

Standardization of the Labor Process, Taking into Account the "Lean Manufacturing" Process in Pharmacies of Medical Organizations of the Penitentiary System

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ABSTRACT

Background. The study of the basic parameters of the labor process in pharmacies is topical since it consists in the scientific substantiation of directions for improving the organization and improving the efficiency of pharmaceutical employees, which is a criterion for ensuring the quality of medical care to patients.

Objective. Analysis of the possibility of using "lean technologies" in the pharmacy of the medical organization of the penitentiary system, as a tool to improve the efficiency and quality of work of pharmaceutical employees.

Methods. For scientific analysis of labor functions and production activities in pharmacy organizations, the methods of documentary observation and system analysis have been used.

Findings. Using the example of a pharmacy of a multi-disciplinary medical organization of the penitentiary system, the arrangement of the work processes of pharmaceutical employees has been investigated. As a result, the necessity of introducing "lean technologies" into the work of penitentiary pharmacies in the framework of the organization of the working day according to the generally accepted Good Pharmacy Practice system has been substantiated. The basis of the "lean technologies"

implementation system is the systematization and standardization of the labor process through the introduction of standard operating procedures and standard job descriptions for pharmaceutical employees.

Conclusions. The designed approaches to improving the work of pharmaceutical employees will reduce the number of unintended errors, reduce the working time spent on each specific operation, reduce the psycho-emotional burden on pharmaceutical employees and, consequently, increase the productivity of employees and improve the quality of drug supply for patients.

Keywords: medical organization of the penitentiary system, drug supply, pharmaceutical employees, lean technologies, job description, standard operating procedures.

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INTRODUCTION

Introduction of "lean manufacturing" technologies in medical organizations is one of the main methods for increasing the efficiency of using public resources and improving the quality of medical care [1, p. 41]. Using this approach allows reducing the number of personnel errors in the performance of their work duties [2, p. 51].

The objective of this study was to determine the scientific analysis of the possibility of applying "lean technologies" in the pharmacy of the medical organization of the forensic (penitentiary) system, as a tool to improve the efficiency and quality of work of pharmaceutical employees. The main task of the work was to justify the current areas of optimization of the activities of the pharmaceutical service of the interregional medical organization of the penitentiary system.

The interregional medical organization of the penitentiary system has been chosen as an empirical and

experimental base, providing medical care to defendants, persons under investigation, convicts, persons held in custody in the penitentiary system of two constituent entities of the Russian Federation, as well as to employees of the above institutions. The structure of interregional medical organization includes 25 branches, including specialized and multidisciplinary hospitals, outpatient-polyclinic departments, a center for sanitary and epidemiological inspectorate, serving 10 correctional colonies, 4 remand prisons, an interregional tuberculosis hospital, a medical correctional institution, a juvenile correctional facility, an infant home, 4 penal colony settlements, with a total limit of filling more than 20 thousand people. The total bed capacity of the medical organization is 756 beds, its structure (Figure 1) is represented by specialized beds for the provision of inpatient medical care, located in 7 branches of the medical organization.

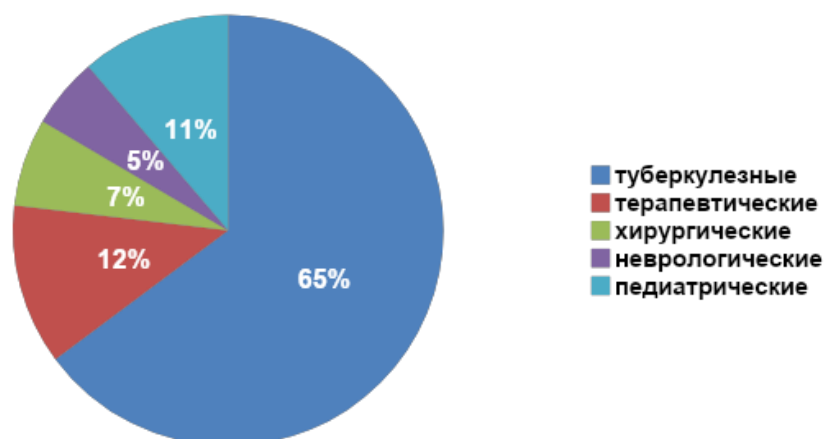


Figure 1. The structure of the bed capacity of the interregional medical organization of the penitentiary system

tuberculosis
therapeutic
surgical
neurological
pediatric

As follows from the data presented in Figure 1, the majority of hospital beds accounts for 490 tuberculosis (65%), including 40 beds for the surgical treatment of pulmonary forms of tuberculosis; the proportion of bed resources for the treatment of other diseases does not exceed 35% and is distributed as follows: 91 therapeutic beds (12%), 85 pediatric beds (11%), 50 surgical beds (7%), 40 neurological beds (5%).

For the purpose of drug provision of 25 branches of the medical organization, in their structure 15 pharmacies are deployed, of which: 1 pharmacy operates as part of a branch that provides medical care only in stationary conditions; 6 pharmacies service branches where they provide medical care both in inpatient and outpatient settings; 8 pharmacies serving only branches for the provision of medical care to patients on an outpatient basis.

The staffing of all pharmacies includes 28 positions of pharmaceutical employees, which are distributed as follows:

14 positions of pharmacists, of which 11 positions of heads of pharmacies and administrative staff, 2 positions of pharmacists-technologists, 1 position of pharmacist-analyst;

9 positions of specialists with secondary pharmaceutical education, of which 4 posts of heads of pharmacies, 5 positions of senior pharmacists and pharmacists;

5 positions of junior pharmaceutical personnel (packers).

The special features of the arrangement of the work of pharmacies of the penitentiary system medical organization for the provision of drugs to patients should

include the procedure of centralized supply of drugs and medical products with which these medical organizations are provided by higher-level authorities [3, p. 288-289]. In the investigated medical organization the direct management of drug supply of pharmacies (the formation of a general application, reclamation, control of receipt, distribution), in view of the limited number of positions, is assigned to one specialist. A significant problem in the organization of drug supply is the process of redistribution of drugs and medical devices between the branches of the medical organization because of their territorial distance from each other. At the same time, the absence of a central pharmacy in the medical organization structure creates a number of organizational, logistical and financial difficulties [4].

LITERATURE REVIEW

Analysis of the scientific literature on the issues revealed hasn't found any studies on the introduction of the concept of "lean manufacturing" in the organization of the labor process of pharmacy organizations, which confirms the relevance of this study.

METHODS

The study has used the methods of documentary observation and system analysis, reflecting the labor functions and the production process in pharmacies of the medical organization of the penitentiary system.

RESULTS

According to Article 57 of the Labor Code of the Russian Federation, if there are compensation payments and benefits, or there are restrictions on the position held, the employer is obliged to apply professional standards. According to Article 195.3 of the Labor Code of the Russian Federation, requirements for the qualifications of workers contained in professional standards are mandatory for an employer in cases if they are established by federal laws, other regulatory legal acts of the Russian Federation [5]. At the same time, professional standards establish the structural components of the professional activities of a pharmaceutical employee [6, p. 25]. The use of professional standards allows characterizing in detail the labor functions of pharmacy employees, which constitute their main activity. These aspects of labor legislation indicate the need for mandatory application of professional standards in penitentiary medical organizations. Currently, the Ministry of Labor and Social Protection of the Russian Federation has approved professional standards "Pharmacist" [7], "Pharmacist-Analyst" [8], "Specialist in the Field of Pharmaceutical Activity Management" [9], which implies that job descriptions of this category of professionals must be aligned with the above professional standards. The government of the Russian Federation has established the timeline for health care organizations for the implementation of professional standards in the work of medical organizations [10, p. 67-77].

An analysis of the job descriptions of

pharmaceutical employees revealed a discrepancy in terms of educational requirements and job responsibilities. At the same time job descriptions are the main document regulating the labor function of the employee. Previously, the authors have already noted detectable violations of pharmacies, with a mismatch of internal regulatory documents [11, p. 269-287].

It must be emphasized that due to the incomplete staffing of the medical organization's staff, some pharmacies have introduced only one pharmaceutical employee position, which does not allow using only professional standards when forming the job responsibilities of a pharmacy employee, while one employee can perform both organizational and executive functions. Thus, the job descriptions of pharmaceutical workers of the penitentiary medical organization should reflect the necessary responsibilities for the position held and several professional standards can be used in the preparation of these documents.

Due to the limited number of pharmaceutical employees, they have to perform various work functions during the working day. Systematization of each work function of staff according to the principles of the concept of "lean manufacturing" reduces the number of unintended errors among pharmacy employees and improves the efficiency and quality of their work [12, p. 88-95].

The definition and regulation of the functions of pharmaceutical personnel in a pharmacy of the interregional medical organization of the penitentiary system (Figure 2) is carried out in accordance with the established procedure.

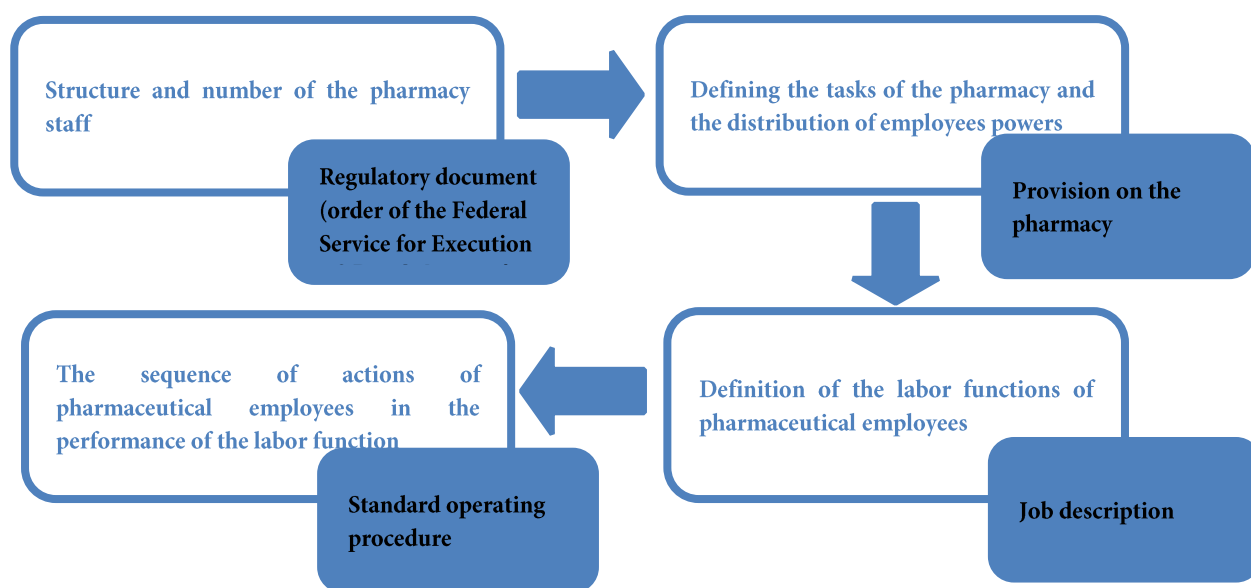


Figure 2. The procedure for determining and regulating the official functions of pharmaceutical employees

From the presented procedure, it follows that the structure of the pharmacy and the staff number of pharmaceutical employees are approved by a separate regulatory document - by order of the Pead of the Federal Service for Execution of Punishment of the Russian Federation. The tasks of the pharmacy, functions, interaction with other departments and the collective financial

responsibility of pharmacy employees are reflected in the local regulatory document of the medical organization - a Regulation on a Pharmacy as its structural subdivision, taking into account the specifics of organizing medical care in the branch of the medical organization and the regime of the contingent in the correctional institution on the territory of which the branch is located. Qualification requirements for

the pharmacy employee (education, work experience), rights, personal duties, including the implementation of certain manipulations, employee personal responsibility, are also reflected in the local normative document of the medical organization - in the Job Description, and the actions of the pharmaceutical employee during various labor operations are reflected in special regulatory document - Standard Operating Procedure.

DISCUSSION

In order to standardize job functions, we have developed standard job descriptions drawn up in accordance with the regulatory order of the Federal Service for Execution of Punishment and the regulatory legal acts governing pharmaceutical activity. Sections of standard job descriptions are:

1. General provisions reflecting the name of the position held, requirements for education and length of service, necessary knowledge, and skills, employee submission, appointment issues, duties in the absence of an employee, the right to combine positions and the list of persons subordinate to the employee.
2. Employee's rights.
3. Employee's obligations.
4. Responsibility of an employee for violation of legal acts in the performance of their official duties and labor discipline.

These model documents will allow you to cover all aspects of the work function of specialists and eliminate emerging issues in the performance of official duties. In total, we developed, agreed with the administration and representatives of the staff of the medical organization 12 standard job descriptions for all professionals working in the pharmacy.

In order to bring the pharmacy regulatory documents to uniform requirements, we developed a model Regulation on a Pharmacy for use in the medical organizations of the penitentiary system, which included general requirements defining the pharmacy's administrative activities, its tasks, structure and functions, the rights of the pharmacy manager, relationships and relations with other structural divisions, responsibility of employees. The draft Regulation on a Pharmacy is currently being tested in other medical organizations of the penitentiary system of the Russian Federation.

The need for the introduction of Standard Operating Procedures has been considered in the process of introducing "lean technologies" in pharmacies based on 5 elements, such as workplace organization, systematization of the distribution of pharmacy inventories, compliance with sanitary and epidemiological requirements, implementation of Standard Operating Procedure, staff self-improvement, and intra-pharmacy audit. The structure of a typical Standard Operating Procedure (Figure 3) is represented by sections.

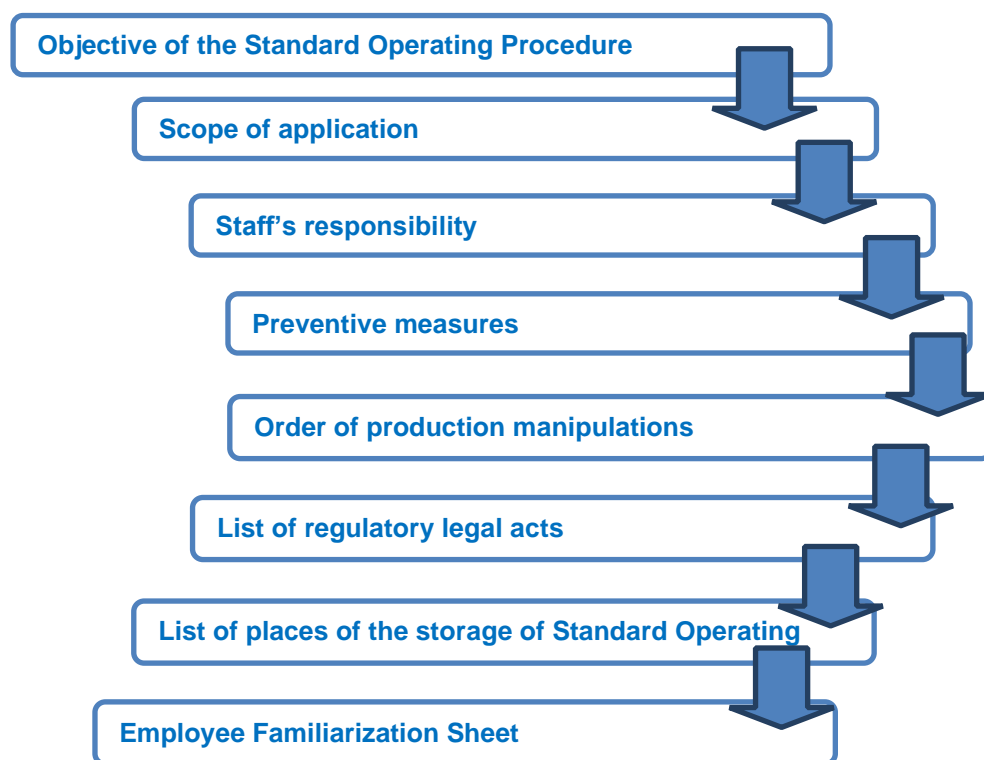


Figure 3. Structure of a typical standard operating procedure for pharmacy of the medical organization of the penitentiary system

In the course of our work, we developed 34 Standard Operating Procedures defining the requirements for the organization and implementation of all production operations that are relevant to the pharmacy of the medical

organization, which we selected as the experimental base of the study.

The program of introducing the concept of "lean manufacturing" into the work of pharmacies is directly

related to the generally accepted system of Good Pharmacy Practice (GPP), which defines Standard Operating Procedure as the main element of compliance with the quality of pharmacy organization's activities. This approach is reflected in the regulatory legal document of the federal executive body of the Russian Federation, which is entrusted with the state function of regulation and management in the field of health care, namely in the order of the Ministry of Health of the Russian Federation No. 647H dated August 31, 2016 On Approval of the Rules of Good Pharmacy Practice of Drugs for Medical Use [13], which emphasizes the state's attention to the problem of improving pharmaceutical activity and organizing drug supply to the population.

CONCLUSION

In the course of our research, standard job descriptions for pharmaceutical workers, sample Standard Operating Procedures for pharmacies and Regulation on a Pharmacy of the medical organization of the penitentiary system have been developed, taking into account the requirements of the legislation regulating pharmaceutical activities, and peculiarities of the work of the medical organizations subordinate to the Federal Service for Execution of Punishment. The introduction of the concept of "lean manufacturing" within the GPP for organizing drug supply to the penitentiary system, as well as Standard Operating Procedure in the pharmacies of the penitentiary system's medical organizations will fully standardize the working procedures by pharmaceutical employees, reduce the number of errors, optimize working time costs, which will have a beneficial effect on the effectiveness and quality of pharmaceutical services provided to patients.

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