



Accuracy and completeness of records of adverse events through interface terminology

Precisión y exhaustividad del registro de eventos adversos mediante una terminología de interfase
Precisão e exaustividade no registro de eventos adversos usando uma terminologia de interface

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ABSTRACT

Objective: To determine what adverse events, including pressure ulcers, infection of the surgical site and aspiration pneumonia, nurses record in clinical histories, in terms of diagnostic accuracy and completeness, through ATIC. **Method:** Observational, descriptive, cross-sectional, multicenter study of 64 medical-surgical and semi-critical units of two university hospitals in Catalonia, Spain, during 2015. The diagnostic accuracy was assessed by means of the correspondence between the event declared in the Minimum Basic Data Set and the problem documented by the nurse. The record was considered complete when it contained the risk of the event, prescriptions of care and a record of the evolution. **Results:** The sample evaluated included 459 records. The accuracy results of pressure ulcers are highly correlated between the nursing diagnosis recorded and that declared in the Minimum Basic Data Set. The accuracy in surgical site infection is moderate, and aspiration resulting in pneumonia is very low. The completeness of results is remarkable, except for the risk of bronchoaspiration. **Conclusion:** The adverse event recorded by nurses with greatest accuracy is pressure ulcers.

DESCRIPTORS

Nursing Records; Pressure Ulcer; Surgical Wound Infection; Pneumonia Aspiration; Standardized Nursing Terminology; Patient Safety.

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INTRODUCTION

Patients admitted to acute care hospitals have a high level of complexity that makes it necessary to provide highly competent care to prevent complications and minimize adverse events (AEs)⁽¹⁾.

An AE is the negative consequence of care that causes unwanted injuries or a disease that could have been avoided⁽²⁾, causing serious complications and involving human suffering and increased financial costs⁽³⁾. The incidence of AEs associated with hospitalization is 9.2%, and 43.5% are considered avoidable⁽⁴⁾.

Among the factors identified that can cause an AE are human factors, environmental factors, equipment, care processes and information management⁽⁵⁾. Depending on the nature of the problem, AEs can be classified in relation to care, medication, nosocomial infections, procedures and/or diagnoses⁽⁶⁾.

In the different stages of the process of providing care, inadequate assessment at the onset of complications, insufficient monitoring⁽⁷⁾, missed care⁽⁸⁾ or the use of abstract languages⁽⁹⁾ have been identified as contributing factors of AEs.

Recent evidence indicates that the use of standardized language systems, such as the classification of the *North American Nursing Diagnosis Association* (NANDA)⁽¹⁰⁾, has significant limitations in practice when communicating care precisely. Inaccuracies and ambiguities have been described in diagnoses^(9,11-12). A lack of knowledge or understanding of the labels and a high level of abstraction of the concepts make it difficult for a nurse to communicate the actual situation of the patient or changes in their health status⁽¹³⁾.

The concepts that represent care must be understandable and meaningful to nurses such that diagnoses, interventions and outcomes are a reflection of the caregiving process. Of the different options of standardized nursing languages, ATIC presents the least amount of abstract concepts. ATIC⁽¹⁴⁾ is "a nursing interface terminology, multi-axial and concept-oriented, based on the study of natural language that nurses use in their daily practice and revised for its theoretical refinement". ATIC has been subjected to qualitative validation and analysis of its metric properties⁽¹⁵⁻¹⁶⁾. ATIC is routinely used in the electronic medical records (EMR) of multiple hospitals and public health centers in the public network of Catalonia (Spain) since 2007, generating more than 200,000 records of annual care episodes. ATIC has been recognized as a language system that supports the development and professional practice of nursing in its autonomous and multidisciplinary role by the General Nursing Council of Spain (*Consejo General de Enfermería de España*) and is currently being evaluated for recognition by other professional organizations at national and international levels.

Currently and despite the importance of documenting AEs to ensure continuity, quality and safety of care, minimal research on what nurses report in electronic health records through standardized nursing languages and the process of providing care has been reported. The scarce existing literature focuses on pressure ulcers as the only studied AE, revealing that the documented information on AEs is not accurate and incomplete⁽¹⁷⁻¹⁸⁾.

The main objective of this study was to evaluate the accuracy and completeness of the information on pressure ulcers (PUs), surgical site infection (SSI) and aspiration pneumonia (AP) recorded by nurses in the electronic medical record using ATIC terminology. The secondary objectives were to identify any differences in the AE records in terms of specific training and scope of care provided.

METHOD

This research utilizes an observational, descriptive, cross-sectional and multicenter design. The scope of study included 64 medical-surgical hospitalization units and semi-critical care units of two university tertiary hospitals of Catalonia (Spain). The data were obtained by reviewing the nursing electronic records between January and December 2015 of hospitalized patients. Included were episodes of discharged patients over 18 years of age who were not required to stay in the intensive care unit and had suffered one of the following AEs: PU, SSI and AP, as declared in the Minimum Basic Data Set (MBDS) of hospital care.

Outpatients with AEs after major surgeries and patients who had AEs at the time of admission were excluded.

The sample was calculated with a hypothetical frequency of 10% ($p=0.10$) of adverse events, assuming a confidence level of 95% ($\alpha=0.05$) and an accuracy of 5% ($i=0.05$), requiring 138 episodes of care for the analysis of each AE. The finite population correction formula $na=n/[1+(n/N)]$ determined that the minimum sample size was 153 episodes for each type of AE care, yielding a final sample of 459 episode records.

A non-probabilistic consecutive sampling technique was used.

A total of 459 records of episodes of patient care was evaluated. In these records, it was stated through the MBDS that the patient presented one of the studied AEs during the hospitalization period, corresponding to $n=153$ episodes of care for each of the following AEs: PU, SSI and AP. The distribution of episode records according to the hospitals was as follows:

Hospital A. PU ($n=90$), SSI ($n=91$) and AP ($n=102$)

Hospital B. PU ($n=63$), SSI ($n=62$) and AP ($n=51$)

The main variables of the study were as follows:

Diagnostic accuracy: correspondence between the record of the health problem documented by the nurse and the AE declared in the MBDS (Chart 1).

Chart 1 – Communication of the AE in the MBDS and in ATIC in two university hospitals in Catalonia, Spain, 2015.

Adverse Event reported in MBDS	ATIC Diagnostics
Pressure ulcer	Pressure ulcer grade I Pressure ulcer grade II Pressure ulcer grade III Pressure ulcer grade IV
Surgical site infection	Surgical wound * Contaminated surgical wound *
Aspiration Pneumonia Aspiration Pneumonitis	Bronchoaspiration ** Hypoxemia **

* With orientation of suspicion of infection recorded; presence of signs and symptoms, such as heat, pain, erythema, swelling and/or purulent discharge.

** With record of orientation of suspicion of pneumonia after an episode of aspiration; presence of fever and/or purulent secretions.

OPERATIONAL DEFINITIONS OF AE

PU: "A pressure ulcer is a localized injury to the skin and/or underlying tissue, usually over a bony prominence, as a result of pressure or pressure in combination with shear"⁽¹⁹⁾.

SSI: "The incisional superficial infection that may involve the skin and subcutaneous tissue, deep tissues such as fascial and muscle layers or organs and spaces that were manipulated during operation"⁽²⁰⁾.

AP: "Pneumonia with previous factors of aspiration and aspiration demonstrated or suspected"⁽²¹⁾.

Completeness of the record: relevant and complete information. The record was considered complete when the following criteria were met:

1. The problem of risk in the care plan was documented from comprehensive and focalized assessment through systematized instruments or standardized scales.

2. Care prescriptions consistent with the diagnosis were recorded according to clinical practice guidelines and international standards⁽¹⁹⁻²¹⁾ in relation to the following aspects:

PU: prevention, nutritional support, repositioning and mobilization, pain, healing, health education, and psychosocial support;

SSI: nutritional support, pain, healing, health education, and psychosocial support; and

AP: clinical control, aspiration of secretions, respiratory exercises, early mobilization, nutritional support, and oral hygiene and health education.

3. The evolution of care in relation to the AE was recorded using a structured format (preformulated templates) or progress notes.

THE SECONDARY VARIABLES INCLUDED THE FOLLOWING:

Methodological training: clinical sessions of care included meetings between members of a nursing team in relation to the analysis of an episode of care in a specific clinical context and with an analytical, evaluative and reflective purpose based on the methodology and the ATIC controlled vocabulary. The data of this variable were obtained from the episode records of hospital A, a hospital where these sessions were regularly held.

Area of provision of care: the location where the AE occurs (medical or surgical area).

The research project was performed with approval by the Clinical Research Ethics Committees of the two hospitals involved (PRO34/15 CEIC 1495). The personal data of both patients and professionals were used in compliance with the regulations in effect in our country regarding the confidentiality of the data. Given the observational, descriptive and retrospective nature of the present study, the Ethics Committees authorized this study to be performed without the need of explicit informed consent.

Data were collected in an Excel spreadsheet designed with the study variables necessary for sample description, and analysis was performed using the statistical software SPSS (version 18.0, SPSS Inc. Chicago, Illinois). The analysis strategy included descriptive statistics to identify frequencies, percentages, means and standard deviations. The Chi-square test was used for categorical variables, and the Fisher exact test for categorical and quantitative variables. The statistical significance for was established as bilateral $p < 0.05$.

RESULTS

The mean age of the patients with PUs was 72.8 years. The average stay was 38.7 days. Most patients (83%) were hospitalized in medical units. Of the episodes of patients in whom SSIs was identified as an AE, hospitalization occurred mostly in surgical areas (121, 79.1%). These patients had a mean age of 64 years and an average stay of 33.2 days. In the episodes of patients who had aspiration pneumonia, 117 patients were hospitalized in medical areas (76.5%) These patients had an average age of 72.9 years and an average stay of 29.6 days. Other data, such as sex and type of admission, are presented in Table 1.

Table 1 – Characteristics of the sample of two university hospitals in Catalonia, Spain, 2015.

		PU (n=153)		SSI (n=153)		AP (n=153)	
		n	%	n	%	n	%
Sex	Men	71	46.4	100	65.4	93	60.8
	Women	82	53.6	53	34.6	60	39.2
Type of admission	Urgent	112	73.2	29	19	126	82.4
	Scheduled	41	26.8	124	81	27	17.6
Hospitalization area	Medical	127	83	32	20.9	117	76.5
	Surgical	26	17	121	79.1	36	23.5
Age M (SD)		72.8 (15.3)		64 (15.7)		72.9 (14.3)	
Stay M (SD)		38.7 (49)		33.2 (21.7)		29.6 (24.5)	

M – mean; SD – standard deviation.

DIAGNOSTIC ACCURACY

In the records of the episodes of care in which an AE of a PU was declared (n=153), the nurses recorded a total of 157 diagnoses in correspondence with the AE. The most prevalent diagnoses included Pressure injury grade II (39.2%) and Pressure injury grade III (35.3%).

In the episodes of care corresponding to an SSI (n=153), the nurses recorded a total of 75 diagnoses related to the AE, including 57 (37.2%) records of a diagnosis of Surgical wound with infection specifications and 18 (11.7%) records with a diagnosis of Contaminated surgical wound.

In relation to the records regarding AP (n=153), nurses recorded the diagnosis of hypoxemia in 24.8% of cases and bronchoaspiration in 2.6%. (Table 2)

Table 2 – Characteristics of the diagnostic accuracy in the communication of the AEs in two university hospitals in Catalonia, Spain, 2015.

AE	ATIC diagnostics	n	%
PU (n=153)	Pressure injury grade I	25	16.6
	Pressure injury grade II	60	39.2
	Pressure injury grade III	54	35.3
	Pressure injury grade IV	18	11.7
SSI (n=153)	Surgical wound*	57	37.2
	Contaminated surgical wound *	18	11.7
AP (n=153)	Hypoxemia **	38	24.8
	Bronchoaspiration **	4	2.6

* With orientation of suspected signs and symptoms of infection include heat, pain, erythema, swelling and/or purulent discharge.

** With orientation of suspected pneumonia after an episode of aspiration; fever and/or purulent secretions.

COMPLETENESS

In the AE records of care of patients in whom PUs were reported, the risk of PUs was identified in 149 (97.4%) episodes of care. The nurses recorded an average of 2.1 prescriptions for diagnostic care related to the PU. The most recorded therapy prescriptions were those referring to PU, with complete healing noted in 128 (83.6%) of the episodes of care and topical healing noted in 59 (38.5%). The evolution of AE care was recorded in 92 episodes of care, with the highest record being through progress notes in 57 episodes (37.2%).

In the care episodes of patients in whom SSI was determined, the risk was identified in the care plan in 150 (98%) of the care episodes. The mean of care prescriptions consistent with the diagnosis was 1.3, and the prescriptions most indicated by the nurses were also related to healing. The most frequent prescriptions were topical and complete healing in 63 (41.2%) and 29 (19%) of the episodes of care, respectively. The nurses recorded the evolution of the care of this AE in 132 episodes of care using the progress notes in 80 (52.3%) episodes of care.

In the records of the episodes of care pertaining to the AE of AP, the nurses identified the risk in the care plan of only 21 (13.7%) of the episodes of care. The average number of prescriptions for diagnostic care was 1.2 per episode of care. The nurses mostly prescribed care related to the administration of oxygen in 42 (27.4%) episodes of care and related to the clinical control of AEs as a control of the respiratory pattern in 36 (23.5%) of the episodes. In this AE, the evolution of care was recorded in 122 episodes of care, and the evolution of care was recorded in higher number in a preformulated template for 71 (46.4%) of the care episodes (Table 3).

Table 3 – Characteristics of completeness in the communication of the AEs in two university hospitals in Catalonia, Spain, 2015.

AE	Completeness characteristics	n	%
PU (n=153)	Identification of the risk	149	97.4
	Prescriptions consistent with the diagnosis M (SD)	2.1	(1.9)
	Evolution of care		
	Preformulated template	35	22.8
	Progress notes	57	37.2
SSI (n=153)	Identification of the risk	150	98
	Prescriptions consistent with the diagnosis M (SD)	1.3	(1.4)
	Evolution of care		
	Preformulated template	52	34
	Progress notes	80	52.3
AP (n=153)	Identification of the risk	21	13.7
	Prescriptions consistent with the diagnosis M (SD)	1.2	(1.8)
	Evolution of care		
	Preformulated template	71	46.4
	Progress notes	51	33.3

M – mean; SD – standard deviation.

DIFFERENCES IN AE RECORDING RELATIVE TO METHODOLOGICAL TRAINING

Statistically significant differences were noted in the communication of diagnoses of PUs (74.2% recorded by nurses who received methodological training vs. 25.8% who did not receive training), with a p value<0.05, SSIs (67.8% vs. 22.2%), with a p value<0.05, and AP (31.8% vs. 16.3%), with a p value=0.03. Statistically significant differences in prescriptions of care were also observed in the records, with means for PU-related prescriptions of 2.5 vs. 1.5, with a p value=0.01, means for SSI-related prescriptions of 1.9 vs. 0.4, with a p value<0.05, and means for AP-related prescriptions of 1.4 vs. 0.7, with a p value=0.02. In the record of the evolution of the care of the AEs evaluated, statistically significant differences are noted in notes recorded using the preformulated template and progress notes, with a p value <0.05 for all AEs except AP. In this event, although there were no statistically significant differences (26.4% vs. 48.8%, p value=0.07), it was observed that nurses who did not receive specific training recorded the evolution of care more frequently through progress notes than did nurses who received methodological training.

DIFFERENCES IN THE AE RECORDS REGARDING THE AREA OF PROVISION OF CARE

No statistically significant differences were observed in the record of the care episodes of any of the adverse events evaluated in relation to whether the patient was hospitalized in a medical area or a surgical area except for the number of

care prescriptions recorded by the nurses in the AP event. For these events, we found statistical significant differences regarding the number of care prescriptions recorded by

nurses in the surgical area which was significantly increased compared with those recorded by nurses in the medical area (1 vs. 1.8; p value=0.03) (Table 4).

Table 4 – Differences in the communication of the AE regarding care training methodology or the area of provision of care in two university hospitals in Catalonia, Spain, 2015.

Communication of the AE	Specific Training					Area of Care					
	Yes		No		pV	Medical U.		Surgical U.		pV	
	n	%	n	%		n	%	n	%		
PU n=153	Diagnosis	66	74.2	23	25.8	0.00	78	87.6	11	12.4	0.08
	Identification of the risk	88	97.8	61	96.8	1.00	123	96.9	26	100	1
	Prescriptions M (SD)	2.5	(1.9)	1.5	(1.6)	0.01	2.2	(1.9)	1.6	(1.8)	0.08
	Evolution templates	37	58.7	15	16.7	0.00	42	33.1	10	38.9	0.37
	Evolution progress notes	63	70	9	14.3	0.00	58	45.7	14	53.8	0.29
SSI n= 153	Diagnosis	61	67.8	14	22.2	0.00	18	24	57	76	0.42
	Identification of the risk	88	97.8	62	94.8	1.00	38	100	112	97.4	0.57
	Prescriptions M (SD)	1.9	(1.3)	0.4	(0.9)	0.00	1.6	(1.4)	1.2	(1.3)	0.120
	Evolution templates	36	40	16	25.4	0.04	6	28.6	46	35.1	0.37
	Evolution progress notes	60	66.7	20	32.3	0.00	70	53.4	10	47.6	0.39
AP n=153	Diagnosis	35	31.8	7	16.3	0.03	30	25.6	12	33.3	0.24
	Identification of the risk	33	30	4	9.3	0.05	28	23.9	9	25	0.52
	Prescriptions M (SD)	1.4	(1.9)	0.7	(1.5)	0.02	1	(1.7)	1.8	(2.1)	0.03
	Evolution templates	62	56.4	9	20.9	0.00	55	47	16	44.4	0.47
	Evolution progress notes	29	26.4	21	48.8	0.07	37	31.6	13	36.1	0.37

M – mean; SD – standard deviation.

DISCUSSION

The results of this study suggest that the diagnostic accuracy of the nurses in terms of PU is high, and the completeness of the related records is remarkable. The diagnostic accuracy in SSI is moderate despite the completeness of the record in relation to risk. On the other hand, although diagnostic concepts for specific interventions for the prevention and approach of AP are included in ATIC terminology, the nursing diagnostic accuracy and the completeness in relation to the identification of risk are low.

DIAGNOSTIC ACCURACY

A discrepancy is noted between the number of health problems documented by the nurses in the electronic records and those declared in the MBDS. These differences are also reflected in the literature, which reveals that the communication of an adverse event varies depending on the professional who communicates it, the nature of the event, and the degree of severity⁽²²⁾.

The integration of nursing languages in electronic records provides nurses the opportunity to improve the safety of care by guaranteeing effective communication. However, it is necessary that the concepts related to care are presented in an unequivocal manner. In the present investigation, it is evident that compared with international nursing diagnoses classifications, such as NANDA, questioned for the high levels of

abstraction of their concepts^(9,12), the ATIC terminology offers nurses concepts with different levels of specificity that allow the problems, situations, or real or risk responses to be accurately reflected⁽¹⁴⁾. In this study, to communicate the PU and SSI events, the nurses used the ATIC diagnoses of “Pressure ulcer grade III”, “Pressure ulcer grade IV”, “Surgical wound”, and “Contaminated surgical wound” that correspond to a more abstract conceptual equivalent, such as “Impairment of tissue integrity”, in NANDA. Standardized nursing languages must ensure that the information generated is accurate and can be retrieved, shared and reused, thereby providing understanding and knowledge regarding the process of providing care.

In relation to PU events, the results of this investigation coincide with other studies that demonstrate that nurses report an increased number of PUs (102.8%) compared with those who communicate using the MBDS⁽²³⁾. These results differ in the evaluation of SSIs and AP, given that their identification as a health problem in the electronic record is low (SSI (48.9%) and AP (27.4%)) despite the fact that ATIC offers diagnostic concepts with different levels of specificity. The causes of this poor recording may be due to a lack of expertise in the recognition of the event⁽²⁴⁾, affecting the diagnostic capacity of the nurse, or fear that recording a particular clinical judgement may result in being interpreted as negligence in care⁽²⁵⁾.

COMPLETENESS

The identification of the risk of the AEs in the record is imbalanced. In episodes of PU and SSI care, the risk is identified in practically all episodes of care. This finding may be related to the existence of a decision-making support process that does not occur in AP, which depends exclusively on the nurses' critical reasoning ability for the identification of AP risk.

All studied AEs are communicated through care prescriptions, with PUs representing the event with the highest record of prescriptions (mean=2.1). This fact contrasts with an investigation on the completeness of PU records in the electronic medical record that indicated that 73% of nurses did not use standardized language and documented the nurses' interventions in free text⁽²⁶⁾. According to the authors, standardized expressions were imprecise and moved away from the language commonly used by nurses. In the present study, the prescriptions of recorded care to communicate the evaluated events, including PUs, SSIs and AP, are consistent with the diagnoses identified and in accordance with the clinical practice guidelines and international standards⁽¹⁹⁻²¹⁾. However, the prescriptions of recorded care are insufficient with respect to aspects, such as nutritional support and health education, with AP also lacking care related to oral hygiene and early mobilization.

The evolution of care is not recorded in a manner consistent with the health problems identified. In other words, in the episodes of PU care, the evolution of the care was recorded in only 60% of the episodes in which the health problem was diagnosed. In contrast, in the other events, follow-up care was recorded at a higher percentage compared with recording health problems of both SSIs (86.3%) and AP (79.7%). On the other hand, when nurses must provide specific descriptions, such as characteristics of the injured tissue or the exudate, they use free text more often⁽²⁶⁾. This situation in our research is not only limited to PU events but also SSIs.

RESUMEN

Objetivo: Determinar qué registran las enfermeras en la historia clínica mediante ATIC, sobre los eventos adversos: úlceras por presión, infección del sitio quirúrgico y aspiración con resultado de neumonía, en términos de precisión diagnóstica y exhaustividad. **Método:** Estudio observacional, descriptivo, transversal, y multicéntrico de 64 unidades médico-quirúrgicas y semicríticos de dos hospitales universitarios de Cataluña, España, durante el año 2015. La precisión diagnóstica se evaluó mediante la correspondencia entre el evento declarado en el Conjunto Mínimo Básico de Datos y el problema documentado por la enfermera. La exhaustividad se consideró cuando el registro contenía el riesgo del evento, prescripciones de cuidados y registro de la evolución. **Resultados:** La muestra evaluada fue de 459 registros. Los resultados de precisión de úlceras por presión muestran una elevada correspondencia entre el diagnóstico enfermero registrado y el declarado en el Conjunto Mínimo Básico de Datos. La precisión en la infección del sitio quirúrgico es moderada, y la aspiración con resultado de neumonía muy baja. Los resultados de exhaustividad son notables, excepto el riesgo de broncoaspiración. **Conclusión:** El evento adverso que registran las enfermeras con mayor precisión es la úlcera por presión.

DESCRIPTORES

Registros de Enfermería; Úlcera por Presión; Infección de la Herida Quirúrgica; Pnevmonía por Aspiración; Terminología Normalizada de Enfermería; Seguridad del Paciente.

RESUMO

Objetivo: Determinar quais informações são registradas pelas enfermeiras nos registros eletrônicos por meio da terminologia ATIC, sobre os eventos adversos: úlceras de pressão, infecção de sítio cirúrgico e aspiração com resultado de pneumonia, em termos de precisão diagnóstica e de exaustividade. **Método:** Estudo observacional, descritivo, transversal e multicêntrico de 64 unidades médico cirúrgicas e semicríticas de dois hospitais universitários da Catalunha, Espanha, durante o ano 2015. A precisão diagnóstica foi avaliada pela correspondência entre o evento indicado no Conjunto Mínimo Básico de Dados e o registro de problemas documentados pela enfermeira. A exaustividade foi considerada quando o registro continha a identificação do risco do evento, as prescrições de cuidados e o registro da evolução. **Resultados:** A amostra avaliada foi de 459 registros. Os resultados em termos de precisão de úlceras de pressão mostram uma alta correlação entre o diagnóstico de enfermagem registrado e o diagnóstico declarado no Conjunto Mínimo Básico de Dados. A precisão na infecção de sítio cirúrgico é moderada, e a aspiração com resultado de pneumonia é muito baixa. Os resultados de exaustividade são notáveis, salvo o risco de broncoaspiração. **Conclusão:** O evento adverso que as enfermeiras registram com maior precisão é a úlcera de pressão.

It is important to stress to nurses the importance of recording care following the process as a backbone of clinical reasoning and as a guide to improve the quality and safety of care⁽¹⁸⁾.

This research provides evidence in favor of training strategies improving the quality of records⁽²⁷⁾, as it suggests that a specific educational intervention in methodology significantly increases the diagnostic accuracy and completeness in the records of AEs. On the other hand, no significant differences were observed in the communication of the events in relation to the hospitalization area (medical or surgical).

CONCLUSION

Although AEs associated with hospitalization are a major safety issue, scarce research is available which evaluate what information nurses record through the process of providing care and standardized nursing languages.

This study reveals a discrepancy between the recording of health problems documented by nurses and the AEs reported in the MBDS. Nurses record PU events with high diagnostic accuracy, but the accuracy decreases with recording SSIs and AP.

Communication regarding AEs for the identification of health risks is complete when support elements are present for decision making and care prescriptions. Of note, the prescriptions of care are comprehensive. It is advisable to establish strategies that will improve recording the evolution of care using structured information that describes the provision of care.

Methodological training improves the diagnostic accuracy and completeness in the communication regarding AEs. It is essential to complement this training with actions that reinforce professional competence and critical thinking in the identification of AEs. In addition, communication should be encouraged by following the process of care provision as a guide to improve the quality and safety of care.

DESCRITORES

Registros de Enfermagem; Lesão por Pressão; Infecção da Ferida Cirúrgica; Pneumonia Aspirativa; Terminologia Padronizada em Enfermagem; Segurança do Paciente.

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