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Nurses' strategies for the continuity of care of hospitalized patients with COVID-19: a qualitative study*

Juanah Oliveira Debetio[1]
ORCID: 0000-0001-5894-2154

Maria Fernanda Baeta Neves Alonso da Costa[2]
ORCID: 0000-0002-2763-8050

Alacoque Lorenzini Erdmann[1]
ORCID: 0000-0003-4845-8515

José Luis Guedes dos Santos[1]
ORCID: 0000-0003-3186-8286

Ana Lúcia Schaefer Ferreira de Mello[1]
ORCID: 0000-0001-9591-7361

Diovane Ghignatti da Costa[1]
ORCID: 0000-0002-0754-8314

Gabriela Marcellino de Melo Lanzoni[1]
ORCID: 0000-0001-5935-8849

Caroline Cechinel-Peiter[1]
ORCID: 0000-0003-0032-6791

Maria Aparecida Salci[3]
ORCID: 0000-0002-6386-1962

[1] Universidade Federal de Santa Catarina, Santa Catarina, Brazil.

[2] Universidade Federal de São Paulo, São Paulo, Brazil.

[3] Universidade Estadual de Maringá, Paraná, Brazil.

Editors:
Ana Carla Dantas Cavalcanti
ORCID: 0000-0003-3531-4694

Paula Vanessa Peclat Flores
ORCID: 0000-0002-9726-5229

Richardson Augusto Rosendo da Silva
ORCID: 0000-0001-6290-9365

Corresponding author:
Juanah Oliveira Debetio
E-mail: juhjuanah@gmail.com

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ABSTRACT

Objective: This study aims to describe the strategies employed by nurses to ensure continuity of care for hospitalized patients with COVID-19 following their discharge. **Method:** A qualitative, descriptive approach was adopted. Individual semi-structured interviews were conducted with 37 registered nurses from ten university hospitals in Brazil between June 2021 and January 2022. Thematic analysis was used to examine the data. **Results:** Three main categories emerged from data analysis. The findings highlighted that nurses' roles in discharge planning and ensuring continuity of care are not defined by standardized hospital protocols. Instead, continuity of care is facilitated within the hospital environment through strategies developed by nurses, often with support from other health care workers. These strategies include mapping patients' needs, providing information about diagnoses and necessary home care, and establishing contact with primary health care services. **Conclusion:** Nurses play a critical role in coordinating both nursing and multiprofessional teams to ensure the continuity of care for patients with COVID-19. This process is supported by the development of specific strategies tailored to the hospital environment. However, in most federal university hospitals, there is a pressing need to train nurses and multidisciplinary teams in these practices. Establishing organizational protocols that formalize continuity of care measures is also critical.

Descriptors: COVID-19; Nurses; Hospitals; University; Primary Health Care; Patient Discharge.

INTRODUCTION

Patients hospitalized with COVID-19, particularly those who spend time in intensive care units, often develop health conditions that require rehabilitation both during their hospital stay and after discharge[1-3].

Ensuring appropriate referrals for these patients is critical for effective rehabilitation and for preventing avoidable readmissions. At a time when hospitals face a shortage of available beds, prioritizing continuity of care becomes essential. A seamless transition of care is especially crucial for managing conditions like COVID-19. Without it, patients may encounter significant challenges in managing their health post-hospitalization, including insufficient guidance on self-care, medication management, and preventive measures. Such gaps can overwhelm patients and caregivers, hinder recovery, and increase the risk of hospital readmissions. Continuity of care is, therefore, vital for supporting a smooth and sustained recovery process[4-6].

Because of the complexity of COVID-19, a multidisciplinary approach bridging hospital and primary health care services is needed to provide comprehensive, coordinated care tailored to the individual.

Thus, continuity of care is implemented during hospital discharge plan-

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ning and counter-referral to primary health care services. Counter-referral involves planning the hospital discharge process by providing guidance to patients and their families on the most appropriate care needed post-discharge[6]. This approach strengthens communication between different levels of care, facilitating a smoother transition. It also streamlines the acquisition of necessary supplies for primary health care, ensuring uninterrupted care. Additionally, effective counter-referral can help prevent avoidable readmissions, ultimately reducing hospital costs[7].

However, despite the recognized importance of continuity of care and hospital discharge planning[7], several challenges hinder its implementation. These include a lack of time for such activities, understaffed teams, and high patient demand[6].

Effective hospital discharge planning begins at the time of a patient's admission. Nurses should gather as much information as possible about the patient during this stage. Additionally, they must provide detailed guidance to families and caregivers and establish communication with primary health care services to ensure a responsible and seamless referral process. Without these mechanisms, care becomes fragmented, leading to avoidable hospital readmissions, increased costs, and unnecessary repetition of tests, all of which contribute to the suffering of patients and their families[8-9].

Because of the severity of COVID-19 cases requiring hospital care, health care facilities were compelled to develop new strategies to protect human life and prevent virus transmission among staff and patients[10-11]. However, information on continuity of care in the context of the COVID-19 pandemic is scarce in the literature.

This study contributes to filling that gap by highlighting the critical role of continuity of care performed by nurses. It provides an in-depth analysis of the strategies employed by nurses to ensure a smooth transition of care from hospital to primary health care for patients hospitalized with COVID-19.

The aim of the study was to describe the strategies used by nurses to maintain continuity of care for hospitalized patients with COVID-19 after hospital discharge.

METHOD

This study employed a descriptive, exploratory design with a qualitative approach. Semi-structured interviews were conducted with nurses, and data were analyzed using thematic analysis[12].

Data collection took place in 10 federal university hospitals in Brazil, all of which served as state reference centers for treating patients with COVID-19. To ensure transparency and methodological rigor, the authors followed the COREQ Guidelines (Consolidated Criteria for Reporting Qualitative Research)[13].

The study included 37 nurses who met the inclusion and exclusion criteria and agreed to participate. These nurses were employed at the ten university hospitals involved in the research. Initial contact was facilitated through technical support provided by scholarship grantees—nurses already working in these hospitals—or professors associated with the multicenter project of the federal university. These technical support personnel or professors conducted a survey to identify eligible nurses based on the established criteria and personally invited them to participate in the study. Contact details of nurses who consented to participate were then shared with the data collector, who directly scheduled interviews with each nurse.

Eligibility criteria for participation included: (a) working in units handling external discharges and (b) having at least three months of experience working with patients with COVID-19. Nurses on sick leave, on vacation, working night shifts, or in sectors dealing with internal discharges were excluded. Notably, there were no refusals or withdrawals from the study. Participants were recruited using a convenience sampling strategy, guided by data saturation criteria.

Nurses who agreed to participate received a link to the informed consent form, after which the interview was scheduled. Interviews were conducted either in person or virtually via the Google Meet platform.

To ensure consistency and minimize interference, prior training sessions were conducted to address technical aspects of the data collection process. Furthermore, the research team regularly held group discussions to review transcriptions and analyze emerging interpretations. These sessions fostered a critical, interdisciplinary approach to the study.

Data collection occurred from June 2021 to January 2022. Semi-structured interviews were conducted with 37 nurses from hospital inpatient units who cared for patients with COVID-19 discharged from the hospital. The interview

script included five open-ended questions: 1) "Tell me about the care provided by nurses to patients with COVID-19 upon hospital admission"; 2) "How does the multidisciplinary team participate in care? Can you describe the role of the multidisciplinary team from admission to patient discharge?"; 3) "Can you explain the preparations made by the nursing and multidisciplinary teams for the discharge of patients with COVID-19?"; 4) "What happens to patients with COVID-19 after hospital discharge? Is there any follow-up?"; and 5) "What guidelines are provided to the patient, family, or caregivers at hospital discharge? Who is responsible for this communication? Is there any training for the family or caregivers?". A pilot interview was conducted to refine the process but was not included in the final study. Each interview began with questions aimed at characterizing the participants. All participants received the informed consent form via email and signed it electronically through the Google Forms platform before data collection began.

The interviews lasted an average of 27 minutes. Audio recordings were made by using Google Meet platform, and the content was transcribed into Word® documents. These transcripts were securely stored on the main researcher's computer for subsequent analysis using NVivo software. Data collection was conducted by a team comprising fellows, undergraduate and graduate students, nurses from the units where data were collected, and a professor. All team members received prior training to ensure consistency. Additionally, a guiding manual was created to standardize the data collection process. Weekly meetings with the lead researcher were held to address any doubts and maintain uniformity in the data collection process.

Data obtained were analyzed by using NVivo software, following Braun and Clarke's thematic analysis framework[12]. This approach involved five phases: (a) familiarization with data, (b) generating initial codes, (c) searching for codes, (d) reviewing codes, and (e) defining and labeling themes.

Triangulation was used to increase the rigor of the study, with multiple analysts involved in coding and interpreting the data. Weekly meetings were held to compare and refine emerging categories.

The credibility of the study was ensured by transcribing the interviews verbatim and by achieving data saturation.

Ethical approval

The study was approved by the Human Research Ethics Committee at Federal University of Santa Catarina (approval number: 38912820.3.10001.0121). Participants were informed of the aim of the study and that the interviews would be recorded. Invitations to participate were sent individually by e-mail. Recipients were included in a hidden list to ensure privacy.

All participants signed an informed consent form electronically on Google Forms before data collection began. They were assured of their right to withdraw from the study at any time. Confidentiality and the privacy of participants' data are strictly maintained.

RESULTS

Table 1 shows the sociodemographic characteristics of the participants, including sex, mean age, state of residence, employment status, and length of time working with patients with COVID-19.

Table 1 – Sociodemographic data of the partic- ipants (n=37). Florianópolis, SC, Brazil, 2022 (cont.)

Variable	N	%
Gender		
Female	28	75.6
Male	9	28.1
Education level		
Undergraduate	7	18,9
Specialization	17	45,9
Master's Degree	12	32,43
Doctorate	1	2,7
State of residence		
Santa Catarina	5	13.5
Rio Grande do Sul	5	13.5
São Paulo	3	8.1
Rio de Janeiro	3	8.1
Mato Grosso	4	10.8
Mato Grosso do Sul	5	13.5
Amazonas	5	13.5
Pará	1	2.7
Bahia	2	5.4
Rio Grande do Norte	4	10.8

Table 1 – Sociodemographic data of the participants (n=37). Florianópolis, SC, Brazil, 2022

Variable	N	%
Employment status		
Public servants	2	5.4
Private sector	8	21.62
Employment relationship with EBSERH	27	72.9
Length of time working with patients with COVID-19		
Less than 12 months	13	35.1
Between 12 and 24 months	24	64.8

EBSERH: Brazilian Company of Hospital Services.

After data collection, the following categories emerged: 1) mapping of patients' care needs since hospital admission; 2) coordination of the nursing and multidisciplinary team; 3) hospital discharge planning and communication with primary health care.

Mapping patients' care needs from hospital admission

Nurses play a pivotal role in the initial stages of patient care by conducting comprehensive assessments, including anamnesis, vital sign monitoring, and physical examinations. This foundational phase establishes a baseline understanding of the patient's health status and serves as a crucial step in identifying and addressing their evolving needs throughout hospitalization.

In the context of the COVID-19 pandemic, nurses face additional challenges and rigorously adhere to safety protocols to prevent viral transmission. These protocols include continuous monitoring of vital signs and the systematic delivery of nursing care, demonstrating their unwavering commitment to patient well-being and safety.

Comprehensive patient assessment

Nurses conduct thorough initial assessments, which include anamnesis, vital sign monitoring, and physical examinations. This process provides a holistic understanding of the patient's health status at the time of admission.

> *We already did the initial anamnesis, checking vital signs, and the nursing care that we already provided. (Nurse 24)*

Safety protocols for COVID-19 containment

Nurses also play a critical role in implementing stringent safety protocols to prevent virus transmission, especially during the COVID-19 pandemic. These measures involve meticulous monitoring of patients' vital signs and systematized nursing care.

> *What happened there for COVID-19 was that the technician would check the signs*
>
> *and we were always present. (Nurse 3)*
>
> *…monitors cardiac and respiratory parameters, systematizes nursing care. (Nurse 21)*

Coordination of the nursing and multidisciplinary team

Nurses take on a multifaceted role in coordinating the efforts of nursing and multidisciplinary teams. This responsibility includes preparing and guiding teams to deliver effective patient care while managing the challenges associated with the rapid destabilization of patients with COVID-19, which often increases nursing workloads.

Beyond their traditional care roles, nurses also provide emotional support to patients experiencing isolation, addressing the psychological demands imposed by their hospital stay.

The need for coordination extends beyond hospitalization, as many patients require rehabilitation and ongoing care post-discharge. Nurses act as the linchpin in facilitating collaboration among various disciplines, ensuring a holistic and integrated approach to patient care. This collaboration is critical for bridging hospital care with primary health care, highlighting the interconnected nature of health care services and the importance of sustained multidisciplinary support in the recovery process.

Team preparation and coordination

Nurses play a pivotal role in coordinating both nursing and multidisciplinary teams, ensuring effective communication and collaboration. This includes preparing the team, discussing patient cases, and providing clear guidelines for the required care. Nurses' ability to maintain a broad, holistic perspective contributes to a comprehensive understanding of patient needs across the team.

…we need to prepare the team, I don't work alone, I need to call the team to talk about the patient we are going to receive and the care they need to have. (Nurse 5)

…because nurses take these guidelines which are more general, they have this more macro view, this view of the whole and they pull a little bit from each area. (Nurse 30)

Rapid destabilization of patients with COVID-19

Nurses highlighted the rapid and unpredictable deterioration of patients with COVID-19, which significantly increased their workload. In many cases, only nurses were permitted inside the COVID-19 treatment units, requiring them to intensify monitoring and care efforts.

We have to pay attention to patients with COVID, they get worse very quickly. They are patients which you have to constantly monitor. (Nurse 31)

…these patients decompensated a lot because they didn't have a companion and then we had to be there all the time at the bedside doing all kinds of care. (Nurse 7)

Emotional support provision

In COVID-19 treatment units, patients were not allowed to have companions. Weakened by the illness and isolation, they often placed significant emotional demands on the nursing team, further straining these professionals. In some hospitals, only the nursing and medical staff provided direct daily care to patients. As a result, in addition to their clinical responsibilities, nurses also assumed the role of providing emotional support to patients with COVID-19. Most nurses reported engaging in some form of emotional support.

Because it was a specific sector and where a companion could not be present, I realized that they were patients who demanded a lot of nursing care, and a very intense workload. (Nurse 1)

…give emotional support too, because this patient is away from home, outside their family environment… so we have that moment to cherish them, that moment when you are away from your family, but we are here with you. (Nurse 32)

Continuity of multidisciplinary care

Most patients with COVID-19 admitted to inpatient units had previously been hospitalized in the Intensive Care Unit, often presenting significant weaknesses and requiring rehabilitation support. This care was provided by the multidisciplinary team, which played a crucial role in addressing patients' needs at the time of hospital discharge. Therefore, many patients required continued multidisciplinary care after discharge. Nurses observed that these patients were typically referred to primary health care services to ensure continuity of care.

…we can't do without the physical therapist, because the physical therapist gives the guidelines, everything the patient has to do at home, the speech therapist guides the family member, if the patient still can't swallow properly, the nutritionist tells them which diets to use for the patient. So the team gets together, and we nurses are the link. One is always stuck in the other. (Nurse 31)

Hospital discharge planning and communication with primary health care

Nurses face significant challenges due to a lack of standardized protocols for hospital discharge, particularly for patients with COVID-19. Discharge responsibilities are often perceived to fall primarily on the medical team, resulting in instances where patients are released without sufficient preparation. This lack of coordination raises concerns among nurses about communication gaps and the readiness of patients to manage their care post-discharge. The coordination of post-discharge activities involves referrals made by nurses and the multidisciplinary team. In many cases, contact with primary health care is facilitated by the social worker or the internal regulation core.

Lack of awareness regarding discharge protocols

When asked about the existence of hospital discharge protocols and actions related to discharge planning, most nurses reported being unaware of their existence or use in the institutions where they worked.

There was no discharge plan related to this in the nursing team. (Nurse 24)

The University Hospital does not have a discharge protocol for patients with COVID, there was no specific protocol, only an access protocol, this was an institutional failure. (Nurse 7)

Medical team dominance in discharge decision-making

When the nurses were asked about hospital discharge, they said that the discharge was the responsibility of the medical team, and the nursing team was responsible for guiding the patients.

…sometimes they decide to discharge the patient at the moment, and then there is no preparation. There are still many failures in communication, and then there is no time to prepare the patient. (Nurse 27)

Role of social worker/internal regulation core in primary health care contact

The study identified that while the referral process was managed by the multidisciplinary and nursing teams, direct contact with primary health care services was typically facilitated by the social worker or the internal regulation core.

…so, often before discharge, I had to contact the social worker to locate the municipality of origin. (Nurse 24)

…the patient will need material for dressing, everything is done via a social worker. Nursing ends up not participating in this contact with the basic unit. (Nurse 33)

Challenges in providing guidance to family members

A few nurses reported offering guidance to caregivers or family members regarding the care patients would need at home. This task was particularly challenging because visitors and companions were not permitted in any COVID-19 hospitalization sectors.

…we had no contact with family members, because it was a COVID-19 sector, it was a closed sector. (Nurse 1)

There was no training for family members and patients. (Nurse 27)

Varied approaches to post-discharge training

One hospital in the Midwest region implemented post-discharge care training specifically designed for caregivers and family members of patients with COVID-19.

…we train family members from the moment the patient is released from isolation. We call this family member who will take care of the home and do training, depending on the patient's situation. (Nurse 21)

…for the discharge itself, we advised to continue using a mask, even if it had already been cured, and we advised the family members. (Nurse 23)

Diverse approaches to discharge care plans

The study found that nurses in two university hospitals had established hospital discharge plans. However, in several other regions, nurses provided post-discharge care guidelines for continuity of care, even in the absence of a formal protocol.

We make their discharge plan with instructions on how they are going to do their diets at home… then we guide them on how to handle the tube. And we make a form with these guidelines, if there is a bandage, we put it on the plan, if there is an application of insulin in patients who did not receive it before, we put it on the plan, explain, show the syringes, the insulin they will receive, and... I think that's basically what it is. (Nurse 33)

... we have a complex discharge care protocol, so together with the multidisciplinary team we fill out the complex discharge form, where each professional ends up writing down the care that this patient needs at home. (Nurse 21)

DISCUSSION

This study highlights the exhausting working hours faced by nurses during the pandemic, driven both by reduced team sizes and the high demands of patient care. Despite being the professional category most consistently present throughout a patient's hospitalization, nurses were not directly responsible for perform-

ing hospital discharges. Instead, this task was delegated to the social worker or the internal regulation core. International research emphasize the importance of having a dedicated professional within hospitals to act as a discharge manager or coordinator, ensuring continuity of care in primary health care settings[14]. However, such a role was not identified in any of the ten university hospitals included in this study. In Portugal, liaison nurses perform comprehensive patient assessments and physical examinations upon hospital admission. These assessments are used to develop discharge plans and facilitate continuity of care[14]. This study revealed that the hospital admission routines conducted by clinical nurses for patients with COVID-19 were similar to those performed by liaison nurses in Portugal. Furthermore, the data collected during hospital admission could potentially serve as a foundation for discharge planning, aligning with international best practices.

Hospital discharge planning enables primary health care services to prepare for each patient individually, focusing on their specific needs and delivering more efficient care. The absence of such planning mechanisms for discharge and continuity of care can result in avoidable complications, increased health care costs, duplication of tests, preventable readmissions, and medication errors[14].

However, in most institutions included in this study, hospital discharge planning was not conducted. Instead, guidelines for home care were typically provided by physicians at the time of discharge. This gap can be attributed to challenges identified in previous national studies, which indicate that nurses struggle to implement discharge plans due to high service demand and a shortage of professionals[6].

Another factor influencing the lack of communication between nursing teams and primary health care was the overwhelming demand for COVID-19 care in hospitals during the COVID-19 pandemic[15]. The rapid spread of COVID-19 and its potential to develop into severe conditions requiring hospitalization significantly increased hospital workloads, placing greater strain on nursing teams[11]. In Brazil, where nursing staff numbers are insufficient to meet patient demands, nurses were forced to prioritize direct care. This prioritization often compromised discharge planning, continuity of care, and overall care management[16].

Some participants noted that, due to restrictive measures implemented in hospitals, nursing teams were the sole providers of direct patient care during hospitalization, as the multidisciplinary teams were not physically present. This increased the workload for nurses. Additionally, many nurses were removed from duty during the pandemic as a safety measure adopted by university hospitals to mitigate the pandemic's impact[11], further reducing the already insufficient nursing workforce.

Nurses in most hospital institutions were responsible for providing discharge instructions on measures to prevent the spread of COVID-19. These included the proper use of masks, hand hygiene with gel alcohol, the importance of vaccination, and guidelines on isolation.

In international practice, as previously noted, nurses typically identify the patient's needs, plan the hospital discharge, and establish contact with primary health care. However, in Brazil, this contact with primary health care is generally managed by social workers. Social workers are tasked with coordinating patient transport, contacting family members in various situations, and serving as liaisons with primary health care services[9,13].

Despite this division of responsibilities, nurses spend most of their time directly caring for patients and coordinating multidisciplinary care. This makes them ideally suited to facilitate communication and ensure a smooth referral to primary health care. Effective hospital discharge planning should involve professionals who have been closely monitoring the patient's care. However, another study conducted in Brazil found that nurses often do not handle hospital discharges, with this responsibility typically left to physicians[14].

A study conducted in Spain with Enlace Hospital Nurses demonstrated that these professionals are responsible for creating discharge plans and continuity of care reports. They also establish contact with primary health care to monitor patients, aiming to prevent complications and reduce hospital readmissions[17]. International studies similarly highlight the importance of discharge planning to minimize avoidable readmissions, hospital-acquired infections, and public health costs[17].

This multicenter study faced challenges in coordinating data collection teams across Brazil due to COVID-19 restrictions. Although training sessions were conducted to ensure consistency, variations in interview techniques may have influenced the results. Additionally, the use of convenience sampling to recruit nurses may

limit the generalizability of findings, warranting caution when interpreting the outcomes.

Limitations of the study included potential biases related to participant selection, as the use of convenience sampling may not capture the full range of perspectives. In addition, institutional factors, such as the presence or absence of specific protocols, may have influenced the strategies described by nurses. Acknowledging these limitations ensures a more balanced and nuanced interpretation of the findings.

The study found that while two university hospitals lacked institutional protocols, health care workers took the initiative to prepare educational materials to guide patients regarding their health conditions and continuity of care in primary health care. This effort is critical, as inadequate discharge information often leads to unnecessary patient readmissions and worsening health conditions. Replicating such initiatives in other university hospitals is essential, as discharge protocols have been linked to reduced readmissions. Effective hospital discharge planning and continuity of care improve bed turnover rates and enhance the overall effectiveness of hospital care, benefiting both patients and health care systems.

CONCLUSION

This study achieved its objectives by describing the role of nurses in ensuring the continuity of care for patients with COVID-19 transitioning to primary health care. The strategies identified include 1) mapping patient's needs from hospital admission; 2) providing information about diagnoses; 3) coordinating nursing and multidisciplinary teams; 4) planning hospital discharge; and 5) communicating with primary health care services.

Despite the absence of formal protocols to guide nurses in maintaining continuity of care for patients with COVID-19, these professionals remain the primary point of contact with patients. This underscores the importance of conducting further studies to empower nurses in implementing effective continuity of care strategies in primary health care settings.

Continuity of care requires seamless integration between hospitals, families, and primary health care services. However, the study identified weaknesses, including a lack of communication with families, limited contact with primary health care, the absence of discharge protocols, and insufficient discharge planning by nurses.

Nurses were identified as the most suitable professionals to undertake hospital discharge planning and ensure continuity of care. Therefore, actions are needed to implement standardized discharge protocols and provide training to improve communication with primary health care services.

The findings of this study highlight the need for further research to assess the long-term outcomes of care continuity strategies implemented by nurses. Future investigations should explore how these practices impact patient rehabilitation and identify areas for improvement, contributing to the development of more robust and effective care protocols.

*Paper extracted from the Master's Dissertation entitled "Práticas dos enfermeiros hospitalares para continuidade do cuidado na atenção primária do paciente com COVID-19", presented to the Graduate Program in Nursing at the Federal University of Santa Catarina, Florianópolis, Brazil, in 2022.

CONFLICT OF INTERESTS

The authors have declared that there is no conflict of interests.

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AUTHORSHIP CONTRIBUTIONS
Project design: Debetio JO, Costa MFBN.
Data collection: Debetio JO, Costa MFBN.
Data analysis and interpretation: Silva RAN, Langendorf TF, Padoin SM.
Writing and/or critical review of the intellectual content: Debetio JO, Costa MFBN, Erdmann AL, Santos JLG, Mello ALSF, Costa DG, Lanzoni GMM, Cechinel-Peiter C, Salci MA.
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Responsibility for the text in ensuring the accuracy and completeness of any part of the paper: Debetio JO, Costa MFBN, Erdmann AL, Santos JLG, Mello ALSF, Costa DG, Lanzoni GMM, Cechinel-Peiter C, Salci MA.