REVISTA DE ENFERMAGEM REFERÊNCIA
homepage: https://rr.esenfc.pt/rr/
ISSNe: 2182.2883

RESEARCH ARTICLE (ORIGINAL)

Continuous improvement project to promote evidence-based care to patients with dysphagia

Projeto de melhoria contínua no cuidado à pessoa com difagia para promover a implementação de evidências

Proyecto de mejora continua dirigido al cuidado de la persona con disfagia para promover la implementación de evidencias

Isabel de Jesus Oliveira [1, 2]
https://orcid.org/0000-0001-6627-3907

Pedro Lopes Ferreira [3, 2]
https://orcid.org/0000-0002-9448-9542

Germano Rodrigues Couto [4]
https://orcid.org/0000-0002-5423-7375

[1] Portuguese Red Cross Northern School of Health, Oliveira de Azeméis, Portugal

[2] University of Coimbra, Centre for Health Studies and Research, Coimbra, Portugal

[3] University of Coimbra, Faculty of Economics, Coimbra, Portugal

[4] UFP - University Fernando Pessoa, Porto, Portugal

Abstract

Background: Evidence shows that systematizing the therapeutic approach to patients with post-stroke dysphagia reduces complications significantly.
Objective: To design and implement a multimodal intervention to systematize an evidence-based approach to patients with dysphagia.
Methodology: A continuous quality improvement project for nursing care was implemented in a rehabilitation inpatient unit in five phases: analysis of the model in use, design of the intervention, implementation, assessment, and dissemination of results. Data were collected through documentary analysis, audits, and focus groups.
Results: There was an increase of 39.59% in the identified nursing *foci* and 45.33% in interventions. The translation of evidence into practice was also observed at the level of assessment, systematization of practices, and monitoring during meals and oral hygiene.
Conclusion: This Project contributed to translating knowledge into practice, particularly concerning the success of the therapeutic plan, specifically in terms of dysphagia, for patients being cared for.

Keywords: nursing; deglutition disorders; quality improvement; evidence-based practice; stroke

Resumo

Enquadramento: Existe evidência de que a sistematização da abordagem terapêutica à pessoa com deglutição comprometida após o acidente vascular cerebral (AVC) tem um impacte significativo na redução de complicações.
Objetivo: Conceber e implementar uma intervenção multimodal para a implementação da evidência, na sistematização da abordagem à pessoa com deglutição comprometida.
Metodologia: Projeto de melhoria contínua da qualidade dos cuidados de enfermagem desenvolvido num serviço de internamento de reabilitação, em cinco fases: análise do modelo em uso, construção da intervenção, implementação, avaliação e partilha dos resultados. Para a recolha de dados utilizaram-se a análise à documentação, a auditoria e grupos focais.
Resultados: Verificou-se um incremento de 39,59% nos focos de enfermagem identificados e de 45,33% de intervenções, assim como a transposição para a prática da evidência ao nível da avaliação, da sistematização das práticas, acompanhamento durante as refeições e higiene oral.
Conclusão: Este projeto contribuiu para a transposição do conhecimento para a prática, nomeadamente para o sucesso do plano terapêutico da pessoa alvo dos cuidados, concretamente no âmbito da deglutição comprometida.

Palavras-chave: enfermagem; transtornos de deglutição; melhoria de qualidade; prática baseada em evidências; acidente vascular cerebral

Resumen

Marco contextual: Está demostrado que la sistematización del enfoque terapéutico de las personas con trastorno de la deglución tras un accidente cerebrovascular (ACV) tiene un impacto significativo en la reducción de las complicaciones.
Objetivo: Diseñar e implementar una intervención multimodal para aplicar la evidencia en la sistematización del enfoque de la persona con trastorno de la deglución.
Metodología: Proyecto de mejora continua de la calidad de los cuidados de enfermería desarrollado en una unidad hospitalaria de rehabilitación, en cinco fases: análisis del modelo en uso, diseño de la intervención, implementación, evaluación y puesta en común de los resultados. Los datos se recogieron mediante análisis de documentos, auditorías y grupos de discusión.
Resultados: Se observa un incremento del 39,59% en los focos de enfermería identificados y del 45,33% en las intervenciones, así como la transposición a la práctica de la evidencia a nivel de la evaluación, la sistematización de las prácticas, el seguimiento durante las comidas y la higiene bucodental.
Conclusión: Este proyecto contribuyó a la transposición de los conocimientos a la práctica, es decir, al éxito del plan terapéutico para la persona atendida, concretamente en el contexto del trastorno de la deglución.

Palabras clave: enfermería; trastornos de ~~la~~ deglución; mejoramiento de la calidad; práctica clínica basada en la evidencia; accidente vascular cerebral

Corresponding author
Isabel de Jesus Oliveira
E-mail: ijoliveira12@gmail.com

Received: 15.05.22
Accepted: 19.12.22

How to cite this article: Oliveira, I. J., Ferreira, P. L., & Couto, G. R. (2023). Designing a continuous improvement project in care delivery to patients with dysphagia to promote evidence-based practice. *Revista de Enfermagem Referência*, *6*(2, Supl. 1), e22010. https://doi.org/10.12707/RVI22010

Introduction

The sudden onset of stroke negatively impacts the person's life and often results in some degree of dependence. One of the stroke-related complications is dysphagia, which negatively affects the person's ability to rebuild autonomy, leading to severe respiratory, nutritional, and psychological problems (Cohen et al., 2016). However, dysphagia is often neglected by both clinical practice and research (Dziewas et al., 2017). Nevertheless, it has been acknowledged that the therapeutic approach to the patient with post-stroke dysphagia must be systematized due to the potential gains in preventing complications, particularly pneumonia, and reducing disability and mortality (Middleton et al., 2017). Thus, a Continuous Quality Improvement Project for Nursing Care (CQIPNC) was developed to design and implement a multimodal intervention to systematize an evidence-based therapeutic approach to patients with post-stroke dysphagia.

Background

Incorporating clinically relevant scientific evidence into the clinical decision-making process ensures the provision of quality care, one of the components of evidence-based practice (EBP; Hartzell & Fineout-Overholt, 2017). EBP improves the quality and safety of care, promotes better health outcomes, decreases geographic variation in care delivery, and reduces costs. However, despite the advantages of implementing a culture of EBP, this is not a healthcare standard procedure, and there are several barriers to its implementation (Hartzell & Fineout-Overholt, 2017). EBP is based on an initial question that triggers the research, synthesis, and incorporation of evidence into clinical practice. Translating evidence into practice is complex and challenging as changing practices requires considerable effort at the individual and organizational levels. However, guidance is scarce on how clinical guidelines can be successfully implemented in clinical practice. Also, the literature regarding their implementation is inconsistent (Flodgren et al., 2016).

CQIPNCs can support the integration and appropriation of a culture of EBP in light of the nursing profession's reference frameworks (Ordem dos Enfermeiros, 2013). Within the context of Nursing Care Quality Standards (NCQS), CQIPNCs start by identifying a problem as an opportunity for improvement (Ordem dos Enfermeiros, 2013). Next, the Project's development is based on the quality management cycle, which includes the following stages: identifying the problem; understanding and dimensioning the problem; understanding the causes; defining objectives; planning and implementing activities; validating results; standardizing practices and training the team; and, finally, disseminating the successful outcomes (Ordem dos Enfermeiros, 2013). These steps overlap with those defined in the methodology of projects aimed at implementing EBP (Hartzell & Fineout-Overholt, 2017).

The challenge facing health professionals and, more broadly, health systems is to develop interventions that incorporate the best available evidence and are tailored to the clinical practice settings and target populations. The systematization of nurses' interventions based on the best available evidence depends primarily on the involvement and participation of health professionals from clinical practice settings. Therefore, the results of implementing CQIPNCs may benefit the development of models of therapeutic approaches and interventions. The evidence shows that systematizing nurses' interventions through formal clinical guidelines for the therapeutic approach to patients with post-stroke dysphagia significantly impacts adverse outcomes, such as respiratory infections and death (Hines et al., 2016). However, a gap was identified between international recommendations and Portuguese practices (Oliveira et al., 2020), as no protocols are implemented in Portugal to systematize the therapeutic approach to patients with post-stroke dysphagia.

Research question

How do CQIPNCs contribute to translating evidence into clinical practice in care delivery to patients with post-stroke dysphagia?

Methodology

A CQIPNC was implemented between April 2019 and December 2020 in an inpatient unit of a Portuguese rehabilitation center, according to the Guide for Organizing CQIPNC of the Portuguese Nursing Regulator (Ordem dos Enfermeiros, 2013), included within the NCQS framework and with the following five phases: analyzing the model in use (problem dimensioning and identification of causes); designing the intervention (understanding the causes, defining objectives and planning activities); implementing the intervention (executing the planned activities); assessing (verifying the results); and disseminating the results. This Project involved the participation of the entire nursing team, consisting of 20 nurses. Data were collected using a qualitative methodology through documentary analysis, audits, and focus groups. An organizational change process was adopted guided by the steps proposed by Kotter (Kotter, 2009), namely: 1) identifying and discussing constraints and opportunities; 2) assembling a group to lead the change; 3) creating and communicating the vision; 4) empowering other team members; 5) planning and creating goals; and 6) consolidating gains and standardizing what was achieved. The results of the first phase of this CQIPNC, which was conducted between April and July 2019, are already published (Oliveira et al., 2019; Oliveira, Almeida et al., 2020).

The second phase of the Project (understanding the causes, defining objectives, and planning the activities) took place in September 2019, and the third phase (executing the planned activities) happened between September 2019 and March 2020. The fourth phase (verifying the results) was conducted between March and September 2020, and the fifth phase (corresponding to disseminating the results) occurred in December 2020. Data triangulation (with time and people as data sources) was used to verify the validity of the results by implementing different data collection strategies.

Context

The CQIPNC was implemented in an inpatient unit of a Portuguese rehabilitation center, with the participation of the whole nursing team, consisting of 20 nurses, of whom 15 (75%) were women. The participants had a mean age of 36.7 ± 6.2 years (minimum of 28 and maximum of 52) and a mean length of service of 12.9 ± 6.5 years (minimum of five and maximum of 29), which ranged from a minimum of one year to a maximum of 18 years working in that unit. The team did not change throughout the development of the Project. Within the nursing team, five participants were selected to form the group to lead the change: two of them were men, with a mean age of 36.6 ± 8.7 years (minimum of 31 and maximum of 52) and a mean length of service of 13.8 ± 8.5 years (minimum of nine and maximum of 29). In addition to having been identified as relevant elements for implementing change (group to lead the change), they were also identified as key informants to form the focus group.

Data collection and analysis strategy

Data were collected using focus groups and participant observation (through clinical audits). In addition to these two methods, data were collected through the analysis of nursing records. The second phase of the study began with a focus group to understand the causes of the problem based on the discussion of the results of the first phase of the present study (Oliveira et al., 2019; Oliveira, Almeida, et al., 2020). No data were collected during the third phase. In the fourth phase, another focus group was conducted in March 2020 to assess the results of implementing the CQIPNC and look ahead to future developments.

The focus groups were conducted with the nurses selected to form the group to lead the change and led by the principal investigator, who was external to the nursing team. For each focus group, a moderately structured question script was designed to reflect on the practices, the transformations needed and those already carried out. Thus, it was possible to deepen the discussion about the opportunities to improve the Project, its barriers, and its facilitators. The following questions guided the focus group conducted during the study's second phase: "Do these results meet your idea of reality?", "What opportunities for improvement do you identify?" and "What strategies are most appropriate in your context?". The following questions were used in the focus group of the fourth phase: "What impact has this Project had on the quality of nursing care and the organization of care?" and "What opportunities do you identify for future developments?". All focus groups were audio recorded and fully transcribed.

Another data collection method used was the participant observation, complemented by field notes, of the nurses' practices regarding the therapeutic approach to patients with post-stroke dysphagia, from patient admission to discharge. One member of the group to lead the change conducted the participant observation as part of the audit process, which took place between August and September 2020. A participant observation form was used (Oliveira, Almeida, et al., 2020). The form had 17 items, 12 focused on clinical information records, and the remaining five on nursing interventions used in patient interaction. Participant observation was performed until data saturation was reached due to data redundancy. In the meantime, relevant field notes were recorded to complement the data collected through the focus group and participant observation.

The digital records of all patients admitted to the service in the last three months, with a clinical diagnosis of stroke, and who authorized access to their digital files were collected in March 2020 to conduct the documentary analysis. The present study was authorized by the Health Ethics Committee of the institution where it was conducted. It also obtained the consent of all the participants and their legal representatives (in the case of patients). All ethical principles of the Declaration of Helsinki and the General Data Protection Regulation were respected, and participants (nurses and patients) were guaranteed confidentiality and anonymity.

Qualitative data analysis and processing were done using the content analysis methodology proposed by Charmaz (2006) and assisted by the Qualitative Data Analysis (QDA) Miner 4 Lite software. Examining the transcripts of the focus groups began with an exploratory reading to break down the text, which led to the initial coding. This was followed by focused coding, which led to the categorization and subcategorization of the data. Regarding nursing records data, the analysis considered the principles of the International Classification for Nursing Practice (ICNP®) concerning the *foci* of nursing practice and respective judgments, as well as the framework interventions. The data recorded in the initial assessment were also considered in the analysis. Data were anonymously exported to a database and treated using descriptive statistics with the IBM SPSS software, version 25.0.

Results

The second phase corresponded to Understanding the causes, defining objectives, and planning the activities. These were achieved through reflection and brainstorming with the group to lead the change and based on the discussion of the results of the first phase of this study. From the results of the focus groups emerged the categories that outlined the multimodal intervention to be developed within a six-month timeframe. This intervention was based on the following strategies: a) educational strategies: continuous education and development of educational support materials - a clinical pathway (Lawal et al., 2016) and support material with evidence synthesis; b) tailored intervention aimed at other context determinants: work partnership with the members (nurses) of the local group for information systems; c) opinion leader strategy; and d) audit and feedback.

Regarding the third phase (executing the planned activities), all activities were executed as planned, except for the working partnership with the local group for information systems.

The fourth phase of the study took place between March and September 2020 using the same data collection techniques used in the first phase (Oliveira et al., 2019; Oliveira, Almeida, et al., 2020): analysis of the records done by nurses in the *SClínico*® software, focus groups, and participant observation. Although data collection was planned to take place between March and May 2020, it was delayed due to the COVID-19 epidemiological-related constraints experienced in Portugal at that time.

The retrospective analysis of nurses' clinical records in the *SClínico*® software was conducted in March 2020. It focused on 16 clinical files of patients admitted with a clinical stroke diagnosis between 11 December 2019 and 4 March 2020. Of these patients, 87.50% (*n* = 14) were men, with a mean age of 62.0 ± 13.88 years (minimum of 31 and maximum of 80 years), a median of 67 years, and a mean Barthel Index score of 23.12 ± 13.52 points (minimum of zero and maximum of 40 points) and median of 22.5 points. The Mann-Whitney U test was used to compare groups, considering the characteristics of the individuals included in the first phase for documentary analysis in relation to those of this phase. It found statistically significant differences between groups in the age variable ($p = 0.029$), with the individuals from this phase being significantly older. No differences were found between the groups regarding the Barthel Index variable ($p = 0.323$). The mean number of hospitalization days at the time of the nursing records analysis was 51 days (minimum of one day; maximum of 84). The analysis of the data recorded in the initial assessment revealed that three patients with dysphagia were identified at the time of admission to the service.

The most frequently recorded nursing focus was "self-care" (61.8%) out of the 275 nursing diagnoses. When comparing to the records analysis in May 2019 (Oliveira et al., 2019), it was observed that nurses identified "swallowing" as an attention focus in six cases (2.2%) and that there was a 39.59% increase in the total volume of identified nursing *foci* (275 versus 197).

When analyzing the "self-care" focus, the items "self-care feeding", "transferring" and "dressing" were identified in all patients (*n* = 16), followed by "self-care personal hygiene" and "toileting" (*n* = 15), "self-care positioning" (*n* = 14), "walking" (*n* = 9), "wheelchair use" (*n* = 8), "drinking" (*n* = 6), "walking using a device" (*n* = 5), and "standing" (*n* = 4). The most frequently used judgments are presented in Table 1. It is worth noting that the most significant difference from the analysis performed in May 2019 is the identification of diagnoses aimed at the caregiver/family caregiver.

Table 1

Judgments – phase 1 (Oliveira et al., 2019) versus phase 4

	May 2019			**March 2020**	
Judgment	***n***	**%**	**Judgment**	***n***	**%**
Dependence	116	58.9	Dependence	128	46.5
Impairment	42	21.3	Risk	43	15.6
Risk	27	13.7	Impairment	40	14.5
Present	7	3.6	Present	22	8.0
Potential for improving the ability	5	2.5	Potential for improving the ability	26	9.5
			Potential for improving the caregiver's ability	16	5.8
Total	**197**	**100.0**		**275**	**100.0**

Note. % = Percentage; *n* = Number of items.

Considering the context of the present study, an analysis of the diagnosis of dysphagia was performed. It was identified in three patients. The diagnoses of dysphagia, the potential for improving the ability to use safe swallowing strategies, and the risk of aspiration were identified in two patients, and the diagnoses of dysphagia and risk of aspiration were identified in another patient. Thus, in addition to the three patients with dysphagia at admission, nurses identified three more patients during their hospitalization.

Next, the planned actions were analyzed (Table 2). Out of 1199 planned actions, *observing* continues to be the most frequently implemented. Also, there was a 45.33% increase in the total actions volume identified compared to 2019 (1199 versus 825).

Fifty-six dysphagia-related interventions were identified, with the most commonly implemented being "monitoring meals" (*n* = 16) and *supervising diets* (*n* = 13).

Table 2

Summary of the number of interventions identified according to the type of action - phase 1 versus phase 4

May 2019			March 2020		
Type of action	**n**	**%**	**Type of action**	**n**	**%**
Observing	406	49.2	Observing	518	43.2
Attending	177	21.5	Attending	289	24.1
Managing	85	10.3	Informing	163	13.6
Informing	84	10.2	Managing	146	12.2
Performing	73	8.8	Performing	83	6.9
Total	**825**	**100.0**		**1199**	**100.0**

Note. % = Percentage; *n* = Number of items.

Also, twice as many self-care interventions related to oral hygiene were identified, with a significant increase in the number of patients assisted with oral hygiene (12 versus five).

Four categories with different subcategories emerged (Table 3) from the data analysis of the focus groups.

Table 3

Coding frequency of the record units for each subcategory

Category	**Subcategory**	**Frequency**	**%**	**Record units - examples**
Perceived gains	Reference framework of practices	17	4.76	"to use with colleagues being integrated into the service, with students..." (N1)
	Systematization of practices	13	3.64	"the standardization of practices... we are now all more aligned..." (N5)
	Recording of practices	9	2.52	"we now see in patients the diagnoses that correspond exactly to what we are doing... and before we did not" (N13)
	Material resources	8	2.24	"we have 0.2% chlorhexidine" (N2)
	Knowledge	6	1.68	"without a doubt, the knowledge update" (N13)
Improvement Opportunities	Clinical pathway	46	12.89	"because the goal is for people to understand it right away... they are not supposed to keep referring back to the instructions" (N12)
	Operationalizing records	18	5.04	"the ideal would be to concentrate all clinical data and therapeutic plan information shared by the professionals in a single system" (N1)
	Materials	15	4.20	"the ideal would be a single dose, there would be less waste. We already asked, but they don't have it." (N1)
	Care organization methodology	9	2.52	"in oral hygiene, we are not meeting the 15 days of use yet, sometimes it is more" (N5)
	Continuous professional update	3	0.84	"there are always new things coming out" (N1)
Barriers	Organizational culture	64	17.93	"the therapeutic plans do not belong to the patients, they belong to the professionals, that is, each professional has a protocol, not each patient." (N2)
	Information system	60	16.81	"We do not have the button for nutritional screening in the *SClínico*" (N2)
	Human Resources	9	2.52	"(…) we still don't have our nutritionist" (N2)
Nurses' Competencies	Lack of recognition	48	13.45	"speech therapists end up creating protocols without consulting us... or without... without including us (...) they have their protocol that was never disclosed or shared with the nursing team" (N2)
	Role awareness	32	8.96	"it is a shame because it is the patient who loses" (N12)
	Total	357	100	

Note. % = Percentage; *n* = Number of items.

Participant observation was concluded when all clinical files of inpatients with the clinical diagnosis of stroke and nursing diagnosis of dysphagia or risk of aspiration were audited. At least one nurse/patient interaction was observed for each observation form item. Fourteen clinical files were audited, and 109 nurse/patient interactions were recorded, resulting in 263 observations. The technique of participant observation was used to complement the data obtained from the focus groups. Compliance was observed in all nursing intervention items of interaction with patients, namely: dysphagia screening/assessment; implementing complementary interventions during meals and nurses' monitoring during all meals; complying with the oral hygiene protocol defined in the clinical pathway; and family involvement in the care process. The exceptions to conformity regarded conducting the initial assessment (*n* = 1) and referring patients at nutritional risk to the nutritionist (*n* = 6). In addition to these non-conformities, another 48 non-conformities regarding recording practices were also identified. Thus, there was a total of 55 non-conformities (20.9%) out of 263 observations. These results align with the barriers participants identified in the focus groups.

The results were disseminated in November and December 2020. As already mentioned, the delays in meeting the plan resulted from the epidemiological context in Portugal at that time.

Discussion

Following the implementation of the planned strategies, there was an increase in the recording of data on swallowing, risk of aspiration, caregivers, and interventions in the area of self-care and oral hygiene. This increase promoted the consistency between what was being done and what was being recorded. Evidence suggests that using different strategies in a multimodal intervention leads to professionals' greater adherence to clinical guidelines (Flodgren et al., 2016). In this domain, the opinion leader strategy proved effective in achieving the desired change in the team, corroborating the results obtained during the planning phase. The reflections on the practices during the previous focus groups (Oliveira, Almeida, et al., 2020) and the dissemination of the results obtained from the records and participant observation had a significant impact. Thus, significant changes were observed in practice even before the implementation phase.

Evidence suggests that the opinion leader strategy, alone or combined with other strategies, promotes EBP (Flodgren et al., 2019). This strengthens the significant role that the nursing leadership style has as a facilitator of EBP, as well as in the quality of care (Akbiyik et al., 2020). Associating this strategy with educational strategies (in-service training and provision of educational material), creating tools for implementing clinical guidelines, and the team's strong involvement proved effective in implementing the CQIPNC. This confirms the evidence that suggests that this type of intervention seems to increase the translation and use of scientific evidence (Flodgren et al., 2016). Baatiema et al. (2017) conducted a systematic literature review on the barriers to and facilitators of EBP, focusing on professionals working in stroke units. The study highlighted as barriers the inadequate peer support among health professionals and the lack of protocols and pathways for implementing evidence. Considering facilitators are the opposite of barriers, the group to lead the change, as the team's aggregating element, and the development of the clinical pathway proved to facilitate the change in the nursing team's interventions and record practices. When analyzing the records, there was an overall increase in the data recorded on the identified nursing *foci*, the diagnostic activity, and the absolute number of planned interventions. This increase might be related to a higher dependence profile of the individuals on whom the documentary analysis focused in this phase. Nevertheless, comparing groups suggests that the individuals' profiles are similar in terms of dependence. The analysis shows that self-care remained the most common focus, while there was an increase in the data on swallowing and caregivers. This aligns with the results of the study's first phase, which showed, through the focus groups, the participants' understanding of the appropriate practices and the focus on the patient and family caregiver (Oliveira, Almeida, et al., 2020). These results suggest greater consistency between what was being done and what was being recorded. However, despite an increase in records, some barriers remain, as demonstrated in the audit and identified by the participants in the focus groups. On the one hand, evidence suggests that user involvement and training in electronic record systems improve the quality and facilitate the recording (Vabo et al., 2017). On the other hand, there are still barriers, which the participants identify as opportunities for improvement and that are supported by literature, namely the existence of user-unfriendly information systems, the difficulty in adapting the record system to the nursing process, and the need to standardize the language used in the software (Tsai et al., 2020). It is worth noting that most of the non-conformities identified in the audit are related to records. The potential difficulty in measuring nursing care-sensitive gains resulting from recording constraints is an obstacle to producing evidence based on nurses' autonomous interventions (Oliveira et al., 2019). Although the audit was not performed at the initially scheduled period, it was implemented more than one year after the Project's beginning and after approximately six months of turmoil caused by the effects of the COVID-19 pandemic in Portuguese healthcare services. Nevertheless, it was clear that professionals had largely implemented the clinical recommendations expressed in the clinical pathway.

Considering the implementation of the clinical pathway, participants identified more opportunities for improvement in terms of material resources and care organization. They pointed out the lack of human resources as a barrier, reflecting the barriers identified in the literature for translating evidence into practice (Baatiema et al., 2017). The organizational culture is another barrier identified by participants and is extensively corroborated by the evidence (Baatiema et al., 2017). The results suggest that organizational culture contributes significantly to the lack of recognition of nurses' skills. Moreover, this lack of recognition of nursing as an autonomous profession hinders the use of evidence in practice. It translates into the nurses' perception that they do not have the authority to change evidence-based procedures. These results align with evidence found internationally (Shayan et al., 2019), according to which the perpetuating of a particular hierarchical logic, also identified in Portugal for many years, hampers the potentiality of each health professional's role and their contribution to the success of the patient's therapeutic plan.

Among the results most relevant for achieving the objective of this study are the gains perceived by the health professionals and corroborated by the analysis of the records and audits, namely: the creation of a reference framework, the systematization of practices, and the improvement in recording and knowledge (through in-service training). These gains align with the quality statement of the professional nursing practice of care organization (Ordem dos Enfermeiros, 2013). The existence of a reference framework, a recording system, care organization methodologies, and a continuous training policy are crucial elements in organizing care.

Regarding stroke patients, implementing a nurse-initiated quality improvement intervention to manage dysphagia significantly reduced the likelihood of death or dependence and improved health status at discharge (Middleton et al., 2017). Also, a continuous quality improvement project to improve dysphagia screening practices in a context-specific intervention significantly increased adherence to clinical recommendations (Sivertsen et al., 2017). The present study suggests that CQIPNCs contribute significantly as strategies for translating evidence into practice, thus promoting an effective EBP.

When nurses incorporate the principles of EBP into their clinical interventions, they promote quality of care and patient satisfaction, improve the population's health, reduce health costs, and increase job satisfaction (Hartzell & Fineout-Overholt, 2017).

The main limitations of this Project are the sample size, the fact that it was developed in a specific clinical practice setting focused on swallowing, and that its impact on the patients was not assessed, particularly regarding the incidence of complications and patient satisfaction. Thus, further studies are recommended.

Conclusion

The present study reflects on implementing of a multimodal intervention to systematize an evidence-based therapeutic approach to patients with post-stroke dysphagia using a CQIPNC. The results show increased data and intervention recording, promoting consistency between what was done and what was recorded. The CQIPNC also significantly contributed to the adherence to EBP, with a relatively successful translation of the clinical pathway into practice, specifically at the level of patient assessment, systematization of practices, and monitoring of patients with dysphagia during meals and oral hygiene. This suggests that implementing the CQIPNC contributes to translating knowledge into practice. There are barriers in this study that are specific to this context and others, namely regarding organizational culture, information systems, and documentation of practices, that will need validation in other clinical practice contexts through replication of studies of this nature.

The implications for clinical practice are that practices based on interdependent interventions negatively compromise the decision-making process, which translates into the risk of losing nursing autonomy. The lack of recognition of nurses' skills and autonomy constitutes a barrier to EBP.

Author contributions

Conceptualization: Oliveira, I. J., Ferreira, P. L., Couto, G. R.
Methodology: Oliveira, I. J., Ferreira, P. L., Couto, G. R.
Investigation: Oliveira, I. J., Couto, G. R.
Formal analysis: Oliveira, I. J.
Supervision and Validation: Ferreira, P. L., Couto, G. R.
Writing - Original Draft: Oliveira, I. J.
Writing – Review & Editing: Oliveira, I. J., Ferreira, P. L., Couto, G. R.

References

Akbiyik, A., Akin Korhan, E., Kiray, S., & Kirsan, M. (2020). The effect of nurses' leadership behavior on the quality of nursing care and patient outcomes. *Creative Nursing*, *26*(1), e8–e18. https://doi.org/10.1891/1078-4535.26.1.E8

Baatiema, L., Otim, M. E., Mnatzaganian, G., de-Graft Aikins, A., Coombes, J., & Somerset, S. (2017). Health professionals' views on the barriers and enablers to evidence-based practice for acute stroke care: A systematic review. *Implementation Science*, *12*(1), Article 74. https://doi.org/10.1186/s13012-017-0599-3

Charmaz, K. (2006). *Constructing grounded theory: A practical guide through qualitative analysis*. Sage.

Cohen, D. L., Roffe, C., Beavan, J., Blackett, B., Fairfield, C. A., Hamdy, S., Havard, D., McFarlane, M., McLaughlin, C., Randall, M., Robson, K., Scutt, P., Smith, C., Smithard, D., Sprigg, N., Warusevitane, A., Watkins, C., Woodhouse, L., & Bath, P. M. (2016). Post-stroke dysphagia: A review and design considerations for future trials. *International Journal of Stroke*, *11*(4), 399-411. https://doi.org/10.1177/1747493016639057

Dziewas, R., Beck, A. M., Clave, P., Hamdy, S., Heppner, H. J., Langmore, S. E., Leischker, A., Martino, R., Pluschinski, P., Roesler, A., Shaker, R., Warnecke, T., Sieber, C. C., Volkert, D., & Wirth, R. (2017). Recognizing the importance of dysphagia: Stumbling blocks and stepping stones in the twenty-first century. *Dysphagia*, *32*, 78–82. https://doi.org/10.1007/s00455-016-9746-2

Flodgren, G., Hall, A. M., Goulding, L., Eccles, M. P., Grimshaw, J. M., Leng, G. C., & Shepperd, S. (2016). Tools developed and disseminated by guideline producers to promote the uptake of their guidelines. *Cochrane Database of Systematic Reviews*, *8*, Article CD010669. https://doi.org/10.1002/14651858.CD010669.pub2

Flodgren, G., O'Brien, M. A., Parmelli, E., & Grimshaw, J. M. (2019). Local opinion leaders: Effects on professional practice and healthcare outcomes. *Cochrane Database of Systematic Reviews*, *6*, Article CD000125. https://doi.org/10.1002/14651858.CD000125.pub5

Hartzell, T. A., & Fineout-Overholt, E. (2017). The evidence-based practice competencies related to searching for best evidence. In B. M. Melnick, L. Gallagher-Ford & E. Fineout-Overholt (Eds.), *Implementing the evidence-based practice (EBP) competencies in healthcare : A practical guide to improving quality, safety, and outcomes* (pp. 55–76). McGraw Hill.

Hines, S., Kynoch, K., & Munday, J. (2016). Nursing interventions for identifying and managing acute dysphagia are effective for improving patient outcomes: A systematic review update. *Journal of Neuroscience Nursing*, *48*(4), 215–223. https://doi.org/10.1097/JNN.0000000000000200

Kotter, J. P. (2009). Leading change: Why transformation efforts fail. *IEEE Engineering Management Review*, *37*(3), 42–48. https://doi.org/10.1109/EMR.2009.5235501

Lawal, A. K., Rotter, T., Kinsman, L., Machotta, A., Ronellenfitsch, U., Scott, S. D., Goodridge, D., Plishka, C., & Groot, G. (2016). What is a clinical pathway?: Refinement of an operational definition to identify clinical pathway studies for a Cochrane systematic review. *BMC Medicine*, *14*(1), Article 35. https://doi.org/10.1186/S12916-016-0580-Z

Middleton, S., Coughlan, K., Mnatzaganian, G., Choy, N. L., Dale, S., Jammali-Blasi, A., Levi, C., Grimshaw, J. M., Ward, J., Cadilhac, D. A., McElduff, P., Hiller, J. E., & D'Este, C. (2017). Mortality reduction for fever, hyperglycemia, and swallowing nurse-initiated stroke intervention: QASC Trial (Quality in Acute Stroke Care) follow-up. *Stroke*, *48*(5), 1331–1336. https://doi.org/10.1161/STROKEAHA.116.016038

Oliveira, I. J., Almeida, S. I., Mota, L. A., & Couto, G. R. (2020). Conceptualization of nursing care to the person with post-stroke dysphagia. *Revista de Enfermagem Referencia*, *5*(4), e20024. https://doi.org/10.12707/RV20024

Oliveira, I. J., Couto, G. R., & Mota, L. A. (2019). Nursing therapies in the person with post-stroke dysphagia. *Revista de Enfermagem Referência*, *4*(23), 133-140. https://doi.org/10.12707/RIV19057

Oliveira, I. J., Couto, G. R., & Mota, L. A. (2020). Nurses' preferred items for dysphagia screening in acute stroke patients: A qualitative study. *Nursing Practice Today*, *7*(3), 226–233. https://doi.org/10.18502/npt.v7i3.3351

Ordem dos Enfermeiros, Conselho de Enfermagem Regional, Secção Sul. (2013). *Guião para a organização de projetos de melhoria contínua da qualidade dos cuidados de enfermagem*. https://www.ordemenfermeiros.pt/arquivo/sites/sul/informacao/Documents/Gui%C3%A3o%20para%20elaborac%C2%B8%C3%A3o%20projetos%20qualidade%20SRS.pdf

Shayan, S. J., Kiwanuka, F., & Nakaye, Z. (2019). Barriers associated with evidence-based practice among nurses in low- and middle-income countries: A systematic review. W*orldviews on Evidence-Based Nursing*, *16*(1), 12–20. https://doi.org/10.1111/WVN.12337

Sivertsen, J., Graverholt, B., & Espehaug, B. (2017). Dysphagia screening after acute stroke: A quality improvement project using criteria-based clinical audit. *BMC Nursing*, *16*, Article 27. https://doi.org/10.1186/s12912-017-0222-6

Tsai, C. H., Eghdam, A., Davoody, N., Wright, G., Flowerday, S., & Koch, S. (2020). Effects of electronic health record implementation and barriers to adoption and use: A scoping review and qualitative analysis of the content. *Life*, *10*(12), 327. https://doi.org/10.3390/LIFE10120327

Vabo, G., Slettebø, Å., & Fossum, M. (2017). Participants' perceptions of an intervention implemented in an Action Research Nursing Documentation Project. *Journal of Clinical Nursing*, *26*(7–8), 983–993. https://doi.org/10.1111/jocn.13389