



Ongoing nursing training influence on the completion of electronic pressure ulcer records



María López^{a,d,*}, José María Jiménez^{b,d,*}, Isabel Peña^c, María José Cao^d, María Simarro^{e,d}, María José Castro^d

^a GACELA Care Management Department, Hospital Clínico Universitario de Valladolid, Valladolid, Spain

^b Hospital Universitario Río Hortega, Valladolid, Spain

^c Research of Nursing Care Department, Hospital Clínico Universitario de Valladolid, Valladolid, Spain

^d Faculty of Nursing, Universidad de Valladolid, Spain

^e Research Instituto Biología y Genética Molecular IBGM, Universidad de Valladolid, Valladolid, Spain

ARTICLE INFO

Article history:

Received 17 August 2016

Received in revised form 26 January 2017

Accepted 8 February 2017

Available online xxxx

Keywords:

Electronic health records

Pressure ulcer

Nursing care and education

Continuing

ABSTRACT

Introduction: Pressure ulcer (PU) care in nursing at the Hospital Clínico Universitario de Valladolid (HCUV) in Spain includes basic care and its registration through the electronic GACELA Care tool. To assess and evaluate the nursing intervention in PU evolution, a training programme was carried out to unify criteria on PU assessment, treatment, evaluation and monitoring.

Objective: To assess the influence of training on the completion of PU records in the GACELA Care application, and identify the level of satisfaction of the nurses after its use.

Materials and Methods: A quasi-experimental prospective study consisting of a specific training programme assessed pre- and post-training was carried out on the records of PU documentation at the HCUV. The PU records included in the study were collected using the electronic nursing healthcare management computer tool GACELA Care and belonged to patients admitted for >48 h, excluding venous, arterial and stage I PUs. The pre-training sample consisted of 65 records collected between 1 April and 30 June 2014, and there were 57 post-training records, completed from 1 January to 31 March 2015. The training programme consisted of thirty-minute theoretical and practice training sessions. The study variables were ulcer type, location, stage, length and diameter, perilesional skin, cure type, products used and cure frequency, in addition to the number of actions taken in the records in correlation to the days of hospitalisation. To identify the nurses' opinions, a satisfaction survey about the management platform of ongoing Castilla y León training was administered. Results: The variations from the pre- to the post-training PU-sample completion rates were the following: from 23% to 40% for PU diameter, from 11% to 38% for PU length and from 57% to 79% for perilesional skin condition records. There was also a significant increase in the number of form updates after the training activity. The nurses' level of satisfaction with the training activity showed a positive outcome, with an average score of 8.84 over 10.

Conclusion: The training activity improved PU record completion significantly and was deemed positive by the nurses, mainly for its applicability in clinical practice.

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1. Introduction

According to the Nursing Interventions Classification, “a nursing intervention is any treatment based upon clinical judgement and knowledge that a nurse performs to enhance patient/client outcomes” (Bulechek et al., 2013). Skills, experience and specific knowledge facilitate the implementation of a correct intervention after carrying out patient assessment to achieve the established objectives (Alfaro-Lefevre, 2009).

It is important for all the activities of the care process to be documented, not only to abide by the rules concerning the rights and

obligations with regard to clinical information and documentation (Boletín Oficial del Estado, 2002), but for reasons related to care quality, patient safety and development of the scientific profession. The absence of data or the lack of specific information makes it difficult to see the overall picture of health work which has an impact on care quality and safety (Gunningberg et al., 2009). Accrediting institutions such as the Joint Commission on Accreditation of Healthcare Organizations establish that Nursing records must meet basic standards and have to be real, exact, complete, updated and organised to be considered quality records (Joint Commission on Accreditation of Healthcare Organizations (JCAHO), 2009).

The appearance of pressure ulcers (PUs) is common complication in hospitalised patients. This type of lesion is linked to a high rates of morbidity and mortality, infection and economic costs (Vollman, 2010). Nurses play an important role in preventing and handling PUs; their

* Corresponding authors at: Avda Ramón y Cajal, n°7, 47005 Valladolid, Spain.

E-mail addresses: maria.lopez.vallecillo@uva.es (M. López), jozejimenez@enf.uva.es (J.M. Jiménez).

interventions, together with records of ulcer evolution, make it possible to carry out strategies that facilitate evidence-based work in nursing healthcare (Tayyib et al., 2016). Implementing ongoing training sessions on classifying, handling and registering pressure ulcers would promote improvement in the quality of nursing healthcare (Bredesen et al., 2016).

2. Background

Within the patient's safety, strategy indicators of the Spanish National Health System are those that identify the risk of PU appearance and its prevalence (Sociedad española de calidad asistencial, 2012). In Spain, the prevalence of hospital PUs in 2013 was 7%–8%, with 65% of these injuries being nosocomial (Pancorbo-Hidalgo et al., 2014). The Nosocomial Infections Prevalence Study in Spain (EPINE) identified the prevalence as 6% in 2014 at the Hospital Clínico Universitario de Valladolid (HCUV) (Sociedad Española de Medicina Preventiva, Salud Pública e Higiene y ECDC, 2014). Although PUs were not historically considered an important problem in Spanish Public Health, in economic terms, hospital PU treatment represents a total annual cost of 461 million euros, out of which 15% is spent on bandages and related supplies, 19% on nursing time and 45% on hospital stay (Soldevilla-Agreda et al., 2007).

The healing process of the PU is long and complex (Soldevilla-Agreda and Torra-Bou, 2004) and healing speed is the main indicator of treatment effectiveness. It is necessary to use a monitoring device that helps observe ulcer evolution, assesses the effectiveness of the established medical care and enables its continuity. In an attempt to unify the minimum set of data that a PU report should contain, the National Group for the Study and Advice of Pressure Ulcers has published a position paper thereon, which specifies the items that must be included for their assessment, such as injury size and depth, wound edge characteristics, the wound bed of the injury, exudation and signs of infection (Ibars-Moncasi et al., 2012). Another way of monitoring ulcer changes is the PUSH (Pressure Ulcer Scale for Healing) scale validated by the National Pressure Ulcer Advisory Panel; it includes parameters such as injury size (length and width), amount of exudation and injury wound bed tissue type to evaluate healing status (National Pressure Ulcer Advisory Panel, 2015). The purpose of its design was to analyse the results of the treatment applied in tackling the ulcer and its reassessment (Restrepo-Medrano and Verdú, 2011). This monitoring enables effective communication among the nurses in charge of the care, helping them to choose the most adequate care intervention objectively (Li and Korniewicz, 2013).

In the HCUV, individual PU records have been maintained using the online nursing care management computer programme GACELA Care (GACELA being the acronym for the programme title in Spanish), Version 1.8-09, since 2009. This application, whose acronym stems from the Spanish for encompasses ulcer assessment, treatment and monitoring and is a part of the electronic patient history in the Castilla y León region health system. GACELA Care makes it possible to work on nursing methods, given that it integrates the various phases of the nursing process. Using a virtual map in which the patients admitted in each hospital unit are presented, specific icons allow access to nursing care evolution, clinical variables, patient registers, evaluation based on Virginia Henderson's 14 basic needs and healthcare plans. Computerising the nursing work records promotes standardisation and obtaining complete documents. The GACELA Care nursing registers make nurses' work and, in turn, the nursing profession, visible (Rubio Sevilla, 2014).

Scanning clinical histories through GACELA Care facilitates systematisation and organisation in data collection, as well as promoting interprofessional communication, decision making and application of evidence-based nursing (Li and Korniewicz, 2013). Electronic records are consequently an important part of improving the nursing process to achieve greater record use (Pokorski et al., 2009).

3. Literature

There are several studies analysing Nursing documentation of PUs in hospitals that lead to the conclusion that such documentation is of low quality and that PU records will have to be completed correctly to be able to make good use of the patient's electronic records in the future (Alexander, 2015; Gunningberg and Ehrenberg, 2004). It is important to highlight that incomplete documentation is of no use in assessing care quality (Thoroddsen et al., 2013) and the records cannot be used as a form ulcer notification (Sebastián-Viana et al., 2016). Detecting documents with these deficiencies has led to the emergence of research areas focusing on evaluating existing standardised records and implementing improvements (Törnvall et al., 2009).

Identifying the level of PU application form completion in the HCUV was carried out in May 2014 through the EPINE research. This study detected 43 PU records, in which only 7 included ulcer size, information essential to assess ulcer status and progress objectively. Several studies such as that carried out by Li and Korniewicz (2013) associate the lack of records –both in digital and paper format– concerning ulcer size with the lack of specific knowledge in the area. However, for O'Brien and Cowman (2011), time constraints and limited nursing staff are boundaries that hinder the development of a good document.

Ongoing training allows health organisations to maintain their professionals' ability to adapt to changes (Pineda Herrero, 2007), as well as to improve their competence in knowledge, skills and attitudes and foster adequate professional criteria (Beamud Lagos et al., 2004). Bearing this in mind, a face-to-face training activity was designed in contrast to the e-learning methodology because, as Beeckman points out, it has been proven equally effective in the case of professionals (Beeckman et al., 2008). The purpose of this training programme was to unify assessment, treatment, evaluation and monitoring criteria to improve the quality PU application form completion. In addition, as specified in the Registered Nurses' Association of Ontario guidelines on "Assessment and Management of Stage I through IV Pressure Ulcers," it was designed to raise awareness of the "need for precise, coherent and uniform assessment, description and documentation of the degree of tissue deterioration" (RNAO, 2007).

The purpose of this study was to assess the influence of training on how to complete electronic PU records in the GACELA Care programme. The study was specifically designed to analyse variations in data completion of ulcer characteristics and treatment, to determine the development of the level of PU monitoring and, finally, to identify the nurses' level of satisfaction with the training programme.

This article provides information on electronic PU records and how training improves their completion, adapted to Good Clinical Practice Guidelines recommendations. Most PU studies focus on ulcer care and not on the area of data registers, whose correct completion makes it possible to reflect the nursing process and measure the impact of planned nursing care.

4. Methods

4.1. Study Design

This was a quasi-experimental prospective study consisting of a specific training programme, assessed with a pre- and post-training analysis of the records of PU documentation of the GACELA Care computer programme at the HCUV.

The PU record consists of four main areas: record data (nurse's name and data entry date), severity data or ulcer characteristics, monitoring data and ulcer remission. The records mainly collect information on the date and place of PU appearance, PU type, location, stage, diameter and length, perilesional skin, edges, discharge, infection symptoms, type of cure, supplies, frequency. They also make it possible to perform all necessary proceedings to monitor the ulcer. It is mandatory to indicate the place of PU emergence, PU type and PU stage. The length and

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