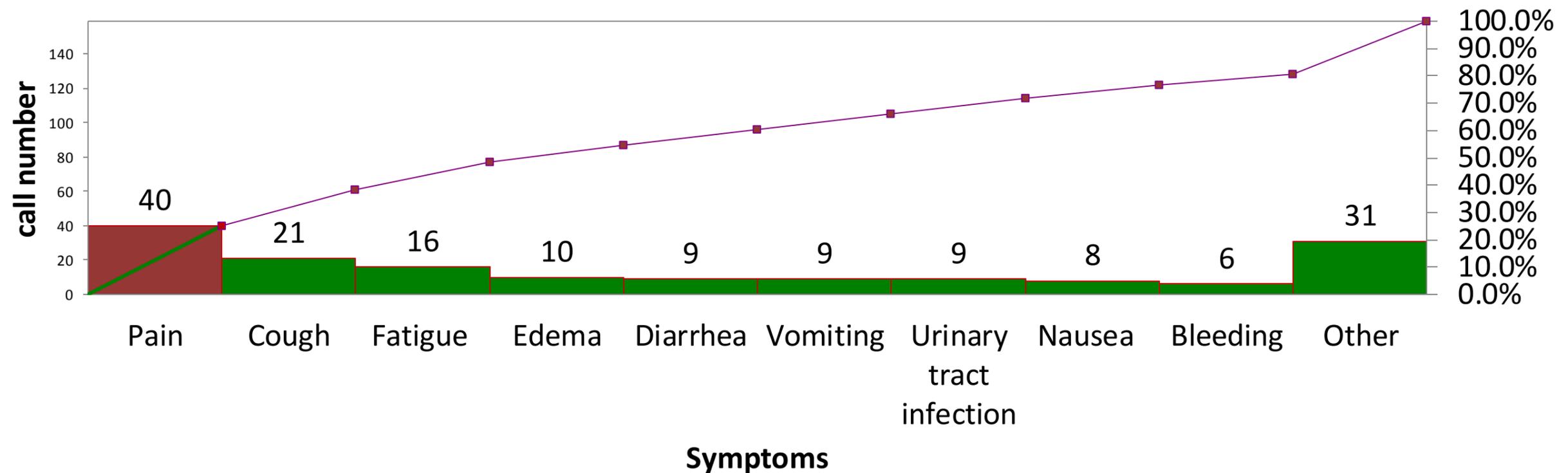
- Most calls are until noon;
- No calls after 6 PM (no need for after hours availability?).



# 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: ***“provide 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

#### 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.**

#### 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

**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

Graph title

Insert graph

#### 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

