

## CARE FOR PEOPLE WITH HEART FAILURE AFTER HOSPITAL DISCHARGE: INTEGRATIVE REVIEW

Cuidado à pessoa com insuficiência cardíaca após alta hospitalar: revisão integrativa

Cuidado de personas con insuficiencia cardiaca después del alta del paciente: revisión integrativa

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### How to cite this article:

Manfredini GMSG, Bravesco M, Dázio EMR, Fava SMCL, Resck ZMR. Care for people with heart failure after hospital discharge: integrative review. 2021 jan/dez; 13:1684-1691. DOI: <http://dx.doi.org/10.9789/2175-5361.rpcfo.v13.9669>.

### ABSTRACT

**Objective:** to identify the evidence on the guidance that should be offered to people with heart failure to continue treatment. **Method:** integrative review, searching the databases Literatura Latino-Americana e do Caribe em Ciências da Saúde (LILACS), *National Library of Medicine* (PUBMED/MEDLINE), *Cumulative Index to Nursing and Allied Health Literature* (CINAHL), *Web of Science* e *Scopus*. **Results:** of the 5422 titles identified, 32 articles were included for analysis. It was understood that the studies addressed, among other aspects, the importance of disease orientation, signs and symptoms, and acute detection; however, it was found that it was difficult to use adequate language to facilitate understanding by the person and/or family members. **Conclusion:** it is suggested that more studies be conducted on this topic, in order to enable health professionals to formulate a coherent care plan, based on the best scientific evidence.

**DESCRIPTORS:** Patient discharge; Continuity of patient care; Heart failure.

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## RESUMO

**Objetivo:** identificar as evidências acerca das orientações que devem ser oferecidas à pessoa com Insuficiência Cardíaca para a continuidade do tratamento. **Método:** revisão integrativa, com busca nas bases de dados Literatura Latino-Americana e do Caribe em Ciências da Saúde (LILACS), *National Library of Medicine* (PUBMED/MEDLINE), *Cumulative Index to Nursing and Allied Health Literature* (CINAHL), *Web of Science e Scopus*. **Resultados:** dos 5422 títulos identificados, 31 artigos foram incluídos para análise. Apreendeu-se que os estudos abordaram, dentre outros aspectos, a importância da orientação da doença, dos sinais e sintomas e da detecção da agudização; no entanto, constatou-se a dificuldade na utilização de linguagem adequada para facilitar a compreensão pela pessoa e/ou pelos familiares. **Conclusão:** sugere-se que mais estudos sejam realizados a respeito desse tema, a fim de possibilitar aos profissionais de saúde a formulação de um plano de cuidados coerente, com fundamentação nas melhores evidências científicas.

**DESCRIPTORES:** Alta hospitalar; Continuidade da assistência ao paciente; Insuficiência cardíaca.

## RESUMEN

**Objetivo:** identificar la evidencia sobre las pautas que deberían ofrecerse a las personas con insuficiencia cardíaca para continuar el tratamiento. **Método:** revisión integrativa, búsqueda en las bases de datos Literatura Latino-Americana e do Caribe em Ciências da Saúde (LILACS), *National Library of Medicine* (PUBMED/MEDLINE), *Cumulative Index to Nursing and Allied Health Literature* (CINAHL), *Web of Science e Scopus*. **Resultados:** de los 5422 títulos identificados, se incluyeron 32 artículos para su análisis. Se entendió que los estudios abordaron, entre otros aspectos, la importancia de la orientación de la enfermedad, los signos y síntomas, y la detección aguda; sin embargo, se descubrió que era difícil usar un lenguaje adecuada para facilitar la comprensión por parte de la persona y/o miembros de la familia. **Conclusión:** Se sugiere que se realicen más estudios sobre este tema, a fin de permitir a los profesionales de la salud formular un plan de atención coherente, basado en la mejor evidencia científica.

**DESCRIPTORES:** Alta del paciente; Continuidade de la atención al paciente; Insuficiencia cardíaca.

## INTRODUCTION

Together with the transition in the Brazilian age structure, the morbidity and mortality pattern is also changing, with a predominance of non-transmissible chronic diseases. Among them, cardiovascular diseases stand out, especially heart failure (HF), a serious pathology whose survival rate after five years of diagnosis can be only 35%. It is a disease marked by hospital readmissions, whose therapy is often complex and difficult to manage by the person and family members.<sup>1-3</sup>

It is noteworthy that many hospitalizations for HF are preventable and that factors such as the health care system, health care providers and self-care of the person with HF are interrelated.<sup>4</sup> Moreover, some issues may contribute to the difficulties of the person and family members in the management of care, such as the amount of prescribed

medications and information in hospital discharge summary, education, gender, race, beliefs, among other aspects.<sup>5-6</sup>

In the first month after hospital discharge, the person with HF faces several problems, such as difficulty in managing symptoms, adherence to the treatment plan, performing activities of daily living and negative feelings and moods.<sup>7</sup> Many readmissions can happen, for example, due to non-recognition of symptoms or for not understanding the need to reduce salt intake.<sup>8</sup>

It is relevant to consider that guidance to the person in the process of hospital-home transition can contribute to the reduction of readmissions, disease management, and better living with chronicity. A statement released by the American Heart Association, after compiling several programs of transition of care, showed that patient education, including basic aspects of HF, the role of diet, counseling on medications and other issues, can help reduce avoidable hospitalizations and risks of adverse drug events and promote patient satisfaction with care.<sup>9-12</sup>

It is believed that the guidelines offered to people with HF and their families may help them to face the disease and to be self-responsible in the search for answers to their questions and to make the necessary adjustments, considering, for this, instructions based on scientific evidence.<sup>12</sup>

In this sense, we chose to conduct an integrative literature review in order to identify the guidelines that should be provided to the person with HF and their families for hospital discharge and thus the continuity of care at home. It is noteworthy that this integrative literature review is part of the data collection of a master's research.

Thus, this study aims to identify the evidence about the guidelines that should be offered to the person with heart failure for the continuity of treatment.

## METHOD

This is an integrative literature review, which was developed in six steps:<sup>13</sup> identification of the theme and selection of the research question; establishment of criteria for sampling; categorization of studies; evaluation of studies; interpretation of results; and synthesis of knowledge.

The guiding question of the present review was: "What is the evidence on the orientation offered to the person with Heart Failure for the continuity of care after hospital discharge?"

For the data search, the terms were defined according to the Descriptors in Health Sciences (DeCS): "heart failure", "hospital discharge", "health education", "continuity of patient care" and "transitional care"; and according to the Medical Subject Headings (MeSH): "heart failure", "patient discharge", "health education", "continuity of patient care" and "transitional care". The uncontrolled descriptors "hospital discharge" and "transitions of care" were also used.

The data search took place in September and October 2018 in the databases Latin American and Caribbean Literature on Health Sciences (LILACS), National Library of Medicine (PUBMED/MEDLINE), Cumulative Index to Nursing and Allied Health Literature (CINAHL), Web of Science, and Scopus. We chose to perform the cross-referencing using two descriptors at a time in order to capture the largest number of articles.

Primary studies in Portuguese, English, and Spanish languages, published from July 2013 to September 2018, were included. Duplicate articles were excluded and, after reading the remaining titles, the abstracts were selected. We chose to exclude editorials, letters to the editor, theses, dissertations, reviews, reflective articles, and case studies/reports. Next, the selected studies were read in their entirety to define the sample.

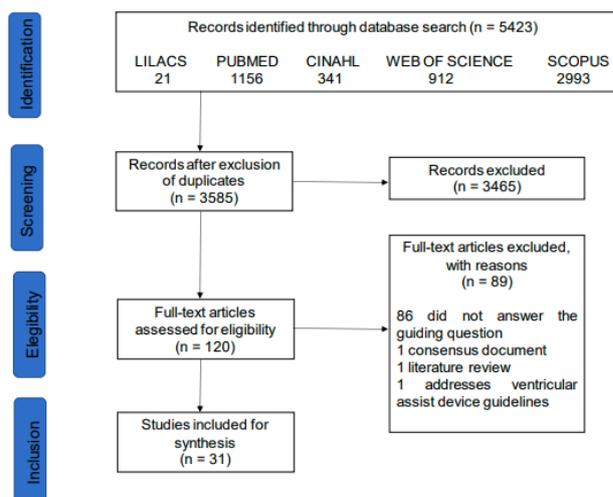
After this refinement, the articles selected for analysis were organized by identifying and transcribing the elements of interest. The data to be collected were established in an instrument created by the author herself, and some of them are described in Chart 1. The levels of scientific evidence of each study were also collected, in order to give more credibility to the information found, using Melnyk and Fineout-Overholt's classification.<sup>14</sup>

Finally, we proceeded to categorize, analyze, and interpret the material found, and then to synthesize the knowledge.

## RESULTS AND DISCUSSION

Preliminarily, 5423 titles were identified, 1838 of which were excluded for duplicity. After reading the titles and abstracts, 120 articles were selected to be read in full, resulting in a sample of 31 articles (Figure 1).

**Figure 1** - Search strategy based on the Prism Flow Diagram, Alfenas-MG, 2018, Source: from the author.



As for the characterization of the studies, 40% were developed in the United States of America, 12.6% in China, 9.5% in Canada, and 3.1% in each of the following countries: Japan, Australia, Saudi Arabia, Uganda, Sweden, Slovenia, England, and Brazil. Three studies did not describe the country in which the research was conducted. There was a predominance of publications in English language (97%).

Regarding the year of publication of the studies, it was noticed that almost half of the sample was published in the last three years, with 18.7% in 2016, 15.7% in 2017, and 12.5% in 2018.

The identification of the studies as to the journal in which it was published, the year of publication, the title of the article, and the authors is shown in Table 1.

**Table 1** - Identification of the studies included in the review, Alfenas(MG), 2018.

JOURNAL / YEAR	ARTICLE TITLE	AUTHORS
Drugs & Aging, 2018	PharmacyBased Approach to Improving Heart Failure Medication Use by Older Adults with Limited Health Literacy: Learning from Interdisciplinary Experience	BONDERSKI, V; MORROW, DG; CHIN, J; MURRAY, MD
Geriatrics e Gerontology International, 2018	Predictive factors of rehospitalization for worsening heart failure and cardiac death within 1 year in octogenarians hospitalized for heart failure	HAMADA, T; KUBO, T; YAMASAKI, N; KITAOKA, H
The Journal for Nurse Practitioners, 2018	Self-care in Heart Failure Hospital Discharge Instructions—Differences Between Nurse Practitioner and Physician Providers	DAVID, D; HOWARD, E; DALTON, J; BRITTING, L
Journal American Medical Association, 2018	Social Worker-Aided Palliative Care Intervention in High-risk Patients With Heart Failure (SWAP-HF) - A Pilot Randomized Clinical Trial	O'DONNELL, AE; SCHAEFER, KG; STEVENSON, LW; DeVOE, K; WALSH, K; MEHRA, MR et al.
Plos One, 2017	'I think my body has become addicted to those tablets'. Chronic heart failure patients' understanding of and beliefs about their illness and its treatment: a qualitative longitudinal study from Uganda	NAMUKWAYA, E; MURRAY, SA; DOWNING, J; LENG, M; GRANT, L.
Hospital Pharmacy, 2017	Impact of the implementation of Project Re-Engineered Discharge for heart failure patients at a Veterans Affairs Hospital at the Central Arkansas Veterans Healthcare System	PATEL, PH; DICKERSON, KW

JOURNAL / YEAR	ARTICLE TITLE	AUTHORS
Journal of Gerontological Nursing, 2017	Outcomes of an interdisciplinary transitional care quality improvement project on self-management and health care use in patients with heart failure	HOOVER, C; PLAMANN, J; BECKEL, J
Circulation Heart Failure, 2017	Patient Perceptions on Facilitating Follow-Up After Heart Failure Hospitalization	BREATHETT, K; D'AMICO, R; ADESANYA, A; HATFELD, S; WILLIS, S; STURDIVANT, RX et al.
European Journal of Cardiovascular Nursing, 2017	Relationship between self-care and comprehensive understanding of heart failure and its signs and symptoms	LEE, KS; MOSER, DK; DRACUP, K
Journal of Cardiovascular Nursing, 2016	Factors Associated With 7-Day Rehospitalization After Heart Failure Admission	EASTWOOD, CA; QUAN, H; HOWLETT, JG; KING-SHIER, KM
Heart & Lung, 2016	A comparative study of fluid management education before hospital discharge	ROUSE, GW; ALBERT, NM; BUTLER, RS; MORRISON, SL; FORNEY, J; MEYER, J et al.
International Journal of Cardiology, 2016	Clinical-pharmacist intervention reduces clinically relevant drug-drug interactions in patients with heart failure: A randomized, double-blind, controlled trial	ROBLEK, T; DETICEK, A; LESKOVAR, B; SUSKOVIC, S; HORVAT, M; BELIC, A et al.
Journal Saudi Heart Association, 2016	Congestive heart failure disease management program: 1-Year population experience from a tertiary center heart failure registry in Saudi Arabia	SALEM, K; FALLATA, D; ELSABAIE, M; MONTASSER, A; ELGEDAMY, K; ELKHATEEB, O
International Journal of Nursing Practice, 2016	Information needs of patients with heart failure: health professionals' perspectives	YU, M; CHAIR, SY; CHAN, CWH; CHOI, KC
Circulation Heart Failure, 2016	Early Follow-Up After a Heart Failure Exacerbation The Importance of Continuity	MCALISTER, FA; YOUNGSON, E; KAUL, P; EZEKOWITZ, JA
Journal of Pharmacy Technology, 2015	Evaluation of a Pharmacist-Managed Heart Failure Education Project: Empowering Patients to Self-Manage Their Disease	SHEPHERD, MR; THOMAS, D; HERALD, M; ADANE, ED
Journal of the American Heart Association, 2015	Heart rate at hospital discharge in patients with heart failure is associated with mortality and rehospitalization	LASKEY, WK; ALOMARI, I; COX, M; SCHULTE, PJ; ZHAO, X; HERNANDEZ, AF.
European Journal of Cardiovascular Nursing, 2015	Person-centred-care - an approach that improves the discharge process	ULIN, K; OLSSON, L; WOLF, A; EKMAN, I
Journal of the Chinese Medical Association, 2015	The effects of a self-care program on patients with heart failure	LIU, H; CHEN, H; HSU, S; LEE, S; CHANG, C; WU, M
Heart & Lung, 2015	A health education booklet and telephone follow-ups can improve medication adherence, health-related quality of life, and psychological status of patients with heart failure	YU, M; CHAIR, SY; CHAN, CWH; CHOI, KC
Professional Case Management, 2015	Hearing the Veteran's Voice in Congestive Heart Failure Readmissions	STEVENSON, CW; PORI, D; PAYNE, K; BLACK, M; TAYLOR, VE
Journal of Pharmaceutical Health Services Research, 2015	Effect of pharmacist discharge counselling on medication adherence in elderly heart failure patients: a pilot study	VINLUAN, CM; WITTMAN, D; MORISKY, D
Journal of Cardiac Failure, 2014	Joint Commission Requirements for Discharge Instructions in Patients With Heart Failure: Is Understanding Important for Preventing Readmissions?	REGALBUTO, R; MAURER, MS; CHAPEL, D; MENDEZ, J; SHAFFER, J
American Society of Health-System Pharmacists, 2014	Pharmacy-managed program for providing education and discharge instructions for patients with heart failure	WARDEN, BA; FREELS, JP; FURUNO, JP; MACKAY, J
European Journal of Cardiovascular Nursing, 2014	The effect of a supervised exercise training programme on sleep quality in recently discharged heart failure patients	SUNA, JM; MUDGE, A; STEWART, I; MARQUART, L; O'ROURKE, P; SCOTT, A
European Journal Cardiovascular Nursing, 2014	The role of patient-held alert cards in promoting continuity of care for Heart Failure Patients	MCBRIDE, A; BUREY, L; MEGAHED, M; FELDMAN, C; DEATON, C

JOURNAL / YEAR	ARTICLE TITLE	AUTHORS
Revista de Pesquisa Cuidado é Fundamental Online, 2014	The art of caring for patients with heart failure at hospital discharge: considerations for nursing health care practice	SOUZA, PMBB; QUELUCI, GC
Journal of Clinical Nursing, 2014	Determinants of self-care decision-making in hospitalized patients with heart failure	TSAI, P; WANG, R; LEE, C; TSAI, L; CHEN, H
Journal of Pharmacy Practice, 2013	Impact of pharmacy student and resident-led discharge counseling on heart failure patients	SZKILADZ, A; CAREY, K; ACKERBAUER, K; HEELON, M; FRIDERICI, J; KOPCZA, K
Circulation Heart Failure, 2013	Association of Heart Rate at Hospital Discharge With Mortality and Hospitalizations in Patients With Heart Failure	HABAL, MV; LIU, PP; AUSTIN, PC; ROSS, HJ; NEWTON, GE; WANG, X; TU, JV et al.
Canadian Medical Association Journal, 2013	Impact of physician continuity on death or urgent readmission after discharge among patients with heart failure	McALISTER, FA; YOUNGSON, E; BAKAL, JA; KAUL, P; EZEKOWITZ, J; VAN WALRAVEN, C

Source: from the author.

According to the levels of evidence, 42% had level VI, of which 61.5% had a quantitative approach. Levels of evidence II and III accounted for 39%, 26% and 13%, respectively. Level IV evidence was found in 19% of the articles.

The analysis of the results allowed the construction of four categories, which are described below.

### Disease and management of signs and symptoms

Social, economic, cultural, racial-ethnic, psychological and behavioral factors, as well as the social determinants of health, can influence the occurrence of health problems and risks to the population.<sup>15</sup> It is important to reflect that this is valid for the understanding of health care, especially regarding the guidelines for continuity of care after a period of hospitalization.

In order to demonstrate the importance of these aspects, studies have found the importance of clarifying to the person with HF and family members about the disease, its chronic characteristic and poor prognosis.<sup>16-26</sup>

It is also important to provide information about the disease, since some people may have difficulties in understanding it, misinterpreting it or associating its cause with previous events or circumstances. Added to this is the lack of understanding about the chronic nature of the disease, often with a belief in a cure or a return to a normal life.<sup>20</sup>

However, the literature does not explore what must be said about these aspects if they are to be understood. In addition, it was found about the importance of providing guidance about the signs and symptoms, but there was no description about how their management should be done by the person with HF and their families.<sup>18,24,27-33</sup>

Studies were found that specifically evaluated the association between the heart rate of people with HF at hospital discharge and mortality or readmission.<sup>32-33</sup> In this sense, it is understood that it is important that the person with HF and family members are aware of the heart rate on a daily basis, despite the medications used to control it.

### Pharmacological and non-pharmacological treatment

Adherence to pharmacological treatment of chronic diseases is dependent on several factors, including age, education, the presence of more than one chronic disease, health expenses, the number of medications in use daily, among others.<sup>34</sup> The I Brazilian Heart Failure Register showed that poor medication adherence, the occurrence of infections and inadequate control of sodium and fluid intake were most responsible for decompensation of HF in the population studied.<sup>35</sup>

It is the consensus of several authors<sup>35-38</sup> that new strategies should be implemented in order to reduce the barriers that hinder adherence to drug and non-drug treatment and to promote quality care to people with HF at all levels of complexity.

In this sense, some articles showed about the guidance regarding pharmacological treatment,<sup>16,25-27,39-43</sup> of which most pointed out the importance of the participation of the pharmacist in counseling people with HF and their families.<sup>25-26,39,41-44</sup>

It is believed that some problems resulting from low understanding of pharmacological treatment are solved by offering written instructions, with easy to understand language, emphasizing the name of the medications, dose, route and time of administration, indications and possible adverse reactions.<sup>22,27</sup>

However, it should be noted that only the attention to pharmacological treatment is not enough to ensure that the person with HF is free of symptoms and can perform their activities satisfactorily. It is important to consider the amounts of fluid and sodium to be ingested, the consumption of healthy foods and appropriate to the nutritional needs, as well as the cessation of smoking and drinking alcoholic beverages.<sup>22,27,45</sup> In addition, the person with HF and family members should be warned not to use herbs and/or drugs without prior medical prescription and/or team guidance.<sup>21,27</sup>

It is important that the person with HF understands the reason for restrictions in food and fluid intake and, especially, how the management should be done to verify

whether adjustments in non-pharmacological treatment are needed. The strategy of weighing daily may help in the control of gains x losses, since the edema shows the accumulation of fluid and becomes visible by means of a scale.<sup>16,23</sup>

Furthermore, it is considered that the orientations must contemplate the need for influenza and pneumococcal vaccinations and the periodic checking of blood glucose and blood pressure in people with diabetes and hypertension, respectively<sup>27</sup> and also the possibility of doing exercises and physical activities, which can have beneficial effects on quality of life, particularly on the quality of sleep.<sup>46</sup>

### Activities of daily living and existing resources

People with HF and particularly those in more advanced stages have a worse prognosis compared to the general population.<sup>1</sup> It should be noted that “being functionally compromised” may be associated with inadequate self-care actions, which involve the various activities in coping with the disease, including the engagement in the proposed therapy, the exercise of the profession, leisure activities, among others.<sup>47</sup>

In this sense, it is important to offer subsidies to people with HF, so that they have the security to perform activities similar to the period before the disease or to adapt to tasks according to the needs of their new condition.<sup>48</sup>

It is important to note that scheduling a post-discharge appointment has emerged in some studies as an excellent strategy for monitoring people with HF, especially in the most vulnerable period of the disease. However, there was no consensus about the most appropriate time frame for this consultation.<sup>19,23,26,28,40,44,49-52</sup>

Although there is no consensus about the deadline for the post-discharge consultation of people with HF, it is suggested that it should be performed between seven and 14 days after discharge, not exceeding 30 days.<sup>26,40,49-51</sup> In addition, to contribute to improvements in post-discharge follow-up, appointments can be scheduled near the residence of the person with HF and provide ways for them or their relatives to be reminded about the day and time of the scheduled consultation.<sup>44</sup>

It is necessary to consider that, to ensure proper monitoring of the disease, there is a coherent communication between the various levels of complexity through which the person with HF goes through. For this, an identification card of the person with HF can be used, with information about the last echocardiogram performed, the ejection fraction and left ventricular function, leading to improvements in care, especially with regard to safety, efficacy, opportunity and equity in treatment.<sup>52</sup>

### Rights and duties of people with HF and family members

The disability and limitations caused by HF can hinder the performance of activities in various areas of life of the person. In addition, HF is often associated with depressive and anxiety symptoms.<sup>53</sup> Furthermore, it can be said that

the incorporation of guidelines, interventions or strategies that promote a holistic care to the person with HF, including social and financial needs, could offer more confidence and security in health services, with consequences on coping with the disease.<sup>54</sup>

However, little was found about the guidelines that can be offered to the person with HF and their families regarding their rights.

Some authors agree that, for an adequate planning of actions, the person with HF must participate in decision-making about care, which makes them confident in their ability to manage the disease. Moreover, the authors mention the importance of involving the caregiver in the treatment plan in cases where it is necessary.<sup>40,48</sup>

Added to this is the need for the person with HF and his family members to be clear about the treatment possibilities. The importance of communication between professional and patient/family members is highlighted, particularly with regard to end-of-life preferences.<sup>17,22</sup>

One must also think about the right of the person with HF and family members to receive written material, with simple language and guidelines made available in a didactic manner and appropriate to the socio-economic and cultural level of the person. It is assumed that such tools can resolve any doubts and allow handling at times and places when necessary.<sup>22-23,29</sup>

With regard to empowerment, it is believed that the attitudes of the person with HF toward the disease may be a factor that hinders the understanding of information and that the involvement of the person is essential, regarding the attention to his disease, the good relationship with health professionals through trust, the control of his temperament, the obedience to medical prescription and the care with documents related to his health.<sup>23</sup>

### CONCLUSION

The studies presented some guidelines that can be offered to the person with HF and their families in the process of transition from hospital to home. The main guidelines refer to drug treatment, especially regarding the participation of pharmacists in counseling for hospital discharge. The scheduling of follow-up appointments after hospital discharge was also pointed out as an important strategy.

However, it was not possible to identify detailed guidance about the disease and the management of signs and symptoms, since the studies brought only the importance of instructing the person with HF on the subject, but did not address the ways to better do it.

There are gaps in the literature regarding the post-hospital discharge care of the person with HF, since no information was found regarding the sexuality of this population in the vulnerable period after hospitalization.

It is suggested that further studies are conducted on the subject, so that health professionals can benefit from information based on scientific evidence to formulate a coherent discharge plan for the person with HF and family members.

**Financial support:** Coordenação de Aperfeiçoamento de Pessoal de Nível Superior (CAPES) - Funding Code 001.

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Received in: 11/11/2019

Required revisions: 03/08/2020

Approved in: 14/08/2020

Published in: 00/00/2021

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**Disclaimer:** The authors claim to have no conflict of interest.