



SUCCESSFULLY COPING WITH CURRENT CHALLENGES IN HEALTH CARE

THANKS TO LEAN HOSPITAL MANAGEMENT

Does Lean Hospital Management help service providers in health care to have more time for their patients? Hospitals all over the world, such as the 'Virginia Mason Hospital' in the United States and the 'Hirslanden Klinik St. Anna' in Switzerland, have discovered the benefits of Lean Hospital Management and have already implemented it successfully. Lean Hospital Management is based on insights from Lean Management, a concept that was popularised by Toyota and experienced a remarkable uplift in manufacturing in the 1980s and within service providers in the 1990s.

Markus Fraefel and Markus Dörflinger

Consultants bij Abegglen, Zwitserse partner van Rijnconsult in Allied Consultants Europe

At first glance it may astonish that a theory originating in production industries suits health care organisations as well and has already been successfully implemented in several clinics. However, industrial production and health care services base on similar key success factors, of which rigorous customer focus is especially important. In this article we discuss the theoretical foundations of Lean (Hospital) Management and refer to examples for demonstrating the results of successful implementation.

Lean Management

Lean Management basically aims at 'creating value without waste'. Activities that add customer value get expanded and coordinated in an optimal way. Non value-adding or redundant activities get eliminated. This results in efficient and effective processes with strong customer focus.

This basic principle of Lean Management may also be applied to the specific circumstances of a hospital or a clinic and therefore to the needs of patients. We illustrate this discussing the five basic principles of Lean Management.

The five Lean Principles

The five Lean Principles (1) Identify Customers and Specify Value Added, (2) Identify and Map Value Streams, (3) Create Flow by Eliminating Waste, (4) Organize According to Customer Pull and (5) Improve Continuously are the foundations of Lean Hospital Management.

1. Identify Customers and Specify Value Added.

Activities that add value from a customer point of view are essential. Therefore, every organisation has to identify its customers and explore their needs. In a hospital, patients are the most obvious customers. Relatives, health insurance companies and governments are additional 'external' customers. Further, 'internal' customers such as medical disciplines and the emergency unit must not be neglected. The coordination with internal 'customer groups' is crucial to maintain the hospital as a functioning system. Due to their variety, each 'customer group' has a different point of view when assessing value added. The patient, for instance, considers healing or at least achieving a better state of health

until leaving the hospital as true value added. His health insurance company, in contrast, focuses on efficient medical services. Finally the relatives require frequent and qualified information on the state of health of the patient. Key questions, such as 'Who is our customer?', 'What is the customer ready to pay for?' and 'How is the value added from a customer perspective linked with the financial performance of the hospital?', help to identify value-added activities and to increase customer focus in all processes.

- 2. Identify and Map Value Streams.** Admission to and discharge from a hospital are frequently mentioned value streams containing non-value-added activities and waste. Examples are administrative barriers, frictions at interfaces between medical disciplines and, from a customer perspective, waiting time. To foster understanding of value streams, it is recommended to visualise these processes. Breaking down a value stream into single process steps brings problematic issues and waste along process operations to the surface and reveals opportunities for improvement.

Key questions, such as 'Which value streams create customer value?', 'What are the process steps, in what sequence and at what time?' and 'Where are problem areas containing waste / non-value-added activities (movements, waiting time, overproduction etc)?', help in fostering the understanding of value streams and in laying the groundwork for optimisation.

- 3. Create Flow by Eliminating Waste.** The target state is characterised by waste-free processes. These are realised mainly by implementing the Lean Management concepts of 'flow' and 'takt'.

To achieve this in a health care context interdisciplinary thinking is crucial. Selective optimisation of some processes may negatively impact others and is neither sustainable nor beneficial for the hospital as a whole. In this sense, it is not acceptable to optimise the processes of a radiology department to cope with a rising number of ambulatory patients (outpatients) while simultaneously disregarding the needs of accident and emergency units or the departments caring for inpatients.

Key questions, such as 'How can a continuous, steady and smooth process operation be realised (flow principle)?', 'Is there a uniform takt guiding the processes?' and 'Where do shortages appear and using what measures can they be mitigated?', have to be answered in this context.

- 4. Organize According to Customer Pull.** The fourth Lean principle focuses on 'demand-governed' service provision. A service has to be provided at the correct time as well as in proper volume and quality. Precisely allocating tasks, responsibilities, and competencies is a basic prerequisite. Amongst other measures, service level agreements help to manage interfaces between functions within the hospital (e.g. between radiology and surgery). Every discipline can count on the delivery of services as agreed (such as the state of diagnosis, duration of patient transport or disposition and transport of beds). This improves the collaboration, reduces redundant activities resulting from unclear responsibilities and enables the patient to have a shorter length of stay.

Key questions, such as 'Are the services provided asked for by the customer?', 'Are the services provided timely, neither too early nor too late?' and 'Are there many backlogs of semi-finished tasks in the service processes?', help to organise in a demand-based way.

- 5. Improve Continuously.** The fifth Lean principle for achieving a Lean hospital is based on sustainable, continuous improvement. In essence this means, daily reaching for the goal of 'perfection' in hospital operations.

Suitable tools are Kaizen boards and Kaizen meetings. Using these instruments, teams periodically work on small improvements that can be realised in the short run. A nursing department, for instance, is able to utilise the ideas of its nurses to enhance not only everyday work but also to contribute to the steady improvement of the whole hospital.

Key questions, such as 'Is a continuous improvement process (CIP) established?', 'Does every employee embrace and pursue the idea of continuous improvement?' and 'Are employees empowered to continuously improve by supplying them with training, resources

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and other support?' are crucial in this context. Answering them allows reflecting to what extent continuous improvement is already part of the corporate culture.

Degree of maturity

Before starting with Lean Hospital Management or proceeding with the next stage, it is recommended to analyse the current situation of the hospital and to assess the suitability of planned Lean activities. Based on that knowledge, optimisation goals, project timing, methods and accompanying change management can be tailored to the specific needs of a hospital. This ensures that Lean Hospital projects are successful, do not cause waste by themselves and that their results are sustainable.

Conclusion

Similar to the introduction of Lean Management in production, service organisations in health care have been facing opposition arising from various stakeholders. In the meantime, more and more managers and employees recognise that neither the product nor the output is at the core of Lean hospital. In fact, it focuses on the processes underlying the service provision. As consequence, Lean Management is more frequently applied in health care aiming at boosting productivity and reducing lead time as well as improving customer and employee satisfaction.

Hospitals and other players in health care have to evolve into modern companies to survive the future of this fast-changing industry. Lean Hospital Management offers leaders many possibilities for establishing professional, process-driven health care organisations.

Further readings

Allied Consultants Europe (2012). *Lean Healthcare – Wie Dienstleister im Gesundheitswesen künftige Herausforderungen meistern.*

Kenney, C. (2011). *Transforming Health Care.* Virginia Mason Medical Center's Pursuit of the Perfect Patient Experience. New York: Productivity Press.