Information and knowledge management in Emergency Care Units: an evaluation of Daily Huddles in emergency services

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Abstract
This study aimed to evaluate the impacts of implementing the Daily Huddle in emergency services from the perspective of knowledge and information management. This is a qualitative study with a descriptive and exploratory approach, in which a content analysis. Based on the findings, it was possible to list a set of empirical impacts on the 24-hour UPA routine. The Daily Huddle had a positive impact on communication between health professionals, on the evaluation and sharing of information, knowledge, and agility in problem-solving. This study showed that daily meetings improved communication, sharing of information and knowledge, and problem-solving and helped in the assessment of operational problems present in the routine of professionals at the analysed health units.
Keywords: Lean Healthcare; Information flow; Daily Huddle; Emergency service.

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Gestão da informação e do conhecimento em Unidades de Pronto Atendimento: uma avaliação das Reuniões Diárias em serviços de emergência

Resumo
O presente estudo objetivou avaliar os impactos da implementação do *Daily Huddle* nos serviços de emergência sob a ótica da gestão do conhecimento e da informação. Esta pesquisa compreendeu um estudo qualitativo, de abordagem descritiva e exploratória, e análise de conteúdo. Baseado nos achados, foi possível elencar um conjunto de impactos empíricos na rotina da UPA 24 horas. O *Daily Huddles* impactou positivamente na comunicação entre os profissionais de saúde, na avaliação e compartilhamento de informações, conhecimentos, e na agilidade na resolução de problemas. Esta pesquisa mostrou que as reuniões diárias melhoraram a comunicação, o compartilhamento de informações e conhecimentos, e a resolução de problemas e auxiliam na avaliação de problemas operacionais presentes na rotina dos profissionais das unidades de saúde analisadas.
Palavras-chave: *Lean* na saúde; Fluxo de informação; *Daily Huddle*; Serviço de emergência; Emergency Care Units.

Gestión de la información y el conocimiento en Unidades de Atención de Emergencia: una evaluación de los *Daily Huddles* en los servicios de emergencia

Resumen
El presente estudio tuvo como objetivo evaluar los impactos de la implementación del *Daily Huddle* en los servicios de emergencia desde la perspectiva de la gestión del conocimiento y la información. Se trata de un estudio cualitativo, con un enfoque descriptivo y exploratorio, y un análisis de contenido. Con base en los hallazgos, fue posible enumerar un conjunto de impactos empíricos en la rutina UPA de 24 horas. El *Daily Huddle* tuvo un impacto positivo en la comunicación entre los profesionales de la salud, en la evaluación y el intercambio de información, conocimientos y en la agilidad en la resolución de problemas. Este estudio mostró que las reuniones diarias mejoraron la comunicación, el intercambio de información y conocimiento, la solución de problemas y ayudaron en la evaluación de los problemas operativos presentes en la rutina de los profesionales de las unidades de salud analizadas.
Palabras clave: *Lean Healthcare*; Flujo de información; Reunión diária; Servicio de emergencia.

Introduction

In the context of healthcare, data and information are critical factors for providing patient care. Healthcare organisations depend on accurate and up-to-date information on patient entry and treatment status, care delivery, and patient satisfaction (Alhashmi; Salloum; Abdallah, 2019).

Management in health units presents a great challenge for authorities and managers. To reduce inequalities in the sector, it is necessary to adopt new management perspectives, emphasising communication between those involved. Prioritising information management, new models, and management tools are essential to promote health. In this sense, the information must flow throughout the entire organisational structure, meeting the specific needs of each unit. Adopting a systemic flow of information and defining roles contribute to the first step of the Information Management (IM) process (Rumisha; Lyimo; Mremi; Tungu; Mwingira; Mbatam; Malekia; Joachim; Mboera, 2020).

The work process in an emergency room is generally intense, especially in units that receive spontaneous demand and operate with open doors, a common scenario in most emergency units (Guzman; Quinelato; Quinelato, 2020). This spontaneous demand turned these units into the main gateway for users of the Unified Health System (SUS), Brazil's national public health system. According to Tabares, Giraldo, Joyanes (2016) and Ferenhof, Bonamigo, Rosa and Vieira (2024), IM and Knowledge Management (KM) are essential complements to increase the consistency, coherence, and security of process flows, allowing an improvement in process performance.

Overcrowding occurs when the demand for health services exceeds the capacity for care, which can lead to long waiting times, a lack of beds, equipment, and professionals, and compromised quality of care (Nascimento; Frade; Miguel; Presado; Cardoso, 2021; Bonamigo; Bernardes; Conrado; Torres; Calado, 2022).

As health work tools, information systems are important resources that help in administrative, technical, and scientific actions. They help to structure, operationalise, supervise, control, and evaluate the performance of departments and services. Health professionals must keep up to date to improve service quality delivery. This reveals and transforms reality through conscious actions (Batista; Oliveira; Veras, 2023; Sadeghi; Prybutok; Sauser, 2022). Furthermore, a deficient flow of information can lead to several problems in an emergency unit, such as delays in patient care, loss of critical

information, delay in medication administration, low effectiveness in patient treatment and care, increased workload due to duplication of effort and patient dissatisfaction (Nascimento; Frade; Miguel; Presado; Cardoso, 2021; Daghfous; Amer; Belkhodja; Angell; Zoubi, 2023).

Information is a mediator agent in producing individual and society's knowledge. The IM is a process linked to planning, organising, directing, and controlling information and is essential for decision-making. Analysing the available sources, it is evident that there is no unified definition for Information Management (IM). Various authors have explored this area from different perspectives, resulting in a multiplicity of models, methodologies, and theories (Nonato; Aganette; Leal, 2023).

The adoption of KM in the ECUs can be understood as the integrated application of practices and methods that aim to enable the creation, identification, acquisition, development, preservation, distribution, and use of various knowledge assets in emergencies (Liu; Tian; Zhu, 2023; Ewuoso; Hall; Dierickx, 2021). KM offers several advantages for providing care within the unit, including reducing medical errors, promoting cooperation and innovation, improving the quality of care, reducing costs, organisation of knowledge, and promoting organisational learning (Drei; Ignácio; Pacagnella Júnior; Min; Silva, 2021; Popa; Ștefan, 2019).

In healthcare, Daily Huddles enable professionals to anticipate care needs and provide mutual support throughout the day, promoting a more efficient and effective flow of information, as well as strengthening a structured organisational culture with a focus on continuous improvement. The Daily Huddles provides a standardised structure for exchanging information between shifts, ensuring that essential data about patient status and procedure progress is shared clearly and continuously (Provost; Lanham; Leykum; Mcdaniel Junior; Pugh, 2015; Pimentel; Snow; Carnes; Shah; Loup; Vallejo-Luces; Madrigal; Hartmann, 2021).

In the context of emergencies, where safe and effective information management is crucial, this research presents a comparative analysis of the periods before and after the implementation of the Daily Huddle in the UPAs. This survey aims to verify the possible benefits and challenges involved in the adoption of this practice. The analysis also seeks to highlight relevant aspects that influence KM and the information flow in emergency services, intending to contribute to the improvement of performance and quality in the emergency sector.

Background

Information and knowledge management in healthcare

Indeed, Information and KM are becoming increasingly important in organisations, as their objective is to identify, standardize and share information, allowing organisations to grow and adapt more easily, be it through technology such as the application of Artificial Intelligence (AI) or even in a more conventional way such as meetings with teams (Stanfill; Marc, 2019).

The various procedures of care, administrative and logistical flows intersect and are articulated in carrying out informational and communicational actions. However, this complexity also risks the institutions and the people involved, such as patients, family members, and health professionals. In this same perspective, IM in healthcare is crucial to ensure the quality of patient care and the effectiveness of the institutions' actions (Pérez-Montoro; Cirino, 2023).

As healthcare is knowledge-intensive, KM is expected to impact organisational performance significantly. Recent studies have confirmed that KM is one of the main levers for improving efficiency, quality of care, innovation, and patient satisfaction in the healthcare sector (Evans; Evans; Miklosik; 2023; Popa; Ștefan, 2019).

KM is the process of obtaining the possible amount of knowledge resources, using the necessary means to achieve this objective (Idrees; Xu; Haider; Tehseen, 2023). Another definition follows: "Comprises the identification and analysis of available and required knowledge resources, followed by the planning and control of actions to develop knowledge assets that meet individual and organisational objectives" (Macintosh, 1997 *apud* Almansoori; Alshamsi; Salloum; Shaalan, 2021, p. 100). In other words, KM involves identifying, acquiring, analysing, and using knowledge resources strategically to achieve specific goals of individuals or organisations.

The operational performance of a healthcare organisation depends, to a large extent, on the ability to effectively use the knowledge and information shared among the various professionals involved. This ability is crucial to providing high-quality and appropriate care to patients and their families (Karamitri; Kitsios; Talias, 2020; Jazieh; Kozlakidis, 2020).

Adopting IM's Knowledge Management in healthcare is a critical factor in patient care since services can be better provided, based on up-to-date information, with a short lead time, allowing decision support at technical and operators, the

patient, and the health professionals involved (Hammoda; Durst, 2022). To Hujala and Laihonen (2021) benefits in healthcare organisations include improved customer service; updated organisation performance; better quality of service; and enhanced risk management capabilities.

Then, sharing knowledge and information is fundamental for improving organisational performance, especially in healthcare, where it is recognised as an important contribution to improving patient safety (Kim; Newby-Bennett; Song, 2012). Among the key elements of KM and IM in healthcare involves integrating people, technology, and processes to improve the provision of services and care to the patient in their journey within the emergency services (Almansoori; Alshamsi; Salloum; Shaalan, 2021).

Thus, encouraging KM and IM in emergency services through methods and techniques integrated into the operational and strategic routine of health organisations allows for mitigating risks in the services provided to the patient, stimulating the learning of health professionals, increasing operational efficiency, and providing better user experiences for emergency services (Karamitri; Kitsios; Talias, 2020).

Lean Healthcare and the Daily Huddles

The Lean approach eliminates waste and creates value for everyone involved in the process (Karaz; Teixeira, 2023). In the hospital environment, the most relevant processes deal with the patient's diagnosis, treatment, and recovery, while the other processes maintain essential services (Kim; Newby-Bennett; Song, 2012; Rumisha; Lyimo; Mremi; Tungu; Mwingira; Mbatam; Malekia; Joachim; Mboera, 2020). Activities that do not add value to the production process are considered losses or waste. These activities can be classified into eight categories: transport, inventory, motion, waiting, overproduction, over-processing, defects, and unused talent (Cosenza; Silva; Neto; Torres; Calado, 2021).

Santos and Balsanelli (2021) conceptualise that the Lean methodology is based on concepts, principles, and tools used to create and provide maximum value from the consumer's point of view while consuming the minimum amount of resources, because by allowing effective management of resources, Lean makes it possible to redirect attention and efforts to areas that are more important for the company's growth. After all, healthcare workers' efficiency and quality depend on technical

competence and how they use their time and provide a comfortable environment for patients (Dorval; Jobin, 2022; Daghfous; Amer; Belkhodja; Angell; Zoubi, 2023).

Daily Huddles are brief meetings where the team reviews the day's activities and discusses immediate issues, upcoming events, and important policy updates. These meetings typically last up to 10 minutes. The idea of using short Daily Huddles, as opposed to the standard one-hour meetings, came from the need to speed up the work of improvement teams. In healthcare, Daily Huddles allow staff to anticipate care needs and special situations, and care team members can support each other throughout the day (Nascimento; Frade; Miguel; Presado; Cardoso, 2021; Provost; Lanham; Leykum; Mcdaniel Junior; Pugh, 2015).

The Daily Huddle promotes IM and KM through increased transparency and collaboration between team members, allowing joint problem-solving and sharing of ideas for continuous improvement of the activities carried out (Chapman; Molloy; Wright; Oswald; Adnum; O'brien; Mitchell, 2020). The Daily Huddle is a common practice in work environments that apply the Lean approach, such as in industry, health services, and other organisations oriented to continuous improvement (Hammoda; Durst, 2022; Tuyishime *et al*., 2024).

ECUS in the emergency services

The implementation of ECUs has been an important strategy for improving access to and quality of health services in the country (Oliveira; Soares; Barreto; Souza; Bruyn, 2024). Ordinance No. 1600 of the Ministry of Health Minister's Office of July 7th, 2011, established the Urgency and Emergency Network in Brazil and established the guidelines for implementing and operating the Emergency Care Units (ECU). Among the main established definitions, the mandatory operation of the ECUs for 24 hours a day, the adoption of reception with risk classification as a priority service method, and the definition of criteria for the operation of the units stand out.

The main difference between Ordinance No. 1,600/GM/MS of July 7th, 2011, and Ordinance No. 10 of January 3rd, 2017, is that the former instituted the Urgency and Emergency Network in Brazil and established the guidelines for its implementation and functioning of the UPAs, while the second updated the norms for the functioning of the existing UPAs. Although both ordinances aim to ensure adequate and qualified care in the UPAs, Ordinance No. 10/2017 brought some important changes to the previous ordinance.

Methodology

This is a qualitative study with a descriptive and exploratory approach, conducted through documentary research and a case study. The analysis was based on Bardin's method (Bardin, 2011), which provides a systematic approach to interpreting and analyzing qualitative texts and data. This method focuses on extracting meanings and patterns from various contents, including documents, interviews, and other relevant materials. The content analysis based on Bardin (2011) allows to definition of the analysis category "*a priori*" or "*posteriori*", from the context units. For this research, was defined the "*posteriori*".

This study aimed to recognise the impacts of implementing the Daily Huddle in emergency services from a KM and IM perspective. To achieve this goal, five steps were taken. The first step comprised the evaluation of 1098 A3 reports from the Project funded by the Brazilian Ministry of Health, called "Lean nas UPAs" which is part of the initial portfolio. The Best Practices reports, known as A3 Reports, were submitted by the UPAs shortly after the technical visits carried out under the Lean project at the UPA, which aimed to implement Lean in the emergency units.

The second step of the study comprised the documental analysis of the reports, where we could evaluate the initial portfolio to recognise the interventions related to the management of information flow and KM in the Lean healthcare perspective within the Lean project in the ECU. At this stage, 133 best practices reports were filtered. In the third stage of the study, we sought to identify conditions linked to the IM and knowledge in which the Daily Huddle was adopted. At this stage, 19 reports resulted, which made up the final portfolio for conducting the study.

The fourth step of the study comprised the content analysis of the Good Practice reports. This step was based on Bardin (2011), so the affinities grouped the context units resulting from the A3s' reports. Units of analysis were defined as "*a posteriori*". They are Lack of communication, Difficulty in sharing information and knowledge, and Agility in solving problems. Once the content was analysed, the fifth stage of the study was carried out. At this stage, the results were discussed based on the literature to list the impacts of Daily Huddles on KM and IM in emergency services.

Results

Table 1 presents the list of the 19 ECUs that comprised the third stage of the study. These were coded to conduct content analysis (Table 1).

Table 1 – Analysed ECUS

Code	Name	State	Region	City
UPA01	João XXIII	RJ	Southeast	Rio de Janeiro
UPA02	Engenho de Dentro	RJ	Southeast	Rio de Janeiro
UPA03	Magalhães Bastos	RJ	Southeast	Rio de Janeiro
UPA04	Pinheirinho	PR	South	Curitiba
UPA05	Sítio Cercado	PR	South	Curitiba
UPA06	Boa Vista	PR	South	Curitiba
UPA07	Zona Norte	PR	South	Maringá
UPA08	Francisco de Arruda Leite (Sabará)	PR	South	Londrina
UPA09	Maria Angélica Castoldo (Centro Oeste)	PR	South	Londrina
UPA10	Cajuru	PR	South	Curitiba
UPA11	Dr. Carlos Vinícius Pistóia de Oliveira (Leblon)	MS	Midwest	Campo Grande
UPA12	Pampulha	MG	Southeast	Belo Horizonte
UPA13	Renascença	PI	Northeast	Teresina
UPA14	Dr. Mário Monteiro (Urgency Municipal Unity)	RJ	Southeast	Niterói
UPA15	Vale dos Barris	BA	Northeast	Salvador
UPA16	Valeria	BA	Northeast	Salvador
UPA17	Oeste	MG	Southeast	Belo Horizonte
UPA18	Gleba A/Gravatá	BA	Northeast	Camaçari
UPA19	Santa Mônica	MS	Midwest	Campo Grande

Source: The authors (2024).

Table 2 presents the final portfolio of Reports on best practices within the scope of this research. The content from 19 ECUs composed the report, which summarises the problem and the implications of the Daily Huddle action in the emergency units studied.

The analysed reports were prepared and written by the staff of the units themselves, serving as the foundation for the structure of each summary presented in this work. Each summary was developed based on the analysis of these best practice reports, which described the challenges encountered and the interventions

implemented to address them, with the implementation of the Daily Huddle being one such intervention. Thus, each unit presented a distinct account of how this tool was implemented and the results achieved. This variation is justified by the differing cultural contexts and the specific characteristics of each team. Consequently, the results vary from one unit to another, reflecting the particularities and dynamics of each work environment.

Table 2 – Content Analysis

Impact factor	Summary of the ECU context from the adoption of the Daily Huddle	UPA Code
Lack of communication	The unit was experiencing information flow failures, as information was shared randomly and the desired message content was dispersed. With the application of the Daily Huddle, which does not generate additional costs, administrative and internal support issues were resolved more quickly, significantly reducing resolution times. In addition, the team will be able to understand and resolve issues proactively, preventing these problems from influencing user service.	UPA01
	Inefficient communication created difficulties for the healthcare team, causing burnout, increased length of stay, and problems that were easy to resolve. The implementation of the Daily Huddle improved the exchange of information, making data more visible and making it easier to identify recurring issues, especially by creating a Google Forms document to collect information. During the meetings, all essential services were discussed, resulting in a more effective approach to solving the problems that affect the institution.	UPA04
	The ECU presented communication failures among the team, compromising the quality of patient care and increasing the length of stay in the unit. To solve this problem, the Daily Huddle was implemented, which reduced process failures by standardizing meetings. This tool allowed all information to be addressed in a clear and objective manner, facilitating the identification of problems and more assertive decision-making.	UPA05
	ECU implemented the Daily Huddle at no additional cost. Reports indicate that this practice significantly improved interaction between different categories of staff, facilitating effective problem-solving and the dissemination of routines and knowledge. In addition, defined scripts were used to discuss routines and propose more robust solutions, ensuring that important information was shared with all team members.	UPA11

Continua

Impact factor	Summary of the ECU context from the adoption of the Daily Huddle	UPA Code
	Information exchange is disorganised, which compromises the identification and resolution of problems in the unit. The flow of information was flawed, and communication between the team could have been more efficient. With the implementation of this Daily Huddle tool in the ECU, the team could rely on a document in Google Forms that allowed them to record and visualise the main needs of the ECU in a clear and objective way.	UPA06
	The exchange of information in the ECU was impaired by the lack of meetings and poor communication, often leading to lost information or delays in patient care. With the implementation of the Daily Huddle in the unit, this new way of managing information allowed the team to identify the most frequent problems more quickly, making it possible to take immediate measures to solve them more quickly and effectively.	UPA02
	Communication between ECU teams was considered flawed and inefficient. However, with the implementation of the *WhatsApp* application to establish a time for exchanging information and guidance, there was a significant improvement in communication. In this way, optimising internal processes, standardising information, and contributing to more efficient shift planning was possible.	UPA08
	The flow of information in the ECU was flawed, generating a message dispersion and a loss of relevant information. In addition, communication between team members was inefficient, and information was often shared randomly without a prior meeting for alignment. With the implementation of the Daily Huddle, daily meetings allowed all employees to be aware of the needs and demands of the unit, facilitating the identification and solution of problems. As a result, the team began to work more integrated and focused on common goals, contributing to greater efficiency and quality in patient care.	UPA09
	Before the practice was adopted, much information was lost because there was no formal staff meeting. However, the implementation of the Daily Huddle enabled a more standardised exchange of information among professionals. This improvement in communication and team interaction allowed for better identification and resolution of recurring problems in the unit, resulting in safer and more comprehensive care for patients. In addition, a *Google Forms* form was developed with the main needs of the ECU, which was essential to provide greater efficiency in information management and decision-making.	UPA10

Continua

Impact factor	Summary of the ECU context from the adoption of the Daily Huddle	UPA Code
	It was observed that communication among professionals could be more effective, which led to the implementation of the Daily Huddle. The team began to meet regularly, allowing for a more objective and efficient exchange of information. This change resulted in a significant improvement in the resolution of routine problems, making the process faster and more effective, without incurring additional costs for the institution.	UPA14
Problem with sharing information and knowledge	The Daily Huddle brought a significant improvement in communication and information exchange between teams after its implementation, allowing greater involvement of all employees in solving problems and identifying opportunities for improvement. Several problems were identified, such as reports that team communication was not good, and information was often lost due to lack of meetings between employees. There was no standardised time for sharing knowledge, making it difficult to exchange information. This improvement was achieved at no additional cost, making the UCE more efficient in serving inpatients and reducing the time to resolve internal problems.	UPA13
	After implementing the Daily Huddle at the ECU, there was a significant improvement in communication between teams, enabling teamwork that is more efficient. In addition, the use of the tool allowed for a great exchange of knowledge among the team, which saved time for all employees. The tool was innovative in daytime shifts, and information was transmitted uniformly, following a checklist developed for this purpose. With this, the team can plan according to the expected obligations and anticipate actions to solve them.	UPA07
	During the shift transition in the unit, failures in communicating important information were common, even with the presence of reports and medical records. After implementing the Daily Huddle, it was possible to notice an improvement in the exchange of information between teams. The exchange of information and knowledge became more frequent and standardised, contributing to more efficient shift planning and better problem solving. To this end, the *WhatsApp* application was used to establish a time to exchange information and guidance involving different categories of staff, considering the availability of each employee's schedule.	UPA08

Continua

Impact factor	Summary of the ECU context from the adoption of the Daily Huddle	UPA Code
	Through the daily huddle, new talent was discovered and the communication process among the multidisciplinary team was improved. In addition, problem solving became faster, thanks to the agility in disseminating information for decision-making. A chart was created to describe the information presented during the Daily Huddle, contributing to a better flow of information and faster identification of problems that could interfere with the care of the patients treated. The Daily Huddle was implemented with the participation of all members of the multidisciplinary team, ensuring that everyone was up to date on relevant information and could contribute to problem-solving.	UPA03
	There was no standardised activity in the unit to help control and manage the routines and demands of each sector. This resulted in serious problems, with important information being lost and impacting the quality of patient care. With the application of the Daily Huddle, improvements were achieved in the management and integration of teams and areas of the unit. Representatives from each area become aware of the needs and problems of the other sectors and help with resolution, which improves team integration and problem-solving in less time.	UPA12
	The lack of a formal process for team communication and alignment had a negative impact on problem-solving, leading to lower efficiency in service delivery and patient care. With the Daily Huddle at the ECU, there was an improvement in resolving routine problems more quickly and effectively, without incurring additional costs for the institution. The team began to meet regularly, which has enabled a more objective and effective exchange of information, resulting in greater alignment among members.	UPA14
	The flow of information in the unit was flawed, as information was shared without a defined standard and in a dispersed manner. The ECU has experienced an optimisation in service since the implementation of the Daily Huddle. It was clear that pending issues were resolved more quickly and effectively, generating satisfaction for the team and for the patients served. Another factor was the great exchange of knowledge among the professionals themselves from all sectors, leading to information sharing throughout the unit.	UPA15

Continua

Impact factor	Summary of the ECU context from the adoption of the Daily Huddle	UPA Code
	Since the implementation of the Daily Huddle, the UCE has experienced an improvement in its decision-making dynamics. Through this tool, the team has optimised the work dynamics, minimising impacts on patient care. This is because, during the Daily Huddle meetings, all the services and problems necessary for the proper functioning of the UCE are addressed objectively and effectively, enabling a more assertive and effective discussion of the issues that affect the institution and a great exchange of information.	UPA18
	The Daily Huddle was adapted to the institution's reality, making it unique and personalised, allowing for better team communication and optimising problem-solving time. During the meetings, all services required for the UCE to function are addressed objectively and effectively, enabling a more assertive and effective discussion of the problems affecting the institution and often generating a great exchange of knowledge between them.	UPA19
Agility in problem-solving	After implementing the Daily Huddle at the UCE, it was possible to hold team meetings in an agile and objective manner, which resulted in a reduction in response time to on-call incidents. Furthermore, it is worth noting that there were no costs involved in adopting this practice. Additionally, internal communication was improved, allowing for a more effective exchange of information and solutions to recurring problems through the creation of a document in *Google Forms* with the main needs of the UCE.	UPA02
	After implementing the Daily Huddle, there was a significant improvement in problem-solving and care delivery at the ECU. Internal communication between team members was continually interrupted, leading to delays in problem-solving. In addition, there was no standardised activity for aligning information and knowledge between teams, negatively impacting the action plan aimed at patients. Communication between teams was facilitated, and inconsistencies could be resolved quickly, as information was passed on quickly and uniformly to all members involved.	UPA09

Continua

Conclusão

Impact factor	Summary of the ECU context from the adoption of the Daily Huddle	UPA Code
	There were communication difficulties between teams, which led to selective dissemination of information and problems in implementing new workflows. Information was shared randomly, which resulted in fragmented communication between teams and difficulties in exchanging knowledge and experiences. After implementing the Daily Huddle, interaction between teams was improved, allowing for the standardisation of activities in the UPA. In addition, the tool made it possible to identify more visible data, which contributed to solving recurring problems in the unit. To further improve management, a document was created in *Google Forms* that addresses the main needs of the UPA, making problem identification and resolution more efficient.	UPA10
	Communication between teams could have been better, and information was often lost due to lack of staff meetings, causing resolution activities to take longer. ECU has seen significant improvements by using Daily Huddle at no additional cost to the institution. This tool has improved communication between teams, which has optimised the time to resolve issues.	UPA16
	The lack of communication and information between departments contributed to poor management of the unit and made it difficult to implement the changes needed to improve the quality of patient care. The ECU has seen improvements since adopting the Daily Huddle, especially in terms of communication between staff and optimising time for problem-solving. By holding Daily Huddle meetings, all essential services for the proper functioning of the ECU are addressed objectively and effectively, which has allowed for a more assertive discussion of problems and the proposal of more effective solutions.	UPA17

Source: The authors (2024).

Based on the content analysis proposed by Bardin (2011), three categories of analysis were defined to assess the impacts of the Daily Huddles on the analysed UPAs: Lack of Communication, Problem of sharing information and knowledge, and Agility in Problem Solving. Below is shown an analysis of the impacts generated in each category identified in the content analysis of the table above. Next is the analysis of each category analysed from the perspective of IM and KM.

Lack of communication

MI and knowledge sharing in the healthcare field are seen as strategic resources that help achieve the goals and actions of organisations (Barreto; Inocêncio; Nunes; Oliveira, 2023; Almansoori; Alshamsi; Salloum; Shaalan, 2021).

According to UPA01, UPA04, and UPA05, it was possible to verify that the lack of communication was present in the unit, especially during the shift change. Although there were reports of patients and medical records available to healthcare professionals, this alternative needed to be improved, since information necessary for the process was ignored and not perceived, which harmed the care provided.

In UPA11 and UPA06, the implementation of the Daily Huddle can reduce the lack of communication, allowing the analysis of relevant occurrences and the sharing of information and learning with professionals from other shifts. To ensure integrated care for patients and their families, all professionals in the unit must develop effective communication (Pérez-Montoro; Cirino, 2023). Furthermore, communication also allows for discussing suggestions for improvements in care and exploring the perceptions of each speciality (Andrade; Azevêdo; Souza; Freitas; Cruz; Almeida; Morais, 2023).

The importance of the Daily Huddle in ensuring more optimized and satisfactory patient care is widely recognised (Tuyishime *et al*., 2024). In the context of ECU 04, 06 and 10, the adoption of the Daily Huddle, combined with the use of *Google Forms*, had an impact on team communication and helped with implementation in the unit. This integration facilitated data collection and visualisation, allowing professionals to identify problems more quickly and effectively. As a result, the team was able to implement solutions more quickly and continuously, not only improving communication between shifts but also easily viewing information using *Google Forms*.

In addition, the shift change, previously considered a mere entry and exit procedure, became a crucial part of the process. At this time, it is important to take certain measures to ensure the safety and continuity of patient care, as effective communication between the professionals involved is essential, as this occurs between doctors, nurses, nursing technicians and other entities of fundamental importance for adequate health care (Vieira; Lima; Viana, 2023). Many professionals, through the Daily Huddle, share information that they consider relevant, such as the evolution of certain patients or situations of decompensation, alerting the team to be aware of these cases, making it have a daily effect on the health care of patients.

The reports analysed allowed us to conclude that communication became effective among emergency room staff, enabling the exchange of knowledge and information. This joint practice, when applied in specific situations, brought many benefits, such as reducing risks in the services provided to patients, encouraging

health professionals to learn through the exchange of information with more experienced employees who have experienced similar situations, increasing operational efficiency and providing a quality experience for health service users (Karamitri; Kitsios; Talias, 2020; Ferenhof; Bonamigo; Rosa; Vieira, 2024).

Over time, despite some initial resistance to the implementation of the Daily Huddle due to cultural issues, it was observed that the more the practice was consolidated in a standardised way, the more improvements and changes in culture became evident. This cultural change for health professionals is seen as a process of continuous improvement in the search for perfection (Bonamigo; Nunes; Mendes; Martelotte; Andrade, 2024).

From the ongoing conduct of the Daily Huddle, it was observed that professionals began to separate relevant information specifically to share during the Daily Huddle, highlighting the importance of this data exchange. Because of the standardisation of the Daily Huddle in the unit, as observed in UPA10, a significant improvement in IM and KM was noted, bringing a series of benefits, including the improvement of patient safety and processes (Stanfill; Marc, 2019).

In addition, there was a gradual reduction in poor communication over time. It is important to highlight that the implementation of the tool also occurred at no additional cost to the institution, as evidenced in the reports of UPA01, UPA02 and UPA14, which suggests that unit managers can adhere to the tool more easily, due to its cost-benefit advantage.

In most of the UPA evaluated, weak communication was reported, manifested by the lack of meetings, the absence of adequate tools and the team's habits, as stated in UPA09: "The flow of information in the ECU was flawed, generating dispersion of messages and loss of relevant information." The implementation of the Daily Huddle emerged as an effective solution to address this issue, contributing significantly to the reduction of communication failures in almost all units.

Thus, it can be observed that what was lost due to the lack of technology, meetings and standardised processes was compensated for during the Daily Huddle, which established itself as a fundamental space for the exchange of information. This practice not only improved communication between professionals, but also made it possible to identify possible failures, resulting in several benefits already highlighted in the literature. Thus, the tool proved to be essential for strengthening collaboration and effective communication.

The problem in sharing information and knowledge

The implementation of the Daily Huddle in the unit optimised patient care, as it facilitated the rapid identification and resolution of problems. Furthermore, by standardising the sharing of information, this practice reduced the time dedicated to internal administrative and care issues, as seen in UPA13, UPA08 and UPA03.

In a more agile and assertive way, the Daily Huddle is directly linked to the improvement of the sharing of information and knowledge (Murphy, 2023). The meetings proved to have a great effect on the information of the entire team in an optimised and standardised way, as we can see in the examples of UPA14, having met regularly, which allowed, in the view of the UPA manager, a more objective and effective exchange of information, resulting in greater alignment between the members of the events and information about the patients.

As soon as the Daily Huddle was implemented in UCEs, such as UPA18, UPA15, UPA14, UPA12 and UPA07, they reported an improvement in the decisions made, whether to improve the unit or patient care. This sharing of information between employees that did not exist before involves the team quickly and simply, resulting in necessary discussions on safety issues, for example, and thus helping to increase awareness of the specific situations and issues of each patient (Castro; Amaro; Mendonça; Siman; Zanelli; Carvalho, 2023).

The Daily Huddle acts as a powerful strategy to overcome communication barriers in clinical and administrative teams since during the shift change it addresses advance discussions on safety and performance and other information if the professional deems it important at the time. By integrating safety meetings and briefings, the Daily Huddle encourages greater expression of safety-related concerns and contributes to improving patient care results (Ferreira; Oliveira; Marques; Lima; Barbosa; Castro; Guimarães, 2020).

Agility in problem-solving

The Daily Huddle is a valuable tool for collaboratively and efficiently solving difficulties (Corrêa; Sousa Rocha, 2021). By bringing together a multidisciplinary team in a limited, and preferably short, time, it is possible to identify several problems, share creative ideas and knowledge, prioritise the most promising solutions, and create an action plan for their implementation. As seen in UPA09, communication between

employees was improved through daily meetings to share information and knowledge.

The shift handover is one of the essential activities for the work of health professionals, consisting of the transfer of specific patient information from one health professional to another, from one team to another, or even to patients and family members at the hospital discharge time, according to Schorr, Debold, Santos, Nascimento and Matos (2020). With that in mind, the application of the Daily Huddle was a facilitator to ensure that the exchange of information between professionals is safer and more constant when changing shifts, causing problems to be resolved more quickly and in a standardised way.

Observing the UPA02, UPA09, UPA10, UPA16, and UPA17, it was clear the exchange of information between the collaborators, in which many of the situations reported by a professional in a certain shift were treated with the unification of the knowledge of other professionals with different perspectives. Applying the Daily Huddle has enabled greater efficiency in the team's workflow and decision-making, which has been critical to ECU's success.

Conclusion

The findings of this study show that the implementation of the Daily Huddle in the ECUs analysed had an impact on the dynamics of communication between healthcare professionals and all employees of the healthcare unit, promoting an improvement in the sharing of information and knowledge among teams, in addition to facilitating the agile resolution of problems. By establishing this regular practice, it was possible to strengthen interpersonal interactions and create a more collaborative environment, which directly reflects on the operational efficiency of the units.

The research revealed that, before the adoption of the Daily Huddle, communication failures and fragmentation of information were barriers that compromised both the identification of problems and the speed of patient care, which was evidenced by most of the units analysed. The introduction of the Daily Huddle not only mitigates these inefficiencies but also establishes a structured process for the exchange of knowledge, ensuring that crucial information is discussed and understood by all team members, regardless of the shift.

The results presented here highlight the importance of the Daily Huddle as a vital component for strengthening internal communication and promoting a culture

of continuous improvement in healthcare facilities. This study also provides a solid foundation for the adoption of Lean Healthcare management practices in healthcare settings, particularly in services that demand agility and precision, such as UPAs.

For future research, it is recommended that additional research be conducted to explore the effects of implementing the Daily Huddle in different contexts and settings of healthcare services. This approach will allow for a broader understanding of the effectiveness of the Lean practice, as well as its applicability in different healthcare realities, contributing to an even greater strengthening of management practices and improvement in the quality of care. Additionally, quantitative evaluation is recommended to support the measures and performance indicators based on Daily Huddle adoption.

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