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Improvement of early functional outcomes in hospitalized geriatric patients after hip surgery

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Abstract

Computer supported clinical practice has great potential to improve process performance and care outcomes. However, further research is needed to evaluate the efficiency of Health Information Technology (HIT) across the various clinical settings. This study focuses on the status of the patient as determined by various potential predicting factors for functional recovery during hospitalization after hip surgery. We assess the relations among patient's characteristics, (co)morbidities, surgical procedures, hospital courses and modified Salvati-Wilson's (SW) score on discharge. The aim is to improve decision making in clinical practice at General hospital "Djordje Joanovic" in Zrenjanin, Serbia, by applying the variation of the Johnson's algorithm for data reduction. The data are related to hospitalized geriatric patients after hip surgery. The second aim is to define the methodology for decision making based on data related to hospitalized geriatric patients after hip surgery in local environments. The SW score as a measure of results of early functional recovery, was affected by age, surgical procedure, the lowest postoperative value of red blood cells during hospitalization, haemoglobin level on discharge, length of hospitalization and length of rehabilitation. It is possible to improve decision making in clinical practice at General hospital "Djordje Joanovic" in Zrenjanin, Serbia, by applying the variation of the Johnson's algorithm for data reduction. The applied method is useful for any local environment for similar geriatric population, in effort to improve their own clinical practice.

Keywords: geriatric hip surgery; rehabilitation; Salvati-Wilson's score; indiscernibility; attribute reduction; discretization

1. Introduction

Hip surgery in elderly people has a great effect on overall health and health-related quality of life. The aging of the baby boomer generation will result in a large number of patients over the next years [1]. An increasingly great number of elderly patients who sustain hip surgery represent not only a significant challenge in managing health care of those patients but also a threatening increased cost. Early functional recovery after hip surgery is of interest to clinicians, patients and their family members and to health services administrators and health policy makers.

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