Healthcare in Sweden: applying lean initiatives

Today lean production is a well-established management concept in many manufacturing organizations. There are several success stories of the strategic changes achieved through lean initiatives in both the private and the public sector with effects such as reduced lead time, improved work routines, teamwork, empowerment, quality improvements, and lower costs.

A similar approach to deliver higher healthcare quality at lower costs would be invaluable in the Swedish healthcare services, which has experienced an increasing need for care and a negative financial development with extensive staff reductions.

During the last decade the Swedish healthcare has developed a measurement system for following up lead-times in order to deal with long waiting times and delays. The measurement system called the “flow model” makes it possible to follow an individual patient’s path through the healthcare system by focusing on eight measures, all of which measure a certain date or time in the patient care chain. The model aims to prevent long waiting times and delays and to make comparisons between clinical departments and over time.

Swedish healthcare

The healthcare system in Sweden is highly decentralized compared to other countries. The health services are financed and managed by the 20 county councils and 290 municipalities within their respective areas. Moreover, the Swedish Government and Parliament have the main responsibility for the health policy on a national level. The Swedish Health Act states that the main goal of healthcare is to offer the population good healthcare based on equal terms. Patients that have the greatest need for healthcare shall have preference for care.

Over the years the State has gradually shifted financial and provider responsibilities to the county councils and the municipalities resulting in a reinforcement of the decentralization. Today, services related to residential care, excluding physician services, are managed by the municipalities. In addition, the municipalities can enter into contracts with the county councils to provide home care.

The Swedish healthcare services are mainly tax-financed through county and municipal taxes. The county councils also charge patient fees, which account for 2.7 per cent of the revenues (ibid). The county councils and municipalities are the main providers of healthcare, but private providers deliver about 10 per cent of all health services. All counties can contract with private providers, which are mainly done in primary care. The Swedish healthcare is relatively unified compared to other countries, with county councils and municipalities serving as the financiers and dominant providers.

Lean thinking

The lean production concept was born on the Japanese manufacturing shop floor and was promoted through the success of the Toyota Motor Corporation. The lean production management design included among other things Just-in-Time (JIT), kanban method, and a high level of employee problem-solving. The focus was on eliminating waste and represented an alternative to the traditional mass production system.

Lean production is described in five elements:

1. lean manufacturing;
2. lean product development;
3. supply chain coordination;
4. customer distribution; and
5. lean enterprise management.

In 1996 the concept of lean production was extended from the shop-floor techniques to including the entire organization, not only manufacturing functions. Successful lean companies in western industries were promoted which further accelerated the expansion of lean production.

Lean thinking is based upon five principles. These comprise:

1. identification of customer value;
2. management of the value stream;
3. developing a flow production;
4. using “pull” techniques; and
5. striving to perfection.

In recent years the discussion on lean production has also included the concept's relation to Six Sigma and TQM.

Is lean thinking applicable in healthcare?

Because lean thinking originated from manufacturing companies, it may be argued that the service sector and especially the healthcare sector may not gain from it. However, others advocate the application of lean thinking in the medical system, and argue that the first step in implementing lean thinking in medical care is to put the patient in the foreground and include time and comfort as key performance measures of the system.

Lean product development, supply chain management, and lean manufacturing are important areas in healthcare. The focus on zero defects, continuous improvements and JIT in healthcare makes lean production especially applicable. An obvious application of lean thinking in healthcare lies in eliminating delay, repeated encounters, errors and inappropriate procedures.

Global movement

Management concepts originating from private industry organizations have received increased attention in the Swedish healthcare during the 1990s. The interest may be seen as a result of shifting the traditional way of controlling the public sector to be based on a market-oriented mindset. This global movement is often named New Public Management including an orientation towards results, individual responsibility and flexible organizations, employment and personnel.

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A common model for depicting the power distribution between the traditional and the new management control in Sweden is the “acute care model”. This model comprises two hierarchies, namely the administrative “control and coordination” hierarchy and the medical “care and production” hierarchy. In a hospital the physicians control the medical hierarchy, while the hospital manager has the overall responsibility of the administrative hierarchy.

Primary customer

The patient may be seen as the primary customer to the healthcare services since the patient justifies the existence of such services. However, this is sometimes hard to accept, especially in public healthcare, since the patient does not pay directly for the services. Other customers to Swedish public healthcare are the patient’s family, the society in general as the major funding party, referrers as internal customers and medical students.

This indicates that there are many different customer groups to healthcare services. Depending on the perspective, the definition of value will differ. However, because the main mission of healthcare is to treat and cure patients, who are the end-consumers in the care process, it is argued that the patient should define what creates value in healthcare.

Continuous preparation

In healthcare JIT means to balance the demand for care with the capacity in order to eliminate waste such as overcapacity or waiting times. Thus, JIT requires that demand can be predicted and planned for. However, emergency or outpatient units may experience difficulties predicting demand over a longer period of time. In such departments difficulties may arise in smoothing up the flow of patients. Patients are in
periods piled up in emergency units without prediction and the pressure on the healthcare professionals becomes over-whelming. The departments therefore need to have a continuous preparation for unpredicted patients requiring emergency care.

A second difficulty regarding JIT concerns the identification of a demand on which the flow should be based. An initial demand defined by the patient, e.g. an aching leg, may end up in a totally different demand, e.g. a heart transplant. The demand for care may be even more complicated in psychiatric care, in which some patients never receive a clear diagnosis, i.e. the demand on the healthcare services is undefined, even though the patients benefit from the healthcare services. Hence, what the patient demands is not always what is needed in the end seen from a medical point of view. The differences of demand may make the application of JIT more complicated in healthcare than in industry.

Planning for change

During the last years the need for care has increased in Sweden. Together with a negative financial development and extensive staff reductions the situation requires a system change, which can make processes more efficient without extra resources. The concept of lean thinking may be one approach that can help managers to liberate existing resources and allocate them for further improvements.

In adopting lean thinking principles, and actually in any new management implementation, it is important to design a measurement system that reflects the initiatives taken. It is also worth noting that implementing a performance measurement system requires a new way of thinking about managing healthcare. Process orientation and patient focus are some concepts in the new public management philosophy, which need clarification.

It is also of great importance to see lean thinking as a part of the larger management shift in order to plan for changes in mindsets and work places. Local departments have different requisites to plan and predict their demands when adapting the lean principles to healthcare, and patients’ demands may change during the care process, which puts further restrictions on adaptation.

October 2007.

This is a shortened version of “Measuring lean initiatives in healthcare services: issues and findings”, which originally appeared in


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