Bachelorarbeit

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Lean Management in Hospitals

Principles and Key Factors for Successful Implementation

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List of Abbreviations

DMAIC	Define – Measure – Analyse – Improve – Control
DMADV	Define – Measure – Analyse – Define – Verify
DOE	Design of Experiments
DPMO	Defects per Million Opportunities
DPU	Defects per Unit
ECG	Electrocardiogram
E-Health	Electronic Health
E-Kanban	Electronic Kanban
e. g.	for example
etc.	et cetera
ETC	Market Research Firm in Olathe, Kansas, USA (Elaine, Tathame, Chris)
EU	European Union
FMEA	Failure Modes and Effect Analysis
GKV	Gesetzliche Krankenversicherung
HGW	Heilmittelwerbegesetz
HR	Human Resources
ICU	Intensive Care Unit
IT	Information Technology
JIT	Just-In-Time
JV	Joint Ventures
KSA	Kingdom of Saudi Arabia
MIS	Marketing Information System
NHS	National Health Service
OR	Operating Room
PDAC	Plan – Do – Act – Check
PR	Public Relations
SA	Strategic Alliances
SIPOC	Supplier – Input – Process – Output – Customer
SWOT	Strengths – Weaknesses – Opportunities – Threads
TPS	Toyota Production System
UK	United Kingdom
UWG	Gesetz gegen den unlauteren Wettbewerb

VSM	Value Stream Mapping
WSG	Wettbewerbsstärkungsgesetz / Gesetz zur Stärkung des Wettbewerbs in der gesetzlichen Krankenversicherung

1. Introduction

"…I will follow that system of regimen which, according to my ability and judgement, I consider for the benefit of my patients, and abstain from whatever is deleterious and mischievous…" [1]

Whether this oath is sworn by future physicians or considered a moral guideline by nurses and other hospital staff: it contains the message that medicine and medical ethics follow economical principles (Schönermark, 2007). At least, they should. Astonishingly, waste is a common phenomenon in hospitals. Furthermore, the European healthcare sector cannot be regarded a cost-plus business anymore since hospitals nowadays have to cope with cutbacks in capital spending, financial pressure and reduction of staff. By way of example, the German health insurance contribution rate for public insured persons increased up to 15.5 % in 2009, tantamount to the rise of healthcare costs by 10 billion euros (Laschet, 2008).
In contrast, hospital leaders surely wish to design and maintain an ethical and economically justifiable system that leads to a win-win-situation for both the institution and the end-user: the patient. Accordingly, a more sophisticated approach that helps hospitals to work efficiently and effectively is needed. Among quality management tools, Lean is one suitable methodology that can help hospitals out of the dilemma.

Originally, Lean is a management methodology that goes back to production processes with the main aim to increase output by reducing input. The lean philosophy has its origin in the Japanese manufacturing industry and is strongly bound to the Toyota Production System (TPS). Toyota introduced this system in the 1990s with the intention to become one of the largest car manufacturers. Toyota's success is self-explanatory.

The following book introduces main principles of Lean and deals with the questions: what are the principles and key factors for successful implementation of lean management in hospitals?

[1] Abstract from the Hippocratic Oath, traditionally taken by physicians upon graduation, pertaining to ethical practice of medicine (Edelstein, 1943).

How does the lean methodology apply to the German healthcare sector and what are the main aspects to be considered to make Lean work in hospitals?
However, this book will concentrate on fundamental principles of Lean whereas general analysis concepts will be mentioned roughly but not introduced in detail.

Ideally, Lean is based on three main pillars: process optimisation, patient-oriented management and engaging and leading employees. Thus, each of the tree aspects will be centred.
First, key principles and tools of Lean will be elaborated whereas the importance of defining waste and value will be pointed out. Furthermore, new terms and trends such as Lean Sigma and Telemedicine will be of interest to show necessity and additional surplus to traditional lean concepts.
The second chapter is addressed to patient orientation. Hence, patients as customers are defined with regard to loyalty, whilst satisfaction and improvement measurements thereof are introduced. In this context, strategic alliances and hospital marketing are focused to show advantageous aspects that contribute to the improvement process.
Following, the third chapter deals with personnel policy to show interconnection between employee satisfaction and the profitability of a hospital. Thus, tools and methods to analyse and improve the satisfaction and motivation rate, such as surveys and auditing, are introduced. Most importantly, the role of employees for successful implementation of Lean will be elaborated.
Concluding, main thoughts and findings will be summed up.