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**Delivering and Sustaining Change through Implementation  
of a Lean Management System:  
*A Journey towards Health Improvement***

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**Tim Winstone**

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## Abstract

In this ever-changing world organisations seek to be adaptive and innovative and in response they are adopting new ways of working. Approaches to managing change have been well documented and have progressed as a deeper understanding of change and the associated study of human behaviours has developed. One such methodology that emerged from the well-studied area of Lean Thinking is the Lean Management System, which aims to align direction and distribute decision-making in an organisation in order to have greater sustainability of change.

This study was conducted in the pharmacy department of a large New Zealand public hospital that sought to engage their team in change from a supply-driven pharmacy model, to a model focused on medicines optimisation. To enable the change, the pharmacy department developed work practices based on a Lean Management System that had been adopted in other areas of the hospital. There is very little literature on studies that discuss the impact of Lean Management Systems in healthcare organisations, in particular a pharmacy department.

The primary aim for this study is to explore the impact that a Lean Management System has on the sustainability of change in a hospital pharmacy department.

Participatory Action Research was selected as the methodology to explore the two main themes of 'Relevance' and 'Reactivity' before, during and after the introduction of a Lean Management System. The data for the study was collected through a combination of focus groups, interviews and researcher reflections. Given that the researcher worked with the participants of the study to facilitate the introduction of the Lean Management System, processes were established to ensure the study was conducted in an ethical manner.

The findings from the study indicate that the introduction of a Lean Management System has a positive impact on sustainability of change, as observed through an increase in the Relevance individuals had with the wider pharmacy department and a reduction in the day-to-day Reactivity team members experienced. This improvement was not consistent across all teams in the pharmacy department, in particular a difference observed in the level of Relevance between the Pharmacy Leadership Team and the 'front line' teams. The findings also highlight the strong connection between leadership behaviours and effectiveness of the Lean Management System. The findings can be explained by a range of literature relating to behavioural characteristics, identity theory, alignment to purpose and leadership. Implications for policy and practice are provided with the aim of guiding organisations introducing Lean Management Systems to be successful.

The research identifies a number of gaps in literature and recommends that, in order to achieve greater sustainability of change, the introduction of a Lean Management System be conducted in conjunction with the development of leadership behaviours. Finally, future research is recommended focusing on the development of Lean Management Systems aligned to social networks and the impact of Organisational Identity on Lean Management Systems.

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