KAIZEN activities for improving health care and hospital management

2015

KAIZEN Training of Trainers
Objectives of the session

• After the session, the trainees will be able to:
  – Understand KAIZEN can be adopted to improvement quality of care in both of developing countries and developed countries
  – Understand KAIZEN can improve hospital management; financial management, stock management, information management etc.
  – Understand KAIZEN can improve health care service provision
Word of “KAIZEN” in the world

• “KAIZEN” is now known worldwide as continuous problem solving process to improve working environment, process and conditions

• KAIZEN are adopted not only to clinical setting but also several hospital management settings in health care facilities

*Let’s go and see “actual improvements in hospital management and health care services by KAIZEN*
Virginia Mason Medical Center (U.S.A.)

• In 2002, the hospital adopted Toyota Production System philosophies and practices to health care; Virginia Mason Production System (VMPS):
  – Customer first
  – Highest quality
  – Obsession with safety
  – Highest staff satisfaction
  – A successful economic enterprise

• The hospital staff have been improving the quality of patient care with VMPS

VMPS, Virginia Mason Medical Center: https://www.virginiamason.org/vmps
Actual improvement in Virginia Mason Medical Center

“Eliminating wasted nurses’ steps and increasing time to care patients”

• Nurses were able to improve the flow of how they went about their day – eliminating wasted steps to get necessary medical equipment and supplies, and increasing time spent with patients
  – Steps walked per day fell from 10,000 from roughly 1,200
  – Time in direct patient care was increased to 90% of their time from 35%

VMPS, Virginia Mason Medical Cetnter: https://www.virginiamason.org/vmps
Actual improvement in Virginia Mason Medical Center

“Faster revenue cycle”

- The finance department improved “Days Revenue Outstanding”
- Cash deposits improved from $471 million in 2003 to $794 million in 2009
- Increased the revenue $323 million

VMPS, Virginia Mason Medical Center: https://www.virginiamason.org/vmps
Actual improvement in the hospitals in Pittsburgh (U.S.A)

Eliminate MRSA in the hospital

- TPS and KAIZEN done by the management level and service provision level cooperatively to reduce error in patient care, including the incidents of HAI
- Dropped in MRSA infection rate by approximately 70% after TPS, KAIZEN in many areas

A Quest to Eliminate MRSA at the Veterans Health Administration’s Hospitals in Pittsburgh:
http://www.lean.org/FuseTalk/Forum/Attachments/Positive%20Deviance%20Pittsburgh%20VA%20MRSA%200709041.pdf
Mitchell’s Community Health Center (Cape Town)

“Implementing a structured triage system at a community health center”

• More than 100 un-booked patient presenting daily at the health center, most of them were requesting reissuing of his/her prescription

• By KAIZEN,
  • all patients are **assessed properly** according to the standardized protocol
  • a number of patients requiring reissuing of the prescription was **decreased by 50%**

Reference:
*Implementing a structured triage system at a community health centre using Kaizen*
Mbeya Zonal Referral Hospital (Tanzania)

• In 2007, 5S-KAIZEN-TQM Approach was introduced to the hospital
• The hospital has been orienting hospital staff including students and new employees on 5S-KAIZEN continuously
• Almost all areas in the hospital are practicing 5S
• High performing areas in 5S are practicing KAIZEN
• The hospital is improving own hospital/health care services by 5S and KAIZEN
Actual improvement by KAIZEN in MZRH (1)

“Reducing patient waiting time for the consultation at OPD”

- The frequency of the several problems was reduced from 42 to 24 (42.9% reduction)
- The patients’ waiting time for the consultation was improved from 45 minutes to 15 minutes

<table>
<thead>
<tr>
<th>#</th>
<th>Contributing factors</th>
<th>Frequency</th>
<th>Reduction rate (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Delay in starting consultation</td>
<td>12</td>
<td>33.3</td>
</tr>
<tr>
<td>2</td>
<td>Long break during consultation</td>
<td>10</td>
<td>60.0</td>
</tr>
<tr>
<td>3</td>
<td>Interruption by emergency cases</td>
<td>8</td>
<td>25.0</td>
</tr>
<tr>
<td>4</td>
<td>Bypass of staff</td>
<td>7</td>
<td>71.4</td>
</tr>
<tr>
<td>5</td>
<td>Long contact time</td>
<td>5</td>
<td>20.0</td>
</tr>
<tr>
<td></td>
<td>TOTAL</td>
<td>42</td>
<td>42.9</td>
</tr>
</tbody>
</table>

The KAIZEN was done by hospital staff at OPD in MZRH.
Cont.

Standardized instruction for daily staff allocation and monitoring book; Easy to allocate the staff
Actual improvement by KAIZEN in MZRH (2)

“Improving waste management in the hospital”

- The frequency of the improper waste management was reduced from 155 to 22. (85.8% reduction)
- The cost for procuring waste bin liners were also reduced (next slides)

Problems before KAIZEN

Problems after KAIZEN

<table>
<thead>
<tr>
<th>#</th>
<th>Contributing factors</th>
<th>Frequency</th>
<th>Reduction rate (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Case of bin liners in a wrong containers</td>
<td>Before</td>
<td>After</td>
</tr>
<tr>
<td></td>
<td></td>
<td>42</td>
<td>4</td>
</tr>
<tr>
<td>2</td>
<td>Case of one type of bin liner missing (out of stock) at</td>
<td>Before</td>
<td>After</td>
</tr>
<tr>
<td></td>
<td>the point of waste collection</td>
<td>38</td>
<td>2</td>
</tr>
<tr>
<td>3</td>
<td>Case of mixing up of waste at point of collection (i.e.</td>
<td>Before</td>
<td>After</td>
</tr>
<tr>
<td></td>
<td>an item gets into wrong containers)</td>
<td>29</td>
<td>14</td>
</tr>
<tr>
<td>4</td>
<td>Case of waste container without a bin liner</td>
<td>Before</td>
<td>After</td>
</tr>
<tr>
<td></td>
<td></td>
<td>25</td>
<td>1</td>
</tr>
<tr>
<td>5</td>
<td>Case of unauthorized waste containers/bin liners found</td>
<td>Before</td>
<td>After</td>
</tr>
<tr>
<td></td>
<td>at disposal point (incinerator)</td>
<td>11</td>
<td>0</td>
</tr>
<tr>
<td>6</td>
<td>Case of container found in a wrong area (areas which</td>
<td>Before</td>
<td>After</td>
</tr>
<tr>
<td></td>
<td>where does not generate waste that match with</td>
<td>7</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>container)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>Case of mixing waste bags at the waste storage area</td>
<td>Before</td>
<td>After</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>TOTAL</td>
<td>155</td>
<td>22</td>
</tr>
</tbody>
</table>

The KAIZEN was done by IPC team in MZRH.
Transition of costs for procuring waste bin liners in MZRH

KAIZEN Implementation

Procurement cost per month
Conclusion of the session

- KAIZEN can improve and enhance several aspects of hospital management and health care services:
  - Hospital administrative management
  - Clinical administrative management
  - Quality of care
  - Infection Prevention Control
  - Patient and staff safety etc.
Therefore, **KAIZEN** must be adopted to every work procedure in everywhere in RRHs.
Conclusion (2)

- Possible to **reduce costs/expenditure** by KAIZEN; eliminating “waste” in working environment and working process
Thank you very much for listening