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HOSPITAL MANAGEMENT AND NURSING MANAGEMENT IN THE LIGHT OF THE LEAN PHILOSOPHY IN HEALTHCARE

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ABSTRACT

This article aimed to reflect on hospital management and nursing management based on the Lean Philosophy in Healthcare. It was concluded that hospitals and their most numerous health professionals, the nursing team, may benefit from the application of Lean concepts, in order to avoid waste, add value to the service and provide better health care.

DESCRIPTORS: Hospital management; Total Quality Management; Nursing; Nursing Economics; Nursing care.

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GESTÃO HOSPITALAR E GERENCIAMENTO EM ENFERMAGEM À LUZ DA FILOSOFIA LEAN HEALTHCARE

RESUMO

Este artigo objetivou refletir sobre a gestão hospitalar e o gerenciamento em enfermagem atrelados à filosofia Lean Healthcare. Concluiu-se que tanto os hospitais quanto o seu maior quantitativo de trabalhadores, a equipe de enfermagem, podem ser beneficiados com a aplicação dos conceitos Lean, no sentido de evitar desperdícios, agregar valor ao serviço e propiciar mais qualidade de assistência em saúde.

DESCRIPTORES: Administração Hospitalar; Gestão da Qualidade Total; Enfermagem; Economia da Enfermagem; Cuidados de Enfermagem.

GESTIÓN HOSPITALARIA Y GERENCIAMIENTO EN ENFERMERÍA A LA LUZ DE LA FILOSOFÍA LEAN HEALTHCARE

RESUMEN:

Este artículo tuvo el objetivo de reflexionar acerca de la gestión hospitalaria y del gerenciamento en enfermería vinculados a la filosofía Lean Healthcare. Se concluyó que tanto los hospitales como su mayor cuantitativo de trabajadores, el equipo de enfermería, pueden ser beneficiados con la aplicación de los conceptos Lean, en lo que se refiere a evitar desperdicios, agregar valor al servicio y propiciar más cualidad de asistencia en salud.

DESCRIPTORES: Administración Hospitalaria; Gestión de la Calidad Total; Enfermería; Economía de la Enfermería; Cuidados de Enfermería.

HOSPITAL MANAGEMENT AND NURSING MANAGEMENT IN THE LIGHT OF THE LEAN PHILOSOPHY IN HEALTHCARE

Due to the complexity of the physical-functional structure and the diversity of human resources and specialized materials required for its operation, hospitals demand continuous investments of large amounts of funds, often higher than their profits, which poses challenges to their sustainability⁽¹⁾.

Management strategies, such as those comprised in the Lean Philosophy in Healthcare, and which are focused on these challenges, tend to maintain or provide corrective and continuous improvement actions that strengthen both hospital management and the management of its services⁽²⁾.

In order to make some considerations about this scenario, the present study aimed to reflect on hospital management and nursing management based on the Lean Philosophy in Healthcare.

Hospital management, as a whole, comprises a set of processes that are managed in specific sectors or departments. In order to effectively manage these processes, as well as the human and material resources involved, hospitals should map all their activities to have a global picture of the intervention needs and existing strengths⁽³⁾.

One strategy recently used in the hospital setting and which is still incipient in nursing and in Brazil for process mapping and optimization is the Lean Philosophy in Healthcare which means lean production applied to health⁽³⁾.

This philosophy originated at Toyota. It was known as the Toyota Production System (TPS) and began to be disseminated in hospitals in 2002, with the objective of reducing or eliminating any waste related to the processes, in order to reduce costs, increase profits and improve the quality of hospital services⁽²⁾.

Lean production comprises several principles, such as to determine what creates value for the customer; identify the flow of value, i.e. the sequence of operations and activities that add and do not add value to the production process; implement continuous flow where each activity is immediately followed by the subsequent activity, in order to avoid the generation of inventories and production downtime; and develop the pull system, i.e. when continuous flow is not possible, production should only meet the demand generated by the customer⁽⁴⁾. In addition to these principles, there is a commitment to seek perfection, and this pursuit of continuous improvement creates endless possibilities for hospitals⁽⁵⁾.

In this regard, in order to avoid waste and meet the needs of their real customers i.e., the patients, hospitals and nursing services must identify the value-adding activities, as well as those activities that are necessary, but do not add value; and those that do not add value⁽⁶⁾. Value-adding activities result in a service more valuable to the client, e.g. when the patient is treated by the nursing team; activities that are necessary, but do not add value, do not result in a service more valuable to the client, despite being necessary. For example, when the medication is prepared by the nursing team to be administered later, and finally, some activities do not add value, do not result in a more valuable service to the client, nor are they necessary. For example, a medication that is past its expiration date due to inadequate inventory management⁽⁷⁾.

Ohno⁽⁸⁾, a Toyota executive and critical thinker, has gone deeper into Lean concepts and defined seven categories of waste that can be easily exemplified in the healthcare industry⁽⁵⁾: Overproduction (Excessive/unnecessary monitoring of a patient), Defects (Administration of wrong medication), Unnecessary Inventories (Long waiting for test results), Inappropriate Processing (Prescription of antibiotic to treat an inflammation), Excessive/Unnecessary Transportation and Movement (of patients or medications due to a non-optimized hospital layout), Waiting (for a medical diagnosis). Two other categories emerged after those established by Ohno, as follows⁽⁹⁾: Re-prioritization, which presupposes

the beginning of a new task before another has already begun, and the scarce use of the individuals' talents, as these persons are used as operators, rather than specialists in processes.

The Lean Philosophy in Healthcare has been used in hospitals, although to a limited extent in the Brazilian context, for the improvement of a process-based management and the reduction of waste and costs⁽¹⁰⁾. Some examples, mostly from other countries, can be cited. One example concerns an American hospital that reduced the Patient Flow Lead Time by 25%, transportation by 75%, and waiting time by 31% %; and also in radiology-surgical center flows and in the work processes in the radiology sector⁽⁵⁾.

Another example concerns a hospital in the United States that reduced the time taken to send the medications from the pharmacy to the hospital beds from 4 hours to 12 minutes. Using lean tools, the Virginia Mason Medical Center (USA) increased its productivity by 36% and reduced its inventories by 53%. At ThedaCare Inc. (USA), the average number of days a patient spent in the hospital went from 6.3 days to 4.9 days and the cost of coronary surgery fell 22%⁽⁵⁾.

The nursing team is the largest group of health care professionals and provides direct care to the clients at all moments of their life cycle, from birth to death. It should be stressed that nurses work in shifts and are available 24 hours a day, providing their services in all specialties⁽¹⁾.

According to the World Health Organization (WHO)⁽¹¹⁾ there are major challenges related to the guarantee of health sustainability and equity for the population, and after its 2016 report, the "Nursing Now " campaign was launched in February 2018, which stated that nursing workers are the health professionals most prepared to face the health challenges of the 21st century⁽¹²⁾.

In this context, nurses are trained to coordinate management and care in the hospital environment in a care-centered way, focusing on the improvement of care and on the quality of the services provided in the units⁽¹³⁾. Involved in care in a scientific, political and humanized way, nursing has great potential to change the health profile described by the WHO⁽¹²⁾.

However, the traditional focus on performing tasks, such as delivering care according to a biomedical model, elaborating work schedules, and controlling materials and equipment, is still impregnated in the nursing service, reflecting little direct involvement of nurses in the management of their service, in health management and hospital management as a whole⁽¹³⁾.

Being involved in hospital management processes means investing in skills that ensure financial sustainability, quality of service and customer safety. Since they are the largest group of health care professionals in the hospital and because of their critical, reflective, political, scientific, clinical and social training, nurses are highly capable of leading the management of hospital processes and nursing services, adding value to their services and improving hospital care⁽¹⁴⁾.

Because of the extensive professional training of nurses, the Lean philosophy affirms that they have great capacity to improve the management of hospital services⁽¹³⁾. Despite the scarce number of publications on lean health practices developed or led by nursing professionals⁽¹⁴⁾, researchers believe that the involvement of these professionals in the execution of lean programs is crucial for the decision of introducing the philosophy in the training program of the hospital as a whole, since various daily hospital activities are developed by nurses and nursing technicians⁽¹³⁾.

Some researchers related indicators of improvement of work processes in nursing after the implementation of lean methodologies⁽¹⁴⁾, reporting a decrease in stress levels after standardization and leveling of work; reduction of the level of fatigue involved, with reduction of lead time in the execution of tasks, rework, excessive use of transportation

means, accumulation of functions, inadequate infrastructure and slow flow in work routines⁽¹⁰⁾.

Therefore, the importance and the results of the use of the Lean Philosophy in Healthcare for the hospitals was identified. It should be noted that improvement processes are only mapped and implemented with the involvement of all employees, from the managers to the professionals directly involved in the sectors, mainly the nursing team, who are the front-line leaders in health care⁽¹⁴⁾.

In this regard, Lean Healthcare can both contribute to the improvement of nursing work processes and to the institution in which the methodology is used, reflecting the reduction of hospital costs⁽¹⁰⁾, improvement in the management of processes⁽³⁾, with higher levels of quality in the hospital setting⁽¹⁾ and patient safety⁽¹¹⁾.

FINAL CONSIDERATIONS

The Lean Philosophy in Healthcare associated with Hospital Management and Nursing Services Management tends to improve processes by reducing costs and waste, thus generating profit, valuing the services delivered and providing higher quality care to the customers, which is the ultimate goal of health care providers. Nursing professionals play a key role in this scenario, and their work process can be improved with the implementation of lean programs.

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