

A myocardial infarction arises when the blood supply to part of the heart is interrupted, resulting in damage to the heart muscle. Mortality has dropped by nearly 60% since the 1990s. This is partly due to preventive measures and partly to improved treatment. Myocardial infarction is a very serious condition that develops rapidly, but most patients who are admitted to hospital survive. The treatment used is revascularisation, which is a collective term that covers mechanical widening of the coronary arteries (PCI) and surgery (bypass).

### Background

Patients with a suspected acute myocardial infarction will usually be admitted to hospital. Depending on the distance and type of infarction, it is recommended that patients either be given clot-busting treatment before being transferred to a hospital with a PCI centre or be directly transferred to a hospital with a PCI centre for examination of the heart using a contrast agent (coronary angiography) and, if necessary, revascularisation. More than half of all revascularisation procedures are carried out as acute or sub-acute procedures, i.e. on patients with myocardial infarction or unstable angina pectoris, while the rest are planned procedures performed on patients who have stable angina pectoris or are being assessed for other types of heart disease.

### Results

Each year, approx. 6,650 elderly patients are admitted to hospital with the diagnosis myocardial infarction. Residents of Finnmark hospital referral area are admitted almost three times as often as residents of the Sørlandet area.

Each year, just over 3,400 revascularisation procedures are performed on elderly patients. Residents of Finnmark hospital referral area undergo revascularisation about twice as often as residents of the Møre og Romsdal area. The rates for people resident in Finnmark have decreased markedly during the period. There is no correlation between admissions for myocardial infarction and the number of revascularisation procedures carried out in the different hospital referral areas.

### Comments

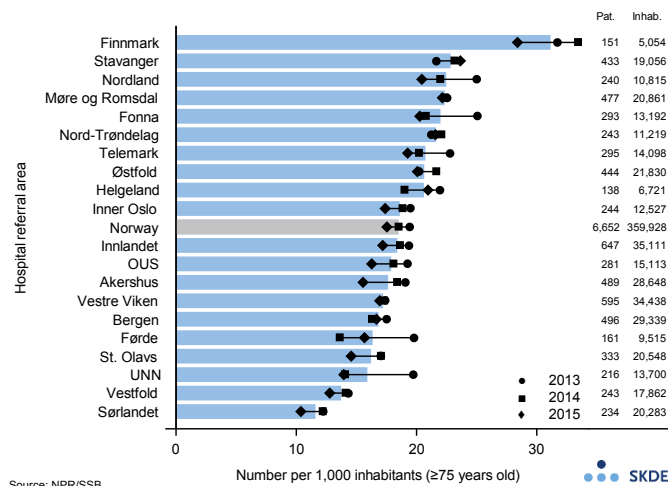
There is great variation in patient rates for admission for myocardial infarction, mainly due to Finnmark's high rate, and this variation does not correspond to the known mortality from myocardial infarction. It is not easy to explain this discrepancy, but there may be reason to suspect differences in diagnosis or coding. The change in the diagnostic criteria for myocardial infarction in 2012 may have influenced use of the diagnosis. For example, the reduction in the number of patients admitted in Finnmark in the last year is remarkable. This could reflect an actual change, or a change in diagnostic practice. Despite this source of error, the number of patients admitted for myocardial infarction can be seen as an indicator of coronary morbidity in the population, and thereby also of the need for revascularisation.

There is moderate variation between hospital referral areas in the use of revascularisation to treat elderly patients. It is striking that Møre og Romsdal and Nord-Trøndelag hospital referral areas, which have an admission rate for myocardial infarction (high morbidity), have few revascularisation procedures performed on the elderly. Conversely, residents of the Sørlandet area have a low rate of admission for myocardial infarction (low morbidity) and a high number of revascularisation procedures.

Possible explanations for the observed variation include differences in practice, but also differences in the availability of services, and priorities.

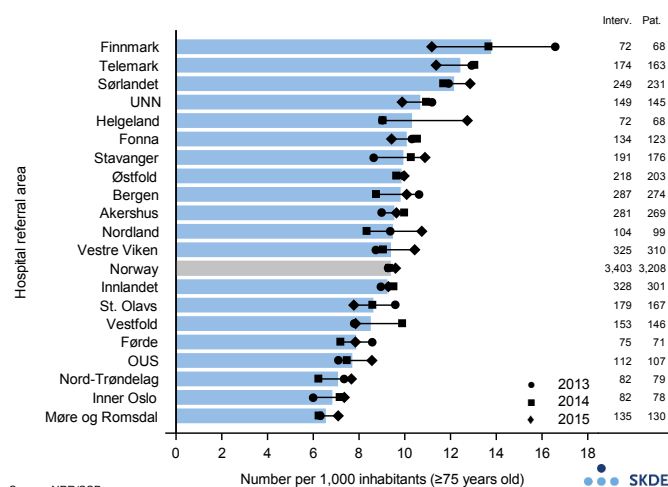
The number of patients who suffer myocardial infarctions is about the same in the age group 50-74 years as in the age group  $\geq 75$  years. Nearly three times as many revascularisation procedures are performed on patients in the age group 50-74 years as in the age group  $\geq 75$  years.

Patients over 75 years of age are rarely included in the randomised studies on which the recommendations are based, but a recent Norwegian study shows that patients over 80 years of age do benefit from PCI. An individual assessment must be carried out to determine the individual patients' suitability for treatment and the risks entailed. Nevertheless, it is open for discussion whether the provision of revascularisation services in Norway today is equitable between hospital referral areas and across age groups.



Source: NPR/SSB

Myocardial infarctions, number per 1,000 population, adjusted for gender and age. Av. number of patients and population per year.



Source: NPR/SSB

Revascularisation, number of procedures per 1,000 population, adjusted for gender and age, average and per year. Av. number of procedures and patients per year.