



Service Priorities and Programmes Electronic Presentations

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Application of lean management for enhancing service efficiency and optimizing capacity in Paediatrics Day Ward

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Introduction

Recently, the referrals from Maternity and Child Health Centre (MCHC) for admission has dramatically increased. Most of the cases are neonatal jaundice that requires medical consultation and blood taking. As one in-patient paediatrics ward with limited bed is unable to cater the up-surgng demand. Cases with prolonged neonatal jaundice (NNJ) are admitted to day ward which hopes to have a better utilization of hospital bed. However, clients are complaining of the complicated MCHC referral admission process. They have to arrive at paediatrics ward for pre-registration which is located at the fourth floor of the hospital. Then they go downstairs to the admission office to complete the registration process. Besides, clients are spending time waiting for medical consultation, blood taking and blood results. All are non-added values process that should be eliminated. Moreover, the percentage increase of prolonged NNJ in paediatrics day ward is 34.9 % in 2015. In fact, the cases are unscheduled that a typical volume spikes are observed on Monday and Tuesday which further lead to staff stress, frustration and patient error.

Objectives

A lean project is implemented and aimed to streamline the referral process from MCHC and to optimize staff capacity to meet the current patient volume as well as the potential growth.

Methodology

3 lean process events have been conducted and implement from Nov to Jan 2016

1. A value stream map is conducted down to the smallest details from arriving till leaving from hospital. 2. A time observation chart is used to measure the cycle time of individual process. 3. The patients' volume and staffing level are measured in order to derive the estimate capacity.

Result

The process of prolonged NNJ admission from MCHC is re-engineering. 1. A

workflow of referral MCHC is developed which can enhance the communication between ward staff and MCHC. 2. A revised admission notice in Chinese and English can help to provide adequate information to the clients. 3. The referral process is streamlined that clients can directly register at admission office. The clinical admission slip is given by MCHC at the time of referred. It helps to minimize the unnecessary transportation with a smooth flow. 4. A quota system is derived to forecast the inflow of patients in busy days. 5. The blood test result is informed via phone to eliminate the unnecessary process of waiting. Result: A. The lead time (Pre) is 196.25 minutes The lead time (Post) is 105.25 minutes. The reduction of lead time is 46.37% B. The patient volume is forecasted and the volume of cases is evenly distributed. C. The staff survey showed that there is an improvement in efficiency of admitting prolonged NNJ and reducing the workload of ward clerk ($P < 0.05$). D. Time saved for verifying and filling the admission slip is 4.9 minutes per cases in which the total time saved for 1021 cases per year is 83 hours.