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Conference Abstract

Predictive models for reablement social care packages in Essex England

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Abstract

Introduction. Evidence has shown that a well-timed social care reablement can enable people to live more independently, and may help minimize the cost of care over an individual's lifespan [1]. "Reablement" packages provide patients, who are discharged from hospital, with personal at home support for six weeks. We investigate predictive models for the success of reablement packages.

Theory and methods. We analyzed 9026 subjects. Logistic regression modeling [2] and machine learning evaluations [3, 4] were used to select influential variables and to assess the predictive value of a set of binary variables.

Results. We analyzed the outcome at 13 weeks, when success is defined as self-care, and we observed odds-ratios (OR and 95% confidence interval): Age 0.67 (0.61-0.74), Hours at start 0.67

(0.61-0.73), On the books 0.64 (0.58-0.72), Carer currently involved 0.70 (0.64-0.76), Double career 0.34 (0.27-0.42) and Mosaic 0.88 (0.80-0.96). When examining the outcome of decrease in care hours, we found that double carer was the strongest predictor in the model 4.74 (3.72-6.06).

Conclusions and discussion. A major limitation of our modeling is that it is based on data of individuals who have already undergone a selection procedure and have been recommended for reablement by social services or health staff. Based on our results we propose an integrated care approach that seeks to improve the quality of life whilst also possibly reducing the costs as a consequence of an integrated allocation of the reablement.

Keywords

reablement social care provision, classification, machine learning, re-sampling

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