

CHAPTER VIII

SUMMARY & RECOMMENDATION

8.1 Thesis Summary

The objective of this research is to improve the service duration in service industry through the approach of Lean Six Sigma by determining the most appropriate methodology to decrease overall service lead time which is one of the essential statements in Reliability dimension of Service Quality. Pattana Medical Center which is cordially established under the intention of His Majesty the King as a non-profit public medical institution to provide both of general therapeutics and special disease medications has been used as a case study in the research in order to represent the Service Quality improvement in this kind of industry through the effective problem solving systematic approach.

The research have fully applied the concept of Lean Six Sigma from defining the process unconformities, measuring the Key Process Output Variables (KPOVs), analyzing the Key Process Input Variables (KPIVs), improve the critical service activities and control the final results for sustainability. The proposed Medication Appointment Schedule which is the first established solution could efficiently decrease the Waiting Time for OPD function from 48 minutes to 17 minute, whereas, the second initiated solution, Semi Operation, contributes the Cycle Time improvement for Laboratory function from 81 minutes to 55 minutes.

The overall service durations after improvement clearly illustrates that customers could shorten their time in the clinic from 195.13 minutes to 132.14 minutes in average with the process capability index, C_{pk} , which has been significantly improved from -0.14 to +1.00. Moreover, the Reliability score has been improved enormously in line with the objective from -0.11 to -0.04 through the approach of Lean Six Sigma and its effective solutions; therefore, it could be implied that PMC's process performance is now aligned with what most of the customers would like to accept and the former huge gap between expectation and perception of Service Quality has been fulfilled through the improvement perfectly.

8.2 Lesson Learn

There are a number of lessons that could be learned simultaneously from a wide range of fortunate factors and some unfortunate aspects during the process of overall service duration improvement. The first uncertainty comes from Measure Stage where all of primary data that are related to the Key Process Input Variables (KPIVs) must be collected through the designed template in order to understand their relative impact to the service duration. It is important that the worksheet which will be used for the first time must be carefully evaluated in the small pilot area and should be improved all mistakes before launching in the real situation. The well-designed, well evaluated and well collected platform would comfortably contribute the reliability and validity of measurement data.

Moreover, another lesson that has been studied from the improvement process is in the Improve Stage where the most appropriate solutions have been efficiently identified to shorten overall service duration within the clinic. There have been some difficulties to introduce new proposed solutions both for the Medication Appointment Schedule to solve the Waiting Time problem in OPD function and the Man-Machine Interaction to decrease long Cycle Time in Laboratory function because most of employees still familiar with the old-fashioned system. Therefore, it is imperative that the concept of Change Management can be effectively implemented in this situation not only for emphasizing employees to recognize their non value-added activities but also influencing to find out the solution by themselves.

In addition, the last interesting lesson in this project certainly focuses on the Control Stage where the improvement results which have been implemented in the real situation must be closely monitored, appropriately adjusted and carefully verified. Not only the Key Process Output Variable, the overall service duration, would be absolutely considered as the primary key measure for successfulness of the proposed solutions but also the secondary pros and cons should be inclusively determined as the other project indicators to ensure that there will have no unfortunate effect to the process after improvement. The management for secondary advantages will add more value to the project while the control for secondary disadvantages will accommodate the thesis completion successfully.

8.3 Final Recommendation

There have been a number of recommendations that could be applied as the useful guideline for improvement in the future. The first opportunity still focuses on overall service duration which could reach the best record if the clinic could improve Medical Management Software that provides difficulties in functioning and interrupt data in processing with multiple system errors as usual. In the case that new information system could go live; it will not only decrease the Waiting Time as low as 15 minute by changing from Paper-based to the Paperless Clinic but also reduce the Total Cycle Time down to 75 minute by eliminating most of the human errors as well. Therefore, it is highly possible for the clinic to provide medical service within 90 minutes and breakthrough the customer satisfaction level.

In addition, the second opportunity which could be fortunately identified from the process improvement points to the other dimensions of Service Quality. Tangibles for the appearances of physical facilities, Responsiveness for the willingness to provide prompt service dependably and accurately, Assurance for the knowledge and courtesy of employees to convey trust and Empathy for organization to provide its customers' individualized attention must be carefully determined because the customers' requirements are rapidly changed for the higher level of services according to the information technology; therefore, the service dimensions which have been rated with the higher score could be decreased once the competitors offer them with the better interests.

Finally, the last opportunity which could be used as the leading way to extend this research study goes up to the Service Business in the macro level. As mention at the starting of research, although the Service Business has pre-dominated the post-industrial economy and recently accounts for roughly 80% of Gross Domestic Product (GDP) but the empirical data have shown that 30-80% of the total cost comes from different kinds of wastes (George 2003). It clearly implies that most of activities along the process could not add value to the customer effectively. The research method which improves the service duration of service industry through the approach of Lean Six Sigma could be appropriately applied in many Service Businesses to leverage the competitive advantage of the organizations.