Application of Lean Healthcare methodology in a urology department of a tertiary hospital as a tool for improving efficiency

F. Boronat\textsuperscript{a}, A. Budia\textsuperscript{a,*}, E. Broseta\textsuperscript{a}, J.L. Ruiz-Cerd\~{a}\textsuperscript{a}, D. Vivas-Consuelo\textsuperscript{b}

\textsuperscript{a} Servicio de Urología, Hospital Universitario y Politécnico La Fe, Valencia, Spain  
\textsuperscript{b} Centro de Ingeniería Económica, Unidad de Investigación en Economía y Gestión de la Salud, Universidad Politécnica de Valencia, Valencia, Spain

Received 19 February 2017; accepted 13 March 2017  
Available online 6 December 2017

KEYWORDS
Lean healthcare methodology; Urology; Continuous improvement; Clinical management; Efficiency; Lean healthcare satisfaction; Satisfaction

Abstract

Objective: To describe the application of the Lean methodology as a method for continuously improving the efficiency of a urology department in a tertiary hospital.

Material and methods: The implementation of the Lean Healthcare methodology in a urology department was conducted in 3 phases: (1) team training and improvement of feedback among the practitioners, (2) management by process and superspecialization and (3) improvement of indicators (continuous improvement). The indicators were obtained from the Hospital’s information systems. The main source of information was the Balanced Scorecard for health systems management (CUIDISS). The comparison with other autonomous and national urology departments was performed through the same platform with the help of the Hospital’s records department (IASIST). A baseline was established with the indicators obtained in 2011 for the comparative analysis of the results after implementing the Lean Healthcare methodology.

Results: The implementation of this methodology translated into high practitioner satisfaction, improved quality indicators reaching a risk-adjusted complication index (RACI) of 0.59 and a risk-adjusted mortality rate (RAMR) of 0.24 in 4 years. A value of 0.61 was reached with the efficiency indicator (risk-adjusted length of stay [RALOS] index), with a savings of 2869 stays compared with national Benchmarking (IASIST). The risk-adjusted readmissions index (RARI) was the only indicator above the standard, with a value of 1.36 but with progressive annual improvement of the same.


* Corresponding author.

E-mail address: alberto.budia@hotmail.com (A. Budia).

2173-5786/© 2017 Published by Elsevier España, S.L.U. on behalf of AEU.
Introduction

After World War II, Japan was devastated and in a precarious economic situation, being forced to rebuild its productive system. In the decade of the 60s, a Japanese company (Toyota) began a change in its production methods that became based on the trust in its personnel and in the special relationship of the workers with the companies in which they performed their functions, launching the Gembas, Kanzei; Gembas (workplace) and Kanzei (improvement). With this, in only 10 years, they managed to unseat the United States of America in the production and in the quality of what produced.1

This system was imported to the West with the name of Lean (changing, slimming) which meant removing, from all activity, what consumes resources and does not create value.2 It is a philosophy based on reducing losses and increasing the value of the business. Lean includes principles, methods and tools that are applied to improve the speed and efficiency of the processes through the detection and elimination of any unnecessary step or in which material losses occur.

The application of this methodology to the management of health services is very appropriate for times of crisis when demand continues to grow and there is no longer a growing funding that can adapt to this demand, and demonstrated its efficiency would be the basis of maintained sustainability. The foundation of this methodology is the reduction of costs, the improvement of the feedback between the health personnel, the increase in the quality of care and production, the decrease in the proportion of patients who do not show up at scheduled appointments, the improvement in the main indicators, as well as the reduction of human and system errors.3,4 In short, a reduction in costs associated with non-quality.

Our objective in this work is the description of the application of the Lean healthcare methodology as a method of continuous improvement of efficiency in a urology department of a tertiary hospital.

Material and methods

From January 2011 to December 2015, a total of 12,532 processes were analyzed and classified in diagnosis-related...
دریافت فوری متن کامل مقاله

امکان دانلود نسخه تمام متن مقالات انگلیسی
امکان دانلود نسخه ترجمه شده مقالات
پذیرش سفارش ترجمه تخصصی
امکان جستجو در آرشیو جامعی از صدها موضوع و هزاران مقاله
امکان دانلود رایگان ۲ صفحه اول هر مقاله
امکان پرداخت اینترنتی با کلیه کارت های عضو شتاب
دانلود فوری مقاله پس از پرداخت آنلاین
پشتیبانی کامل خرید با بهره مندی از سیستم هوشمند رهگیری سفارشات