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Article

# Strategic management in a university pharmacy: a case study

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## Abstract

The university pharmacy is a health establishment linked to a higher education institution used for teaching, research, and extension practices in the pharmacy field, providing pharmaceutical services to the community, such as dispensing and compounding medicine and pharmaceutical care. This study elaborated the strategic management of a university pharmacy by identifying critical processes and elaborating indicators for the drug dispensing area of a university pharmacy. This is an applied research conducted with seven pharmacists and the managers of a university pharmacy. The pharmacists responded to an online questionnaire and participated with the managers in online meetings and an online focus group. The data collected allowed us to define the organization's mission, vision, values, and strategic objectives. After analyzing the processes and identifying critical systems, seven indicators were identified based on the Balanced Scorecard (BSC) performance management method. The indicators relate to financial aspects, internal processes, clients, and organizational learning and growth. The process management implementation and the formulation of indicators based on critical processes were essential for improving the organizational management of the University Pharmacy.

**Keywords:** University pharmacy. Process management. Performance indicators.

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## A gestão estratégica no contexto de uma farmácia universitária


### Resumo

A farmácia universitária é um estabelecimento de saúde vinculado a uma instituição de ensino superior que se apresenta como cenário de práticas de ensino, pesquisa e extensão na área de farmácia e atua perante a comunidade, por meio da prestação de serviços farmacêuticos, como dispensação e manipulação de medicamentos e atenção farmacêutica, entre outros. O presente estudo buscou formular a gestão estratégica em uma farmácia universitária, com base na identificação de processos críticos e na construção de indicadores para o setor de dispensação de medicamentos. Trata-se de uma pesquisa aplicada que objetiva encontrar soluções para determinados problemas conforme conhecimentos já estabelecidos. A pesquisa teve a participação de sete farmacêuticos. Foi aplicado um questionário e realizado um grupo focal com a gestão e os farmacêuticos. Com base nos dados coletados, foram definidos, inicialmente, a missão, a visão, os valores e os objetivos estratégicos da farmácia universitária. Depois da análise dos processos e de posterior identificação de sistemas críticos, foram determinados sete indicadores baseados no método de gestão de desempenho Balanced Scorecard (BSC), que estão relacionados com a perspectiva financeira, os processos internos, os clientes e o aprendizado e crescimento. A implementação da gestão por processos e a formulação de indicadores baseados nos sistemas críticos são importantes para o aprimoramento da gestão organizacional da farmácia universitária.



**Palavras-chave:** Farmácia universitária. Gestão por processos. Indicadores de desempenho.


## Gestión estratégica en el contexto de una farmacia universitaria


### Resumen

La farmacia universitaria es un establecimiento de salud vinculado a una institución de educación superior que se presenta como escenario de prácticas docentes, de investigación y extensión en el campo de la farmacia y trabaja con la comunidad a través de la prestación de servicios farmacéuticos como dispensación y manipulación de medicamentos y atención farmacéutica, entre otras cosas. Este estudio propone definir un método de gestión estratégica basado en la identificación de procesos críticos y la construcción de indicadores para el sector de dispensación de medicamentos de una farmacia universitaria. Se trata de una investigación aplicada cuyo objetivo es encontrar soluciones a determinados problemas de acuerdo con conocimientos ya establecidos. La investigación contó con la participación de siete farmacéuticos. A partir de los datos reunidos se definieron inicialmente la misión, visión, valores y objetivos estratégicos de la farmacia universitaria. Posteriormente al análisis de los procesos y a la identificación de sistemas críticos, se definieron siete indicadores basados en el método de gestión del desempeño del Balanced Scorecard (BSC) que se relacionan con la perspectiva financiera, los procesos internos, el cliente, el aprendizaje y el crecimiento. Se concluye que la implementación de la gestión por procesos y la formulación de indicadores basados en sistemas críticos son fundamentales para mejorar la gestión organizativa de la farmacia universitaria.



**Palabras clave:** Farmacia universitaria. Gestión por procesos. Indicadores de desempeño.





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## INTRODUCTION

The University Pharmacy (Farmácia Universitária – FU) is a health establishment that operates in the promotion, protection, and recovery of health in a community, through the provision of pharmaceutical services that contribute to greater access and rational use of medicines. The FU also presents itself as a valuable teaching-learning scenario in which teaching, research and extension activities are carried out (CONSELHO FEDERAL DE FARMÁCIA, 2016). It has a space where dispensing activities, medication handling, pharmacotherapy review, pharmacotherapeutic follow-up and health education are processed (FÓRUM NACIONAL DE FARMÁCIAS UNIVERSITÁRIAS, 2017).

It consists of a service of great importance for the development and advancement of pharmaceutical care practices that contribute to the quality of life of the people served, and it is also configured by the National Curriculum Guidelines (Diretrizes Curriculares Nacionais – DCN) of the Pharmacy undergraduate course as a mandatory internship field, making it essential for higher education institutions to adapt to this reality (VIEIRA et al., 2018).

Like other healthcare services, the FU requires adequate management to achieve organizational objectives and ensure the quality of care provided. Among the main management challenges of this service are compliance with the National Policy on Pharmaceutical Care and resource management. According to Pereira, Ungari, and Grande (2012), these challenges can be overcome through the use of strategic management practices already consolidated in other areas and in other pharmaceutical care services, such as in hospital pharmacy, where process management is already consolidated along with performance indicators.

In an FU, there are several organizational processes that are linked to the expected results. Some processes are more critical, as they have a greater impact on these results. Process management in this service is essential for identifying and monitoring critical methodologies, such as material and medication management, the result of which interferes with the availability and accessibility of these products by the community (CAÇÃO, 2015).

Strategic indicators are an important tool in process management. According to Oliveira, Costa and Cameira (2007), the adoption of a performance measurement system with strategic indicators aimed at measuring and controlling critical processes can support decision-making on what needs to be improved in order to achieve organizational objectives.

It is necessary to conduct studies that guide the implementation of process monitoring management practices, the development and execution of strategic indicators aimed at optimizing the use of public resources and promoting greater user satisfaction, as well as the consolidation of this space as a scenario of excellence in pharmaceutical assistance.

This text is justified by the gap in the literature about process management and strategic indicators focused on this specific type of pharmacy, which was identified after research based on data from national and international journals.

In this context, this study aimed to formulate strategic management in a university pharmacy, based on the identification of critical processes and the construction of indicators for the medicine dispensing sector.

## THEORETICAL FRAMEWORK

### Process management

In an organization, the concept of process is based on the cooperation of different activities and resources aimed at achieving global objectives guided towards the final customer (ZARIFIAN, 2003). Process is a set of sequentially organized and structured activities that generate a valuable result, product, or service for the organization. For Chiavenato (2000, p. 131), "process means any phenomenon that presents continuous change over time or any operation that has a certain continuity or sequence."

According to Smith and Fingar (2003), processes can be classified into three types: operational processes, which are those in which the generated results are the final products or services intended for the consumer; management processes, which promote the organizational functioning of the processes themselves; and support processes, which assist the other processes.

Given the number of processes that can exist in an organization, another possible classification is based on their criticality. For Paim et al. (2009), critical processes are the most relevant to the organization, where errors can generate the greatest losses and where the greatest opportunities for improvement are found. According to Hronec (1994), critical processes are those that directly impact the achievement of the organization's strategies and goals.

Process management consists of identifying, designing, executing, monitoring, measuring, and improving an organization's processes. It means achieving organizational goals through the improvement, management, and control of essential methodologies (JESTON and NELIS, 2008).

According to Ladeira et al. (2012), the first contributions to the topic were developed in the Total Quality Management (TQM) method, which aims to achieve levels of excellence with cost reduction. To achieve total quality, a detailed analysis of processes is necessary, identifying waste, failures, and effectiveness of results.

Ladeira et al. (2012) further state that since then, process management has followed two approaches: one focused on the analysis of process maturity and another that investigates organizational performance through performance indicators. The tools used to evaluate organizational performance through indicators are Organizational Performance Measurement Systems (OPMS).

### Organizational performance measurement systems

In order for an organization to achieve its strategic objectives, it is necessary for it to constantly monitor its results and performance. Organizational performance measurement allows for quick and well-founded decision-making to keep the organization aligned with its strategy.

According to the classic concept of Neely, Adams and Kennerly (2002), an OPMS is a set of metrics used to gauge the efficiency and effectiveness of past actions, allowing for decisions based on the actions to be taken. An OPMS quantifies the efficiency and effectiveness of past actions through the acquisition, grouping, screening, analysis, and interpretation of appropriate data.

Performance measurement consists of managing measures in a sequence of causality that leads to the achievement of established objectives within specific internal limits of the organization

and its environment (LEBAS, 1995). Performance measurement projects the future based on data about the past.

Measurements are carried out based on the analysis of performance indicators. These must be formulated and chosen so as to portray, with the greatest possible causality, the actions taken by the company and the results obtained. Indicators need to be practical and adequate for planning and strategic objectives, facilitating the identification of factors and behaviors that interfere with success (FRANCISCHINI and FRANCISCHINI, 2017).

The performance indicator is the result of the convergence of measures that makes it possible to understand the behavior of the object being evaluated according to established reference limits, as there is only logic in measurement if there is the idea of the performance indicator and its purpose behind it (OLIVEIRA, COSTA and CAMEIRA, 2007). The data obtained from indicators only gain meaning when compared to previous data from the same indicator, therefore being relative and referenced data.

The combination of measures from different performance indicators forms an OPMS. However, implementing an OPMS involves more than just measuring indicators; it requires a methodical approach to constructing and analyzing indicators to achieve organizational improvement. According to the model proposed by Miranda (2005), there are four stages in implementing a measurement system: planning, measurement, analysis, and improvement.

In the planning stage, all of the organization's processes, critical processes, performance indicators, global objectives, and key areas are identified. The next stage is measurement, in which data is collected with simultaneous perception of feedback execution methods. In the subsequent analysis stage, the results are observed, and tactical objectives are set for each area and process, always aligned with the overall strategic objectives. Finally, in the improvement stage, according to Miranda (2005), the information is used for learning, reassessment, and restructuring of the measurement system itself, with dissemination of the results obtained and the restart of the cycle when there are changes in any characteristic of the organization.

One of the main models of OPMS based on process management is the Balanced ScoreCard (BSC). In the BSC, all processes are mapped to identify critical ones. Critical processes are measured for the formulation of performance indicators and specific goals for growth and improvement. According to Kaplan and Norton (1997), the BSC manifests the organization's strategic vision through strategic objectives, indicators, goals, and actions distributed into four macro perspectives: financial, customer, internal processes, and learning and growth.

In the "financial" perspective of the BSC, companies establish strategic objectives related to growth, cost reduction, productivity improvement, or investment strategies. The second perspective is "customer", which identifies the segments that represent the sources that will produce the organization's revenues, developing strategies for capturing, satisfaction, profitability, relationship, and value generation, through image and reputation. The "internal processes" perspective is the third, elaborated based on the identification of critical processes, which focuses on themes such as innovation, operation, and after-sales services. Operational processes tend to be repetitive, so scientific management techniques are applied to improve the receipt and processing of customer orders. Finally, the "learning and growth" perspective provides the infrastructure that enables the

achievement of strategic objectives established in the other three perspectives. It evaluates employee satisfaction, retention, and productivity, associating them with training and system improvement (KAPLAN and NORTON, 1997).

Next, the organizational characteristics of a university pharmacy will be discussed, a scenario in which the concepts discussed so far will be implemented.

## University pharmacy

The institution called University Pharmacy (FU) is intended to be a practical experience field for pharmacy students. Its importance was further emphasized with the publication of the Technical Note from the National Institute for Educational Studies and Research Anísio Teixeira (Instituto Nacional de Estudos e Pesquisas Educacionais Anísio Teixeira – INEP) DAES/INEP nº 008/2015, which deals with the revision of the assessment instrument for undergraduate courses, both in-person and distance learning. Among the main changes announced by the Assessment Instrument of Undergraduate Courses of the National Assessment System of Higher Education (Sistema Nacional de Avaliação da Educação Superior – Sinaes), is the requirement for the structuring of the university pharmacy as a specialized didactic laboratory for students in pharmacy courses.

In 2017, Resolution no. 6 of the Ministry of Education, which established the National Curriculum Guidelines for the Undergraduate Course in Pharmacy, reinforced the university pharmacy as a mandatory practice scenario, which can be in the higher education institution itself or in another establishment related to pharmaceutical assistance, through an agreement, aimed at carrying out mandatory internship activities for all students on the course.

Vieira et al. (2018, p. 321) define the university pharmacy in their research as:

> […] a healthcare establishment that develops teaching, research and extension activities in the compounding and dispensing of pharmaceutical specialties, providing pharmacy students the opportunity to combine the theoretical knowledge acquired with the daily practice of pharmacist activities in the exercise of the profession.

The National Forum of University Pharmacies (Fórum Nacional de Farmácias Universitárias – FNFU), a collegiate national network that fights in defense of university pharmacies, created a document titled Minimum Standards for University Pharmacy (FNFU, 2017) as a guideline for the implementation of the FU as a Health Educational Establishment. In this document, the FNFU places the university pharmacy within the scope of teaching, research, and extension.

In terms of teaching, the FU must enable professional pharmaceutical practice for students duly enrolled in the pharmacy course, with adequate guidance and supervision, establishing the theoretical-practical interface necessary for professional practice. In the field of research, this service should seek means for the encouragement and conduct of research activities that develop in the student the methodological reasoning directed towards investigative, reflective, and critical analysis, always guided by ethical principles. Within the scope of extension, it is essential to develop extension activities for the community in the form of programs, projects, or events, with the elaboration of


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education and health promotion activities and participation in national and/or regional campaigns aligned with public policies (FNFU, 2017).

The FNFU (2017) provides for the pharmaceutical services and procedures that an FU can offer, including services such as: dispensing and compounding medication; review of pharmacotherapy; pharmacotherapeutic monitoring; health education and procedures such as checking blood pressure, carrying out rapid capillary blood glucose tests and measuring body temperature.

Like any institution, the FU strives for quality in the provision of its services and develops its strategies based on this goal. One way to measure this quality would be through the use of indicators. According to Bittencourt et al. (2019), based on the presentation of these indicators and their applicability, pharmaceutical management skills are strengthened, demonstrating the relevance of using these tools in health services. The indicator is a sensor that contributes to the verification of proposed objectives, so it must be strategically contextualized and altered when necessary.

## RESEARCH METHODOLOGY

This study is characterized as applied research, since its purpose is to create knowledge, with a view to solving certain problems, veracity and obtaining interests at the local level (PRODANOV and FREITAS, 2013).

The study was carried out in the medicine dispensing sector of a university pharmacy, one of the sectors that make up the Pharmacy-School of the Faculty of Pharmacy, Dentistry and Nursing (Farmácia-Escola da Faculdade de Farmácia, Odontologia e Enfermagem – FFOE) of the Federal University of Ceará (UFC). The dispensing sector is the exclusive area for delivering medications to the user/client and providing pharmaceutical guidance (ANVISA, 2007).

The UFC pharmacy-school is a technical-administrative body created due to a specific need for teaching, research and extension, as established in art. 222 of the General Regulations of the Federal University of Ceará (UFC, 2019), playing a very important role in the training of pharmaceutical professionals. The pharmacy-school is administered by agreement, through a support foundation.

In the FU medication dispensing sector, responsible for providing pharmaceutical assistance to the community, an average of 1,500 users/clients are served monthly from the Unified Health System (SUS), the UFC Hospital Complex, the private healthcare network health and the community at large.

For the descriptive and qualitative analysis of the study, the strategic management was formulated based on the identification of critical processes and the construction of indicators for the dispensation sector of a university pharmacy of a High Education Institution (HEI) through four steps:

Step 1 – This step aimed to discuss and formulate the mission, vision, values, and strategic objectives of the FU. To achieve this objective, a questionnaire was sent electronically to seven pharmacists who work in the service. The instrument included guidance on the conceptual definition of mission, vision, values, and strategic objectives, and through open-ended questions, participants were asked to develop the respective concepts for the FU according to their perspectives on the sector. The responses received were organized into tables that represented the mission, vision, and values, respectively, and later, the tables were presented and discussed in a virtual meeting with the

participation of the FU management and pharmacists who responded to the questionnaire. The group used the responses organized in the tables for discussion and final definition of the mission, vision, values, and strategic objectives of the FU. The questionnaire was sent electronically and later a virtual focus group was conducted because the work was developed in June 2020, a period of social distancing due to the COVID-19 pandemic.

Step 2 – The aim of this step was to understand and map the processes carried out at the FU. It was a documentary step in which the standard operating procedures (SOPs) of the FU were analyzed. The processes already established in the medication dispensation sector were analyzed according to the documentary analysis of the SOPs. These documents contain the operational description of the processes and are part of the Good Pharmaceutical Practice Manual, one of the most important documents required by the Collegiate Board Resolution (RDC) nº 44/2009 of the National Health Surveillance Agency (Agência Nacional de Vigilância Sanitária – ANVISA, 2009). The analysis aimed to classify the processes as managerial, operational, and by results, following Smith and Fingar's (2003) classification. In the analysis, all processes carried out in the service were identified and later classified as operational or management processes, as presented in the results.

Step 3 – This step analyzed the processes identified in the phase, with the aim of defining which ones were critical to the sector. To this end, a form was created describing all the identified processes, which was emailed to four pharmacists in the dispensing sector of the FU. The pharmacists were then asked to identify the processes they considered critical. The form included conceptual information about critical processes and their importance in achieving institutional objectives.

Step 4 – In this step, the definition of strategic indicators for the FU was sought, based on critical processes. With their identification in step 3, strategic indicators were created that focused on monitoring these processes. Such indicators were developed in virtual meetings with the FU's management, to discuss procedures that have the BSC concepts as a theoretical framework for the construction of indicators.

## RESULTS AND ANALYSIS

The results collected in the first stage allowed for the definition of the mission, vision, values, and strategic objectives of the university pharmacy, as shown in Box 1.

**BOX 1**

### Mission, vision, values, and strategic objectives of the university pharmacy

| | |
|---|---|
| **Mission** | To support pharmaceutical education, together with research and extension, with the aim of training qualified human resources in the pharmaceutical field, contributing to the well-being of society through the generation and transfer of technical-scientific knowledge. |
| **Vision** | To be recognized as a reference and excellence in supporting pharmaceutical education, developing innovations in the field, with a continuous commitment to the improvement and development of relevant pharmaceutical services. |

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| | |
|---|---|
| **Values** | To offer high-quality products and services.<br>To contribute to the rational use of medicines.<br>To work with ethics and respect towards the patient, student, and collaborator, and<br>To act responsibly in the application of public resources. |
| **Strategic Objectives** | To seek satisfaction of the academic community and society by providing quality care.<br>To expand the scope of the pharmacy-school's compounding activities.<br>To implement pharmaceutical services such as pharmaceutical prescribing, medication reconciliation, and pharmacotherapeutic monitoring.<br>To train pharmacy-school staff to develop research in the sector.<br>To disseminate the scientific work of the pharmacy-school and optimize its digital dissemination. |

**Source:** Elaborated by the authors.

The decision to start with the definition of mission, vision, and values was due to the fact that these concepts are considered benchmarks for the strategic planning of an institution (DIAS, SOUSA and DIAS, 2018).

The construction of benchmarks and strategic objectives is part of management, which uses performance indicators to delineate the paths and actions to be developed by the institution. The cornerstone of strategic management lies in processes, which are the smallest set of activities and actions performed to achieve strategic objectives. Process-based strategic management makes the organizational structure more horizontal and the organizational activities systemic, integrated, and interdependent (COELHO JÚNIOR, 2003).

Given the importance of processes for strategic management, in the second stage, the FU processes were surveyed based on those described in the standard operating procedures (SOPs), which detail the procedures in the medication dispensing sector. Among these processes, pharmacists identified those considered most critical for achieving strategic objectives, which were identified as:

1. Medication dispensing – comprises the supply of finished medications with or without prescription, compounded medications, and pharmaceutical care to customers.
2. Inventory control of medicines and related items – activities related to the entry and exit of medicines and monitoring of products in shortage.
3. Solid waste management – corresponds to activities related to the identification, segregation and safe disposal of solid waste from the Diabetic Patients Monitoring Program, Group E – Sharp Waste – RDC 222/2018 (ANVISA, 2018).

The critical processes identified by pharmacists are presented in Box 2.

**BOX 2**

## Critical processes of the dispensing sector of the university pharmacy

| Process Classification | Process | SOP | Objective |
|---|---|---|---|
| Operational | Medication Dispensing | Rules for the dispensing of prescribed medications to comply with Good Pharmacy Practices (GPP). | Dispensing of prescribed medications to ensure that activities and processes are carried out within the Good Pharmacy Practices (GPP). |
| | | Rules for the dispensing of non-prescribed medications to comply with Good Pharmacy Practices (GPP). | Dispensing of non-prescribed medications, prioritizing the rational use of medication. |
| | | Rules for the dispensing of compounded medications to comply with Good Compounding Practices in Pharmacies (GCPP). | Dispensing of compounded medications to ensure the provision of pharmaceutical services and magistral products in accordance with the Good Compounding Practices in Pharmacies (GCPP). |
| | | Rules for the pharmaceutical evaluation of prescriptions. | Perform pharmaceutical analysis of prescriptions evaluating the concentration; feasibility; physical-chemical and pharmacological compatibility of components; dose; dosage; pharmaceutical form; route; administration schedules and medication fractionation. |
| Managerial | Inventory Turnover | Rules for receiving and storing magistral formulations from the Compounding Magistral sector. | Receipt and storage of compounded medications in order to guarantee quality, safety and therapeutic efficacy. |
| | | Rules for controlling the inventory of medications and related products. | Establish control of the inventory of medications and related products of the university pharmacy to comply with Good Pharmacy Practices. |
| | Waste Management | Rules for packaging and disposal of infectious waste from the Diabetic Patient Monitoring Program. | Establish rules for appropriate container packaging, disposal of sharp waste, and the presence of biological agents that may potentially pose a risk of infection. |

**Source:** Research data.

The critical processes, due to their potential to cause an impact on the FU, are the ones that are most closely related to the other processes. Identifying them provides, in this sense, a holistic view of the organization, as it allows the measurement of problems and prioritizes improvements (CARDOSO and VIANA, 2017).

In the next step, seven strategic indicators were formulated for the medication dispensation sector of the FU. They were proposed based on the perspectives of the BSC: financial, customer, internal processes, and learning and growth, as shown in Box 3. The BSC is a performance measurement tool that can be applied to the FU because, in addition to having the dimension of a teaching, research, and extension practice field, the FU also carries out commercial activities, such as dispensing medications to the community at a low cost.

**BOX 3**

## Suggested indicators for the dispensing sector of the university pharmacy

| Perspective | Indicator Name | Indicator Objective | Indicator Calculation |
|---|---|---|---|
| Financial | Medicine, finished and compounded; expired. | To monitor expired medicines on a monthly basis. | Number of expired medicines/ total medicines in stock × 100. |
| Customer | Customer satisfaction. | To improve the perception of the quality of service. | Average degree of satisfaction given by surveyed customers (scale 1 to 5). |
| Internal Process | Finished medication dispensed to users/ customers. | To monitor finished medication dispensed to users/customers on a monthly basis. | Number of finished medication dispensed/total medication produced by the pharmacy × 100. |
| | Compounded medicines dispensed to users/customers. | To monitor compounded medicines dispensed to users/customers on a monthly basis. | Number of compounded medicines dispensed/total prescriptions filled × 100. |
| | Finished and compounded medicines out of stock. | To monitor finished and compounded medicines out of stock on a monthly basis. | Number of medications out of stock per demand/month |
| Learning and Growth | Employee training. | To verify the completion of workforce competency development activities on an annual basis. | Number of training hours per employee/year. |
| | Scientific production of the FU. | To measure the scientific production carried out annually by the FU. | Number of scientific publications/year. |

**Source:** Elaborated by the authors.

From the customer perspective, the customer satisfaction indicator was identified. According to Kaplan and Norton (1997), this indicator is important because it is a way for the customer to provide feedback on the performance of the service provided. Such feedback is important for organizations to carry out their planning. The customer satisfaction indicator will be measured based on future data collected in a customer satisfaction questionnaire, which will be made available in the medication dispensing area at the time of service.

From the internal process perspective, three indicators related to the medication dispensing process were formulated and should be measured monthly: total number of finished medications dispensed per month; total number of compounded medications dispensed per month, and total number of medications out of stock per month.

The total indicator of expired medications was classified as an internal process indicator and financial indicator, as it impacts the solid waste management procedures due to being chemical waste that requires specific disposal, according to Anvisa's RDC 222/2018, and the unit's costs, due to the loss of material and the costs associated with the special disposal of such waste.

In the learning and growth perspective, indicators were formulated regarding employee training and scientific production. Such indicators directly affect the strategic objectives of the FU, as they are related to its role in the fields of teaching, research, and extension.

The formulation and implementation of indicators are common practices in the field of hospital pharmacy. The FU provides health and pharmaceutical assistance services that can also benefit from the implementation of management techniques and performance indicators already used in the area of hospital pharmacy. According to Silva, Castilho, and Ferraz (2017), pharmacy management through indicators and analysis allows for the elaboration and proposal of improvements in the existing scenario.

The reduction of resource loss by identifying problems and improving material management can generate savings that can be reinvested, generating greater quality and efficiency in the provision of pharmaceutical services.

## CONCLUSION

This work provided the outlining of the mission, vision, values, and strategic objectives for a university pharmacy, as well as the construction of process-based indicators using the BSC method, contributing to the strategic planning of a university pharmacy.

The identification and organization of critical processes into managerial and operational processes allowed for a better understanding of the pharmacy's procedures, resulting in the development of seven strategic indicators related to the financial perspective (finished and compounded medications, expired medications), customer perspective (customer satisfaction), internal process perspective (finished medications dispensed to users/customers, compounded medications dispensed to users/customers, and finished and compounded medications out of stock), and learning and growth perspective (employee training and scientific production of the pharmacy). These indicators are related to critical processes, and their monitoring will provide information that can assist managers in making decisions and implementing strategies to strengthen and consolidate the university pharmacy as an important setting for pharmaceutical practice in teaching, research, and extension.


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The proposal to implement process management and the formulation of indicators based on critical processes presented in this study can contribute to the improvement of organizational management in this sector, by allowing the monitoring of the results of the university pharmacy. This way, decision-making can be based on the results obtained and directed towards meeting strategic objectives.

As a suggestion for future research, it is proposed the monitoring of the indicators formulated in this study through analysis of time series data, in order to improve management practices in the university pharmacy.


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