

Case interview

Please prepare a presentation based on the scenario presented below. We would like to focus on your skills in analytics, communication, and problem-solving methodology. Put code and results in your public git repository and send a link to ernst.ahlberg@molnlycke.com AND jessica.martin@molnlycke.com

Scenario

One of the competitors has just published a study and two corresponding datasets. Our team is called upon to conduct a rapid analytic for the business stakeholders, who have read the abstract already and hope to gain additional insight from the data. You are expected to conduct your own analysis, visualize your findings, provide concise interpretation, and identify potential opportunities for the business. In addition, formulate three other questions that could be interesting from a machine learning perspective using this data. Is the dataset sufficient, if not what else would you need?

Data

[Data for: Multicenter randomized controlled trial comparing the effectiveness and safety of hydrocellular and hydrocolloid dressings for treatment of stage II pressure ulcers in patients at primary and long-term care institutions. - Mendeley Data](#)

Abstract

Title: Multicentre randomized controlled trial comparing the effectiveness and safety of hydrocellular and hydrocolloid dressings for treatment of category II pressure ulcers in patients at primary and long-term care institutions

Background: Pressure ulcers are a major burden to patients because they affect health, well-being, and health-related quality of life. Thus, prevention and early treatment of pressure ulcers is a major challenge for health care professionals.

Objective: To compare the efficacy of hydrocellular and hydrocolloid dressings after 8 weeks of treatment of category II pressure ulcers.

Design: A prospective multicentre clinical trial with blinded outcome assessors.

Participants and settings: Adult patients with category II pressure ulcers from primary and long-term care institutions on Majorca Island.

Methods: Category II ulcers were treated with ALLEVYN Adhesive® dressings or VARIHESIVE® GEL CONTROL dressings, with the primary outcome being healing of the ulcers in 8 weeks. Blinded confirmation of ulcer healing was performed by a treatment-group assessment committee. Estimates of cumulative survival probabilities were determined using the Kaplan-Meier method and analyses of effectiveness were performed using the chi-squared test.

Results: A total of 169 patients with pressure ulcers were enrolled, 84 of whom received hydrocellular dressings and 85 of whom received hydrocolloid dressings. A total of 58% were women and 56% were from primary care institutions. The hydrocellular dressing group had a higher percentage of healed pressure ulcers at 8 weeks (90.7% vs. 77.1%, $p = 0.039$) and a shorter average healing time (3 weeks vs. 4 weeks, $p = 0.015$). Analysis of safety outcomes at 8 weeks indicated that the hydrocellular dressing group had a smaller proportion of ulcers that were unhealed (3.9% vs.

7.1%) and a smaller proportion of ulcers that progressed to a higher category or infection (5.3% vs. 15.7%), although these differences were not statistically significant.

Conclusions: This study of patients with category II pressure ulcers indicated that hydrocellular dressings were superior to hydrocolloid dressings in terms of healing at 8 weeks and time required for healing, although these two dressings had similar safety profiles.