

Equity of access to revascularisation in Wales by socioeconomic deprivation.



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Summary of findings

This study provides evidence that access to revascularisation is being provided equitably by socioeconomic deprivation for Welsh residents admitted to hospital with a first time acute myocardial infarction.

The results suggest that measures to reduce previous inequity of access to revascularisation have been working, alleviating previous concerns that increased access to revascularisation, in particular percutaneous coronary intervention, would only serve to widen the gap between deprivation quintiles.

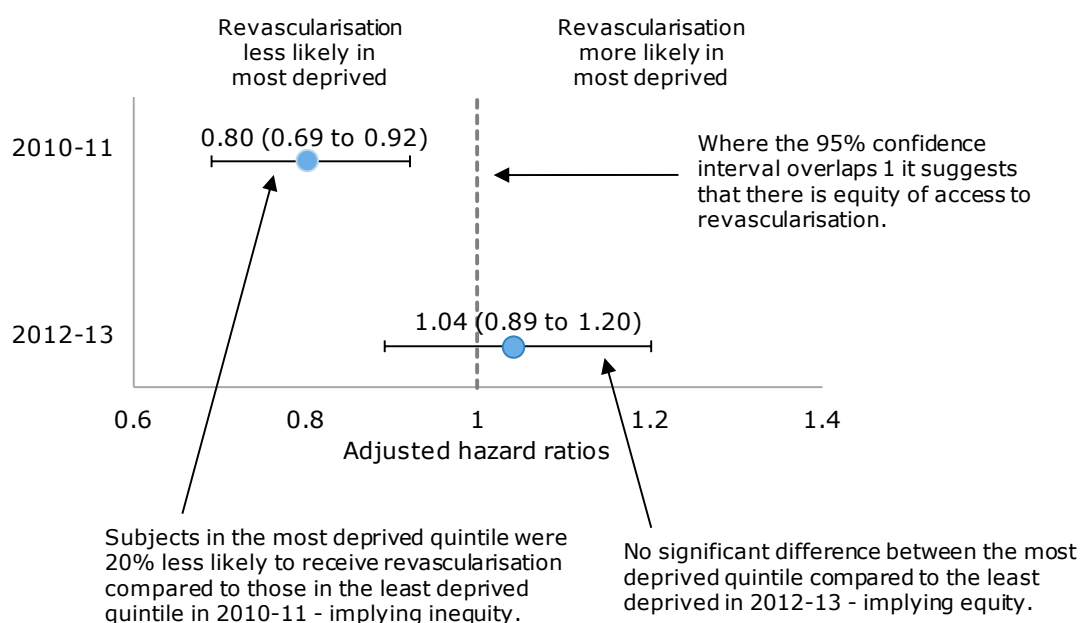
Analysis on the residents of north Wales provides evidence of no significant difference in the time to revascularisation between deprivation quintiles.

A change in revascularisation provision in south Wales eliminated the previously observed inequity between deprivation quintiles. In the 2010-11 cohort, compared to subjects from the least deprived quintile, those in the most deprived quintile were 20% (HR=0.80; 95% CI: 0.69 to 0.92, $p=0.002$) less likely to receive revascularisation in the six months following admission for acute myocardial infarction. In the 2012-13 cohort, there was no significant difference in the likelihood of revascularisation at any time during the six months follow-up for subjects in the most deprived quintile compared to the least deprived (HR=1.04; 95% CI: 0.89 to 1.20, $p<0.649$).

Equity of access to revascularisation* for the most deprived quintile (reference: least deprived quintile), south Wales, 2012-13 compared to 2010-11

Produced by Public Health Wales Observatory, using PEDW (NWIS), WDS (NWIS), WIMD 2011 (WG) in the SAIL databank

— 95% confidence interval



*for Welsh residents admitted to hospital with a first time acute myocardial infarction

Following the change in revascularisation provision in south Wales, the extra capacity of revascularisation has benefitted all, with incidence rates of revascularisation statistically significantly higher in each quintile in the 2012-13 cohort compared to the rates in all quintiles in 2010-11.

Revascularisation has been provided in a timelier manner. The proportion of subjects that received revascularisation on the first day following admission with a first time acute myocardial infarction doubled between 2010-11 and 2012-13 for all quintiles in south Wales. Also, a greater proportion received revascularisation in the first month post-admission in all quintiles in 2012-13 compared to six months post-admission in 2010-11.

However, results suggest inequity of access to revascularisation for both females and those aged 75 years and over in both north and south Wales after adjusting for all other explanatory variables in the cohorts.

Background to the study design and statistical analysis

The study population were Welsh residents aged 35 and over admitted to a NHS hospital with a first time acute myocardial infarction between 1st January 2010 and 30th June 2013.

Patients were followed for up to six months to determine whether they received a revascularisation procedure – a coronary artery bypass graft or percutaneous coronary intervention.

The main explanatory variable of interest was deprivation with WIMD 2011 used to assign a deprivation quintile to each patient.

Analysis was performed separately for residents of north Wales and south Wales cardiac networks. Analysis on north Wales covered the whole study period of 2010-13 with no major changes over this time to the provision of revascularisation. Analysis on south Wales was split into two cohorts of those admitted between 01/01/2010 to 31/12/2011 (2010-11 cohort) and 01/01/2012 to 31/06/2013 (2012-13 cohort), with the 2012-13 cohort relating to the time period post change in the provision of revascularisation.

A number of statistical techniques were used to analyse the data and determine whether the likelihood of revascularisation differed between deprivation quintiles.

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Acknowledgement to Public Health Wales NHS Trust to be stated.

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