

Translation and adaptation of the *In-Hospital Utstein Style* into the portuguese language*

TRADUÇÃO E ADAPTAÇÃO PARA A LÍNGUA PORTUGUESA DO
IN-HOSPITAL UTSTEIN STYLE

TRADUCCIÓN Y ADAPTACIÓN AL IDIOMA PORTUGUÉS DEL INSTRUMENTO
IN-HOSPITAL UTSTEIN STYLE

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ABSTRACT

Cardiopulmonary arrest (CPA) is a potentially lethal event in which the quality of the service depends on agility, knowledge and the skills of all of the involved team. The development of the guide identifying the significant points during the procedure of an in-hospital CPA appeared in 1997, with the creation of the *In-Hospital Utstein*. The purpose of this study was the translation and adaptation of the procedures into the Portuguese language. Outcomes of this process resulted in a pre-test instrument administered on 20 CPA patients. The outcome variables were not collected, because it involved accompanying these patients over a lengthy period of time. The most common CPA rhythm was pulseless electrical activity (65%); the defibrillation average time was 1.25 minutes. Some information was not recorded. In conclusion, the instrument is adaptable to the Brazilian reality, therefore improving care administered during the CPA event.

KEY WORDS

Emergency nursing.
Heart arrest.
Cardiopulmonary resuscitation.

RESUMO

A parada cardiorrespiratória (PCR) é um evento potencialmente letal e a qualidade do atendimento prestado depende da agilidade, conhecimento e habilidade de toda a equipe envolvida. Desenvolvido em 1997, o *In-hospital Utstein Style* é um relatório padrão para coleta de dados significativos em PCR. O estudo objetivou realizar a tradução e adaptação à língua portuguesa do instrumento. O instrumento foi submetido ao processo de tradução e adaptação cultural. O resultado deste processo gerou um instrumento aplicado em fase de pré-teste a 20 pacientes vítimas de PCR. As variáveis de resultado não foram coletadas, pois pressupõe o acompanhamento destes pacientes ao longo do tempo. O ritmo de PCR mais comum foi atividade elétrica sem pulso (65%); o tempo médio para desfibrilar foi de 1,25 minutos. Houve itens sem resposta. Podemos concluir que o instrumento é aplicável à realidade brasileira, buscando melhor atendimento ao evento da PCR.

DESCRIPTORES

Enfermagem em emergência.
Parada cardíaca.
Ressuscitação cardiopulmonar.

RESUMEN

El paro cardiopulmonar (PCP) es un estado potencialmente letal, donde la calidad del servicio depende de la agilidad, conocimiento y habilidad del equipo involucrado. El *In-hospital Utstein Style* fue elaborado en 1997. Este instrumento que recolecta datos de importancia durante un PCP fue traducido y adaptado al portugués. De esta forma fue sometido al proceso de traducción y adaptación cultural. Se obtuvo como resultado un instrumento, el cual fue aplicado a 20 víctimas de PCP a través de un pre-test. Las variables de resultado no fueron consideradas en la recolección de datos, pues suponía el seguimiento de los pacientes por un periodo prolongado. El ritmo del PCP más común fue la actividad eléctrica sin pulso (65%) y el tiempo promedio de desfibrilación fue de 1,25 minutos. Algunos ítems no fueron respondidos. Se concluye que el instrumento puede ser aplicado al contexto brasileño, en busca de una mejor atención en casos de PCP.

DESCRIPTORES

Enfermería de urgencia.
Paro cardíaco.
Resucitación cardiopulmonar.

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INTRODUCTION

Cardiopulmonary arrest (CPA) is regarded as a sudden loss of conscience due to a lack of blood flow to the brain, caused by the cessation of cardiac functioning, which fails to act as a pump⁽¹⁾.

Irreversible consequences may happen to the CPA victim, since the *time* factor is extremely important for the outcomes. The neural necrosis and the cellular edema are likely situations due to a lack of appropriate cerebral oxygenation⁽²⁾.

In order to avoid such outcomes, the hospital field professionals, previously trained, are advised to use the recommendations and guides elaborated by international associations and committees. Thus, they will attain a high quality cardiopulmonary resuscitation⁽³⁾.

It is known that both resuscitation effort monitoring and feedback to the professional increase the odds of a qualified assistance in accordance with international research⁽³⁾.

The presentation of the survival chain concept reinforces the importance of the *time* factor when it comes to the CPA assistance⁽⁴⁾.

It is composed by 4 phases: fast access; fast installation of basic life support; fast defibrillation and fast installation of advanced life support. These phases urge both lay people and healthcare professionals to strive for agility in the assistance and development of future CPA research practices⁽⁴⁾.

Authorities point out the importance of CPA assistance. When high-quality CPA is performed, it can save lives⁽⁵⁾.

In order to gather and analyze the CPA assistance data, a procedure guide was developed with a standard form to collect CPA data. This form was made available in the procedure guide about CPA data collection, developed in 1997: the *In-Hospital Utstein Style*⁽⁶⁾.

The standard form is divided into information blocks about the patients, CPA moment, results obtained following assistance, and additional information about the event.

The information related to the patients is collected retrospectively. The information related to the moment of the event is collected at the moment it occurs. The information related to the resuscitation results, collected by accompanying each individual throughout the stay in the hospital up to a year after discharge.

Neurological evaluation is performed by the Glasgow Coma scale and by the Cerebral Performance Category scale.

This internationally-used form has brought standardization into CPA research, enabling comparisons of conducts and results, as well as discussions about the quality of professional practice.

Hence, its use in the practice brings advantages to the CPA studies in Brazil. It allows comparative analyses with inter-

national studies, aiming at quality assistance. Nevertheless, a process of translation and cultural adaptation is required.

Therefore, this study aimed at adapting and translating the In-hospital Utstein Style into the Portuguese language, making it available for the practice.

METHOD

Prior to beginning the study, the American Heart Association (AHA) was required to authorize the use of the instrument, which was copyrighted by Lippincott Williams & Wilkins publishing house, in the United States. After receiving correspondence with the reasons of the request and the study objectives, the publishing house agreed to have the instrument translated and adapted.

Likewise, the researcher obtained authorization from the Ethics Committee of School of Nursing - USP and from the institution where the data were collected.

The process of translation and transcultural adaptation of the In-hospital Utstein Style relied on the methodological determinations recommended by the literature⁽⁷⁻⁸⁾.

It can be said that the In-hospital Utstein Style is an objective instrument that allows, through the standardization of relevant CPA assistance information, to compare inter- and intra-hospital results, with the purpose of improving assistance quality⁽⁶⁾.

The development of instruments containing objective information easily allows the comparison of care results, decreasing subjectivity during data collection⁽⁹⁾.

Choosing an instrument created in another society and language poses the challenge of adapting it to another cultural reality to the researcher, through the processes of translation and transcultural adaptation.

An instrument with plenty of technical items facilitates the work of translation and adaptation. By considering that the translated version is equivalent to the original, the instrument is considered to be adapted⁽¹⁰⁻¹¹⁾.

The original instrument was translated by two independent translators, according to the literature recommendations. From these translations, the versions were compared and the next phase was the back-translation into English, the original language of the instrument.

The original and the retro-translated version were compared. Thus, the final instrument was obtained and submitted to a three-judge committee so that the comparative analysis to could be performed between the final version in Portuguese and the original version in English.

The judges analyzed the instrument, adding remarks and suggestions, which were considered to be pertinent. They were adopted with the purpose of making the instrument better adapted to Brazilian reality.

Therefore, after the suggested alterations, it was possible to achieve semantic, linguistic, cultural and conceptual equivalence, resulting in the final instrument in Portuguese.

The pre-test was carried out at an institution specialized in cardiology, where the data of the CPA moments were collected by professionals working at the institution.

RESULTS

Following analysis of a judge committee, word adequacy and colloquial expressions, the instrument for tests was obtained with the purpose of checking its applicability.

During the pre-test, it was not possible to apply the instrument to the result variables. For that, it is necessary to accompany patients for a whole year. It will be done in future studies.

The data were collected in intensive and diagnostic therapy units, as well as in emergency rooms. Only one event per patient was considered.

Since such events cannot be scheduled, a period of two months was determined to collect data with the purpose of testing the instrument. Overall, 20 individuals was the number of patients that had CPA in this period. Those who had already been admitted into the emergency CPA service were excluded.

The patients were hospitalized in critical units: 35.0% in coronary intensive therapy, 30.0% in emergency rooms, 25.0% in intensive therapy units and 10.0% had CPA in interventionist cardiology invasive exam units.

In this study, there was a higher number of CPA started by non-shockable rhythms, totaling 16 cases (80.0%). Of these, 13 (65.0%) were cases of pulseless electrical activity (PEA) and 3 (15.0%) of asystole. The events started by shockable rhythms (20.0%) were: 3 cases (15%) ventricular fibrillation (VF) and only 1 case (5.0%) by pulseless ventricular tachycardia (VT).

The immediate defibrillation occurred with two patients (10.0%), with time intervals of less than 1 minute between rhythm identification and shock, without the need of external chest compression.

The final instrument was seen to be applicable to our reality. It allows both the retrospective and prospective information collection.

DISCUSSION

Medical care monitoring contributes to the improvement of public policies and also individualized care. Many are the forms to obtain information about such care, and the development of instruments for information collection in health⁽⁹⁾ is one of them.

The Utstein Style Standard form is mostly made up of objective questions, which impair double interpretation during the process of translation and adaptation and the practical application.

During the application of the instrument, in the pre-test phase, we sought the same variables that international studies have discussed. The purpose was to check the applicability of the instrument in our reality and possible identification of failures in our routine.

The non-shockable arrest rhythms were the most observed in the study sample (AESP in 13.0% and asystolism in 3.0%), as observed by other researchers in literature, in applied studies of the hospital Utstein Style model⁽¹²⁻¹⁵⁾.

The identification of the shockable arrest rhythms and the fast defibrillation often re-establish spontaneous circulation without the need of further resuscitation maneuvers, increasing the chances of assistance success and discharge of these individuals^(12,16).

Thus, fast shock, when indicated, increases the possibility that individuals have their situation reestablished. Consequently, being aware of how fast a team is able to recognize and reverse such situation allows the enhancement of the CAP maneuvers.

It is then indispensable that a service knows how the team deals with these events, how fast it is and its efficiency. Authors report that the constitution of a specialized, well-trained team to assist CAP increases the number of patients who manage to obtain the return of spontaneous circulation (ROSC), and hospital discharge⁽¹⁴⁾.

The possibility of retrieving data and information for comparison by means of reporting the variables proposed by the guide, currently used by several researchers, allows the service to advance in the CAP assistance research.

The observation of multiple aspects involved in the CAP assistance, according to the Utstein Style guide, maintains the intervention standard at high levels. It increases the survival rates and quality of life⁽¹⁷⁾.

CAP assistance is performed dynamically and requires the professionals to be involved both in competence and agility whenever using their abilities. Hence, there is the possibility that the data related to the time intervals, during assistance, show deviations during collection⁽¹³⁻¹⁴⁾.

It is imperative to train healthcare teams to use the Utstein registers on a daily basis, becoming acquainted with the standardized terminology, and registering the healthcare assistance provided to the CAP event.

The information related to the moment when the event occurs is difficult to obtain retrospectively. The habit of describing the time intervals during assistance in details, in the patient records, is not part of our tradition.

An investment increase in personnel improvement, updating the teams with novel guidelines, and even investing

in the creation of specific CAP assistance, results in shorter assistance time intervals and higher number of individuals surviving CAP⁽¹³⁻¹⁴⁾.

CONCLUSION

The translation and adaptation process of the In-hospital Utstein Style into the Portuguese language originated an instrument applicable to our reality.

REFERENCES

1. Kouwenhoven WB, Jude RB, Knickerbocker GG. Closed chest massage. *JAMA*. 1960;173(10):1064-7.
2. Sousa RMC, Pedreira AR, Ribeiro PVC. Vítimas de trauma com ou sem traumatismo cranioencefálico após parada cardiorrespiratória. *Rev Bras Neurol*. 1999;35(1/2):1-10.
3. Abella BS, Alvarado JP, Beng HM, Edelson DP, Barry A, O'Hearn N, et al. Quality of cardiopulmonary resuscitation during In-Hospital cardiac arrest. *JAMA*. 2005;293(3):305-10.
4. Cummins RO, Ornato JP, Thies WH, Pepe PE. Improving survival from sudden cardiac arrest: "the chain of survival concept": a statement for health professionals from the 20 Advanced Cardiac Life Support Subcommittee and Emergency Cardiac Care Committee. *Circulation*. 1991;83(5):1832-47.
5. American Heart Association (AHA). Aspectos mais relevantes das diretrizes da American Heart Association sobre ressuscitação cardiopulmonar e atendimento cardiovascular de emergência. *Curr Emerg Cardiovasc Care*. 2005/2006;16(4):1-27.
6. Cummins RO, Chamberlain DA, Hazinski MF, Nadkani V, Hloek W, Kramer E, et al. Recommended guideline for uniform reporting and conducting research on in-hospital resuscitation: The In-Hospital Utstein Style. *Circulation*. 1997;95(8):2213-39.
7. Guillemin F, Bombardier C, Beaton D. Cross-cultural adaptation of health-related quality of life measures: literature review and proposed guideline. *J Clin Epidemiol*. 1993;46(12):1417-32.
8. Beaton D, Bombardier C, Guillemin F, Ferraz MB. Guidelines for the process of cross-cultural adaptation of self-report measures. *Spine*. 2000;25(24):3186-91.
9. McDowell I, Newell C. Measuring health: a guide to rating scales and questionnaires. 2nd ed. London: Oxford University Press; 1996.
10. Queijo AF. Tradução para o português e validação de um instrumento de medida de carga de trabalho de enfermagem em unidade de terapia intensiva: Nursing Activities Score (N.A.S.) [dissertação]. São Paulo: Escola de Enfermagem, Universidade de São Paulo; 2002.
11. Nunes B. Tradução para o português e validação de um instrumento de medida de gravidade na UTI: TISS –28 Therapeutic Intervention Scoring System [dissertação]. São Paulo: Escola de Enfermagem, Universidade de São Paulo; 2000.
12. Sandroni C, Ferro G, Santangelo S, Tortora F, Mitsura L, Cavallaro F, et al. In-hospital cardiac arrest: survival depends mainly on the effectiveness of the emergency response. *Resuscitation*. 2004;62(3):291-7.
13. Patrick A, Rankin N. The In-Hospital Utstein Style: use in reporting outcome from cardiac arrest in Middlemore Hospital 1995-1996. *Resuscitation*. 1998;36(2):91-4.
14. Henderson SO, Ballesteros D. Evaluation of a hospital-wide resuscitation team: does it increase survival for in-hospital cardiopulmonary arrest? *Resuscitation*. 2001;48(2):111-6.
15. Skrifvars MB, Saarinen K, Ikola K, Kuisma M. Improved survival after in-hospital cardiac arrest outside critical care áreas. *Acta Anaesthesiol Scand*. 2005;49(10):1534-9.
16. Spearpoint KJ, McLean CP, Zideman DA. Early defibrillation and chain of survival in In-hospital adult cardiac arrest: minute count. *Resuscitation*. 2000;44(3):165-9.
17. Gullo A. Cardiac arrest, chain of survival and Utstein

In order to take full advantage of the instrument potential, it is necessary to train the teams and inform them of the importance that the assistance registers have. It will cause the data to be used in studies related to personnel improvement, change of clinical procedures and increase in the rates of quality survival.