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.
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);

Where are we?

2,4 million inhabitants
Metro Area in Sao Paulo State
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

Lean is:

1. Create Value
2. Continuous Improvement
3. Unity of Purpose
4. Respect for People
5. Visual
6. Flexible Regimentation

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
  - \textbf{Safety is a System Property} (IOM 2001).
  - Get everyone in the same platform AND looking at the same direction;
- Respect for people.
  - \textbf{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…

Major Outcomes

- \textbf{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:
    \begin{itemize}
    \item \(\sim \frac{7}{1000}\) procedures (outpatient facility);
    \end{itemize}
- \textbf{Other outcomes}:
  - \textbf{Timely, “3rd 1st appointment”:}
    \begin{itemize}
    \item At IOV 99% in less than 7 days;
    \item At IOV-HRVP (public hospital) 80% in less than 14 days.
    \end{itemize}
- \textbf{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)
Thumbs up!

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

Not so well...

- 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

<table>
<thead>
<tr>
<th>Address Strategic Priorities, Culture, and Infrastructure</th>
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</tr>
</thead>
<tbody>
<tr>
<td>Lean thinking “model” and project alignment</td>
<td>Team work and flow REDESIGN to CONNECT FLOWS</td>
<td>DAILY HUDDLES SBARs</td>
<td>IHI-WSM adapted to our needs</td>
</tr>
<tr>
<td>Board Approval “A3 shake hands”</td>
<td>4 DAYS KAIZEN EVENT (“RIE”)</td>
<td>DAILY → WEEKLY → MONTHLY HUDDLES</td>
<td></td>
</tr>
<tr>
<td>Framework approved: “IHI 8 steps paper”</td>
<td>Information team Patient flow team Environment team People team</td>
<td>Huddles STANDARD WORK</td>
<td></td>
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### Step by Step

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<tr>
<td>IHI WSM Tracer – Trigger tools</td>
<td>Root Cause Analysis (London Protocol)</td>
<td>Lean and safety training program</td>
<td>VSM - HFMEA</td>
</tr>
<tr>
<td><strong>HUDDLES STANDARD WORK</strong></td>
<td><strong>Respect for People</strong> (no blame culture)</td>
<td>Lean thinking valued</td>
<td></td>
</tr>
<tr>
<td><strong>Training program 2009-10 and:</strong></td>
<td></td>
<td>For career progression</td>
<td></td>
</tr>
<tr>
<td>2013 → ASCO-QOPI Survey</td>
<td></td>
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<td></td>
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<td>MSI-2007 survey</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>Lean tools survey</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>(2013) LESAT survey</td>
<td></td>
</tr>
</tbody>
</table>
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.

Model ➔ Engage

**Hoshin Kanri IOV “style”: teamwork design**

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

**WSM project**

Leadership Team (Project Coordination Team)

- Patient Value Stream
- Human Develop. Team
- Information Team
- Environment team

**Catchball**

Executive Director ➔ BOD
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:

Monthly: Whole System Measures
Daily for Safety
Weekly for teams
“Boards on board” weekly
Align: Whole System Measures – IHI

SIX DIMENSIONS OF CARE at IOV

- **Safety:**
  - Triggers (harms)
  - Personnel safety
  - Events (Alerts and “never”)

- **Effectivity**
  - CLINICAL OUTCOME QOPI-ASCO (2013 ASCO-Pilot)
  - CLINICAL AUDIT- QOPI (Tracer)
  - FHS-6

- **Efficiency**
  - Productivity (FTEs)
    - Chemo in the last six months*
    - Hospital days in the last six months*

  - Timely
    - Third first appointment
  - Patient Centered
    - Surveys, FHS-6
    - VSMs
    - QOPI
  - Equitative
    - FHS-6 compared
    - Clinical Outcome compared
  - LEAN ENTERPRISE


Daily Huddle and Variation Sheet Samples
Kaizen Board, Alert System and Daily Huddles Board

Safety Alert System

Kaizen board: Respect for People
Sentinel Event: No blame on RCA

Colored Sectors: improved safety and services.

Chair Poka-yoke: base enlargement

Sample MSI 2007 Survey Analysis

http://www.yorku.ca/patsafety/pcculture/questionnaires/MSI%20Version%202005%20FINAL.pdf
Process Redesign

Value Stream Mapping

Above: Partial View
Left: Complete Schema of Chemo VSM

VSM

VALUE STREAM MAP

FUTURE STATE DESIGN (countermeasures)

CURRENT STATE

FUTURE STATE PLAN

EXECUTE FUTURE STATE PLAN

PROBLEM ANALYSIS

CHECK / ADOPT

Rother M, and Shook J. Learning to See. LEI, Cambridge, 2002
VSM - HFMEA

VALUE STREAM MAP

CURRENT STATE

PROBLEM ANALYSIS

FUTURE STATE DESIGN (countermeasures)

ACTION PLAN FOR THE FUTURE STATE (VALUE DELIVERY)

FUTURE STATE HFMEA

EXECUTE FUTURE STATE PLAN

CHECK / ADOPT


VSM Future State Sample (~25%)

One “step” (Box) has 8 possible failure modes

NEW ACTIONS FOR THE FUTURE STATE

FUTURE STATE RISK

NEW SCORES FOR THE FUTURE STATE
VSM Patient Flow & HFMEA

- HFMEA Patient Flow (#1) at IOV
  - 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)

- 2010-2012 less 70% events
- 2011-2012 less 83% events

Better safety awareness in 2011 raised notification?
Trigger/Tracer Standard Work

Trigger/Tracer Audits as checkpoints for medical records:
- Fall Prevention Protocol
- Visits to Emergency
- Hospitalizations
- Surgery or other
- Drug Reconciliation
- Pain and Opioid use
- Constipation
- ECOG

http://www.ihi.org/knowledge/Pages/Tools/IHIGlobalTriggerToolforMeasuringAEs.aspx

IOV Lean Journey so far:
HOW WE ARE CREATING VALUE

<table>
<thead>
<tr>
<th>Category</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>SAFETY (&quot;never&quot; events)</td>
<td>- 75 % (2010-2012)</td>
</tr>
<tr>
<td>Waste elimination in km</td>
<td>18,000 km (accumulated)</td>
</tr>
<tr>
<td>(transportation and movement)</td>
<td></td>
</tr>
<tr>
<td>Waste elimination in working hours</td>
<td>13,000 hours (per year)</td>
</tr>
<tr>
<td>(eliminated tasks, movement)</td>
<td>6.25 FTEs</td>
</tr>
<tr>
<td>Productivity annual gain per employee</td>
<td>12 days (per year) (5.4%)</td>
</tr>
<tr>
<td>Overtime from 2010 to 2012</td>
<td>- 40 %</td>
</tr>
<tr>
<td>Power Saved (% reduction in billing)</td>
<td>- 16 % (2013)</td>
</tr>
<tr>
<td>Inventory</td>
<td>- 70 % (total)</td>
</tr>
<tr>
<td>Capacity Improvement (IOV unit)</td>
<td>~ 170 % in six years</td>
</tr>
</tbody>
</table>
Nine Lessons from Jedi Master Yoda:

One: Do not overlook the obvious.
Two: Wars not make one great.
Three: Focus on the here and now.
Four: Size Matters Not.
Five: The Force is all around you.
Draw strength from it.
Six: CONCENTRATE!
Seven: Have Faith.
Eight: Be Humble.
Nine: Age Gracefully.

http://missaytwisted.wordpress.com/lessons-from-jedi-master-yoda/

Thanks

Additional Material:
- My IHI ➔ Enrollments ➔ Session ➔ Handouts
- Daily Huddles (with subtitles)
  Video: [http://www.youtube.com/watch?v=JFL6Rk74mmk&feature=relmfu](http://www.youtube.com/watch?v=JFL6Rk74mmk&feature=relmfu)
- Routine Management for Strategy Deployment (with subtitles)
  video: [http://www.youtube.com/watch?v=cvoz1OfURjw&feature=relmfu](http://www.youtube.com/watch?v=cvoz1OfURjw&feature=relmfu)

Carlosfpinto@iov.com.br
www.iov.com.br
Extra: How we used the HFMEA

1. Using each Future State "box", identify most relevant failure mode and possible effects.
2. 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.

\[ \text{Chance} \times \text{Consequences} \times \text{Prevention} = \text{SCORE} \]

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

http://www.ihi.org/knowledge/Pages/Tools/IHIGlobalTriggerToolforMeasuringAEs.aspx
Medical appointments / Med Oncologists (Fig 27)

1st chemo infusion / chemo staff FTE (Fig 88)

All Staff FTE / Med Oncologist FTE

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

2013-16 Drivers:

8.3 Facilitar Infraestrutura (PF)
8.2 Ciclo de Processos no serviço de saúde (PF)
8.1 Transformação Lean (PF)
7.5 Resultado financeiro e Mercado (PF)
7.4 Resultado Liderança e Governança (PF)
7.3 Resultado Força de Trabalho (PF)
7.2 Resultado Focado no Cliente (PF)
7.1 Resultado Processo de Saúde (PF)
6.2 Processo de Trabalho (PR)
6.1 Sistema de Trabalho (PR)
5.2 Engajamento Força de Trabalho (PR)
5.1 Ambiente RH (PR)
4.1 Medição e Melhoria (PR)
3.2 Engajamento dos Clientes (PR)
2.2 Implementação Estratégia (PR)
2.1 Desenvolvimento Estratégia (PR)
1.2 Governança (PR)
1.1 Liderança (PR)