CONSENSUS ON NURSING DIAGNOSES, INTERVENTIONS AND OUTCOMES FOR HOME CARE OF PATIENTS WITH HEART FAILURE

Karina AZZOLIN[a], Emiliane Nogueira de SOUZA[b], Karen Brasil RUSCHEL[c], Cláudia Motta MUSSI[d], Amália de Fátima LUCENA[e], Eneida Rejane RABELO[f]

ABSTRACT

This was a consensus study with six cardiology nurses with the objective of selecting nursing diagnoses, outcomes and interventions described by NANDA International (NANDA-I), Nursing Outcomes Classification (NOC), Nursing Intervention Classification (NIC), for home care of patients with heart failure (HF). Eight nursing diagnoses (NDs) were pre-selected and a consensus was achieved in three stages, during which interventions/activities and outcomes/indicators of each NDs were validated, and those considered valid obtained 70% to 100% consensus. From the eight pre-selected NDs, two were excluded due to the lack of consensus on appropriate interventions for the clinical home care scenario. Eleven interventions were selected from a total of 96 pre-selected ones and seven outcomes were validated out of 71. The practice of consensus among expert nurses provides assistance to the qualifications of the care process and deepens the knowledge about the use of taxonomies in nursing clinical practice.

Descriptors: Home visit. Nursing Process/classification. Heart Failure.

RESUMO

Estudo de consenso realizado entre seis enfermeiras especialistas da área de cardiologia, com o objetivo de selecionar diagnósticos, intervenções e resultados de enfermagem descritos pela NANDA Internacional (NANDA-I), Nursing Outcomes Classification *(NOC),* Nursing Intervention Classification *(NIC), para pacientes com insuficiência cardíaca em cuidado domiciliar. Inicialmente, foram pré-selecionados oito diagnósticos de enfermagem, conforme a NANDA-I e, a partir deles, realizado um consenso, em três etapas, para a seleção das intervenções/atividades NIC e os resultados/indicadores NOC. Consideraram-se selecionados os que obtiveram entre 70% e 100% de consenso. Os resultados apontaram seis diagnósticos de enfermagem selecionados, 11 intervenções de um total de 96 e sete resultados de um total de 71. O consenso entre os enfermeiros especialistas permitiu identificar e selecionar diagnósticos, intervenções e resultados de enfermagem para aplicação na prática clínica, com vistas a subsidiar o processo de cuidado e o conhecimento das taxonomias de enfermagem.*

Descritores: *Visita domiciliar. Processos de enfermagem. Insuficiência cardíaca.*
Título: *Consenso de diagnósticos, resultados e intervenções de enfermagem para pacientes com insuficiência cardíaca em domicílio.*

a PhD degree in Nursing from the Federal University of Rio Grande do Sul (UFRGS). Adjunct Professor, Federal University of Rio Grande do Sul (UFRGS). Group of Studies and Research in Nursing (GEPECADI).
b PhD degree in Cardiovascular Sciences, Cardiology from UFRGS. Assistant Professor, UFCSPA. Professor, Graduate Program in Cardiology. Group of Studies and Research in Nursing (GEPECADI).
c PhD degree in Cardiovascular Sciences, Cardiology from UFRGS. Nurse Coordinator of Clinical Research, Institute of Vascular Medicine/ HMD. Group of Studies and Research in Nursing (GEPECADI).
d Master's student in the Graduate Program in Health Sciences: Cardiology and Cardiovascular Sciences, UFRGS. Nurse of the Department of Cardiovascular Nursing, Nephrology and Imaging at the Hospital de Clínicas de Porto Alegre. Group of Studies and Research in Nursing (GEPECADI).
e PhD degree in Sciences, Adjunct Professor, School of Nursing, UFRGS. Researcher of the Group of Studies and Research in Nursing (GEPECADI).
f PhD degree in Biological Sciences: Physiology, Adjunct Professor, School of Nursing, Graduate Program in Nursing and Cardiovascular Sciences: Cardiology, UFRGS. Coordinator of the Clinic for Heart Failure, Hospital de Clínicas de Porto Alegre, Productivity Research Fellowship/ CNPq. Researcher of the Group of Studies and Research in Nursing (GEPECADI).

Azzolin K, Souza EN, Ruscel KB, Mussi CM, Lucena AF, Rabelo ER. Consensus on nursing diagnoses, interventions and outcomes for home care of patients with heart failure. Rev Gaúcha Enferm. 2012;33(4):56-63.

57

RESUMEN

Estudio de consenso alcanzado por seis enfermeras expertas en cardiología con el objetivo de seleccionar diagnóstico, intervenciones y resultados de enfermería descrito por NANDA Internacional (NANDA-I), Clasificación de Resultados de Enfermería (NOC), Clasificación de Intervenciones de Enfermería (NIC), para el cuidado de los pacientes con insuficiencia cardiaca (IC) en casa. Se trata de un estudio por consenso entre seis enfermeras expertas en cardiología. Fueron preseleccionados ochos diagnósticos de enfermería según NANDA-I y se logró un consenso en tres etapas, que seleccionaron las intervenciones/actividades NIC y resultados/indicadores NOC, considerando seleccionados los que obtuvieron del 70% al 100% de consenso. Los resultados indicaron seis diagnósticos de enfermería seleccionados, 11 intervenciones del total de 96 y siete resultados del total de 71. El consenso entre las enfermeras expertas para identificar y seleccionar los diagnósticos, intervenciones y resultados de enfermería para la aplicación en la práctica clínica, con el fin de apoyar el proceso de cuidado y conocimiento de las taxonomías de enfermería.

Descriptores: *Visita domiciliaria. Procesos de enfermería. Insuficiencia cardíaca.*
Título: *Consenso de diagnósticos y resultados y las intervenciones de enfermería para pacientes con insuficiencia cardiaca en cuidado en el hogar.*

INTRODUCTION

The use of nursing taxonomies has gained ground in order to standardize the language that classifies diagnostic assessment, interventions and outcomes through evidence-based nursing practice[1]. Currently, there are some classification systems that represent the nursing terms used in all health care scenarios and specialties[2]. Some examples are the diagnosis classification described by International NANDA (NANDA-I)[3], the interventions described by Nursing Interventions Classification (NIC)[4] and outcomes described by Nursing Outcomes Classification (NOC)[5].

These three classification systems, NANDA-I/NOC/NIC (NNN), associate what is defined as a relationship or association between nursing diagnosis and intervention that together provide a result and/or solve a problem, facilitating diagnostic reasoning and decision making[4].

These associations may help in the decision-making process, however, despite the refinement and advancement in knowledge of the NNN classifications, there are few studies that have been conducted in the real clinical environment.

One recent study aimed to compare the records regarding the ten most frequent nursing diagnoses (ND), interventions and outcomes for elderly patients with heart failure (HF) in three U.S. hospitals. The results showed that only four diagnoses, two interventions and three outcomes were common in three different hospitals showing a greater variation than expected since the patients studied had similar characteristics. Among the limitations of the study, the difficulty in linking records related to the patient diagnoses, interventions and outcomes was pointed out. This means identifying the best nursing intervention to obtain the expected result for treatment of a particular diagnosis, which is essential for future research[6].

The need and importance of furthering knowledge through new research about the nursing classifications (NANDA-I/NIC/NOC) as well as the links proposed by them in different real care environments is imperative. Thus, it is possible to expand the understanding of them and assess their application in patient care[4].

Within the scenario of treating patients with HF, it is found that home care has been studied in different countries through randomized clinical trials. This strategy, when compared with usual care, has shown to be beneficial because it reduces emergency care, hospital readmissions, treatment costs, and improves the quality of life of patients[7]. Thus, nursing home care for HF patients includes reinforcement, monitoring and reevaluation of previously provided guidance about the disease and self-care, adherence to prescribed medications, and especially early recognition of patients and their families/caregivers of signs and symptoms of decompensated heart failure[8].

The motivation for this study was to gain more knowledge and improve home care for HF patients associated with the use of the nursing classifications NANDA-I/NOC/NIC in clinical practice as qualifying tools of the care process. The aim was to select nursing diagnoses, interventions and out-

58

Azzolin K, Souza EN, Ruscel KB, Mussi CM, Lucena AF, Rabelo ER. Consensus on nursing diagnoses, interventions and outcomes for home care of patients with heart failure. Rev Gaúcha Enferm. 2012;33(4):56-63.

comes proposed by the adequate NNN linkages for home care of HF patients.

METHODS

The aim of the present study was to establish an expert consensus. The consensus validation is a process to obtain collective opinion or agreement among expert nurses on a particular phenomenon, such as the best clinical practice for example. The technical consensus validation is used to refine nursing taxonomy in order to establish connections among them and define standards of practice[9,10].

Six specialist cardiology nurses who are members of a research group and have publications in the area, graduate courses and clinical practice experience participated in the study. This group of nurses selected, through consensus, the nursing diagnoses, interventions and outcomes based on the links proposed among them of the NANDA-I/NIC/NOC classification with the purpose of preparing a care protocol for patients with heart failure treated at home by nurses.

Initially, eight NDs that could be established for HF patients receiving home care, according to NANDA-I, were selected at three meetings based on clinical experience and literature. Based on this, there was a consensus of the other elements studied, i.e., nursing interventions and outcomes at three distinct stages: selection of interventions (label and concept); outcomes (label and concept); and finally, the activities belonging to each intervention and indicators belonging to each outcome, according to each previously chosen ND.

In the first stage, priority and suggested interventions, described in the chapter about the linkages between NIC[4] and NANDA-I[3], were identified as well as those interventions that could probably solve the ND. In the second stage, the outcomes suggested in chapter about NOC[5] and NANDA-I linkages, i.e., those probably considered adequate to assess the ND selected. In these two stages, the main interventions and outcomes indicated by the book Linkages between NANDA-NOC-NIC[2] were also included.

For these two stages an instrument that contained the NDs, the priority and suggested interventions and the suggested results, was prepared according to the linkages presented by the aforementioned classifications[2-5]. Considering the label and concept of each one, the expert nurses should mark one of the indications on this instrument indicating if they recommend or do not recommend them.

The third stage referred to the selection of activities that consist of each NIC intervention and the indicators that consist of each NOC outcome. For this, the experts also filled out an instrument and marked one of the indications, stating if they recommend or do not recommend them. At the end of the list of activities, the following question was asked: Do I still recommend this intervention? The purpose of asking this question, after group analysis of the activities that are part of an intervention, is that judgment could have changed as the discussion about the relevance of each activity provided more evidence for the nurses to judge the applicability of the intervention in clinical practice. Similarly, next to each outcome indicator there was the option "I recommend" and "I do not recommend", which was marked by expert. At the end of the list, the following question was also asked: Do I still recommend this outcome?, under the same above-mentioned justification.

To analyze the results of the study, we used descriptive statistics and selected by consensus the interventions, outcomes and indicators that obtained 80% to 100% of agreement. The activities were considered validated when 70% or more of agreement was obtained among the expert nurses. This percentage reduction was due to the greater number and similarity among the activities analyzed. This study is part of a project approved by the Research Ethics Committee of the Hospital de Clínicas de Porto Alegre (No 100055).

RESULTS

The eight pre-selected ND to begin the study were: Readiness for Enhanced Self-care, Ineffective Home Management, Ineffective Self Health Management, Excess Fluid Volume and Risk for Imbalance Fluid Volume. Of these, two were excluded by consensus (Readiness for Enhanced Self-care, Ineffective Home Management) because no interventions and outcomes were related to them within the context of home care of HF patients. Thus, six ND were selected by consensus (Table 1).

Azzolin K, Souza EN, Ruscel KB, Mussi CM, Lucena AF, Rabelo ER. Consensus on nursing diagnoses, interventions and outcomes for home care of patients with heart failure. Rev Gaúcha Enferm. 2012;33(4):56-63.

59

Nursing diagnoses (NANDA-I)	Interventions (NIC)	Outcomes (NOC)
Readiness for Enhanced Self health Management (00162)	Health Education (5510)	Knowledge: Treatment Regimen*(1813)
Ineffective Self health Management (00078)	Self-Modification Assistance (4470)	Knowledge: Treatment Regimen* (1813)
	Behavior Modification (4360)	Symptom Control (1608)
	Telephone Consultation (8180)	
	Nutritional Counseling (5246)	
	Teaching: Prescribed Medication (5616)	
	Teaching: Disease Process (5602)	
Ineffective Family Therapeutic Regiment Management (00080)	Family Involvement Promotion (7110)	Family Participation in Professional Care (2605)
	Family Mobilization (7120)	Knowledge: Treatment Regimen*(1813)
Excess Fluid Volume (00026)	Fluid Monitoring (4130)	Fluid Balance (0601)
Risk for Imbalance Fluid Volume (00025)		Knowledge: Medication (1808)
Fatigue (00093)	Energy Management (0180)	Activity Tolerance (0005)
		Energy Conservation (0002)

Table 1 – Nursing diagnoses, interventions and outcomes selected by expert consensus for home care of patients with heart failure. Porto Alegre-RS, 2010.

* Selected outcome that measures different interventions.

Eleven different interventions, of a total of 96 pre-selected interventions, were selected for the study[2,4]. Among the 71 pre-selected outcomes, seven different outcomes were indicated (Table 1).

Finally, we were selected by consensus 88 activities belonging to interventions and 38 indicators belonging to the selected outcomes. It is important to point out that, after analyzing the activities that compose each intervention, the following four selected interventions were excluded: Mutual Goal Setting, Risk Identification, Assistance for Home Maintenance, and Coping Enhancement. Similarly, two outcomes that had been selected by consensus were excluded: Safety Management: Home Environment and Family Environment, both referring to the ND of Ineffective Home Management.

In short, the results of this consensus study among experts showed a total of six ND NANDA-I, 11 interventions with 88 NIC activities and seven outcomes with 38 NOC indicators for home care of HF patients.

These linkages are being used to prepare a care protocol for HF patients receiving home care monitoring, who will be visited by nurses for six consecutive months, according to the research project developed by the same group of experts who participated in this stage of the research.

DISCUSSION

The nursing diagnoses, interventions and outcomes from this study are being used, as previously mentioned, as a care protocol for individuals with HF, in which not only the evaluation of the patient but also their living and everyday life conditions are relevant. Therefore, home care is considered a key strategy that provides the consolidation and operationalization of professional nursing practice, according to the health care model proposed by the Unified Health System[11].

In this area of health care there are large gaps and nurses are considered protagonists in

60

Azzolin K, Souza EN, Ruscel KB, Mussi CM, Lucena AF, Rabelo ER. Consensus on nursing diagnoses, interventions and outcomes for home care of patients with heart failure. Rev Gaúcha Enferm. 2012;33(4):56-63.

this occupation. Thus, these professionals need knowledge, need to be equipped and to develop skills that may favor the quality of work. One of the strategies to improve the quality of work may be the use of a methodology for nursing process in combination with the use of classification systems, which contain standardized nursing language.

In this context, the findings of this study provided, through consensus among experts, nursing diagnoses, interventions and outcomes based on the classifications of NANDA-I, NIC and NOC linkage proposals. The results also point to the specificity of nursing care in clinical practice and provide assistance for their qualification, in addition to enabling the refinement of the terminology used.

As for the six ND selected by study, taking into account the scenario of home care for HF patients, it appears that the ND of Readiness for Enhanced Self Health Management, Ineffective Self Health Management, Ineffective Family Therapeutic Management Regiment are part of Domain 1, which is called Health Promotion and it is defined as the perception of well-being or normality and strategies to maintain it[3], considered relevant for health care.

The ND of Excess Fluid Volume and Risk for Imbalance Fluid Volume are part of Domain 2, called Nutrition, in the hydration class[3]. Whereas ND Fatigue is part of Domain 4, called Activity and Rest, which includes the classes and ND related to production, conservation, expenditure and energy balance[3]. These domains are related to issues of prevention and health promotion, as well as those related to the physiological and behavioral aspect of each individual to which nurses need to be aware of in order to develop interventions aimed to obtain positive results.

Some care situations are pertinent to patients with chronic diseases. Among them, those that refer to the treatment adherence, one of the main reasons for decompensated HF, are related in several studies[16]. The results of this study showed the selected ND of Readiness for Enhanced Self health Management, Ineffective Self health Management, Ineffective Family Therapeutic Regiment Management, which are aimed to the identify the responses of individuals and family about health problems related to HF.

Furthermore, as for the ND of Ineffective Control of the Therapeutic Regimen, currently called ND of Ineffective Self Health Management[3], a Colombian group of researchers evaluated the effectiveness of five NIC nursing interventions for this ND in the home environment[17]. The same consisted of adult patients with chronic diseases and the method applied was a controlled randomized clinical trial. The aim was to prove that five NIC intervention sessions − Teaching: Prescribed Medication, Teaching: Disease Process; Teaching: prescribed diet; Exercise Promotion; Behavior Modification− improved by one point the outcomes expected for the patients. Thus, the two outcomes − Treatment Behavior: disease or lesion and Knowledge: Treatment Regimen − were used with seven indicators each, when compared with the intervention and control groups. The authors confirmed a difference of 1.1 and 1.5 points between the initial and final mean of outcomes (P <0.001), which shows that effective intervention improves ND[17].

Another ND selected in this consensus study was Excess Fluid Volume, which is understood as a key item for these patients, since it has been clinically validated in patients with decompensated HF in the hospital scenario[12]. Several defining characteristics of ND - pulmonary congestion, dyspnea, orthopnea, changes in blood pressure, jugular vein distention, positive hepatojugular reflux, edema, weight gain in a short period and increased central venous pressure − are significant clinical evidences related to the cardiac output, which confirms the importance of care for HF patients with.

The expert nurses also selected the ND Risk for Imbalance Fluid Volume, a condition that is present in the majority of HF patients due to cardiac pump failure. However, it is found that NANDA-I[3] does not include an appropriate risk factor for patients with this syndrome, which points to the need to developed it.

Finally, it was found that ND Fatigue is important for HF patients. Corroborating this result and applicability of ND in cardiology, a review of the literature on fatigue in patients with heart failure showed that it was frequent in 69% to 88% of cases analyzed[15].

Studies on ND are diverse however those that investigate interventions according to NIC and outcomes according to NOC are still scarce, especially for certain clinical situations, such as

Azzolin K, Souza EN, Ruscel KB, Mussi CM, Lucena AF, Rabelo ER. Consensus on nursing diagnoses, interventions and outcomes for home care of patients with heart failure. Rev Gaúcha Enferm. 2012;33(4):56-63.

61

home care. A study within this context included cardiac patients and identified key NIC interventions applied to Hydric Control, Exercise Promotion and Heart Care[18]. Similarly, the intervention Fluid Monitoring, imperative for patient care that has Risk for Imbalance Fluid Volume or Excess Fluid Volume, was also included in the present study.

Among other selected NIC interventions for six ND, two are part of the Domain Physiological: Basic (Energy Management, Nutritional Counseling); one of the Physiological: Complex Domain (Fluid Monitoring), five of Behavioral Domain (Self-Modification Assistance, Behavior Modification, Health Education, Teaching: Disease Process; Teaching: Prescribed Medication); two of the Family Domain (Family Support, Family Involvement Promotion), and one of the Health System (Telephone Consultation). An emphasis on the behavioral domain is noticed, which confirms the importance of care to chronically ill patients in order to develop and facilitate self-care, as described by researchers in the field of HF. Self-care depends on the physiological conditions, family and the health system.

Still with regard to HF patients and ND of Excess Fluid Volume, one study in the literature on content validation of nursing interventions (NIC), priorities, and outcomes (NOC) is suggested for them. However, as it was a pilot study, the authors suggested further investigation of the results found[19].

Another study aimed to identify NIC nursing interventions, home care commonly provided to cardiac patients, and to explore the differences in care among patients with coronary artery disease, heart failure and other cardiac disorders. The most common interventions were related to monitoring tissue perfusion and patient education and there was variability in the different pathologies presented[20]. In this consensus study, the interventions that focused on the education and teaching of patients were the most important.

Among the selected NOC outcomes in this consensus study, two are in the Functional Health Domain (Activity Tolerance, Energy Conservation), and three in Health Knowledge & Behavior Domain (Knowledge: Treatment Regimen, Symptom Control, Knowledge: Medication); one in Physiological Health (Fluid Balance) and one in Family Health Domain (Family Participation in Professional Care). It was found that their distribution in the domains followed a pattern similar to that presented by the interventions, focusing more in the Knowledge and Behavior Domain.

An integrative review with the purpose of identifying the knowledge produced from 1991 to 2008 on the Nursing Outcomes Classification (NOC) found 53 articles; of these only 15 were available online and they were analyzed. The results indicated that use of this taxonomy is still recent and it is still being refined by researchers, as they present limitations regarding the possibility of generalizations of the terms in several specialties[20].

There were no other published clinical studies that focused on evaluating the NOC outcomes in HF patients, other than those previously mentioned[19,20], which also studied NIC interventions.

With regard to the linkages proposed by NANDA-I/NIC/NOC (NNN), one study, previously mentioned, analyzed the 10 most common NNN proposals documented by nurses of HF patients in three hospitals. The results showed few ND, interventions and outcomes common to the three institutions analyzed. In addition, NNN linkages related to knowledge of the disease, caregiver, and self-care were rarely found in hospital records[6].

These results show the importance of testing and validating the linkages through studies conducted in the real clinical environment, as it is the intention of this study to apply the protocol for the selected ND, interventions and outcomes. We believe that this study can qualify care to HF patients in the home environment based on the NANDA-I, NOC and NIC linkages. However, the nurse needs to bear in mind that although a protocol qualifies and organizes work it should not be seen as a prescriptive way and only option for care, but as an alternative that can be used with actions based on clinical judgment at the time of its application, taking into account the real needs of patients in their real clinical settings.

Among the difficulties and limitations of this study, the high number of possible interventions and outcomes for each ND is pointed out, which makes the consensus among experts a laborious process, but it is a good alternative to select those that are the most applicable within each context and specialty.

62

Azzolin K, Souza EN, Ruscel KB, Mussi CM, Lucena AF, Rabelo ER. Consensus on nursing diagnoses, interventions and outcomes for home care of patients with heart failure. Rev Gaúcha Enferm. 2012;33(4):56-63.

CONCLUSIONS AND IMPLICATIONS FOR NURSING PRACTICE

Consensus studies among expert nurses provide assistance for the qualification of the care process and deepen knowledge on the use of nursing taxonomies. Studies such as the present one also favor the increase in the use of taxonomies in the clinical practice in different specialties.

The present study obtained consensus in the preparation of a protocol consisting of six nursing diagnoses, 11 interventions with 88 activities and seven outcomes with 38 indicators, which is to be implemented in clinical practice for home care, according to the linkages described by NANDA-I, NOC and NIC. We believe that its application in clinical practice will allow assessing the effectiveness of nursing interventions for ND with greater scientific rigor, according to the measurement of nursing outcomes.

REFERENCES

1   Müller-Staub M, Lunney M, Lavin MA, Needham I, Odenbreit M, Van-Achterberg T. Testing the Q-DIO as an Instrument to Measure the Documented Quality of Nursing Diagnoses, Interventions, and Outcomes. Int J Nurs Terminol Classif. 2008; 19(1):20-7.

2   Johnson M, Bulechek G, Butcher H, Deochterman JM, Maas M, Moorhead S, et al. Ligações entre NANDA-NIC-NOC, diagnósticos, resultados e intervenções de enfermagem. 2. ed. Porto Alegre: Artmed; 2009.

3   North American Nursing Diagnosis Association. Nursing Diagnoses: Definitions and Classification 2009-2011. Indianapolis: Wiley-Blackwell; 2008.

4   Dochterman JM, Bulechek GM. Classificação das intervenções de enfermagem (NIC). 4. ed. Porto Alegre: Artmed; 2008.

5   Moorhead S, Maas MJM. Classificação dos resultados de enfermagem (NOC). 3. ed. Porto Alegre: Artmed; 2008.

6   Scherb CA, Head BJ, Maas ML, Swanson EA, Moorhead S, Reed D, et al. Most frequent Nursing Diagnoses, Nursing Interventions, and Nursing-Sensitive Patient Outcomes of hospitalized older adults with Heart Failure: Part 1.. J Nurs Terminol Classif. 2011; 22(1):13-22.

7   McCauley KM, Bixby MB, Naylor MD. Advanced practice nurse strategies to improve outcomes and reduce cost in elders with heart failure. Disease Management 2006; 9:302-10.

8   Bocchi EA, Cruz F, Guimarães G, Moreira LFP, Issa VS, Ferreira SMA, et al. A Long-term Prospective Randomized Controlled Study Using Repetitive Education at Six-Month Intervals and Monitoring for Adherence in Heart Failure Outpatients: The REMADHE Study. Circulation 2008; 3:1-23.

9   Lunney M, McGuire M, Endozo N, McIntosh-Waddy D. Consensus-validation Study Identifies Relevant Nursing Diagnoses, Nursing Interventions, and Health Outcomes for people with Traumatic Brain Injuries. Rehabilitation Nurs 2010; 35(4):161-66.

10 Carlson J. Consensus validation process: A standardized research method to identify and link the relevant NANDA, NIC and NOC terms for local populations. J Nurs Terminol Classif. 2006; 17(1):23-24.

11 Lopes WO, Saupe R, Massaroli A. Visita domiciliar: tecnologia para o cuidado, o ensino e a pesquisa. Cienc Cuid Saude. 2008; 7(2):241-47.

12 Barth QCM. Diagnósticos de Enfermagem Débito Cardíaco Diminuído e Volume Excessivo de Líquidos: Validação Clínica em Pacientes com Insuficiência Cardíaca Descompensada [Dissertação]. Porto Alegre: Universidade Federal do Rio Grande do Sul; 2007.

13 Boery RNS, Quatrini HCPG, Barros ALBL. Definições operacionais das características definidoras do diagnóstico de enfermagem Volume de Líquidos Excessivo. Acta Paul Enferm. 2005; 18(2):197-202.

14 Boery RNSO, Barros ALBL, Lucena AF. Características definidoras do diagnóstico de enfermagem: Volume de Líquidos Excessivo. Rev Gaúcha Enferm. 2005; 26(3):326-32.

15 Fini A, Cruz DAL. Características da fadiga de pacientes com insuficiência cardíaca: revisão de literatura. Rev Lat Am Enfermagem 2009; 17(4):123-31.

16 Mangini S, Silveira FS, Silva CP, Grativvol OS, Seguro LF, Ferreira SM, et al. Insuficiência cardíaca descompensada na unidade de emergência de hospital especializado em cardiologia. Arq Bras Cardiol. 2008; 90(6):433-40.

Azzolin K, Souza EN, Ruscel KB, Mussi CM, Lucena AF, Rabelo ER. Consensus on nursing diagnoses, interventions and outcomes for home care of patients with heart failure. Rev Gaúcha Enferm. 2012;33(4):56-63.

63

17 Rojas-Sánchéz OA, Rueda-Diaz LJ, Vesga-Gualdrón LM, Orozco-Vargas LC, Forero-Bulla CM, Camargo-Figuera FA. Eficacia de las intervenciones de enfermeria para el diagnóstico "manejo inefectivo del régimen terapéutico". Enferm Clin 2009; 19(6):299-305.

18 Schneider JS, Slowik LH. The Use of the Nursing Interventions Classification (NIC) with Cardiac Patients Receiving Home Health Care. Int J Nurs Terminol Classif. 2009; 20(3):132-40.

19 Lopes JL, Barros ALBL, Michel JLM. A pilot study to validate the priority nursing interventions Classification Intervention and Nursing Outcomes Classification Outcomes for the Nursing Diagnoses "Excess Fluid Volume" in Cardiac Patients. Int J Nurs Terminol Classif. 2009; 20(2):76-88.

20 Garbin LM, Rodrigues CC, Rossi LA, Carvalho EC. Classificações de resultados de enfermagem (NOC): identificação da produção científica relacionada. Rev Gaúcha Enferm. 2005; 30(3):508-15.

Author's address / *Endereço do autor / Dirección del autor*
Karina Azzolin
Rua Itapitocaí, 60, ap. 602, Cristal
90820-120, Porto Alegre, RS
E-mail: karina.azzolin@gmail.com