



Service Priorities and Programmes
Electronic Presentations

Convention ID: 1165

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Using LEAN Six Sigma Methodology to Improve efficiency of care in Geriatric Hip Fracture Rehabilitation

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Keywords:

LEAN Six Sigma Methodology

Geriatric Hip Fracture Rehabilitation

Introduction

Lean six sigma(LSS), a combination of lean production and six sigma , is a method developed in the industry, to improve quality, reliability, and efficiency of processes. More recently, in health care LSS is used to improve the organization and quality of care . With an aging population, geriatric hip fracture will continue to be a major challenge for the health care system in the foreseeable future.

Strategies to improve the efficiency and consequently to reduce costs by improving the care process are needed to cope with this increasing service demand .

Objectives

As a continuous quality improving project, LEAN principle was used to identify factor influencing LOS ,and clinical pathway was then designed to improve the process of care.

Six sigma approach was used to evaluate and monitor the effectiveness of clinical pathway.

Methodology

From 2010 and 2016, 4752 operated hip fractures managed with a designated clinical pathway in rehabilitation phase. Physical functional score (EMS and MFAC) and daily activities (MBI) were collected at admission and discharge. Length of stay(LOS)and change of residency was also collected. Effectiveness of program is assessed by Process capability index (Cpk), a statistical measure of process capability to reflect the ability of process (clinical pathway) to produce output (LOS) within specification limits

Result

3242 (71.4%) were female. Mean age was 83.6 over the 7 years, patients with age between 86 and 95 were increased significantly over the 7 years (p Cpk values were increasing (improving) over the 7 years, particularly in female patients and patients with age between 75 and 84. Our experience showed the usage of LSS offers promise for improving quality and efficiency in the provision of optimum patient care.