Service Priorities and Programmes

Electronic Presentations

Convention ID: 1047
Submitting author: Dr Tsz Kin Kwok
Post title: Associate Consultant, Tung Wah Hospital, HKWC

Shortening the Waiting Time for Elevators in Tung Wah Hospital

Kwok TK(1), Cheng LK Nikki(2), Chan Katherine(2), Yu Cissy (3), Chow WS(4)
(1)Department of Medicine, Tung Wah Hospital; (2)Administrative Services, Tung Wah Hospital; (3)Hospital Chief Executive, Tung Wah Hospital; (4)Department of Medicine, Queen Mary Hospital

Keywords:
Waiting Time
Elevators
Tung Wah Hospital

Introduction

Long waiting time for elevators is always a major concern in high rise building, especially in hospital settings where wheelchairs and stretchers took up large space. The existing strategies on allocating different timeslots for specific use by patients, medication trolleys or hospital supplies have received numerous complaints from all stakeholders.

Objectives

To address the long waiting time for elevators at Tung Wah Hospital, the existing strategies on elevator utilization will be studied for improvement opportunities, through the adoption of Six Sigma techniques.

Methodology

We defined the scope of our project by focusing on our 12-storeys Centenary Building. Numerous complaints on its long waiting time for elevators during peak hours were raised by patients, hospital visitors, and our colleagues. To gain insights on the situation, and to gather comments from various stakeholders, we held a multidisciplinary meeting. The existing elevator utilization patterns, including their purposes, durations, and their need for extra spaces to accommodate wheelchair, stretchers or trolleys were collected. The waiting times for elevators at the lower ground floor were subsequently collected on normal working days, from 11:00 to 16:00. The headcounts of passengers in different timeslots and their mean waiting time were measured. In addition, the use of wheelchairs, stretchers and trolleys were also registered for further analysis.

Result

We had identified two peaks on the elevator utilization, with a total of 129 & 104 passengers during the timeslots 12:00-13:00 & 14:00-15:00, respectively, while the overall mean was around 95 passengers. Their mean waiting times ranged from 101 to 155 seconds, with the top 2 longest durations coincided with the aforementioned peak hours, 155 & 137 seconds. The constraints of physical layout and the possibilities of changing the elevator utilization time among different departments were studied. After thorough communication with various stakeholders, we have redeployed our existing hospital staff to cater for the newly revised elevator utilization schedule. As a result of our actions, we managed to fulfill our target of shortening the waiting time for elevators to less than 100 seconds, with an overall reduction of around 18%. The feedbacks from our hospital staff were also very encouraging.