0041

# Predictors of Failure to Achieve Minimal Clinical Important Improvement Following a Stratified Education and Non-Surgical Self-Management Program for Low Back Pain (LBP)

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## Objectives

The objective of this study was to identify risk factors for failure 6 months following an assessment at the Inter-professional Spine Assessment and Education Clinics (ISAEC), a non-surgical LBP stratified education and self-management program.

## Method

A retrospective analysis of ISAEC patients was performed. Adjusted log-Poisson regression analysis was used to identify independent risk factors for failure. Failure was defined as a change in the Oswestry Disability Index (ODI) score of less than the minimally clinically important difference, 10 units. Baseline factors considered were: age, sex, body-mass index, number of comorbidities, pain intensity, pain duration, pain pattern, smoking, ODI score, STarT Back chronicity risk, and self-efficacy. Analyses were stratified by pain pattern: back-dominant (BDP); leg-dominant (LDP). The analytical sample was restricted to those who achieved ≥10 unit change in ODI score and who completed the follow-up questionnaire.

## Results

435 patients were included (240 BDP, 195 LDP). Mean age was 51.8 (BDP) and 54.4 years (LDP). At baseline, the LDP group reported greater disability and pain. A significantly higher proportion of women had BDP (62%) vs. LDP (52%). Overall failure rate was higher with BDP (58%) vs. LDP (44%). "High" chronicity risk was more prevalent in LDP (28%) than BDP (18%). Adjusted analyses: Younger age and worse baseline ODI scores were associated with a decreased risk of failure. Smoking in the LDP group was associated with a 2-fold increased risk of failure ($p<0.01$). Females with LDP were nearly twice as likely to fail as males ($p<0.01$); this was not the case in the BDP group ($p=0.57$). 'Moderate' and 'high' chronicity risk (vs. 'low') were associated with an increased, and similar, risk of failure (RR=1.7 and 1.9; ($p<0.01$)) with LDP; no effect was observed with BDP ($p>0.5$).

## Conclusions

Patients with BDP appear to have greater overall risk for failure, but the risk appears equally distributed across patients. In contrast, within the LDP group, women and those with moderate/high chronicity risk appear to have greater failure risk.

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