Journal of Nursing

Revista de Enfermagem

UFPE On Line

ISSN: 1981-8963

CASE REPORT ARTICLE

NURSING ASSISTANCE TO THE EMERGENCY/URGENCY PATIENT ASSISTÊNCIA DE ENFERMAGEM AO PACIENTE DE EMERGÊNCIA/URGÊNCIA ASISTENCIA DE ENFERMERÍA AL PACIENTE DE EMERGENCIA/URGENCIA

Adriana Conrado de Almeida¹, Fernando Ramos Gonçalves², Cristine Vieira do Bonfim³, Betise Mery Alencar Sousa Macau Furtado⁴

ABSTRACT

Objective: to describe the teaching experience in Nursing undergraduate care practice with the use of an emergency protocol. **Method:** this is a descriptive study, a type of experience report on the curricular practice carried out in the emergency department of an emergency room, with the participation of 70 students, teachers and patients. A protocol was used to collect data in three stages, presenting the results in tabular form. **Results:** a new teaching-learning model was developed with the application of the emergency protocol, with the articulation of theoretical knowledge with practice, as well as providing the improvement and facilitating the use of emergency nursing diagnoses. **Conclusion:** it was concluded that the teaching-learning strategy used contributed to the professional training associated with evidence-based practice. **Descriptors:** Emergency Nursing; Nursing Process; Education, Nursing; Nursing, Practical; Faculty, Nursing; Teaching Care Integration Services.

RESUMO

Objetivo: descrever a experiência do ensino na prática assistencial da graduação de Enfermagem com a utilização de um protocolo de emergência. **Método:** trata-se de estudo descritivo, tipo relato de experiência sobre a prática curricular realizado na emergência cardiológica de um pronto-socorro, com a participação de 70 estudantes, professores e pacientes. Utilizou-se um protocolo para a coleta de dados em em três etapas, apresentando-se os resultados em forma de tabela. **Resultados:** possibilitou-se com a aplicação do protocolo de emergência um novo modelo de ensino-aprendizagem, com a articulação dos conhecimentos teóricos com a prática, além de proporcionar o aprimoramento e facilitar a utilização dos diagnósticos de Enfermagem em emergência. **Conclusão:** concluiu-se que a estratégia de ensino-aprendizagem utilizada contribuiu para a formação profissional associada à prática baseada em evidências. **Descritores:** Enfermagem em Emergência; Processo de Enfermagem; Educação em Enfermagem; Enfermagem Prática; Docentes de Enfermagem; Serviços de Integração Docente-Assistencial.

RESUMEN

Objetivo: describir la experiencia de la enseñanza en la práctica asistencial de la graduación de Enfermería con la utilización de un protocolo de emergencia. **Método:** se trata de un estudio descriptivo, tipo relato de experiencia sobre la práctica curricular realizada en la emergencia cardiológica de una unidad de socorro, con la participación de 70 estudiantes, profesores y pacientes. Se utilizó un protocolo para la recolección de datos en tres etapas, presentando los resultados en forma de tabla. **Resultados:** se ha posibilitado con la aplicación del protocolo de emergencia un nuevo modelo de enseñanza-aprendizaje, con la articulación de los conocimientos teóricos con la práctica, además de proporcionar el perfeccionamiento y facilitar la utilización de los diagnósticos de Enfermería en emergencia. **Conclusión:** se concluyó que la estrategia de enseñanza-aprendizaje utilizada contribuyó a la formación profesional asociada a la práctica basada en evidencias. **Descriptores:** Enfermería de Urgencia; Proceso de Enfermería; Educación en Enfermería; Enfermería Práctica; Docentes de Enfermería; Servicios de Integración Docente Asistencial.

¹PhD, University of Pernambuco/UPE. Recife (PE), Brazil. E-mail: aconradoalmeida@yahoo.com.br ORCID iD: <https://orcid.org/0000-0001-6141-0458>; ²Master, University of Pernambuco/UPE. Recife (PE), Brazil. E-mail: fernandoramos30@uol.com.br ORCID iD: <https://orcid.org/0000-0003-2692-9769>; ³PhD, Federal University of Pernambuco/UPE. Recife (PE), Brazil. E-mail: cristine.bonfim@uol.com.br ORCID iD: <https://orcid.org/0000-0002-4495-9673>; ⁴PhD, University of Pernambuco/UPE. Recife (PE), Brazil. E-mail: betisemery@gmail.com ORCID iD: <https://orcid.org/0000-0001-6344-8257>

INTRODUCTION

It is known that Advanced Trauma Life Support (ATLS) is one of the most successful course formats for managing seriously injured patients. The mnemonic ABCDE is the backbone of the ATLS. It is reported that it is a system that portrays a didactic strategy in teaching, approaching the patient in traumatic emergencies¹ to stabilize vital signs, and is based on the identification of signs/symptoms and on the treatment of problems that compromise the life of the individual.² It is reported that it is represented by capital letters of the alphabet A (Airway), B (Breathing), C (Circulation), D (Disability), E (Exposure).³ This method is shown to significantly facilitate knowledge about management of multiple trauma patients, on clinical skills, organization and priority approaches.⁴

Nurses are formed and updated in the emergency/emergency area based on the Nursing Process (NP) method, which uses Nursing diagnoses⁵ to systematize care in the individual/collective care, also using protocols based on the ABCDE method of trauma during their professional training. It is noticed that the classification of the patient according to this method allows the identification of Nursing needs for the purpose of a better allocation of resources.⁶

It contributes, through teaching-learning theories, to the transformation of Nursing teaching. Therefore, they must be based on the problematization of the work process in order to redefine practices and consolidate professional knowledge.⁷ In addition, the articulation between theory and practice, through the process training, results in a mutual influence with repercussions on teaching and learning.⁷

It turns out that creative thinking for the development of skills in solving problems depends on the full interaction between the individual, the training and the work context. Teaching with the use of clinical practice as an essential component of professional education is considered to prepare students for the application of previously acquired knowledge in the provision of care to patients and the acquisition of skills, attitudes and values necessary for the professional socialization.⁸

It is warned that the training of competence in the teaching of nurses is not restricted to the school, but also to the workplace. It is emphasized that moments of practice inside the health units favor the

learning of the student forming individuals capable of acting in a real situation.⁹

It was thought to elaborate a protocol based on the diagnostics aligned to the ABCDE mnemonic of Advanced Trauma Life Support and to apply it to the patients of the sector before the importance of the practice of the students of graduation in Nursing in the emergency services and the observation of the difficulty of these students and professionals in the use of the systematization of nursing assistance in this sector.

OBJECTIVE

- To describe the teaching experience in Nursing undergraduate care practice with the use of an emergency protocol.

METHOD

This is a descriptive study, an experience report that describes the elaboration of a protocol with the Nursing diagnoses⁵ aligned to the ABCDE mnemonic of Advanced Trauma Life Support,²⁻³ in a cardiology emergency, by undergraduate Nursing students during the urgency and emergency curricular practices of the seventh module of the course.

The work team was constituted by a total of seventy students and seven teachers (total of three phases) of Nursing graduation from a public university in the State of Pernambuco. It is shown that all teachers had experience in the emergency area and in nursing diagnoses. The study was conducted in the red emergency room of the Pernambuco University Cardiology Emergency Room - Professor Luiz Tavares (PROCAPE). The four-bed red room is available for the care of serious patients. It should be noted that this hospital unit is a reference for the Unified Health System (UHS) in hospital and outpatient cardiology.

The research project was approved by the Ethics and Research Committee of the HUOC/PROCAPE hospital complex (CAEE nº 48399615.9.0000.5192).

This experiment was developed in three phases. It is pointed out that the first phase occurred in two periods corresponding to the students' practices: September to November 2014 and March to May 2015. It was observed that 42 students participated, accompanied by the teacher of the practice, with a total workload of thirty hours distributed in six meetings for each group of seven students. The aim of this study was to apply the Nursing process to the data collection through a structured interview with the patient and/or caregiver using the Nursing history

standardized by PROCAPE, direct observation, physical examination and monitoring of the clinical picture of each patient.

The data on 56 patients were collected by grouping them and analyzing them to make a clinical judgment at that stage by the students.

Four teachers with expertise in the emergency area and in nursing diagnoses were chosen in the second phase, in June 2015. The

objective of this phase was to analyze the grouping of the selected diagnoses and aligned with the ABCDE in order to refine the adequacy of the items and evaluate their conformity. It is shown that after the adjustments resulting from the judgment made by the teachers, the instrument acquired a new form (Figure 1) and was then applied to new patients in the third stage.

Patient Identification			
Nursing Diagnosis	Definition	Defining Characteristics	Related Factors
A - Opening of airways			
Ineffective airway clearance			
Risk of aspiration			
B - Breathing and Ventilation			
Impaired gas exchange			
Impaired Spontaneous Ventilation			
Ineffective respiratory pattern			
Dysfunctional response to weaning			
C - Circulation			
Decreased cardiac output			
Intolerance to physical activity			
Excessive fluid volume			
Sharp pain			
Ineffective peripheral tissue perfusion			
Impaired urinary output			
Risk of ineffective renal perfusion			
Poor fluid volume			
Bleeding hazard			
Shock hazard			
Risk of electrolyte imbalance			
Risk of decreased cardiac tissue perfusion			
D - Neurological Dysfunction			
Acute confusion			
Risk of acute confusion			
Risk of ineffective cerebral tissue perfusion			
Risk of unstable glycemia			
E - Exposure of the patient to internal and external environmental conditions			
Impaired physical mobility			
Ineffective protection			
Hypothermia			
Hyperthermia			
Dysfunctional Gastrointestinal Mobility			
Risk of unbalanced nutrition less than bodily needs			
Risk of infection			
Risk of falls			
Risk for impaired skin integrity			
Risk for imbalance in body temperature			

Figure 1. Protocol constructed and adjusted using the trauma mnemonic. Recife (PE), Brazil, 2014-2015.

The third phase took place in the period between September 15 and October 28, 2015 involving 28 students. It is observed that this phase had the objective of applying the instrument after the adjustment made by the expert teachers. It is shown that the adjusted instrument was applied to the 32 patients who were hospitalized in the red room at that time.

RESULTS

It should be noted that the nursing diagnoses found were in line with the ABCDE

mnemonic of Advanced Trauma Life Support (Table 1).

It is known that, in this way, the diagnoses pertinent to the opening of airways were accommodated in letter A; those related to respiration and ventilation were in letter B; those referring to circulation were in the letter C; those related to neurological dysfunction and neurological status were in the letter D and those related to the exposure of internal and external environmental factors were aligned in letter E.

Table 1. Nursing diagnoses aligned to the ABCDE mnemonic. Recife (PE), Brazil, 2014-2015.

Diagnosis	Domain	Class	A, B, C, D, E
Inefficient protection	1 (Health promotion)	2 (Health control)	E
Risk of unbalanced nutrition:	2 (Nutrition)	1 (Ingestion)	E
Risk of glycemia	2 (Nutrition)	4 (Metabolism)	D
Risk of electrolyte imbalance	2 (Nutrition)	5 (Hidration)	C
Poor fluid volume	2 (Nutrition)	5 (Hidration)	C
Excessive fluid volume	2 (Nutrition)	5 (Hidration)	C
Impaired urinary output	3 (Elimination and exchange)	1 (Urinary function)	C
Gastrointestinal Mobility	3 (Elimination and exchange)	2 (Gastrointestinal Function)	E
Impaired gas exchange	3 (Elimination and exchange)	4 (Respiratory function)	B
Risk of ineffective renal perfusion	3 (Elimination and exchange)	4 (Cardiovascular/pulmonary responses)	C
Impaired physical mobility	4 (Activity and rest)	2 (Activity and exercise)	E
Activity Intolerance	4 (Activity and rest)	4 (Cardiovascular/pulmonary responses)	C
Impaired Spontaneous Ventilation	4 (Activity and rest)	4 (Cardiovascular/pulmonary responses)	B
Ineffective Respiratory Pattern	4 (Activity and rest)	4 (Cardiovascular/pulmonary responses)	B
Decreased cardiac output	4 (Activity and rest)	4 (Cardiovascular/pulmonary responses)	C
Risk of decreased cardiac tissue perfusion	4 (Activity and rest)	4 (Cardiovascular/pulmonary responses)	C
Risk of ineffective cerebral tissue perfusion	4 (Activity and rest)	4 (Cardiovascular/pulmonary responses)	D
Ineffective peripheral tissue perfusion	4 (Activity and rest)	4 (Cardiovascular/pulmonary responses)	C
Dysfunctional response to ventilatory weaning	4 (Activity and rest)	4 (Cardiovascular/pulmonary responses)	B
Risk of acute confusion	5 (Perception/cognition)	4 (Cognition)	D
Acute confusion	5 (Perception/cognition)	4 (Cognition)	D
Risk of infection	11 (Security and protection)	1 (Infection)	E
Risk of aspiration	11 (Security and protection)	2 (Physical injury)	A
Shock hazard	11 (Security and protection)	2 (Physical injury)	C
Ineffective airway clearance	11 (Security and protection)	2 (Physical injury)	A
Bleeding hazard	11 (Security and protection)	2 (Physical injury)	C
Risk of fall	11 (Security and protection)	2 (Physical injury)	E
Impaired skin integrity risk	11 (Security and protection)	2 (Physical injury)	E
Hypothermia	11 (Security and protection)	6 (Thermoregulation)	E
Hyperthermia	11 (Security and protection)	6 (Thermoregulation)	E
Risk of imbalance in body temperature	11 (Security and protection)	6 (Thermoregulation)	E
Sharp pain	12 (Comfort)	1 (Physical comfort)	C

Note: A - Opening of airways; B - Breathing/Ventilation; C - Circulation; D - Neurological dysfunction/neurological status; E - Environmental control/exposure.

DISCUSSION

It is aimed, through clinical practice and supervision, to promote the development of professional skills of health students.¹⁰ It is shown that the activity of curricular practice, reported in this study, enabled the development of skills to identify the diagnosis of Nursing in emergency through the elaboration and application of a protocol based on the ABCDE mnemonic. It should be emphasized that the protocol provided the

problematization of the practice and contributed to the students being able to establish a clinical reasoning with the immediate intervention in serious patients. It is noted that the strong student adherence can be explained by the familiarity they have with the didactic strategies of the medical protocols.

It was sought to understand, through curricular practice, the role of nurses in the care of patients with cardiovascular dysfunction, in all levels of care, in

emergency and emergency situations, and critical patients using Nursing care systematization. It is reported that the classification of Nursing care, in association with the patients' health needs, was an important tool to optimize care levels, quality of care, patient safety and adequate allocation of the Nursing team.¹¹

The ABCDE method is used by nurses to classify patients in the ICU and in emergency sectors.^{3,12-3} It is worth mentioning that another significant contribution of this experience was the dissemination of the ABCDE method among students and hospital professionals. It is reported that a study that evaluated nurses' knowledge, usefulness and perception about the ABCDE method showed that only 41.6% of the interviewees knew the method and most of them recognized their ability to improve patient follow-up.¹²

It is observed that the most important part of nursing education is the process of continuing education in clinical practice.¹⁴ It can be seen that in clinical education, it is possible to train based on social skills, attitude and professional ethics, as well as anamnesis of communication diagnosis-therapy. It is also perceived to increase awareness of patient safety, professional attitudes, respect for patient confidentiality and comfort, development of empathy, information about medical equipment, and the importance of a holistic approach to patient care.¹⁵

It is believed that the opportunity to obtain quality clinical experience within a learning environment is a central point in the teaching-learning process. It should be noted that clinical teaching represents the acquisition of practical knowledge and knowledge.¹⁴ In this sense, the field of clinical teaching constitutes a space of constant inquiry. It is known that the professional development of the students is not understood as the result of the application of the theory acquired to the practice. It is assumed that it is not possible to understand and manage professional situations only on the basis of predefined knowledge and formulas, and it is necessary to construct creative and adjusted solutions to these situations.¹⁶

It is evident from this perspective that the curricular practice associated with the elaboration of the protocol by students and teachers exposed in this experience report made it possible to review previous theoretical knowledge, to reflect on professional experience, and to develop skills and knowledge about diagnoses Nursing in emergency. It is shown that in a quantitative

study conducted at a College of Health Sciences of Portugal identified that perceived quality and satisfaction are significantly different when students are exposed to different methods of learning and teaching.¹⁷

This study evaluated the effect of an active learning program on the competence of nursing students, showing that those who participated in the active learning group presented higher scores on general and special clinical performance skills, critical thinking and human comprehension, when compared to the traditional teaching group.¹⁸ It should be noted that the active learning strategy is conducive to the development of professional skills.¹⁸

In this teaching-learning experience, we sought to associate the theoretical knowledge with Nursing care practice in a meaningful way for each student and for professionals in the sector. It is understood that this type of experience enables the development of clinical reasoning, the improvement of Nursing diagnoses with safe and efficient interventions based on evidence, and contribute to the formation of a critical, reflexive and committed professional with the health needs of the population and the Unified Health System.

The present models of nursing education are based on the development of competencies. It is a student-centered approach whose curriculum design and teaching emphasizes what students should know, understand, demonstrate and how to adapt to life beyond formal education. It is shown that the results of this type of teaching have demonstrated improvements in clinical skills and basic nursing skills.¹⁹

It is revealed that, in the reported activity, the students demonstrated satisfaction with the clinical learning environment and the pedagogical approach adopted, which related the theoretical knowledge with the practice of care. It is emphasized that the clinical learning environment and supervision have a significant impact on the development of the clinical competence of future health professionals.¹⁰ It is added that, for the competent development of students within the clinical environment, the pedagogical aspect is considered fundamental.¹⁴

CONCLUSION

It is emphasized that this experience report brings contributions related to the new teaching-learning model that seeks to articulate theoretical knowledge with students' curricular practice. It is stated that

the use of the emergency protocol, aligning Nursing diagnoses to the ABCDE method, contemplated a new teaching-learning model that seeks alternative ways of including diagnosis and effective Nursing intervention. It is concluded that, in addition, the protocol will be able to optimize the time of the professionals, with a higher quality in the assistance and minimizing possible errors, besides providing a better linking of the teaching with the health service.

REFERENCES

1. Radhakrishna S, Walker L, Copeman PA. 'LIVES': a mnemonic for teaching advanced airway management. *BJA*. 2017 Feb; 118(2):270-1. Doi: <https://doi.org/10.1093/bja/aew459>
2. American College of Surgeons. *ATLS Manual*. 9th ed. Chicago: American College of Surgeons; 2012.
3. Miller MA, Govindan S, Watson SR, Hyzy RC, Iwashyna TJ. ABCDE, but in That Order? A Cross-Sectional Survey of Michigan Intensive Care Unit Sedation, Delirium, and Early Mobility Practices. *Ann Am Thorac Soc*. 2015 July; 12(7):1066-71. Doi: [10.1513/AnnalsATS.201501-066OC](https://doi.org/10.1513/AnnalsATS.201501-066OC)
4. Mohammad A, Branicki F, Abu-Zidan FM. Educational and Clinical Impact of Advanced Trauma Life Support (ATLS) Courses: a systematic review. *World J Surg*. 2014 Feb; 38(2):322-9. Doi: [10.1007/s00268-013-2294-0](https://doi.org/10.1007/s00268-013-2294-0)
5. Horta WA. *Processo de Enfermagem*. Rio de Janeiro: Guanabara Koogan; 2015.
6. Wang Z, You L, Zheng J, Guan X. The ABCD patient classification tool for nurse-to-patient assignment to improve nursing workload balance: a multi-center study. *Int J Clin Exp Med* [Internet]. 2017 [cited 2018 Mar 12]; 10(6):9502-7. Available from: <http://www.ijcem.com/files/ijcem0052828.pdf>
7. Sousa ATO, Formiga NS, Oliveira SHS, Costa MML, Soares MJGO. Using the theory of meaningful learning in nursing education. *Rev Bras Enferm*. 2015 July/Aug; 68(4):713-22. Doi: [http://dx.doi.org/10.1590/0034-7167.2015680420i](https://doi.org/10.1590/0034-7167.2015680420i).
8. Wong J, Wong S. Towards effective clinical teaching, in nursing. *J Adv Nurs*. 1987 July; 12(4):505-13. PMID: 3655138
9. Silva DM, Silva EMVB. O ensino clínico na formação de enfermagem. *Millenium* [Internet]. 2004 Oct [cited 2018 Mar 21];9(30):103-18. Available from: <http://www.ipv.pt/millenium/Millenium30/8.pdf>
10. Pitkänen S, Kääriäinen M, Oikarainen A, Tuomikoski AM, Elo S, Ruotsalainen H, et al. Healthcare students' evaluation of the clinical learning environment and supervision - a cross-sectional study. *Nurse Educ Today*. 2018 Mar; 62:143-9. Doi: [10.1016/j.nedt.2018.01.005](https://doi.org/10.1016/j.nedt.2018.01.005)
11. Yu D, Ma Y, Sun Q, Lu G, Xu P. A nursing care classification system for assessing workload and determining optimal nurse staffing in a teaching hospital in China: a pre-post intervention study. *Int J Nurs Pract*. 2015 Aug; 21(4):339-49. Doi: [10.1111/ijn.12295](https://doi.org/10.1111/ijn.12295)
12. Pinto F, Biancofiore G. The ABCDE Bundle: The ABCDE Bundle: a survey of nurses knowledge and attitudes in the intensive care units of a National Teaching Hospital in Italy. *Dimens Crit Care Nurs*. 2016 Nov/Dec; 35(6):309-14. Doi: [10.1097/DCC.0000000000000210](https://doi.org/10.1097/DCC.0000000000000210)
13. Kantonen J, Lloyd R, Mattila J, Kauppila T, Menezes R. Impact of an ABCDE team triage process combined with public guidance on the division of work in an emergency department. *Scand J Prim Health Care*. 2015 June; 33(2):74-81. Doi: [10.3109/02813432.2015.1041825](https://doi.org/10.3109/02813432.2015.1041825)
14. Papastavrou E, Dimitriadou M, Tsangari H, Andreou C. Nursing students' satisfaction of the clinical learning environment: a research study. *BMC Nurs*. 2016 July; 15(1):44. Doi: <https://doi.org/10.1186/s12912-016-0164-4>
15. Sezer H. How should clinical education be in nursing education? *J Nurs Res Pract* [Internet]. 2018 [cited 2018 June 25];2(1):15. Available from: <https://www.pulsus.com/scholarly-articles/how-should-clinical-education-be-in-nursing-education.pdf>
16. Cunha CMSLM, Macedo APMC, Vieira IFGFF. Nursing students' perceptions of training processes in clinical supervision contexts. *Referência*. 2017 Jan/Mar; 4(12):65-74. Doi: [http://dx.doi.org/10.12707/RIV16072](https://doi.org/10.12707/RIV16072).
17. Mendes L, Pedro EM, Lourenço L. Perceived service quality and students' satisfaction in higher education: the influence of teaching methods. *Int J Qual Res*. 2018; 12(1):165-92. Doi: [10.18421/IJQR12.01-10](https://doi.org/10.18421/IJQR12.01-10)
18. Shin H, Sok S, Hyun KS, Kim MJ. Competency and an active learning program in undergraduate nursing education. *J Adv Nurs*. 2015 Mar; 71(3):591-8. Doi: [10.1111/jan.12564](https://doi.org/10.1111/jan.12564)
19. Tan K, Chong MC, Subramaniam P, Wong LP. The effectiveness of outcome based education on the competencies of nursing students: a systematic review. *Nurse Educ*

Today. 2018 May; 64:180-9. Doi:
[10.1016/j.nedt.2017.12.030](https://doi.org/10.1016/j.nedt.2017.12.030)

Submission: 2018/07/20

Accepted: 2018/09/27

Publishing: 2018/12/01

Corresponding Address

Cristine Bonfim
Fundação Joaquim Nabuco
Rua Dois Irmãos, 92
Bairro Apipucos.
CEP: 52071-440 – Recife (PE). Brazil