Decreasing educational inequalities in percutaneous coronary interventions following an incident acute myocardial infarction in Norway during 2001-2009: a CVDNOR project

E. Sulo1, J. Igland1, G. Sulo1, SE. Vollset1,2, O. Nygård3,4, G. Egeland1,2, M. Ebbing2, GS. Tell1,2

1. Department of Global Public Health and Primary Care, University of Bergen, Norway
2. Department of Health Registries, Norwegian Institute of Public Health, Bergen, Norway
3. Section for Cardiology, Department of Clinical Science, University of Bergen, Norway
4. Department of Heart Disease, Haukeland University Hospital, Bergen, Norway

Purpose

To analyze gender-specific national trends in percutaneous coronary intervention (PCI) rates and explore potential educational inequalities in receiving PCI, among patients hospitalized for an incident acute myocardial infarction (AMI) in Norway during 2001-2009

Methods

Study population: Patients (35-89 years) hospitalized for an incident (first) AMI during 2001-2009 were retrieved from the 'Cardiovascular disease in Norway' (CVDNOR) project. Highest attained education was categorized into: primary, secondary, and tertiary education

Outcome: PCI received within 28 days from hospitalization date

Statistical analyses: Gender-specific, age-standardized PCI rates and 95% CI were calculated for each education category

Changes over time in PCI rates were explored using Joinpoint regression analysis and expressed as average annual percentage change (AAPC)

Educational differences in receiving PCI were explored using Poison regression analyses for patients with secondary and tertiary education versus those with primary education only (reference category) and expressed as relative risks (RR)

Possible interaction between calendar year and education categories were tested

Results

• 104,863 patients [mean age (SD) 71.1 (12.7)] were hospitalized for an incident AMI during 2001-2009
• 62.7% were men
• 30.4% underwent PCI within 28 days

Time trends in age-standardized PCI rates (Figure 1)

Men: PCI rates increased with 14.2%, 13.9%, and 9.9% per year among men with primary, secondary, or tertiary education, respectively

Women: Among women with primary, secondary, or tertiary education PCI rates increased with 13.8%, 10.6%, and 8.9% per year

Educational differences in PCI rates:

Compared to patients with primary education, patients with secondary or tertiary education had 12% and 21% higher rates in receiving PCI

Educational differences in receiving PCI decreased over time (p<0.001 for interaction between calendar year and educational level) (Figure 2)

CONCLUSIONS

PCI utilization after an incident AMI increased among all education categories in both men and women in Norway during 2001-2009

Patients with secondary and tertiary education had higher PCI rates compared to those with primary education. However, these differences decreased over time