

This presenter has nothing to disclose

# Hoshin Kanri for Patient Safety

CARLOS FREDERICO PINTO



Tuesday Dec 10 1:30 PM - 2:45 PM

### **Session Objectives**

- Use both Hoshin Kanri to align organizational goals and outcomes and the standard methods for organizational alignment, such as Trigger/Tracer tools, daily huddles, and leadership huddles.
  - VSM-HFMEA
  - How to use standard work for organizational alignment: daily huddles, Trigger/Tracer tools.
- Describe the key attributes of a strategic planning and deployment process that embraces continuous improvement principles and puts patients first.
- Identify ways in which Hoshin Kanri planning can be used to build a shared narrative and facilitate health system transformation, particularly with respect to patient safety.





**IOV** Taubaté

**Private Practice** 

#### Who are we?

- Outpatient Cancer Care Group;
- Chemo and Radiotherapy Centers:
  - 6 chemo units;
  - 3 radiation units (4 LINACs);
  - ~180 employees/partners;
- 45,000 medical appointments/year;
- ~500 patients under treatment daily:
  - 250 radiation (\*);
  - 160 IV chemo;
  - 100 PO chemo;
- Covering cancer treatment for ~70% of our Metro Area (not exclusively);









#### What is hoshin kanri?

 Policy deployment method based on "up stream" and "down stream" agreements (A3s) and – for us – with

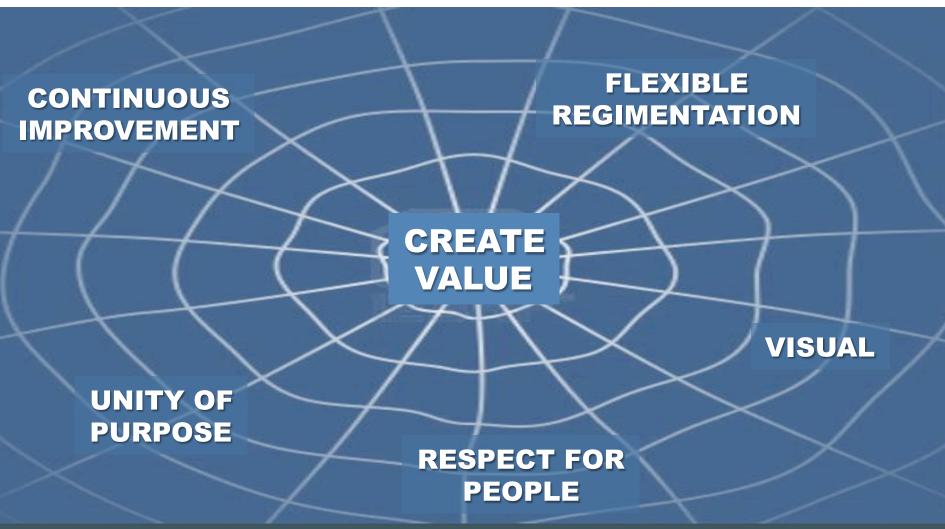
#### **Focus on Safety**

 We aligned our Policy Deployment to the 8 steps for patient safety.

## Why Lean?



#### The Promise of Lean in Healthcare





#### **Hoshin Kanri IOV 2010 – 2013**

Directive 1:

**LEAN THINKING** 

Directive 2:

**PATIENT SAFETY** 

8 Steps to Achieving Patient Safety and High Reliability

(Leadership Guide to Patient Safety)



**CONVERGENCE OF FOCUS:** 

2010-13 working projects (Action Plans)



# 8 Steps to Achieving Patient Safety and High Reliability (guidelines for safety)

Step 1:	Address Strategic Priorities, Culture, and Infrastructure
Step 2:	Engage Key Stakeholders
Step 3:	Communicate and Build Awareness
Step 4:	Establish, Oversee, and Communicate System-Level Aims
Step 5:	Track/Measure Performance Over Time, Strengthen Analysis
Step 6:	Support Staff and Patients/Families Impacted by Medical Errors
Step 7:	Align System-Wide Activities and Incentives
Step 8:	Redesign Systems and Improve Reliability



## Key Challenges

- Commitment to change
  - Safety is a System Property (IOM 2001): for everyone.
  - Get everyone in the same platform AND looking at the same direction;
- Respect for people.
  - Future Shock is "too much change in too short a period of time";
  - People don't fear change, they fear the unknown;
  - Understand hidden patterns and hidden values.
- Agree on new standards
  - Make it visible: If you can see you can deal with...
  - Everything is about agreements...



### Thumbs up!

- Daily Huddles (up and down stream)
- Safety Alert System + Kaizen Board
- Culture Survey MSI 2007 and other surveys
- VSM-HFMEA



## Not so good...

- Sustaining team design
  - For information
  - For people development
  - 5S (but 5S is ok...)
- Leveling all activities
  - We are growing faster than we can manage
- Sustaining Safety Alert System in a fast growing environment.

Common Root cause (?): standard work missing parts...

# \* Step by Step

Address Strategic Priorities, Culture, and Infrastructure	Engage Key Stakeholders	Communicate and Build Awareness	Establish, Oversee, and Communicate System-Level Aims
Lean thinking "model" and project alignment	Team work and flow REDESIGN to CONNECT FLOWS	DAILY HUDDLES SBARs	IHI-WSM adapted to our needs
Board Approval "A3 shake hands"	4 DAYS <b>KAIZEN</b> EVENT (~ RIE)	DAILY → WEEKLY → M	MONTHLY <b>HUDDLES</b>
Framework approved: "IHI 8 steps paper"	Information team Patient flow team Environment team People team	Huddles STAN	IDARD WORK



# \* Step by Step

Track/Measure Performance Over Time, Strengthen Analysis	Support Staff and Patients/Families Impacted by Medical Errors	Align System-Wide Activities and Incentives	Redesign Systems and Improve Reliability
IHI WSM Tracer – Trigger tools	Root Cause Analysis (London Protocol)	Lean and safety training program	
HUDDLES STANDARD WORK	Respect for People (no blame culture)	Lean thinking valued For carreer progression	VSM - HFMEA
<b>2013→</b> ASCO-QOPI Survey	Training progra MSI-200 Lean too (2013) LES		



### Agreement "Kaizen Event"

- Four day "Kaizen Event" in 2 units: Hoshin Kanri for Patient Safety;
- 10 weeks preparation and 4 days event (feb/2011);
- Around 50 action plans developed to be executed in 2011-13;
- Agreements were made and working teams designed to specific projects (A3s);
- Interim reviews planned every 45 – 90 days;
- Major adjustments would require new agreements.

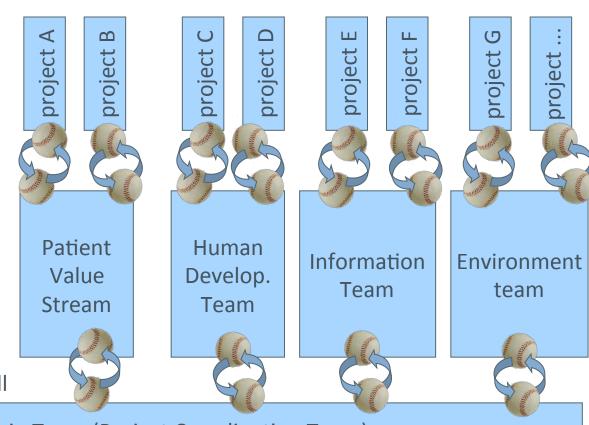




#### Hoshin Kanri IOV "style": teamwork design

Project
Yellow & Green
Belt 2009-10:
Internal
Lean training
for 2010-2013





Catchball

Leadership Team (Project Coordination Team)





# Policy Deployment and **Daily Management:**

#### **Daily Huddles STANDARD WORK:**

- Refers to the six dimensions of care, specially focused on safety as of:
  - Kaizen Boards (continuous improvement)
  - Root Cause Analysis of Sentinel Events (The London Protocol Adapted)
  - Safety Alert System
  - Adverse and Never Events Forms

Catchball for further alignment (similar to Thedacare)

- Weekly Huddle for Safety at every department /area board (16 in total)
- Weekly Leadership Huddles at Q0 and "Boards on Board"
- Monthly Huddle at WSM-IHI board for all.



#### **Huddles down stream:**

Daily for Safety

WHATHAMA

Monthly: Whole System Measures

Segurança

Eficiência

Weekly for teams

with thinks

SEQUEDRO DEPADOR DE LORIAS

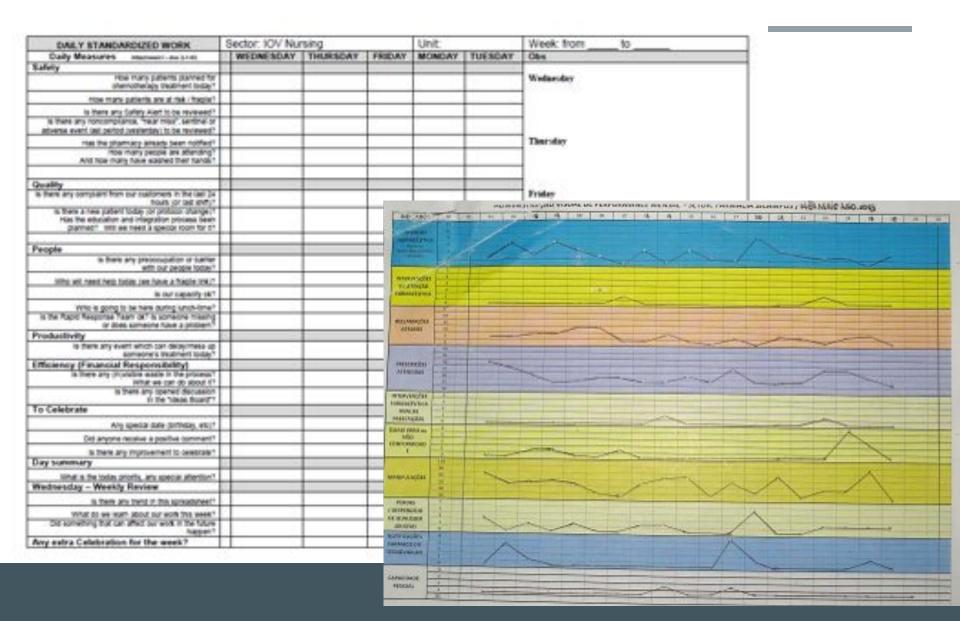
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"Boards on board" weekly

WHAT HAVE



#### Daily Huddle and Variation Sheet Samples



# Kaizen Board, Alert System and Daily Huddles Board



## Kaizen board: Respect for People











#### Sentinel Event: No blame on RCA







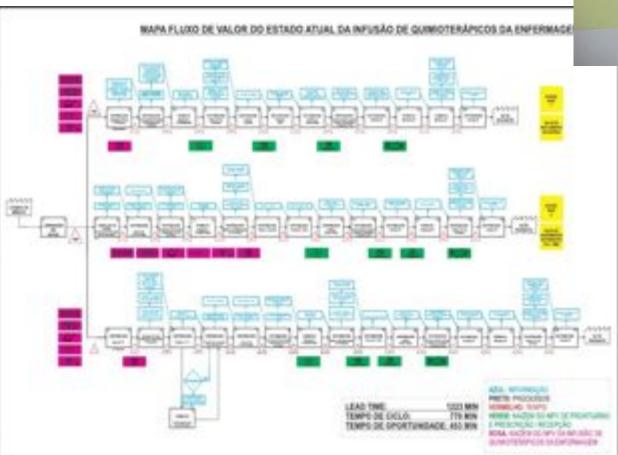
Chair Poka-yoke: base enlargement

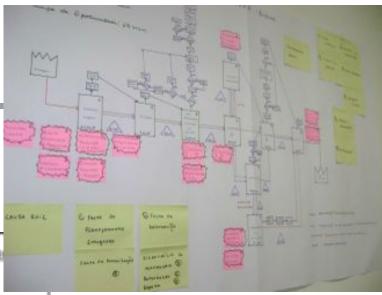
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### **Process Redesign**

Value Stream Mapping





Above: Partial View

Left: Complete Schema of Chemo VSM



# **VSM**

VALUE STREAM MAP

CURRENT STATE

**PROBLEM ANALYSIS** 

# FUTURE STATE DESIGN

(countermeasures)

ACTION PLAN FOR THE FUTURE STATE (VALUE DELIVERY)

> EXECUTE FUTURE STATE PLAN

**CHECK / ADOPT** 

# **VSM - HFMEA**

FUTURE STATE DESIGN

(countermeasures)

VALUE STREAM MAP

CURRENT STATE

PROBLEM ANALYSIS

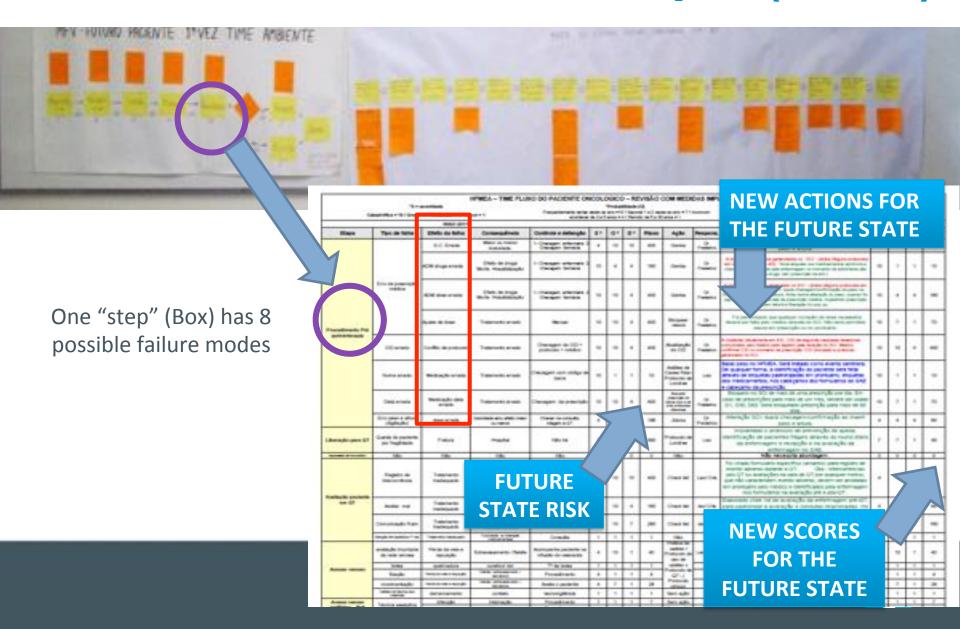
ACTION PLAN FOR THE FUTURE STATE (VALUE DELIVERY)

FUTURE STATE HFMEA

> EXECUTE FUTURE STATE PLAN

CHECK / ADOPT

## VSM Future State Sample (~25%)



#### **VSM Patient Flow & HFMEA**

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<ul><li>HFMEA Patient Flow</li></ul>	(#1	) at IOV
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May 2011: 5,098 points

Review Jan 2012: 2,074 points

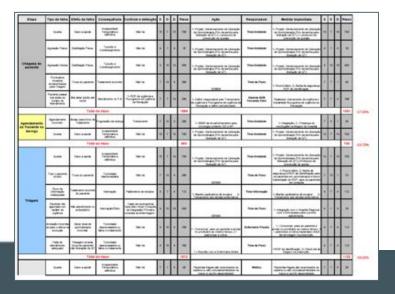
# ~60% REDUCTION OF IDENTIFIED RISKS

"Care Path HFMEA" at IOV-HRVP Unit:

March 2011: 27,261 points

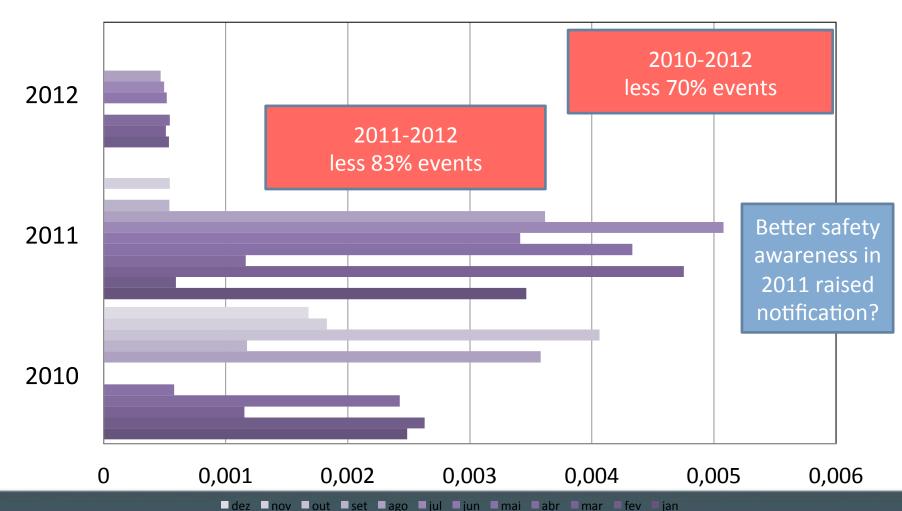
Review March 2012: 17,085 points

~38% REDUCTION OF IDENTIFIED RISKS





# VSM-HFMEA on SAFETY: Never Events per Procedures (by month)





## Trigger/Tracer Standard Work

## Trigger/Tracer Audits as check points for medical records:

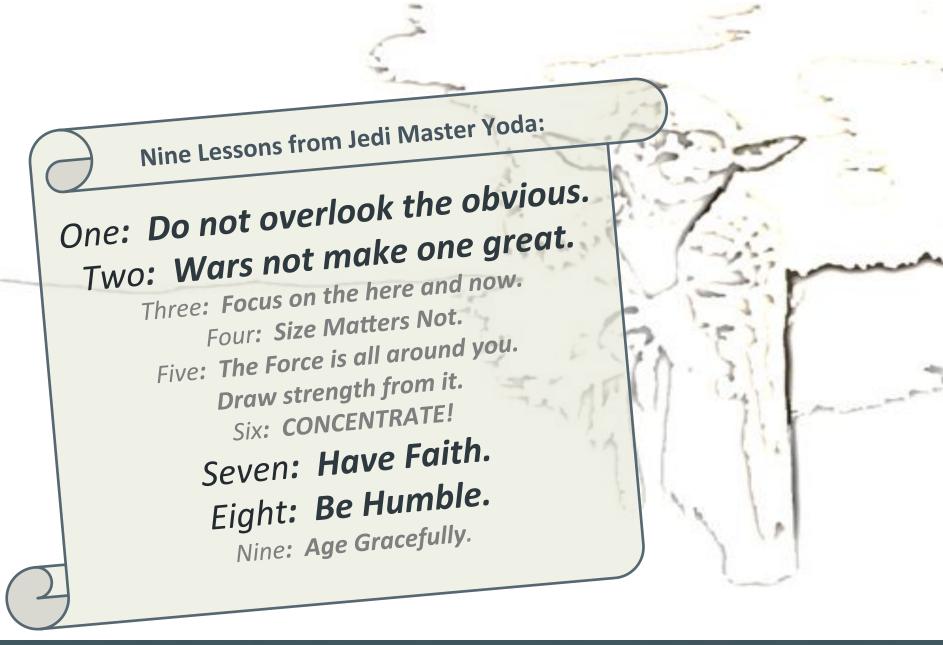
- Fall Prevention Protocol
- Visits to Emergency
- Hospitalizations
- Surgery or other
- Drug Reconciliation
- Pain and Opioid use
- Constipation
- ECOG





#### IOV Lean Journey so far: HOW WE ARE CREATING VALUE

SAFETY: (sentinel "never" events)	- 75 % (2010-2012)
SAFETY: (lost work days)	2 in sept 2009 (1 event) and 4 in june 2013 (1 "in transit" event)
Timely: 3rd 1st appointment	< 7 / 14 days (90% of time)
Waste elimination in km (transportation and movement)	18,000 km (accumulated)
Waste elimination in working hours (eliminated tasks, movement)	13,000 hours (per year) 6.25 FTEs
Productivity annual gain per employee	12 days (per year) (5.4%)
Overtime from 2010 to 2012	- 40 %
Inventory	- 70 % (total)





#### **Thanks**

#### Additional Material:

- My IHI → Enrollments → Session → Handouts
- Daily Huddles (with subtitles) Video:
   <a href="http://www.youtube.com/watch?v=JFL6Rk74mmk&feature=relmfu">http://www.youtube.com/watch?v=JFL6Rk74mmk&feature=relmfu</a>
- Routine Management for Strategy Deployment (with subtitles) video: <u>http://www.youtube.com/watch?v=cvoz1OrURjw&feature=relmfu</u>

<a href="mailto:carlosfpinto@iov.com.br">carlosfpinto@iov.com.br</a>
<a href="mailto:www.iov.com.br">www.iov.com.br</a>





#### Extra: How we used the HFMEA

- Using each Future State "box", identify most relevant failure mode and possible effects.
- Use the score table to calculate this "box" score
- 3. Sum all scores.
- 4. This is your Future State Before HFMEA score.
- 5. Now work on these failure modes: propose new improvements and go further on safety.

- Each of these failure modes are scored for:
  - Chance (probability of happening),
     higher the value, higher the risk;
  - Consequences (event possible outcome), higher the value, higher the risk;
  - "Preventability"(current ways to avoid risk), higher the value, less avoidable risk.

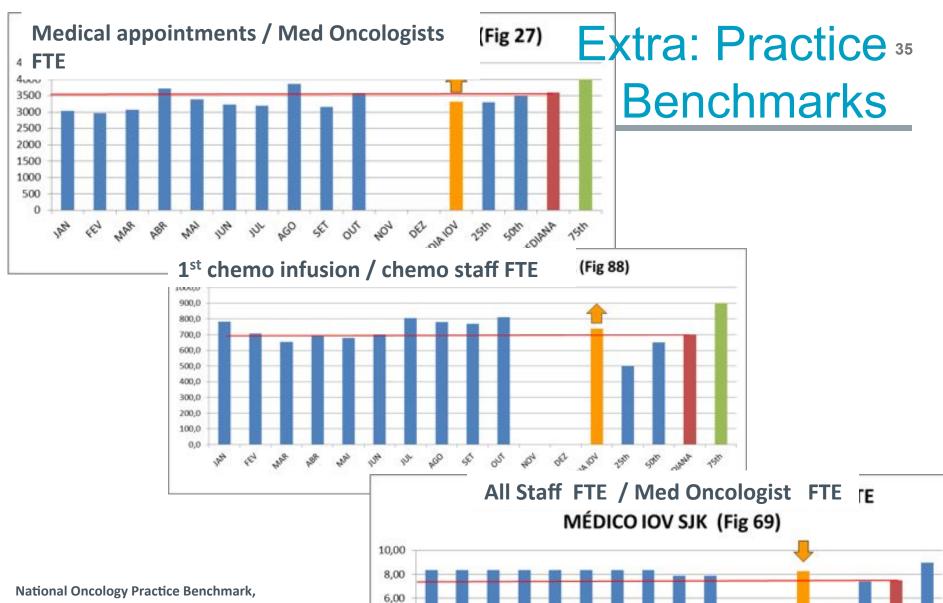


### Extra: Triggers for outpatient care

- T1 New Cancer diagnosis
- T2 Home Care
- T3 Hospital Admission/ discharge
- T4 More than 2 doctors in one year
- T5 Surgical procedure
- T6 Emergency Visit
- T7 More than 5 drugs in use

- T8 Ask for new doctor assistance
- T9 Letter of complaint
- T10 More than 3 nurse calls at the same week
- T11 Abnormal blood sample
- T12 Sudden medication stop
- T13 Sudden treatment plan change
- T14 Emergency call or CR arrest





4,00

2,00

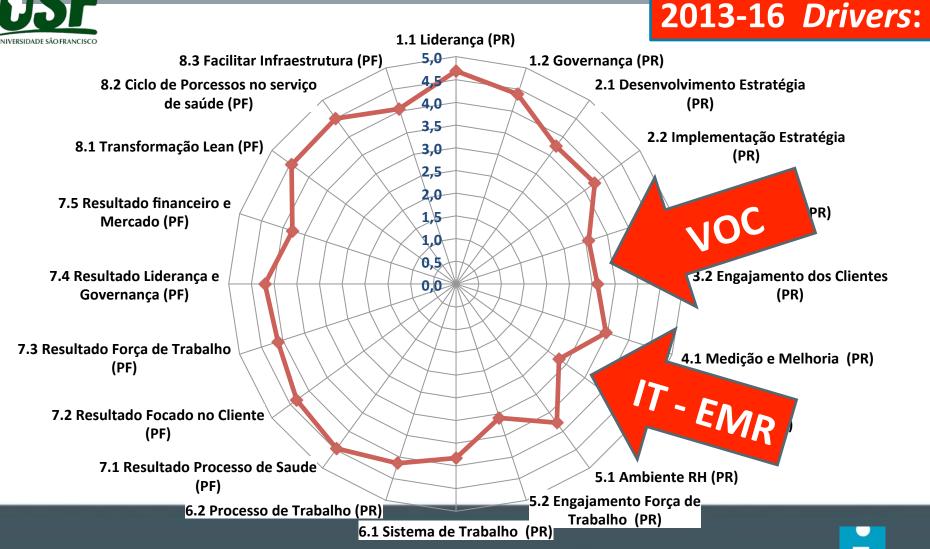
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**National Oncology Practice Benchmark,** 2012 Report on 2011 Data

By Elaine L. Towle, CMPE, Thomas R. Barr, MBA, and James L. Senese, MS, RPh

Journal of Oncology Practice Publish Ahead of Print, published on October 2, 2012 as doi:10.1200/JOP. 2012.000735

#### Extra: Align for the future (2013-16): **2013 LESAT**



## **Major Outcomes**

#### Safety:

- Predicted risk reduction of patient journey from 40 to 60%;
- Reduction in 70% of Sentinel Events (never events) in 24 months;
- Patient harm (TRIGGER TOOL) in the lower quadrant:

~ 7/1000 procedures (outpatient facility);

#### Other outcomes:

- Timely, "3rd 1st appointment":
  - At IOV 99% in less than 7 days;
  - At IOV-HRVP (public hospital) 80% in less than 14 days.

#### Efficiency:

- Over 30% capacity improvement between 2010 and 2012;
- Same facilities, minimal layout redesign;
- 40% reduction in overtime with the same number of employees.
- (Major layout redesign in 2013)

