Background

Reducing health inequalities across geographic regions is an important aim for improving health (1, 2). Previous studies in Iceland show:

1. Lower prevalence of several diagnosed chronic diseases, including cardiovascular disease, in regions outside the Capital Region (CR) while poorer self-rated health in the same areas (3).

2. Lower prevalence of diagnosed gestational diabetes and hypertension as well as congenital malformations outside the CR (4).

With the motivation to support evidence-based spatial organization of health care the aim of this study is to explore potential differences in hospital service utilization, focusing on cardiovascular disease, by geographic regions in Iceland.

Study Area

Iceland. Population approx. 320,000. Iceland is divided into seven health regions which serve as a foundation for the organization of general health services (Figure 1). The seven regions differ greatly in size and population. The Capital Region of Reykjavik in SW Iceland covers the smallest area in square kilometers but contains 2/3 of the total population (5).

Material & Methods

- Standardized data on every hospital admission in Iceland from the National Patient Register.
- Admissions under 90 days 2008-2013 included in analysis (n=266803).
- Data on: Institution, postal code, discharge diagnoses (ICD10) and operations (NCS).

Residence was grouped in three ways;

1. Capital Region versus all other areas.
2. By distance from the CR.
3. By availability of local health services.

Logistic regression was used to explore differences in outcomes by area of residence while controlling for potential confounding variables. Odds ratios and 95 percent confidence intervals (95% CI) were calculated.

Discussion

The higher hospital admission rates in general among residents outside the CA may reflect poorer health or poorer availability of specialized outpatient health services in this population.

Alternatively, long distances to local health service providers might promote inpatient services for rural patients where they can be easily observed.

The observed regional differences in hospital admission due to selected cardiovascular disease will be explored further.

References