

Knowledge and use of the digital platform of institutional documents by pharmacy professionals: a diagnosis

Elice Maria da SILVA¹ , Camila Nascimento MONTEIRO¹ , Carlos Moreira CUNHA¹ 

¹Hospital Sírio-Libanês, São Paulo, Brasil

Corresponding author: Silva EM. elice.msilva@outlook.com

Submitted: 04-07-2024 Resubmitted: 30-09-2024 Accepted: 05-12-2024

Double blind peer review

Abstract

Objective: This study analyzed the knowledge and use of the digital platform for accessing institutional documents by pharmacy professionals at a philanthropic hospital in São Paulo. **Method:** This is an exploratory study with a quantitative approach. The results were obtained by applying a semi-structured questionnaire to pharmacy professionals at the hospital under study, with different job titles and work shifts. **Results:** A total of 152 professionals were interviewed, and the majority were male (51.3%). Regarding age, they were adults with an average of 32.3 years. Knowledge of the digital platform used by the hospital was reported by 75% of the survey participants, while daily access at work was described by only 2.6%. Most interviewees described the lack of keyword recognition by the system as the main difficulty in accessing institutional documents. It was observed that 78.9% of the professionals interviewed stated that they had knowledge of the procedures in their area, while 21.1% did not. The most frequently mentioned opportunity for improvement for these documents was the text being written in a clear and direct manner (39.5%). **Conclusion:** Although most professionals are familiar with the platform and its function, there is low usage, which can be explained by the difficulty of accessing it, searching for documents using keywords, and the extensive format and few visual illustrations in which the documents are presented. Thus, this study can be used as information support for improvement actions in the areas of pharmacy and hospital quality management, and it is also possible to replicate this study for other sectors, seeking to obtain a broader view of this topic.

Keywords (DeCS): Hospital Pharmacy Service; Quality Management in Health; digital library; Information sharing.

Conhecimento e utilização da plataforma digital de documentos institucionais pelos profissionais da farmácia: um diagnóstico situacional

Resumo

Objetivo: O estudo analisou o conhecimento e utilização da plataforma digital para acesso aos documentos institucionais pelos profissionais da farmácia de um hospital filantrópico em São Paulo. **Método:** Trata-se de uma pesquisa exploratória com abordagem quantitativa. Os resultados foram obtidos através da aplicação de um questionário semiestruturado para profissionais da área da farmácia do hospital em estudo de diferentes ocupações de cargo e turno de trabalho. **Resultados:** Foram entrevistados 152 profissionais e a maioria eram do sexo masculino (51,3%). Quanto a idade, eram adultos com média de 32,3 anos. O conhecimento da plataforma digital utilizada pelo hospital foi relatado por 75% dos participantes da pesquisa e o acesso diário no trabalho foi descrito apenas por 2,6%. A maioria dos entrevistados descreveram como principal dificuldade para acesso aos documentos institucionais a falta de reconhecimento de palavras-chaves pelo sistema. Observou-se que 78,9% dos profissionais entrevistados afirmaram possuir conhecimento sobre os procedimentos da sua área enquanto 21,1% não conhecem. A oportunidade de melhoria mais apontada para esses documentos foi o texto escrito de forma clara e direta (39,5%). **Conclusão:** Apesar da maioria dos profissionais conhecerem a plataforma e sua função, há uma baixa utilização que pode ser justificada pela dificuldade de acesso, na busca de documentos através de palavras-chave e a forma extensa e poucas ilustrações visuais em que os documentos são apresentados. Dessa forma, este estudo pode ser utilizado como subsídio de informações para ações de aperfeiçoamento pelas áreas da farmácia e gerenciamento da qualidade do hospital, também sendo possível replicar este estudo para outros setores buscando obter uma visão mais ampliada acerca desta temática.

Palavras-chave (DeCS): Serviço de Farmácia Hospitalar; Gestão da Qualidade em Saúde; Biblioteca Digital; Compartilhamento de informações



Introduction

Hospital pharmacy is an area integrated with other hospital sectors to deliver efficient and safe processes. To achieve this, it requires professionals in the field to be qualified to assume roles with adequate knowledge levels for the execution of activities. Therefore, the services provided must be offered accurately, based on standardized documents to prevent and reduce errors, ensure safe patient care, and give processes more uniform and systematic characteristics.¹⁻²

In this context, standardized operational procedures are introduced, systematically describing each activity to be performed by the operator to ensure the expected outcome of the designated task. In addition to serving as a guide and clarifying doubts, their development allows for the identification of failures and the implementation of corrective measures in the process, thus avoiding harm to the health of those using pharmaceutical products and services.³

The pharmaceutical assistance activities at the institution studied are described through institutional documents, an internal term encompassing manuals, operational flows, and standardized operational procedures. These documents are made available on a digital platform, which serves as the institution's official tool for storing and providing access to documents for all professionals. It is an electronic document management application.

Considering the importance of institutional documents in daily routines, it becomes necessary to understand how the hospital pharmacy professionals use and engage with the digital tool, as the literature highlights adherence to established documents as a critical point. The expectation is that, in practice, all professionals utilize the recommendations.⁴⁻⁵ This understanding provides a valuable source of data for hospital pharmacy management and quality management, allowing for the identification, understanding, and evaluation of various aspects that impact the safety of pharmaceutical assistance. The knowledge or lack thereof regarding how an operation should be carried out directly affects the quality of the care provided.

Thus, the study aimed to evaluate the knowledge and use of the digital platform for accessing institutional documents by pharmacy professionals at a philanthropic hospital in São Paulo.

Methods

This was an exploratory study with a quantitative approach, investigating aspects related to the knowledge and use of the digital platform by the pharmacy professionals of the studied hospital. The objective was to obtain parameters on the topic, foster ideas for improving existing documents, and identify opportunities for the platform in use. Ethical principles followed Resolution No. 466/2012 of the National Health Council⁶, with approval granted by the Research Ethics Committee under opinion number 4,388,917.

The studied institution is an international health reference, also engaged in teaching and research activities. The study was conducted with active professionals directly involved in pharmacy activities at the philanthropic hospital in São Paulo, from December 2020 to July 2021. Inclusion criteria included professionals working as pharmacy assistants, pharmacy interns,

pharmacists, pharmacy coordinators and managers, and stock analysts with a pharmacy technician background. Exclusion criteria included professionals on medical leave, maternity leave, those who declined participation in the first approach, and those unavailable for a second approach.

The sample size calculation aimed to estimate the proportion (p) of professionals who know and use the DMDOcs[®] platform to access institutional documents. With a 95% confidence level, a 5% margin of error, a target population of 235 professionals, and $p=50\%$, the required sample size was determined to be 147 individuals.

A semi-structured questionnaire, based on similar research in the literature, was used. It covered: sample characterization data (gender, age range, and educational level), professional characteristics (job role and years of experience in pharmacy), reading habits and preferences (frequency and preferred format physical or digital), knowledge of the digital platform (how they became aware of it, what can be found there, and frequency of access), standard operating procedures and other institutional documents (knowledge, importance of use, access methods, improvement opportunities, and challenges).⁷⁻⁸

The questionnaire also included optional open-ended questions to allow participants to share their perceptions about elements not addressed elsewhere, such as additional suggestions for improving institutional documents, access frequency considerations, and views on the adopted digital platform.

To encourage participation, all professionals were invited in person to take part in the study. The research team visited the pharmacy areas during all work shifts, individually inviting each professional during their work activities. Upon agreeing to participate, professionals read and signed the Informed Consent Form (ICF) and completed the self-administered questionnaire through the REDCap[®] platform.

Data analysis involved exporting the research data from the platform in statistical format to Microsoft Excel 2016[®]. The data were then consolidated to produce frequency, percentage, mean, and standard deviation results for the quantitative variables, along with graphical representations. The Kruskal-Wallis, Mann-Whitney, and Fisher's exact tests were used to evaluate associations between variable groups. Open-ended responses were analyzed using REDCap[®] to identify the most frequently cited terms.

Results

Due to the interest and convenience during data collection, the study sample consisted of 152 participants, with a predominance of males (51.3%). Regarding age, the sample was composed of a predominantly young adult population. Additional data on education and professional characteristics are presented in Table 1.

Among the study participants, 43.7% reported consistently having the habit of reading, whether digitally or in print, including books, newspapers, and magazines. Another 43.7% described having this habit almost always, while 12.6% reported rarely reading. There was no significant relationship between reading habits and age, years of experience, or job role. However, statistical analysis using Fisher's exact test extension revealed that a higher intensity of reading was observed among individuals with higher educational levels ($p = 0.02$).



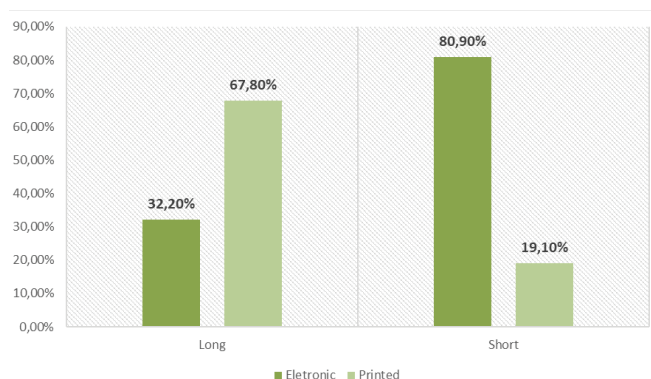
Table 1. Sociodemographic, Educational, and Professional Characteristics of Study Participants.

Characteristics	Total (n=152)
Sex	
Female	48.7%
Male	51.3%
Age Range	
Minimum	19 years
Maximum	61 years
Average	32.3 years
Education	
Ongoing undergraduate	22.4%
Completed high school	21.7%
Postgraduates	15.1%
Others*	40.8%
Professional Characteristics	
Pharmacy assistant	61.2%
Pharmacist	23.7%
Pharmacy stock analyst	3.9%
Others**	11.2%
Time Working in Pharmacy	
Minimum	1 month
Maximum	35 years
Average	5,4 years

* They include those pursuing postgraduate studies, specialization, master's, and doctoral degrees. ** They include coordinators, managers, interns, and pharmacy technicians.

Participants were asked about their preference for printed versus digital formats for reading long and short texts. No significant relationship was found between reading medium preferences and the participants' ages. The obtained data are shown in Figure 1.

Figure 1. Preferred Reading Medium Among Pharmacy Professionals.



Regarding the primary source for work-related information, 58.9% of participants sought help from colleagues, a behavior significantly more common among younger individuals ($p = 0.001$), as per the Kruskal-Wallis test. Consulting supervisors accounted for 29.1%, while the digital platform was used by 11.9%.

Of the participants, 78.9% reported being familiar with their area's procedures, while 21.1% were not. When asked whether having a procedure available for guidance in case of doubt was important, 98.3% agreed, whereas 1.7% did not.

When questioned about knowing where to find their sector's documents, 76.7% affirmed they knew, while 23.3% did not. Furthermore, only 31.7% believed their practices fully aligned with procedural descriptions, 60% thought they mostly did, 5% were unsure, and 3.3% reported rarely aligning with them.

Participants could select multiple predefined options for improving procedures. Among these, 39.5% highlighted the need for clearly and concisely written texts, 23% suggested drafting texts by those performing the processes, and 21.1% recommended validation of texts by those executing the tasks. Active suggestions included easier and more practical access to documents and the digital platform, frequent updates of content, and visually improved documents with images, workflows, and simpler language.

Other suggestions included providing employees with procedures during training to ensure alignment with documented processes. Some participants noted that many documents overlap or partially describe the same processes, proposing the creation of shorter, more direct documents, even if it increases the total number available on the platform

Regarding familiarity with the digital platform used for document storage, 75% of respondents indicated they were aware of it, while 25% were not. To understand how professionals learned about the platform, participants selected predefined options, shown in Figure 2.

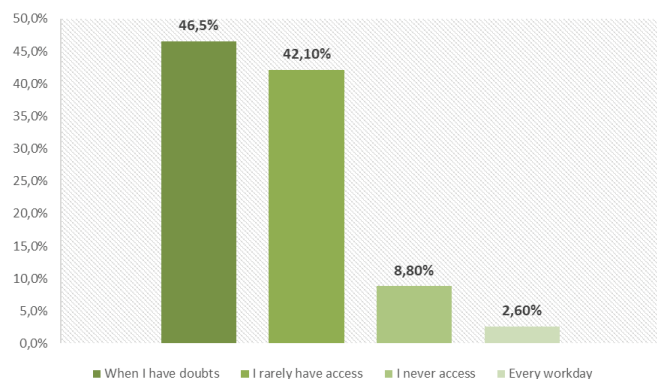
Figure 2. Channels Through Which Pharmacy Professionals Learned About the Institutional Digital Platform.



When asked if they knew what to find on the digital platform, 95.6% responded affirmatively, while 4.4% did not. The frequency of platform access showed no significant relationship with education level or job role. Additional results on access frequency are displayed in Figure 3.

Among participants who never accessed the platform, 6% indicated they did not see the need, relying instead on colleagues for clarification. Two open-field comments mentioned unsuccessful attempts to use the system and the lack of a requirement to access the platform.

Figure 3. Frequency of Access to the Digital Platform by Pharmacy Professionals.



Open-ended questions about the digital platform were answered by 25% of participants. Among these responses, the most frequently cited challenges were difficulties in searching with keywords and accessing the platform, mentioned by 71.05% of those who provided open-field feedback. Other suggestions included enabling keyword association for searches and emphasizing the importance of the platform as a standardized tool.

Discussion

Analyzing the sociodemographic profile of a target audience provides an understanding of their main characteristics and can suggest strategic ways to address their needs and those of their organization.⁸⁻⁹ The data from this study showed that most participants were men, contrasting with a study conducted in Portugal with pharmacy professionals, which revealed a predominantly female profile, as well as a survey by the Federal Pharmacy Council, which reported that 67.5% of professionals were women.¹⁰⁻¹² The sample consisted of young, single adults, aligning with findings from studies conducted in healthcare organizations in hospital settings.¹³

Most respondents held the position of pharmacy assistant at the studied hospital. The Brazilian Society of Hospital Pharmacy recommends a ratio of one pharmacy assistant for every 10 hospital beds and one pharmacist for every 50 beds.¹⁴ Thus, it is expected that pharmacy assistants represent the majority, which explains their predominance in this study. Pharmacy assistants support pharmacists in meeting patient needs, maintaining local organization, and managing inventory.

Reading, whether in digital or printed format, is one of the most accessible means of personal and professional knowledge development. It fosters critical thinking, improves writing, encourages continuous learning, and opens opportunities for acquiring new knowledge.¹⁵ Results indicated that a significant portion of the participants considered reading part of their daily routine.

Regarding participants' reading preferences, digital formats were favored for short texts, while printed formats were preferred for long texts. Based on the authors' experience and the way documents are made available in the studied institution, a mismatch was observed between professionals' preferences and the current document format. Most available documents

are long digital texts with minimal visual elements. A study with undergraduate students of a similar age range found that 42% preferred reading long texts in print, citing reasons such as screen fatigue, the habit of highlighting text, and difficulties concentrating due to digital distractions.¹⁶

Most professionals were familiar with their area's procedures, considered them important for task execution, and knew where to locate them. However, a significant percentage reported not knowing or being unaware of where to find these documents. A case study on standard operating procedure (SOP) management in a hospital highlighted that SOPs are integral to successful quality systems, directly impacting the consistency and integrity of outcomes.¹⁷⁻¹⁸ Greater exploration and knowledge of these tools are expected to lead to significant improvements in work processes.

Participants suggested several improvements for procedures, with the most prominent being the need for clear and concise writing, aligning with the preference for short texts in digital formats. Involving those who execute the processes in drafting and validating procedures was also emphasized, as they can clearly and objectively outline steps and identify potential gaps, preventing errors and enhancing safety. Inclusivity in the implementation process is crucial, as people are more likely to support what they help create.⁵

Access and navigation within the digital platform were frequently mentioned as areas for improvement. This highlights a lack of familiarity with the platform, which can hinder access to documents. Participants also suggested training on both the platform and the available files.

Information technology is considered an ally in optimizing healthcare processes.¹⁹ Electronic Document Management (EDM) systems meet these needs by providing control, storage, and data sharing.

The digital platform used by the institution facilitates cataloging and locating documents. A case study on EDM systems noted benefits such as automated process management, better physical space utilization, instant document availability, reduced loss or falsification risks, and streamlined legal processes.¹⁸

Despite most participants being aware of the platform, a significant portion was not. However, many reported learning about it through internal training, indicating the potential benefits of more frequent training sessions to enhance knowledge and document access.

Infrequent platform use for document access, typically only when doubts arise, was correlated with suggestions for improved search mechanisms and keyword functionality. These findings are critical, as professionals who rarely access the platform are unlikely to utilize its documents. Literature describes limitations in search mechanisms, which often guess appropriate keywords without fully understanding users' needs, leading to low engagement and difficulty finding information.²⁰

To improve access, the hospital's pharmacy and quality management sectors provide web-based training sessions on the platform's functionalities. These sessions are accessible to all staff, including pharmacy professionals, and include tips for optimizing searches and personal configurations to facilitate keyword-based document retrieval.

This study faced challenges related to the COVID-19 pandemic, which significantly increased workload, making it difficult for some participants to take part, even after a second approach.

Additionally, the study does not propose further action plans beyond the institution's existing initiatives to increase digital platform knowledge and use. However, it serves as a foundation for future research on EDM systems in institutions with similar digital tools in pharmacy. The findings highlight the importance of understanding digital platform use and its associated documents, enabling pharmacy and quality management sectors to refine their actions based on this diagnostic. This study also opens the door for replication in other departments, providing a valuable model for improving document management and digital platform integration.

Conclusion

The study revealed that most professionals are familiar with the digital platform and recognize it as the repository for institutional documents. However, its low utilization may be attributed to challenges in accessing and searching for documents using keywords. While participants are aware of the existence of area-specific procedures, adherence remains low. This can be associated with the current presentation format (lengthy and lacking visual illustrations) despite readers' preference for concise and visually enriched content in digital media.

The continuous availability and accessibility of documents guiding Pharmaceutical Assistance practices are essential for standardizing activities, offering potential improvements in patient healthcare delivery. Future studies employing the same document management methodology are encouraged to evaluate a specific process-oriented document to measure outcomes.

Funding

The study received no funding for its execution.

Contributors

SEM, CCHM, CNM: Study design, data collection, analysis, and article drafting.

Acknowledgments

The authors thank the studied institution, particularly the hospital pharmacy professionals; the Institute for Teaching and Research; the Residency Program in Health Services Management and Health Care Networks; and the Institute for Quality and Safety.

Conflict of Interest Statement

The authors declare no conflicts of interest regarding this article.

References

1. Eça RB, Miranda PHA, Silva DR. Farmácia Hospitalar: a eficiência e desempenho das atividades farmacêuticas no ambiente hospitalar. 12º Congresso Nacional de Conhecimento e 12º Congresso Nacional dos Estudantes de Saúde. Página 12. 2018.
2. Pereira LR, Carvalho MF, Santos JS, *et al.* Avaliação de procedimentos operacionais padrão implantados em um serviço de saúde. *Arq Cienc Saude.* 2017; 24: 47-51.
3. Mendes VA, Carvalho VRJ. Pops – procedimento operacional padrão em serviço de emergência. II Congresso Internacional do Grupo Unis. Fundação de Ensino e Pesquisa do Sul de Minas, 2016.
4. Silva IF, Melo OF, Gomes FRAF *et al.* Construção de procedimento operacional padrão das farmácias dos centros de saúde da família do município de Sobral - CE. *SANARE -Rev Polit Publicas.* 2010.
5. Amare, G. Reviewing the values of a standard operating procedure. *Ethiop J Health Sci.* 2012; 22: 205 – 208.
6. Brasil. Ministério da Saúde. Conselho Nacional de Saúde. Resolução n. 466, de 12 de dezembro de 2012. Aprova as diretrizes e normas regulamentadoras de pesquisas envolvendo seres humanos. Brasília, Diário Oficial da União, Jun. 13, 2013.
7. Dias BP, Escudeiro L. Perfil sociodemográfico de notificação de acidentes de trabalho com material biológico. *Saúde Coletiva (Barueri).* 2021; 11: 4704–4713. doi:10.36489/saudecoletiva.2021v11i6Op4704-4713
8. Guerrero GP, Beccaria LM, Trevizan MA. Standard operating procedure: use in nursing care in hospital services. *Rev Latino-Am Enfermagem.* 2008;16(6):966-972. doi:10.1590/S0104-11692008000600005.
9. Silva ACMR, Loures PV, Paula KC *et al.* A importância do núcleo de segurança do paciente: um guia para implantação em hospitais. *Rev Educ Meio Amb Saude.* 2017. 7: 87-109.
10. Reis BL, França LBP, Silva WC. Perfil sociodemográfico dos trabalhadores de saúde afastados durante a pandemia de Covid- 19 no Piauí. *Res Soc Dev.* 2021. 10: e141101724597-e141101724597. doi:10.33448/rsd-v10i17.24597
11. Antunes PESP. Conhecimento, Comportamentos e Atitudes dos Profissionais de Farmácia em relação aos Medicamentos Biossimilares. [Doctoral Thesis] Coimbra: Escola Superior de Tecnologia da Saúde de Coimbra; 2019.
12. Conselho Federal de Farmácia. Perfil do farmacêutico no Brasil. Brasília, 2017. Available from: < https://www.cff.org.br/userfiles/file/Perfil%20do%20farmac%C3%AAutico%20no%20Brasil%20_web.pdf > Accessed April 3, 2024
13. Tottoli CR, Toledo AM, Silva NC, *et al.* Health professionals working in a hospital environment have a high prevalence of fatigue and back pain: a cross-sectional study. *Fisioter Pesqui.* 2019;26:91-100. doi:10.1590/1809-2950/18032926012019
14. Sociedade Brasileira de Farmácia Hospitalar e Serviços de Saúde. Padrões mínimos para farmácia hospitalar e serviços de saúde. 3ª edição. São Paulo: Sbrafh, 2017.
15. Damil FP. A importância da tecnologia na criação de hábitos de leitura. [Master's Dissertation]. Lisboa: Iscte- Instituto Universitário de Lisboa; 2018.
16. Lemos KMF, Borges VMC. Compreensão e retenção de informações na leitura de textos em meio impresso e digital. *Letras Rev.* 2018; 9: 78 – 93.
17. Pinheiro FR, Santos CHS. Gestão dos procedimentos operacionais padrão: um estudo de caso em uma instituição hospi-



talar. *Rev Eletron Adm*. 2020;18:307-321.

18. Santos TC. Avaliação do sistema de gestão eletrônica de documentos (GED): um estudo de caso. [Undergraduate Thesis]. São Cristóvão: Universidade Federal de Sergipe; 2019.
19. Salomi MJA, Maciel RF. Gestão de documentos e automação de processos em uma instituição de saúde sem papel. *J Health Inform*. 2016;8:31-38.
20. Kent P. Otimização para mecanismos de busca para leigos. 5ª ed. Rio de Janeiro: Alta Books Editora; 2015.

