

**XXXI CICLO** - Anno Accademico 2017/2018

**Dottorando:** Dott. Marco Artico

**Tutor:** Prof.ssa Maria Grazia De Marinis

**Titolo tesi:** Pressure injuries in palliative care

## **ABSTRACT**

### Background

People with advanced illness are the population cohort with the highest overall presence of all wound classes and, in particular, pressure injuries are those with the highest prevalence in palliative care patients. The development of pressure injuries is associated with a negative impact on patients' quality of life.

Although pressure injuries are one of the most-studied health problems, there is surprisingly scarce evidence on the prevalence and incidence of pressure injuries in palliative care settings and on the factors associated with their development.

Despite the constantly worsening conditions of palliative care patients, the preferred aim of the palliative care team is pressure injury healing. When this becomes unrealistic, the goal shifts toward achieving maintenance and stabilization, avoiding deterioration with a main focus on wound palliation. Specific data about the course of pressure injuries in the home palliative care setting and the factors associated with the different management goals are lacking.

There is a lively debate concerning the inevitability of pressure injuries during the end of life phase. In order to be able to estimate the survival time with more accuracy and objectivity, more prediction tools based on studies comparing independent prognostic indicators are needed.

### Objectives

This thesis aimed to analyze the problem of pressure injuries in palliative care patients, with the aim of contributing to the scarce knowledge base of this phenomenon.

In particular, it aimed at documenting the point prevalence at admission and the cumulative incidence of pressure injuries in terminally ill patients and at analyzing the patients' and caregivers' characteristics associated with their occurrence in two different palliative care settings, home palliative care and hospice. Furthermore, the study aimed at describing the course of healing for pressure injuries in a home palliative care setting according to different end-points, and to explore patient and caregiver characteristics and specific care activities associated with their achievement.

### Methods

Two four-year retrospective chart reviews were conducted. The clinical electronic records of all patients with advanced illnesses and a life expectancy lower than 6 months, admitted to a home palliative care service of the 'Palliative Care Network' in Veneto, a north-eastern region of Italy from September 2012 to December 2016 were considered.

A multicentre prospective longitudinal observational study, including 13 hospices located throughout the Italian territory, divided into 3 geographical areas (north, centre and south/islands) is still ongoing. Each geographical area will include at least 280 subjects. The uploading of data will be supported by a web-based platform developed specifically for this purpose and placed on a server that guarantees security and anonymity.

## Results

The prevalence and incidence rates of pressure injuries in patients in home palliative care were 13.1% and 13.0% respectively. The logistic regression models showed Body Mass Index (BMI), Braden score at risk, Karnofsky Performance Status (KPS) index <30, patients' female gender, patients' age >70 and >1 caregiver at home, as the dichotomous variables predictors of presenting with a pressure injury at time of admission and during home palliative care.

The proportion of healed pressure injuries was 24.4%. Of the injuries not healed, one third was in a maintenance phase, while almost two third were in a process of deterioration. BMI, artificial nutrition, and age < 70 years emerged as predictive factors of pressure injury complete healing. Artificial nutrition, age, male caregiver and spouse were factors significantly associated with a more rapid pressure injury healing. Continuous deep sedation was a predictive factor for pressure injury deterioration and significantly associated with a more rapid worsening.

## Conclusion

The high rate of pressure injuries prevalence suggests the need to include this care issue among the main outcomes to pursue during home palliative care. The accuracy of BMI, Braden Scale and KPS in predicting the pressure injuries risk is confirmed. Therefore, they appear as essential tools, in combination with nurses' clinical judgment, for a structured approach to pressure injuries prevention. The results of this thesis affirm the pivotal role played by home caregivers in achieving the pressure injuries' objectives. More research is needed to further explore home caregivers' characteristics and attitudes associated with the occurrence of pressure injuries, and the relations between their prevention care activities and gender-related patient's needs.

Pressure injury healing emerged as a realistic aim in home palliative care, particularly for injuries not exceeding Stage II occurring at least two weeks before death. When the complete healing of a pressure injury is no longer achievable, an intermediate goal to be considered in palliative care is the maintenance of the injury, with the purpose of avoiding its deterioration. Especially for the early and central phases of the palliative care trajectory, the beneficial action of the presence of a urinary catheter or ostomy and the provision of artificial nutrition (parenteral or enteral), respectively on moisture and nutritional status, was confirmed.

As regards palliative care patients in the end-of-life phase, the next step could be to evaluate unavoidable pressure injuries as a possible end of life prognostic indicator. This would help the palliative care professionals for planning the activities aimed at accompanying the patients and their families during the remaining period of life.