

Do socioeconomic status and ethnicity predict CR outcomes in coronary heart disease patients in Denmark?

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Background: Cardiac patients with low socioeconomic status and other ethnic background have worse prognosis and outcomes. Cardiac rehabilitation (CR) has the potential to diminish this socioeconomic and ethnical disparity, but evidence is lacking.

Purpose: To describe if socioeconomic status and ethnicity predicts CR outcomes in coronary heart disease (CHD) patients in Denmark.

Methods: The study is based "The Danish Cardiac rehabilitation database" (DHRD) which monitors quality of CR in Denmark. The study population are all patients with CHD (myocardial infarction or stable coronary artery disease with revascularization or medical treatment) participating in CR reported to the database from Aug 2015 to Mar 2018. The quality indicators (QI) were >80% participation in exercise sessions, >10% increase in VO₂peak, smoking cessation, LDL <1.8mmol/L (or 50% reduction of baseline LDL), blood pressure <140/90, dietary consulting, screening for diabetes, screening for depression and medical treatment with acetylsalicylic acid, statins and beta-blockers at completion of CR. Educational level as a marker for socioeconomic status was divided into no-, basic-, medium- and

high education, and ethnicity into Danish, Western and non-western origin. We compared QI across educational level and ethnicity using descriptive statistics.

Results: Analyses are based on 9000 patients. Age and gender differed significantly in the groups (all $p < 0.001$). Medical treatment and achievement of LDL- and blood pressure control was overall good with no difference across socioeconomic strata or ethnicity. Despite similar participation rate, higher education was associated with greater improvements in VO₂peak. Patients of non-western ethnicity were less often screened for depression and less often received dietary consulting.

Conclusion: In this nationwide quality database for CR, medical treatment and achievement of traditional risk factor goals was good across socioeconomic and ethnic strata. However, outcome in VO₂peak and implementation of screening for depression and diabetes showed disparity across socioeconomic and ethnic groups. The effect on long-term outcomes remains to be addressed.