HEALTHCARE Lean Kaizen

What is 改善?

Ahmed M. El-Sheikh, MBA, MD, CMQ-OE, CPHQ
KAIZEN Definition

“Everybody improving, everywhere, and every day”

DOES IT WORTH to save just ONE MINUTE
KAIZEN Methodology
Mark Graban

KAIZEN CARD

Problem

.idea

Date Originated __________ By:

Expected Benefits

Input Needed From

Implementation Steps

Results Verified? YES / NO

New Method Standardized? YES / NO

Completed Date

3
Kaizen Tour 2014

- Toyota Plant
- Sekigahara factory
- Ukouni Food Services
- Seki Chou Hospital

KAIZEN in KAIZEN Land
**I. KAIZNER Information**

<table>
<thead>
<tr>
<th>Name: Hassan K. Al-Made</th>
<th>ID: MA888</th>
</tr>
</thead>
<tbody>
<tr>
<td>Position: Clinical Dietitian</td>
<td>Department: Clinical Nutrition</td>
</tr>
<tr>
<td>Extension Number: 9488</td>
<td>Email: <a href="mailto:hahahah@gmail.com.de">hahahah@gmail.com.de</a></td>
</tr>
<tr>
<td>Date: 9/11/2013</td>
<td>Location: Breastfeeding Office</td>
</tr>
</tbody>
</table>

**II. Improvement IDEA Details**

- **What was the problem(s) or opportunity for improvement?**
  Young children are very difficult to make them ready to follow dietary instruction.

- **What is your IDEA for improvement?**
  To give advice by using funny ways and games (to have a board with magnetic food items (good and bad ones) and asked them to put good food items to good list and bad ones also).

- **In which stages is your IDEA?**
  - Done: Year already implemented
  - Generalized: New idea implemented in one department

- **Who are the Members of implementation? Teams in each department if the IDEA was generalized**
  - Department Name: Team Member Name:

- **What are the Benefits of your IDEA?**
  - Improved Quality
  - Decreased Motion
  - Decreased Cost
  - Improved safety
  - Other: "Knew exactly what"

- **Before Improvement**
  - Patients satisfaction, good response.

- **After Improvement**
  - Use a simplification or photo.

- Always taking time in the clinic to advice younger children to follow dietary instructions, parents are refusing to keep coming in the clinic because they think that the child will not listen to them.

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**Kaizener of the Month**

- **1.3**
  - Done
  - Hospital
  - Generalized
  - Idea

- **1.1**
  - To Do
  - Completed

- **1.9**

- **1**
  - Done
  - Hospital
  - To Do
  - Generalized
  - Idea

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**Healthcare Lean Kaizen**

**Email:** hahahah@gmail.com.de
ENCOURAGE

ABCDEF TO KAIZEN

1 # of 改善
2 改善：
3 % of ☑改善

Clinical Nutrition Department

OFI Calculation of nutritional formulas

KAIZEN Feeding Formula ticket
Proper barcode label to improve TAT and decrease error

Laboratory Department

Patient Education

OFI: Patients don’t understand insulin pin technique

KAIZEN: Injection education sponge
Pharmacy :: Sequential Kaizens

Lack of Crash Cart Standardization

Summary of Results
ENCOURAGE
ABCD TO KAIZEN

1. # of 改善
   311 IDEAS

ENCOURAGE
ABCD TO KAIZEN

2. 改善: 92 Kaizeners
   16%
ENCOURAGE

3 % of 改善

50%

SFHPM KAIZEN CHAMPION
Departments

<table>
<thead>
<tr>
<th>Absolute Number Of Ideas</th>
<th>Number of Completed Kaizens</th>
<th>Staff Participation Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>141</td>
<td>27</td>
<td>100%</td>
</tr>
</tbody>
</table>

- Nursing Department
- Laboratory and Blood Bank Department
- Clinical Nutrition Department
HONORING SECURITY FORCES HOSPITAL PROGRAM MAKKAH
FOR WINNING IN MIDDLE EAST FORUM ON HEALTHCARE QUALITY AND PATIENT SAFETY COMPETITION

Hamad Medical City - Doha, May 2016

Project: Improvement of SFHPM's Pharmaceutical Services using Kaizen

**Project Sponsors:**
Dr. Mahfouz Al Dirdiri - Program Director General
Dr. Dalal Al Saaid - Deputy Program Director General

**Project Supervisors:**
Dr. Khadija Alkhemzi - Executive Director of Medical Administration
Dr. Abdulrahim Eisa - Head of Pharmaceutical Services

**Project Team:**
- Fs. Saabia Bished - QPS Improvement Specialist
- Fs. Saeed Jerwad - Pharmaceutical Services Quality Officer
- Fs. Niyad Jawaed - Pharmaceutical Services Quality Officer
- Fs. Saeed Alfaris - Pharmaceutical Services Quality Officer

SFHPM - 8th Middle East Forum for Quality and Safety, held by Hamad Medical City, Doha, 2016 second place winner.
Poster Title: Implementation of Healthcare Kaizen to improve pharmaceutical services in Security Forces Hospital, Makkah.
Our experience in KAIZEN

KAIZEN of Documents “Vitalization”
THE END
OF PART ONE

HEALTHCARE LEAN KAIZEN

WHAT is LEAN?
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How many Times?

Request → [Graph showing allocation of time] → Fulfillment

Waste → Adding Value

What is Lean?

Focus on what adds value and move out the waste

• “A systematic approach to identifying and eliminating waste (non-value-added activities) through continuous improvement by flowing the product/service at the pull of the customer (patient) in pursuit of perfection.”

[Diagram showing healthcare lean kaizen]
Lean major domains

Focus only on Value
Classification of activities

Imagine your self the thing

Yes → Is the activity essential?

No → Non Value added
Type 1
ELEMINATE

Business perspective

Value added

Customer perspective

MINIMIZE

( Essential )
Non Value added

☑ Does the customer Welling to pay for this step?
☑ Is it done right from the first time?
☑ Does it change something customer cares about?

What is Waste?
Cash in trash
8 types of waste: DOWNTIME

- Defects
- Overproduction
- Waiting
- Non-Utilized Talent
- Transportation
- Inventory
- Motion
- Extra-Processing

Examples in Medical Imaging

<table>
<thead>
<tr>
<th>Defects</th>
<th>Running unnecessary scans; forms not being signed, faxes sent that are illegible</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overproduction</td>
<td>Undertaking multiple scans</td>
</tr>
<tr>
<td>Waiting</td>
<td>Waiting for referrals/scans; waiting for reports/signatures; waiting for patients, doctors, porters</td>
</tr>
<tr>
<td>Non-utilised Talent</td>
<td>Helpers in waiting rooms; secretaries waiting for reports to be signed</td>
</tr>
<tr>
<td>transportation inventory</td>
<td>Transportation of scan results in post</td>
</tr>
<tr>
<td>motion</td>
<td>Extra supplies</td>
</tr>
<tr>
<td>Excess processing</td>
<td>Time spent looking for staff, entering duplicate information; looking for parts and forms; interruptions from other staff</td>
</tr>
<tr>
<td></td>
<td>The process for ringing porters in the evening is to ring the Help Desk and then to be routed to the porters; entering duplicate information; printing paper reports to send in post</td>
</tr>
</tbody>
</table>

HEALTHCARE LEAN KAIZEN
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Types of waste in service

- Process
- People
- Information
- Asset

Process waste in Healthcare

Non value added
- Waiting, Waiting and waiting
- Review, Rework, REXYZ
- Misuse of automation (HIS)
- Redundant authorizations
- Group labs, Very early Preoperative check.

Simplification, Simplification, Simplification
- KAIZENs
- Metrics (KPIs, Clinical measures)
- Poka yoka
- 5S
People waste in Healthcare

Problem correction
Inappropriate task assignment (privileging)
Waiting, waiting, waiting
Motion (Searching)
Underutilization of skills
Imbalanced workloads

Simplification, Simplification, Simplification
KAIZENs
Cross functional teams
Cross training, Shadowing, CUSP, Team STEPPs
STANDARDIZATION

Information waste in Healthcare

Data Reach information Poor DRIP
Silos of information systems
Delinquency of documentation
Excessive / Double Documentation
In accuracy of information
Ineffective communication between care givers

Simplification, Simplification, Simplification
KAIZENs
Cross functional teams
Optimization of information based on need
Automation and systems integration
Assets waste in Healthcare

- Over storage
- Zero Stock
- Under/over utilized technologies

Action

- Simplification, Simplification, Simplification
- KAIZENs
- Standardization of work
- Monitor walk-ins
- Cross training

How to Lean Kaizen?

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A step forward

The Toyota way / Uker and Meier

Lean KAIZEN structure

QPS Committee

Lean Kaizen Facilitator

Lean Kaizen Team

Lean Kaizen Team

Lean Kaizen Team
Expand the sources of KAIZENs

Listen to improvement whispers
Listen to improvement whispers

HEALTHCARE LEAN KAIZEN

How to prioritize and start?

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When to do what?

Dr. Fumio Fukumura
Kaizen Promotion office director
Aso Iizuka Hospital - Fukuoka

When to Lean / Kaizen?

<table>
<thead>
<tr>
<th>Type of method</th>
<th>Theme</th>
</tr>
</thead>
<tbody>
<tr>
<td>Annual Plan</td>
<td>Sporadic</td>
</tr>
<tr>
<td>Short (1-3 Month)</td>
<td>Kaizen event</td>
</tr>
<tr>
<td>Long (3-12 Month)</td>
<td>Lean Kaizen</td>
</tr>
<tr>
<td></td>
<td>Everyday Kaizen</td>
</tr>
<tr>
<td></td>
<td>Lean Kaizen IHI model (PDCA)</td>
</tr>
</tbody>
</table>
Do we really need a PROJECT?

<table>
<thead>
<tr>
<th>Root Cause Solution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Every day KAIZEN (Just-Do-It)</td>
</tr>
<tr>
<td>Rapid improvement event</td>
</tr>
<tr>
<td>Define</td>
</tr>
</tbody>
</table>

Don’t Forget Common Sense.

When to lean?

- Silos
- Don’t know what to do!
- Working to correct defects
- Interruptions
- DEFECTS
How the team works?

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How to the team works?

1. Team formulation and training
2. Workplace 5S
3. GEMBA walks
4. Kaizen events + Board
5. Selections of metrics
6. Waste reduction/Elimination
7. Communicate results
8. Maintain with daily KAIZEN
1. Team Formulation

LEAN KAIZEN team

- The process owner and Supervisors
- Outsider
- Sponsor
- Leader (selected by sponsor)
- Facilitator
- Member (SME)
- Board Champion

PROJECT CHARTER FORM

<table>
<thead>
<tr>
<th>PROJECT NAME</th>
<th>TEAM MEMBERS</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Project Leader</td>
</tr>
<tr>
<td>BACKGROUND/PHASE</td>
<td>Champion</td>
</tr>
<tr>
<td></td>
<td>Sponsor</td>
</tr>
<tr>
<td></td>
<td>Board Champion</td>
</tr>
<tr>
<td></td>
<td>Team Member</td>
</tr>
</tbody>
</table>

PROJECT FRAMEWORK

<table>
<thead>
<tr>
<th>OBJECTIVES</th>
<th>RESULTS</th>
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<tbody>
<tr>
<td></td>
<td>Date</td>
</tr>
<tr>
<td></td>
<td>Date</td>
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<tr>
<td></td>
<td>Date</td>
</tr>
<tr>
<td></td>
<td>Date</td>
</tr>
</tbody>
</table>
2. Workplace 5S

Start from a 5Sed workplace
HEALTHCARE LEAN KAIZEN

2. Workplace 5S

BEFORE

AFTER

HEALTHCARE LEAN KAIZEN

2. Workplace 5S

OFI

KAIZEN
2. Workplace 5S
10 QUESTIONS TO ASK ON GEMBA WALKS

1. What are you doing now?
2. Is there an established, documented standard for doing the activity?
3. What challenges do you face?
4. How do you think a challenge?
5. What can you fix?
6. What can’t you fix?
7. Who do you speak to when something goes wrong?
8. Do you use a visual management board?
9. If you do, what?
10. If you do, what?

HEALTHCARE LEAN KAIZEN

4. KAIZEN EVENT

Two or three days

AS-IS
Utopia
Implementable

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33
4. KAIZEN EVENT

Board Champion
Role is to SEE

SEE
Supervise
Engage
Educate

5. Selections of metrics

Cycle time
Tackt - time
### Value Add evaluator

<table>
<thead>
<tr>
<th>Process name</th>
<th>Customer</th>
<th>Does the customer care about this step?</th>
<th>Is it done right from the first time?</th>
<th>Does it change something customer cares about?</th>
<th>Classification</th>
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<tbody>
<tr>
<td>Step 1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Step 2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Step 3</td>
<td></td>
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### The ideas funnel

- Brainstorming
- Brainwriting
- Multi Vote Nominal Group
- Tech
- Selection Matrix
6. Waste reduction

Effect Impact matrix

<table>
<thead>
<tr>
<th>Effort</th>
<th>High</th>
<th>Medium</th>
<th>Low</th>
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<tbody>
<tr>
<td></td>
<td>No!</td>
<td>Avoid</td>
<td>Maybe</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
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</table>

Impact

7. Communicate results

Action item list

<table>
<thead>
<tr>
<th>No.</th>
<th>Status</th>
<th>Classification</th>
<th>Description</th>
<th>Original Completion Date</th>
<th>Actual Completion Date</th>
<th>Assigned To (Physician)</th>
<th>Assigned To (Other)</th>
<th>Date</th>
<th>Comments</th>
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<tbody>
<tr>
<td>1</td>
<td>C</td>
<td>A</td>
<td>Standardization of Ortho kit</td>
<td>23-Apr</td>
<td>28-Apr/Ms. Julia</td>
<td>H</td>
<td>M</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>C</td>
<td>A</td>
<td>Redesign of forms</td>
<td>20-Apr</td>
<td>20-Apr/Mohamed Eman</td>
<td>L</td>
<td>H</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>C</td>
<td>A</td>
<td>New process flowchart</td>
<td>20-Apr</td>
<td>20-Apr/Ms. Julia</td>
<td>M</td>
<td>M</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>C</td>
<td>A</td>
<td>Update of infection control guidelines</td>
<td>26-Apr</td>
<td>26-Apr/Dr. Abdallah</td>
<td>M</td>
<td>M</td>
<td></td>
<td></td>
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<tr>
<td>5</td>
<td>C</td>
<td>B</td>
<td>Shadow board</td>
<td>22-Apr</td>
<td>28-Apr/Ms. Julia</td>
<td>H</td>
<td>M</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>O</td>
<td>A</td>
<td>Value Stream map</td>
<td>20-Apr</td>
<td>20-Apr/M. Eman</td>
<td>M</td>
<td>M</td>
<td></td>
<td></td>
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<tr>
<td>7</td>
<td>O</td>
<td>C</td>
<td>Upgrade of sustain machine</td>
<td>10-May</td>
<td>Dr. Khalid</td>
<td>H</td>
<td>L</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
HEALTHCARE LEAN KAIZEN

8. Maintain with KAIZEN

Lessons Learned

HEALTHCARE LEAN KAIZEN
IMPROVEMENT IS AN ENDLESS JOURNEY

Systems are perfectly imperfect
IMPROVEMENT STARTS WITH “I”
SUCCESS HAS NO “I”

THANK YOU AND STAY LEAN - KAIZENED

Ahmed M. El-Sheikh, MD, MBA, CMQ-OE, CPHQ, LGBSS
www.treathospitals.com