

Original article

## Validation of an instrument for the Nursing Process Record in prehospital mobile emergency care\*

Validação de instrumento para Registro do Processo de Enfermagem no atendimento pré-hospitalar móvel de urgência

Validación de un instrumento para el Registro del Proceso de Enfermería en la atención móvil de emergencia prehospitalaria

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### Abstract

**Objective:** face and content validation of an instrument for Recording the Nursing Process in the Mobile Emergency Care Service. **Method:** quantitative study of face and content validation of the instrument by a committee of 21 experts in the field of prehospital mobile emergency care nationwide. A Content Validity Index (CVI) equal to or greater than 0.80 determined validation. **Results:** a CVI of 0.94 was obtained. Only the item ease of reading, related to appearance, had an index below the established. It was possible to evaluate the 99 nursing interventions listed. **Conclusion:** the instrument for the Nursing Process Record in the Mobile Emergency Care Service was considered valid and can enable the manual documentation of nursing practice in this setting.

**Descriptors:** Nursing Records; Nursing Process; Validation Study; Emergency Nursing; Emergency Medical Services

### Resumo

**Objetivo:** validar a aparência e o conteúdo de um instrumento para Registro do Processo de Enfermagem no Serviço de Atendimento Móvel de Urgência. **Método:** estudo de abordagem

quantitativa, em que o instrumento foi submetido à validação de aparência e conteúdo por comitê de 21 *experts* na área de atendimento pré-hospitalar móvel de urgência nacionalmente. Um Índice de Validade de Conteúdo (IVC) igual ou superior a 0,80 estabeleceu a validação.

**Resultados:** obteve-se um IVC de 0,94. Apenas o item facilidade de leitura, relacionado à aparência, teve um índice abaixo do estabelecido. Foi possível avaliar as 99 intervenções de Enfermagem elencadas. **Conclusão:** o instrumento para Registro do Processo de Enfermagem no Serviço de Atendimento Móvel de Urgência foi considerado válido e pode possibilitar a documentação manual da prática do enfermeiro neste cenário.

**Descritores:** Registros de Enfermagem; Processo de Enfermagem; Estudo de Validação; Enfermagem em Emergência; Serviços Médicos de Emergência

## Resumen

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**Objetivo:** validación de apariencia y contenido de un instrumento para el Registro del Proceso de Enfermería en el Servicio de Atención Móvil de Emergencia. **Método:** estudio cuantitativo de validación facial y de contenido del instrumento por un comité de 21 expertos en el campo de la atención prehospitalaria móvil de emergencia a nivel nacional. Un Índice de Validez de Contenido (IVC) igual o superior a 0,80 determinó la validación. **Resultados:** se obtuvo un IVC de 0,94. Únicamente el ítem facilidad de lectura, relacionado con la apariencia, presentó índice por debajo de lo establecido. Fue posible evaluar las 99 intervenciones de enfermería listadas. **Conclusión:** el instrumento para el Registro del Proceso de Enfermería en el Servicio de Atención Móvil de Emergencia se consideró válido y puede posibilitar la documentación manual de la práctica de enfermería en este escenario.

**Descriptorios:** Registros de Enfermería; Proceso de Enfermería; Estudio de Validación; Enfermería de Urgencia; Servicios Médicos de Urgencia

## Introduction

In Brazil, the Mobile Emergency Care Service (SAMU) is a component of the National Emergency Care Policy. The purpose of this service is to reach the victim shortly after the occurrence of a health problem (of clinical, surgical and traumatic nature, including psychiatric ones) for adequate care and/or transport to a health service.<sup>1</sup>

Patients who demand high complexity care in prehospital mobile emergency care are assisted by an Advanced Support Unit (ASU) team. Nurses are part of the crew of this unit, supported by Resolution no. 713/2022 of the Federal Nursing Council (COFEN)<sup>2</sup> that regulates nursing activities in Prehospital Mobile Land and Waterway Care. With regard to the documentation of nursing actions in pre- and inter-hospital care, nurses must perform the Nursing Process (NP) and the records.<sup>2</sup>

The exercise of nursing practice in the mobile prehospital setting is based on clinical reasoning. The particularities of care in this context require nursing actions

directed by care priorities for patients in critical life situations in order to favor quick decision-making and facilitate communication.<sup>3</sup>

Even though the ASUs of SAMU currently have technical records through a care bulletin filled out jointly by medical and nursing professionals, it does not include the NP. This fact together with the incipient literature on nursing documentation in this context boosted the development of an instrument for recording nursing care in the ASUs of SAMU that originated from a dissertation whose findings were not published.<sup>3</sup>

The content of the instrument was based on the conceptual model of Basic Human Needs,<sup>4</sup> on the International Classification for Nursing Practice (ICNP®)<sup>5</sup> and on international protocols that guide care in emergencies.<sup>6-7</sup> Its objective is to record the summary of data collected, and nursing diagnoses/outcomes and interventions. However, it lacks validation.

In the context of the present study, the validation confirms the veracity of the instrument and reflects the purpose for which it is being used hence, it is fundamental for its legitimacy and credibility.<sup>8</sup> Face validation criteria are presented to assess if it is comprehensible to participants, while content validation criteria are used to analyze the internal validity of its dimension.<sup>9</sup> The objective was the face and content validation of an instrument for recording the Nursing Process in the Mobile Emergency Care Service.

## Method

This is a quantitative face and content validation study. The empirical basis for validation was the instrument entitled "*Registro da Assistência de Enfermagem - USA no SAMU*" ("Nursing Care Record - ASU in SAMU"), presented on a page with items arranged in vertical position, consisting of fields and subfields in a checklist format with space for completion. It includes the summary of data collected using the mnemonic method SAMPLE (signs/symptoms; allergies; medications; past pertinent medical history; last oral intake; and environment and events leading up to present illness/injury),<sup>6</sup> as well as 63 nursing diagnoses/outcomes and 98 nursing interventions.<sup>3</sup>

This study had the participation of experts at the national level, selected through a direct search of the Lattes curriculum (national virtual environment to gather and facilitate access to

curricula), and social media such as Facebook and Instagram. Subjects were invited by electronic mail (email) and after acceptance, the letter of invitation with information about the objectives of the study, method and ethical aspects was sent.

The population comprised SAMU nurses residing in the country with at least one year of experience in the specialty. In the beginning of the selection process, an internet search for regional SAMU nursing coordinators and/or coordinators of Emergency Education Centers, or Permanent Education Centers linked to SAMU was performed.

Intentional non-probabilistic sampling was used. The number of one participant per Brazilian state was established to achieve national representation, totaling 27 subjects. Group diversity is important as it contemplates different perceptions, realities and cultures.<sup>10</sup>

Of the 27 people in the sample, two did not respond to the invitation, four did not return the questionnaire within the specified period, and 21 agreed to participate and responded to the questionnaire.

The data collection period was between November 2018 and February 2019, by means of an online questionnaire consisting of three items: 1 - characterization of participants (sociodemographic, academic and professional variables); 2 - general assessment of the instrument (face validation); 3 - specific evaluation of fields and items (content validation). The content evaluation item was segmented into four fields: identification; history, vital signs, and findings; Priority Nursing Diagnoses/Outcomes and Interventions; and final field. Space for comments and suggestions (used to improve the content) was provided after completion of each field.

Face validation consisted of appearance, clarity, organization and readability criteria. The variables for content validation were: pertinence; relevance; title; first field; second field; airways and breathing; circulation; neurological; exposure and environment; fourth field; replication; and if records are allowed.

Questions with responses on a Likert-type scale were used. The levels of agreement and relevance of each item ranged from 1 to 5 points, with 1 - strongly disagree; 2- disagree; 3 - neither agree nor disagree; 4 - agree; and 5 - strongly agree.

Data were organized in charts and tables using the Microsoft® Excel® program, version 2018, confronted with the stipulated level of consensus and assessed through the Content Validity Index (CVI) of items and of the instrument as a whole; values equal

to or greater than 0.80 were considered validated. This index allows analyzing each item individually and the instrument as a whole.<sup>11</sup>

The experts' comments and suggestions were analyzed. Suggestions about nursing interventions were listed, organized and quantified, and those relevant to international protocols and the hierarchical structure of the ICNP® were accepted.

The study was approved by the Research Ethics Committee of the Universidade Federal do Paraná under Opinion number 2.601.088 of April 16, 2018 (CAAE: 82979718.4.0000.0102), in compliance with Resolution No. 466/2012 of the National Council of Health. All participants received the Informed Consent form, which was signed as agreement to participate in the study.

## Results

Fifteen out of the 21 participating nurses were female. The highest educational degrees of participants were the following: specialization (n=12), master's (n=6), graduation (n=2) and PhD (n=1). As for the field of action, 13 were in direct care practice, five accumulated teaching activities and three in research. The mean age of participants was 37.6 years (Standard Deviation (SD): 6.9); the mean time since graduation in Nursing was 11.8 years (SD: 5.7); and the mean time working at SAMU was 8.1 years (SD: 4.9). The participating nurse with the longest experience in SAMU (22 years) was from the state of Pará (PA).

Regarding the area covered by data collection, the experts represented 21 of all Brazilian states, except for Alagoas, Maranhão, Paraíba, Pernambuco, Rondônia and Roraima. Regarding the employment relationship, 17 were public servants, three were workers under the code of labor law and one was self-employed.

As for training in refresher courses on international protocols, Advanced Cardiologic Life Support (ACLS) had the highest participation (n=15), followed by Basic Life Support (BLS) and Prehospital Trauma Life Support (PHTLS) (both n=14). Some subjects have participated in more than one course. The overall CVI of the instrument was 0.94 (Table 1). Only the reading questions had a CVI below 0.8.

**Table 1** - Content Validity Index according to option of answers for questions related to appearance, clarity, organization, readability of the instrument. Curitiba, PR, Brazil, 2019 (N=21)

Question	Answer options					CVI <sup>¶</sup>
	SD* n (%)	D <sup>†</sup> n (%)	NAND <sup>‡</sup> n (%)	A <sup>§</sup> n (%)	SA <sup>  </sup> n (%)	
Appearance	-	-	3 (14.2)	9 (42.8)	9 (42.8)	0.86
Clarity	-	1 (4.76)	-	11 (52.3)	9 (42.8)	0.95
Organization	-	-	1 (4.76)	11 (52.3)	9 (42.8)	0.95
Readability	-	1 (4.76)	5 (23.8)	7 (33.3)	8 (38.0)	0.71

\*SD =strongly disagree; <sup>†</sup>D = disagree; <sup>‡</sup>NAND = neither agree nor disagree; <sup>§</sup>A = agree; <sup>||</sup>SA = strongly agree; <sup>¶</sup>CVI = Content Validity Index

The experts' comments and suggestions for readability variable were: “lack of space to complete data”; “add space for obstetric data”; “reduced letter space”; and “more succinct instrument”. In response to suggestions for this variable, modifications were made to the first and second fields of the instrument and space to be completed with information was inserted in some nursing interventions. Table 2 represents the CVI for the content questions of the instrument. All had an index above 0.8.

**Table 2** - The Content Validity Index according to the option of answers to questions related to the content of the instrument. Curitiba, PR, Brazil, 2019 (n=21)

Question	Answer options					CVI <sup>¶</sup>
	SD* n (%)	D <sup>†</sup> n (%)	NAND <sup>‡</sup> n (%)	A <sup>§</sup> n (%)	SA <sup>  </sup> n (%)	
Content	-	1 (4.76)	-	8 (38.0)	12 (57.1)	0.95
Pertinence	-	1 (4.76)	1 (4.76)	7 (33.3)	12 (57.1)	0.90
Relevance	-	-	1 (4.76)	8 (38.0)	12 (57.1)	0.95
Title	-	1 (4.76)	1 (4.76)	8 (38.0)	11 (52.3)	0.90
First field	1 (4.76)	-	1 (4.76)	10 (47.6)	9 (42.8)	0.90
Second field	-	-	2 (9.52)	6 (28.5)	13 (61.9)	0.90
Airways and breathing	-	2 (9.52)	1 (4.76)	6 (28.5)	12 (57.1)	0.86
Circulation	-	1 (4.76)	1 (4.76)	6 (28.5)	13 (61.9)	0.90
Neurological	-	1 (4.76)	1 (4.76)	7 (33.3)	12 (57.1)	0.90
Exposure and environment	-	-	3 (14.2)	6 (28.5)	12 (57.1)	0.86
Fourth field	-	1 (4.76)	1 (4.76)	6 (28.5)	13 (61.9)	0.90
Replication	1 (4.76)	-	1 (4.76)	6 (28.5)	13 (61.9)	0.90
If records are allowed	-	-	1 (4.76)	2 (9.52)	18 (85.7)	0.95

\*SD = strongly disagree; <sup>†</sup>D = disagree; <sup>‡</sup>NAND = neither agree nor disagree; <sup>§</sup>A = agree; <sup>||</sup>SA = strongly agree; <sup>¶</sup>CVI = Content Validity Index

The experts' suggestions regarding the instrument resulted in the insertion of an explanatory footnote and inclusion of space to be completed in some interventions.

There were also suggestions to modify the title of the instrument to "*Registro do Processo de Enfermagem no SAMU*" ("Record of the Nursing Process in SAMU"), in addition to changes in appearance (layout) in relation to the arrangement of items in the instrument, font size and model, and use of colors (grayscale). In the field for identifying the type of ambulance, it was suggested to change the item ASU to "unit" in order to contemplate the different types of land vehicles manned by nurses.

The nursing intervention suggestions (n=11) that were accepted are listed in figure 1, resulting in the writing adjustment of three interventions and inclusion of a new intervention, totaling 98.

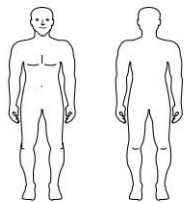
Suggestion	Number of experts
Correct "Examine upper airways"	1
Make it clear that the "Defibrillate Patient" intervention can only be performed with an automated external defibrillator by the nurse	1
Leave space for filling in after "Administer Medication"	1
Leave space for filling in after "Administer Solution"	1
Leave space after "Venipuncture" to include the catheter number	1
Highlight the medical prescription of medicines	1
Perform thermal adjustments by regulating the temperature in the vehicle	1
Review the "Defibrillate patient" intervention, as it depends on the physician	2
Review the "Implant Cardiac Device (Transcutaneous Pacemaker)" intervention, as it depends on the physician	1
Change "Measure Level of Consciousness" to "Assess Level of Consciousness"	1
Total	11

**Figure 1** – Experts' suggestions regarding nursing interventions. Curitiba, PR, Brazil, 2019

The experts' notes must be discussed, namely about the dependence on the medical professional to perform some actions, such as the intervention "Implant Cardiac Device (Transcutaneous Pacemaker)". In this sense, an explanatory note was inserted to support the actions that depend on medical prescription. With regard to "Defibrillate Patient", "with Automated External Defibrillator" was included.

As a product, Figure 2 presents the "*Registro do Processo de Enfermagem no SAMU*" ("Record of the Nursing Process in SAMU") validated instrument. It is represented as a checklist in a page, based on a nursing theory,<sup>4</sup> contemplating the steps of the NP: history, nursing diagnoses, outcomes and interventions, following a logical sequence of care priorities based on international protocols. The instrument is to be completed

exclusively by professional nurses and may be issued in two copies; the first is stored by the service administration and the second can be given to the destination.

NURSING CARE REPORT - ASU							FINDINGS	
Date:	Time:	Incident:	Regulator:	Displacement Code:	ASU:			
Name:			Age:	Sex: <input type="checkbox"/> Male <input type="checkbox"/> Female				
<b>S</b>	INCIDENT LOCATION		NATURE		VITAL SIGNS			
<b>A</b>	<input type="checkbox"/> Public thoroughfare		<input type="checkbox"/> Clinical		Glasgow:			
<b>M</b>	<input type="checkbox"/> Residence		<input type="checkbox"/> Gynecological/Obstetric		RR: _____ rpm			
<b>P</b>	<input type="checkbox"/> Workplace		<input type="checkbox"/> Pediatric		Sat O <sub>2</sub> _____ %			
<b>L</b>	<input type="checkbox"/> US		<input type="checkbox"/> Psychiatric		HR: _____ bpm			
<b>A</b>	<input type="checkbox"/> UPA		<input type="checkbox"/> Social		BP: _____ mmHg			
	<input type="checkbox"/> Others		<input type="checkbox"/> Transport		T: _____ °C			
			<input type="checkbox"/> Trauma		Capillary blood glucose: mg/dl			
DIAGNOSES/RESULTS			NURSING INTERVENTIONS					
<b>OXYGENATION</b>								
<b>A</b>	<input type="checkbox"/> Respiration Rate, Altered	<input type="checkbox"/> Impaired Gas Exchange	<input type="checkbox"/> Administering Inhaled Medication*	<input type="checkbox"/> Installing Laryngeal Mask	<input type="checkbox"/> Perform pulmonary auscultation			
	<input type="checkbox"/> Impaired Breathing		<input type="checkbox"/> Administering Oxygen Therapy	<input type="checkbox"/> Installing Mechanical Ventilator	<input type="checkbox"/> Pulmonary resuscitation			
	<input type="checkbox"/> Risk for Aspiration		<input type="checkbox"/> Suctioning the Airway	<input type="checkbox"/> Maintaining Airway Clearance	<input type="checkbox"/> Maintaining Ventilation with Breathing Device			
	<input type="checkbox"/> Risk for Impaired Respiratory System Function		<input type="checkbox"/> Maintaining Raised Edge Mattress > 30°	<input type="checkbox"/> Monitor O <sub>2</sub> Saturation Using Pulse Oximeter	<input type="checkbox"/> Monitoring Respiratory Status			
<b>B</b>			<input type="checkbox"/> Examining Upper Airways	<input type="checkbox"/> Monitoring Respiratory Therapy	<input type="checkbox"/> Measuring Respiratory Movement			
	<b>VASCULAR REGULATION</b>							
<b>C</b>	<input type="checkbox"/> Absent Heart Rate	<input type="checkbox"/> Risk for Bleeding	<input type="checkbox"/> Administering Medication*	<input type="checkbox"/> Examining Pulse	<input type="checkbox"/> Assessing Peripheral Tissue Perfusion			
	<input type="checkbox"/> Impaired Cardiac Function		<input type="checkbox"/> Administering Medication and Solution*	<input type="checkbox"/> Perform Electrocardiogram	<input type="checkbox"/> Venipuncture _____			
	<input type="checkbox"/> Bleeding		<input type="checkbox"/> Applying Compression Bandage	<input type="checkbox"/> Managing Bleeding Risk	<input type="checkbox"/> Measuring Heart Rate			
	<input type="checkbox"/> Impaired Peripheral Tissue Perfusion		<input type="checkbox"/> Chest Compressions	<input type="checkbox"/> Monitoring Blood	<input type="checkbox"/> Implantable Cardiac Device* Pressure (Transcutaneous Pacemaker)			
	<input type="checkbox"/> Altered Blood Pressure		<input type="checkbox"/> Defibrillate Patient*	<input type="checkbox"/> Install Cardiac Monitor				
	<input type="checkbox"/> Risk for Hypovolemic Shock		<input type="checkbox"/> Determining External Bleeding	<input type="checkbox"/> Managing Hypovolemic Shock				
<b>HYDRATION</b>								
<input type="checkbox"/> Dehydration	<input type="checkbox"/> Risk for Dehydration	<input type="checkbox"/> Assessing Risk for Dehydration	<input type="checkbox"/> Managing Vomiting	<input type="checkbox"/> Evaluating Response to Fluid Therapy				
<input type="checkbox"/> Vomiting	<input type="checkbox"/> Risk for Vomiting	<input type="checkbox"/> Response to Fluid Therapy	<input type="checkbox"/> Positioning Patient					
<b>NEUROLOGICAL REGULATION</b>								
<b>D</b>	<input type="checkbox"/> Impaired Psychomotor Activity	<input type="checkbox"/> Agitation	<input type="checkbox"/> Assessing Agitation	<input type="checkbox"/> Identifying Obstruction to Communication				
	<input type="checkbox"/> Impaired Verbal Communication	<input type="checkbox"/> Amnesia	<input type="checkbox"/> Assessing Ability to Feel	<input type="checkbox"/> Assessing Consciousness (Glasgow)				
	<input type="checkbox"/> Impaired Consciousness	<input type="checkbox"/> Confusion	<input type="checkbox"/> Assessing Diameter and Symmetry of Pupils	<input type="checkbox"/> Monitoring Psychomotor Activity				
	<input type="checkbox"/> Impaired Mobility	<input type="checkbox"/> Disorientation	<input type="checkbox"/> Assessing Weakness in Members	<input type="checkbox"/> Monitoring Confusion				
	<input type="checkbox"/> Impaired tactile perception	<input type="checkbox"/> Hypoglycemia	<input type="checkbox"/> Assessing Mobility Pattern	<input type="checkbox"/> Observing Paresis				
	<input type="checkbox"/> Altered Pupillary Reflex	<input type="checkbox"/> Paresis	<input type="checkbox"/> Assessing Responsiveness	<input type="checkbox"/> Assessing Ability to Communicate by Talking				
	<input type="checkbox"/> Altered Pupil Size	<input type="checkbox"/> Risk for Fall	<input type="checkbox"/> Assessing Pupillary Reflex	<input type="checkbox"/> Teaching about Safety Measures				
	<input type="checkbox"/> Risk For Impaired Nervous System Function		<input type="checkbox"/> Managing Blood Glucose*	<input type="checkbox"/> Measuring Blood Glucose				
	<b>PERCEPTION OF SENSE ORGANS</b>							
	<input type="checkbox"/> Complications during labor	<input type="checkbox"/> Labor Pain	<input type="checkbox"/> Administering Pain Medication*	<input type="checkbox"/> Monitoring Uterine Contractions				
<input type="checkbox"/> Acute Pain	<input type="checkbox"/> Impaired Vision	<input type="checkbox"/> Evaluating Response to Pain Management	<input type="checkbox"/> Monitoring Pain					
		<input type="checkbox"/> Implementing Childbirth Care	<input type="checkbox"/> Assessing Vision					
<b>PHYSICAL INTEGRITY</b>								
<input type="checkbox"/> Oedema	<input type="checkbox"/> Risk for infection	<input type="checkbox"/> Evaluating Burn Characteristics	<input type="checkbox"/> Examining Chest	<input type="checkbox"/> Assessing Oedema				
<input type="checkbox"/> Traumatic wound	<input type="checkbox"/> Head Trauma	<input type="checkbox"/> Skin Care	<input type="checkbox"/> Immobilizing Head	<input type="checkbox"/> Preventing Infection				
<input type="checkbox"/> Fracture	<input type="checkbox"/> Neck trauma	<input type="checkbox"/> Traumatic Wound Care	<input type="checkbox"/> Implementing Immobilization Regime	<input type="checkbox"/> Protecting Burn				
<input type="checkbox"/> Impaired skin integrity	<input type="checkbox"/> Chest Trauma	<input type="checkbox"/> Fracture care	<input type="checkbox"/> Using Cervical Collar	<input type="checkbox"/> Providing Privacy				
<input type="checkbox"/> Burn		<input type="checkbox"/> Examining Head and Neck	<input type="checkbox"/> Irrigating Burn	<input type="checkbox"/> Taking off clothes				
		<input type="checkbox"/> Assessing Skin Integrity	<input type="checkbox"/> Mobilising in a Block					
<b>THERMAL REGULATION</b>								
<input type="checkbox"/> Present Perspiration Process	<input type="checkbox"/> Impaired Thermoregulation	<input type="checkbox"/> Administering Antipyretic*	<input type="checkbox"/> Covering with Aluminized Blanket	<input type="checkbox"/> Adjusting Ambulance Temperature				
		<input type="checkbox"/> Covering with Blanket	<input type="checkbox"/> Monitoring Perspiration Process	<input type="checkbox"/> Measuring Body Temperature				
<b>PHYSICAL SAFETY AND ENVIRONMENT</b>								
<input type="checkbox"/> Alcohol Abuse	<input type="checkbox"/> Risk for Self-Mutilation	<input type="checkbox"/> Accompanying Patient	<input type="checkbox"/> Managing Anxiety	<input type="checkbox"/> Assessing Social Support				
<input type="checkbox"/> Substance Abuse	<input type="checkbox"/> Victim of Child Abuse	<input type="checkbox"/> Applying Physical Restraint	<input type="checkbox"/> Managing Aggressive Behavior	<input type="checkbox"/> Assessing Behavior				
<input type="checkbox"/> Conflicting Family Attitude	<input type="checkbox"/> Risk For Elopement	<input type="checkbox"/> Communicating Risk for Aggression	<input type="checkbox"/> Implementing Suicide Precautions	<input type="checkbox"/> Assessing Family Coping				
<input type="checkbox"/> Aggressive behavior	<input type="checkbox"/> Risk for Suicide	<input type="checkbox"/> Communicating Situations of Violence	<input type="checkbox"/> Implement Safety Regime	<input type="checkbox"/> Assessing Substance Abuse				
<input type="checkbox"/> Environmental Safety Problem	<input type="checkbox"/> Risk for Violence	<input type="checkbox"/> Referring to Specialized Services	<input type="checkbox"/> Assessing Alcohol Abuse	<input type="checkbox"/> Teaching about Safety Measures				
<input type="checkbox"/> Lack of Social Support	<input type="checkbox"/> Victim of Elder Abuse	<input type="checkbox"/> Establishing Trust	<input type="checkbox"/> Assessing Environment	<input type="checkbox"/> Request Police Service				
<input type="checkbox"/> Suicidal ideation								
<input type="checkbox"/> Risk for Self-Destructive Behavior								
<input type="checkbox"/> Impaired Psychological Status								
<b>Comments:</b>				<input type="checkbox"/> Referral _____				
<b>Outcomes Achieved:</b>				<input type="checkbox"/> Service Refusal				
<b>Team Identification:</b>				<input type="checkbox"/> Formal verification of death by doctor				
<b>Nurse responsible for registration</b>			<b>Nurse responsible for admission</b>					
<b>Register</b>	<b>Signature</b>		<b>Register</b>	<b>Signature</b>				

Nota: \* according to medical prescription

Figure 2 - Record of the Nursing Process in SAMU validated instrument. Curitiba, PR, Brazil, 2019



## Discussion

The female prevalence of participants is supported by the fact that 90% of the Nursing workforce is still composed of women.<sup>12</sup> According to overall data on global workforce aging patterns, these professionals are relatively young, with 38% of nurses aged under 35 years.<sup>12</sup> This was also observed in participants of this study.

Worldwide estimates are that the largest current workforce have started their professional activities in the last 10 years.<sup>12</sup> The fact that an increase in qualifications is considered may require coordination between the different levels of continuing education programs as an important mechanism of career development.<sup>12</sup> This information corroborates the average time of training in undergraduate studies and in continuing education qualification of study participants.

Regarding attendance to courses on international protocols, according to a study on the role of nurses in prehospital care, this topic is rarely addressed in undergraduate Nursing.<sup>13</sup> In this sense, the nurses' search for external training in order to supply the need to be updated in this area was observed in the profile of experts, as well as the presence of teaching and research activities.

An expert from the state of Pará had the longest time working at SAMU, which is in line with the inauguration period of one of the first SAMU in capitals of Brazil, in Belém-PA in 1994.<sup>14</sup>

The national representativeness of participation was not achieved given the lower participation of experts from the North and Northeast regions. A study indicated that SAMU coverage is still unequal between states and regions in Brazil and structural restrictions have affected the North and Northeast more strongly.<sup>14</sup>

Regarding the validation of the instrument, it was not possible to confront the result with other studies on the validation of the nursing record in prehospital mobile emergency services, as these were not identified in the scientific literature. However, a systematic review revealed that different criteria were followed in most studies on instrument development and a CVI > 0.80 was found in nine of them.<sup>15</sup>

Although there are studies on instruments for the record of nursing in various contexts, weaknesses in scientific production on nursing documentation and its

applicability in prehospital mobile emergency care services are still found. An article analyzed the trends of Brazilian scientific nursing productions on prehospital care and first aid and considered a relationship with assistance in the Mobile Emergency Care Service.<sup>16</sup>

The only item of the instrument with CVI below the appropriate is related to the instrument readability criteria, which comprised the size of the letter, spaces and lines. In a survey, it was concluded that less than 50% of respondents agreed there was enough space for records, and readability appeared as the second cause that can decrease the efficiency of documentation.<sup>17</sup>

Items with compatible CVI for face validation are directly linked to the importance of the appearance, clarity and organization of the instrument, demonstrating assertiveness at the time of its development. Accurate and affordable documentation is essential for a quality, safe, evidence-based nursing practice,<sup>18</sup> and patient records need to be clear and accurate for nurses' clinical practice.<sup>19</sup>

As for the content of instrument items, the validated criteria - pertinence, relevance, title, fields, replication of the instrument and if records of nurses' assistance in SAMU are allowed - are important. In a study that evaluated the content of nursing records in hospitals, data showed that the content of records was poor and did not portray the reality of nursing care.<sup>20</sup>

Although data were inserted with assertiveness in the validated instrument, this was not described in other studies, such as a systematic review on quality criteria, instruments and requirements for nursing documentation. Given the lack of evidence-based quality indicators, uncertainty regarding criteria needed to obtain high-quality nursing documentation was indicated. However, the same study discusses the alignment of the documentation with the NP in the understanding that the use of terminologies seems to be important for high-quality nursing documentation.<sup>21</sup> Another systematic review on the accuracy of nursing care plans and the use of standardized language reported the need to focus on the accuracy of the nursing record, particularly on the accuracy and rigor of the content.<sup>22</sup>

The experts' view is relevant in expanding the item to identify the care unit in order to meet a trend to be implemented nationwide, because nurses have the

possibility to work both in ASUs and in Intermediate Life Support units to fill gaps in the care of critically ill patients.

This service is regulated by Resolution COFEN n. 688/2022<sup>23</sup> on the implementation of care guidelines and the administration of medication by the nursing team working in the Basic Life Support modality and recognizes Intermediate Life Support in public and private services. The physical or electronic media record of care provided, considering the NP, is mandatory and one of the technical conditions for the implementation of care guidelines.

The above-expected CVI for validation of nursing interventions presented by Basic Human Needs (Airway and breathing; Circulation; Neurological; Exposure and environment) demonstrates its suitability and is considered an expressive result for the mobile emergency prehospital setting. The findings of the present study add actions to studies in which were identified 14 nursing interventions,<sup>24</sup> 51 blocks of nursing interventions expressed in algorithms,<sup>25</sup> and 43 interventions for prehospital trauma victims.<sup>26</sup>

The scientific literature in the area of prehospital care presents more findings about interventions by other professionals compared to interventions by nursing and the latter, in particular, are often directed towards the health/disease dichotomy.<sup>25</sup> Thus, encouraging investigation in the context of provision of emergency care in the prehospital setting is a relevant strategy to consolidate the nursing space.<sup>27</sup>

It is understood that the instrument validated in this study respects the criteria for nursing documentation. Such criteria are highlighted in the conclusion of a study stating that nursing care must be fully expressed in the content of the nursing documentation,<sup>15</sup> which promotes effective, quality communication between teams, thereby facilitating the continuity and individuality of care.<sup>15</sup>

The instrument will be able to overcome the gap presented in a study that evaluated the profile and activities performed by SAMU nurses, in which the description of the use of the nursing process and consequent registration was not identified.<sup>28</sup> It is argued that the lack of records of the care process transmits how nursing care interventions are communicated through a hidden language,<sup>29</sup> which can result in the absence of visibility and create a barrier to the advancement of the Nursing science,<sup>30</sup>

compromise the quality of care and patient safety, and the systematic development of nursing care in the prehospital area.<sup>29</sup>

Limitations of this study include the incipient publication on nurses' records in prehospital mobile emergency care services, which did not allow comparison between results and the difficulty in accessing experts.

As a contribution to the nursing area, the validation of an instrument in a checklist format, with priority nursing diagnoses, outcomes and interventions, focused on meeting the specificities of the prehospital context, can collaborate in a quick, effective and systematic documentation process. It can also help in conducting the nurse's clinical reasoning and in the organization of the work process, promoting the documentation of professional practice in this scenario. It is recommended to maintain the instrument, following the dynamic changes in urgent and emergency services and in standardized terminologies in nursing.

## Conclusion

The validation process involved nurses from all regions of Brazil, demonstrating the sharing of knowledge from experts in prehospital mobile emergency care services in different geographic locations.

The instrument for Recording the Nursing Process in the SAMU, printed version (paper), was face and content validated. A list of priority nursing interventions for this context of action was presented. The structural logic of the Nursing Process with the ICNP<sup>®</sup> language was adopted and is related to the sequence of priorities in emergency care.

The validation of this instrument allows the documentation of nursing practice in SAMU with legal, technical, ethical and scientific support. It is hoped that the results will allow the development of future studies to assess the applicability and implementation of the printed record in this scenario.

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