I.E. Livieris, I.F. Dimopoulos, T. Kotsilieris and P. Pintelas. Predicting length of stay in hospitalized patients using SSL algorithms. In In *ACM 8th International Confer ence on Software Development and Technologies for Enhancing Accessibility and Fighting Infoexclusion* , 2018.

Abstract - Length of stay in hospitalized patients is acknowledged as a critical factor for healthcare policy planning that consequently affects the available human, technical and financial resources as well as facilities occupation. Over recent years, data mining and machine learning led to the development of several efficient and accurate models for predicting of how long a patient will stay in the hospital and support healthcare policy planning. As an alternative to traditional classification methods, semi-supervised learning algorithms have become a hot topic of significant research which exhibit remarkable performance over labeled data but lack the ability to be applied on large amounts of unlabeled data. In this work, we evaluate the performance of semi-supervised methods in predicting the length of stay of hospitalized patients. Our reported experimental results illustrate that a good predictive accuracy can be achieved using few labeled data in comparison to well known supervised learning algorithms.