USING A LEAN MANAGEMENT TO EXPLORE THE SERVICE TOUCH POINT AND OUTPATIENT SATISFACTION: THE CASE OF YANHEE INTERNATIONAL HOSPITAL, BANGKOK THAILAND

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ABSTRACT

This research was aimed to reduce the duration time at the service touch point by the theory of Lean management used as a guide to explore the service touch point and outpatient satisfaction of Outpatient Department (OPD) at Yanhee International Hospital, Bangkok Thailand. This study employed the outpatient satisfaction survey as the means in collecting data with nonprobability sampling of 400 outpatients. The statistics used to compile the data were frequency, percentage, average and standard deviation. The results of applying the guidelines to reduce the duration time at the service touch point can shorten the waiting time up to 9 minutes per one service touch point. For the outpatient satisfaction found that, there were quite satisfied overall, and thus could provide a service to a greater number in the same period. Most outpatient were female, the highest education was bachelor degree, most were aged between 20-40 years, the average revenue per month were 25,000-35,000 bath was the largest number. Most did not come to the hospital for the first time. The service touch point had been very satisfied, including patient registration, medical facilities, the pharmaceutical and financial division were the most. Issues and recommendations should include a discussion questioning the health symptoms and increasing signs suggest to other healthcare destinations. Further research there should be a comparative study of Lean management in the other hospitals both private and public sector that how they use to explore the service touch point and outpatient satisfaction.

Keywords - Lean management, Outpatient satisfaction, Service touch point

INTRODUCTION

Yanhee International Hospital is a leading center for the treatment of patient with more than 36 centers including the center of plastic surgery, skin and leaser, dental, 24 hours medical, heart and surgery center etc. All are equipped with the medical equipment and technology for diagnosis, treatment and examination. There have 155 surgical rooms, 12 large rooms, 30 minor surgery rooms including delivery room, C.U. emergency room, dialysis room, baby room, Cath lab, modern chemical laboratory and a sterile standard room. There can accommodate up to 400 inpatient beds and capacity of 2,000 outpatients per day.

At present, the current number of patient are increased that delays the service. Most patients complained the duration time at the service touch point. That was a source of research to improve the service operation by implement a Lean management to explore the service touch point and outpatient satisfaction to step up in providing efficient service as well as the ability to leverage a universal service, the competitive advantage and enhance service standards. While Lean management and supply chain management have many similarities, especially concerning origin, tool and effects, methodologies. Base on combination impacting by the
cooperation within process that they differ in some areas (Issaragura Na Ayuthaya, 2016) in particular concerning the main theory, approach and the main criticism.

LITERATURE & THEORY

Lean means slim, refers to who have the slender body and fat-free, strength, agility and dexterity. If compared to the organization that was operated without any loss in process, the ability to adapt the needs of market and customers in a timely manner and superior than the competitor. Lean manufacturing is a multi-dimensional management practice including just in time-quality systems, work teams, cellular manufacturing, supplier management etc. the popular definition of Lean Manufacturing and the Toyota Production System usually consists of the following (Wilson, 2009); it is a comprehensive set of techniques which when combined allows you to reduce and eliminate the waste. This will make the company leaner, more flexible and more responsive by reducing waste; Lean is the systematic approach to identifying and eliminating waste through continuous improvement by flowing the product or service at the pull of your customer in pursuit of perfection.

Lean is a holistic & sustainable approach that use with the little things but works more and meet match to the customers’ need. What is the less waste, cycle time, the delivery, the conservation, the use of the tools and operational areas. What is more knowledge and power of the workers, greater flexibility and capabilities of the organization, productivity, and customer satisfaction. The success in the long term of Lean thinking is to change from waste to the value in the view of recipient and changes endlessly. (Graban, 2016, pp.1-17)

Lean Thinking (Womack & Jones, 2003, p.15) is an integrated system of human development and as a philosophy management in building the Lean corporate culture (Convis & Gary, 2007). Lean is to eliminate all waste and show mutual respect (McIntyre, 2009, p.287). Lean is designed in the shape of the trial continued which will revealed a problem immediately. The problem will be dealt immediately by the rapid experimentation. The solution will be published and personnel at all levels of the organization are taught to be a trial (Spear & Steven J, 2005). The principle of Lean concepts are setting value from customer's perspective, identify all steps in value stream and eliminate all waste, make value step up in order to flow and integrate all tasks, customers will be the one who extract the value and aim for the perfection which have continuous improvement (Marchwinski, Chet & John Shook, 2003, p. 42). The researcher had used the concept of Lean management as the tools to explore the service touch point and outpatient satisfaction, analyze the cause and finding the way to improve service performance.

Given all the pressures on hospital organization, it's not surprising that hospital practitioners are looking to Lean management to help address industry challenges in core process (Watson-Hemphill & Kimberly, 2016, p. 250) as shown in Table 1.
In the world of quality improvement, complexity is an unparalleled source of waste, losses, delays, and errors in process. Once you start looking at these functions as processes, it becomes clear that there are many opportunities for applying Lean management to make improvements. (Watson-Hemphill & Kimberly, 2016, pp. 249-253) as shown in Table 2.

### Table 2

(Lean management projects in hospital)

<table>
<thead>
<tr>
<th>Project Type</th>
<th>Key Relevant Lean Management</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cycle time:</td>
<td></td>
</tr>
<tr>
<td>- Registration</td>
<td>- Process mapping/VSM</td>
</tr>
<tr>
<td>- Admission</td>
<td>- Setup reduction</td>
</tr>
<tr>
<td>- Discharge</td>
<td>- Process load balancing</td>
</tr>
<tr>
<td>Working capital:</td>
<td>- Statistical tools</td>
</tr>
<tr>
<td>- Reduce time between discharge and billing</td>
<td>- Mistake-proofing</td>
</tr>
<tr>
<td>- Insurance coding accuracy</td>
<td></td>
</tr>
<tr>
<td>Quality:</td>
<td></td>
</tr>
<tr>
<td>- Improve customer satisfaction scores on admission or discharge</td>
<td></td>
</tr>
<tr>
<td>- Improve medication tracking accuracy from admission to discharge</td>
<td></td>
</tr>
<tr>
<td>Wait time:</td>
<td></td>
</tr>
<tr>
<td>- Reduce ER wait times</td>
<td>- Simulation</td>
</tr>
<tr>
<td>- Reduce time from arrival to bed</td>
<td>- Statistical tools</td>
</tr>
<tr>
<td>Treatment:</td>
<td></td>
</tr>
<tr>
<td>Exit and Entry Transactional:</td>
<td>- Root cause analysis tools</td>
</tr>
<tr>
<td>- Improve consumable replenishment process</td>
<td>- Quick changeover</td>
</tr>
<tr>
<td>- Reduce cost of inventory on hand (pharma, ortho, endo, cardio)</td>
<td>- FMEA</td>
</tr>
<tr>
<td>- Distribution and management of medications</td>
<td></td>
</tr>
<tr>
<td>- Room turnover</td>
<td></td>
</tr>
<tr>
<td>Logistics:</td>
<td></td>
</tr>
</tbody>
</table>

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RELATED WORKS

Al-Araidah & others (2010), studied Toyota Lean principles to reducing or eliminating nonvalue-added time, money, and energy in healthcare. By utilize DMAIC (Define, Measure, Analyze, Improve, Control) and 5S (Sort, Set-in-order, Shine, Standardize, Sustain) principles to identify and reduce wastes that contribute to increasing the lead-time in healthcare operations at the pharmacy understudy. The results obtained from the study revealed potential saving of >45% in the drug dispensing cycle time.

Begam & others (2013), detailed literature survey that had been conducted to identify the lean practices in various manufacturing industry. The results revealed that the status of Lean Manufacturing implementation in still in thriving stage. This will further assist the organizations to improve its process, align it to the requirements of its customers and relentless contribution to manufacturing sector to enhance productivity, quality and competitiveness is immense.

Martinez & Lu (2013), provided a literature overview about the application of Lean thinking concept and the main research findings through different industries. By collecting research records from ISI web of knowledge naming directly the lean thinking issue; 34 Web of science records, 10 Medline records and 2 Chinese citation database records were found. Results show that the main focus areas on Lean thinking researches were mainly applied in healthcare industry (48%) followed by manufacturing industry (17%), construction (10%), product development (7%), training and education (7%) and supply chain (2%). Other industries (9%) are also staring to apply lean thinking philosophy according to the particularities of their domain.

Dammand & others (2014), explored whether Lean management can improve efficiency in patient treatment at hospital. By using a case study methodology and rely on both qualitative and quantitative data for analysis. Found that efficiency in patient treatment increased through reduction in waiting times, higher process cycle efficiency, and shorter walking distances for staff. This was achieved through the use of various Lean tools, such as Kaizen tablets, elimination of non-value adding activities, and Gemba mapping.

Young (2014), reviewed the information about 5S, Lean, ways to implement 5S in healthcare setting, use of 5S in healthcare, combinations of 5S and other tools and suggestions to enhance success of 5S in healthcare service. Results showed that 5S can be applied to healthcare service with beneficial effects, and sustain is a key to success.

Kovacevic & others (2016), studied the Lean concept that had been successfully implemented in healthcare and hospital organization systems as a management method and philosophy with main focus on elimination of all types of wastes and losses in all tasks and processes so that time, materials, resources and medical procedures could be realized as effectively as it is possible.

Magalhaes & others (2016), demonstrated the scientific knowledge developed on Lean thinking in health, highlighting the impact and contributions in health care and nursing. This study showed that the use of Lean thinking in the context of health had a transforming effect on care and organizational aspects, promoting advantages in terms of quality, safety and efficiency of health care and nursing focused on the patient.
METHODS

Sample used in this research was the outpatient who came to the hospital, using the formula of Taro Yamane this study employed the outpatient satisfaction survey as the means in collecting data with nonprobability sampling of 400 outpatients. Questionnaire was divided into three parts; the overview of the respondents, the satisfied to shorten the waiting time at service touch point, the problem and suggestions. For the creation and performance of the tool, the procedure had been follow these steps; learn the basic research papers related to the concept of creating a set of guideless, analyze the documents and draft a structured questionnaire, create a query in the definition and purpose. The questionnaires were tested to determine the validity and reliability by Cronbach’s Alpha Coefficient 0.703.

The researcher used a computer program for data analysis. The survey of service touch point satisfaction levels was a question of rating scale, which had an option on the five-level average ($\bar{X}$) and the standard deviation (S.D.). The scoring was as follows; Level 5 means most satisfied, Level 4 means very satisfied, Level 3 means moderately satisfied, Level 2 means least satisfied and Level 1 means very little satisfied.

RESULTS

Found that the respondents were female more than male, with 255 female equal to 63.8% and 145 male which equal to 36.3%. The highest education was bachelor degree, most were aged between 20-40 years from 250 people. The average revenue per month 25,000-35,000 bath was the largest number, which have 202 people equal to 50.5%. Most did not come to the hospital for the first time.

At the patient registration service touch point, the satisfaction to shorten the time of service was in averaging level with very satisfied (mean = 3.95) and duration of service (mean = 3.97), followed by the servicing staff willingly welcome with enthusiasm (mean = 3.93).

For reducing the duration service at doctors service touch point was satisfied to very satisfied on average (mean = 3.75), the modesty, care, consulting (mean = 3.99) within the very satisfied level. The second was a waiting period to see a doctor (mean = 3.78).

The reduced time available at the financial division service touch point were the most satisfaction (mean = 4.29). The highest level of satisfaction were the care in consulting and explained clearly (mean = 4.78) and staff beaming (mean = 4.78).
The pharmacy service touch point was in the most satisfaction level (mean = 4.65), the convenience and empathy were the most satisfaction items (mean = 4.90).

The results of applying the guidelines to reduce the duration time at the service touch point can shorten the waiting time up to 9 minutes per one service touch point. For recommendations should include a discussion questioning the health symptoms and increasing signs suggest to other healthcare destinations, the THAI etiquette and manners which featured a smiling can make the impressive service and using ICT systems for data network searching will able to work effectively and reduce the waste resources.

CONCLUSION AND FUTURE WORK

Focus on service touch point is particularly important. The service providers need a person with service minded, who understand and recognize the importance of providing service to create a good image and good impression on all clients and end user, as an important one to develop a personality with a conscience in loving service. This will create the organization that has achieved excellence in service.

Further research there should be a comparative study of Lean management in the other hospitals both private and public sector that how they use to explore the service touch point and outpatient satisfaction. Yet as with the application of Lean management methodologies, there are differences in the deployment details for hospital organization that have proved to be challenging if they are not addressed directly; Change management; Developing relevant and engaging training with continuous improvement (Kaizen).

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REFERENCES


