

Pneumonia is inflammation of the lung tissue caused by bacteria, viruses or fungi. The disease is most common in children and old people. Symptoms of pneumonia are reduced general state of health, fever, coughing and shortness of breath. The more inflamed the lung tissue is, the harder it becomes to breathe. Oxygen uptake is sometimes impaired, which makes it difficult to breathe and gives rise to a very dangerous condition.

Background

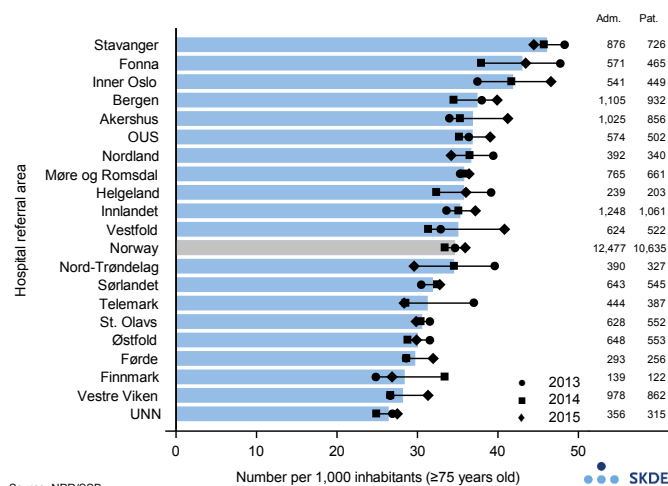
Infections can develop slowly in elderly patients and be more difficult to diagnose because the patients may not experience fever and coughing, so that a reduced general state of health is the only symptom. Confusion can be a sign of low oxygen uptake, which can also lead to falls and fainting. Bacterial pneumonia in elderly people with a weakened immune system must be treated with antibiotics as soon as possible. Most cases are treated by the patient's regular GP, but some become so ill that they have to be admitted to hospital for more intensive treatment.

Results

Each year, there are approx. 12,500 admissions of elderly patients with pneumonia as the primary diagnosis. The average age of these patients is 84.5 years, and the gender distribution is more or less even. The average length of stay is seven days. Residents of Stavanger hospital referral area are admitted 70% more often than residents of the UNN area.

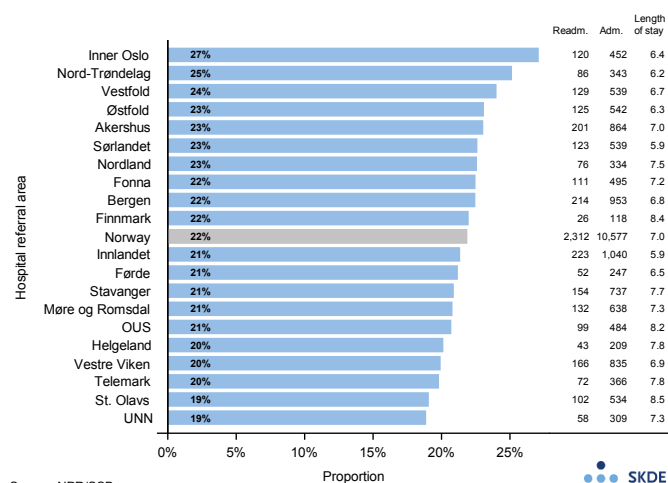
The average 30-day readmission rate after discharge is 22% for Norway as a whole. The length of stay for primary admission correlates with the proportion of patients readmitted within 30 days; longer stays correlate with fewer readmissions.

Of patients admitted to hospital for pneumonia, 22% die within the first 30 days following their last admission, and 42% die within one year. By comparison, 8% of all persons in Norway aged 75 years and older die each year.



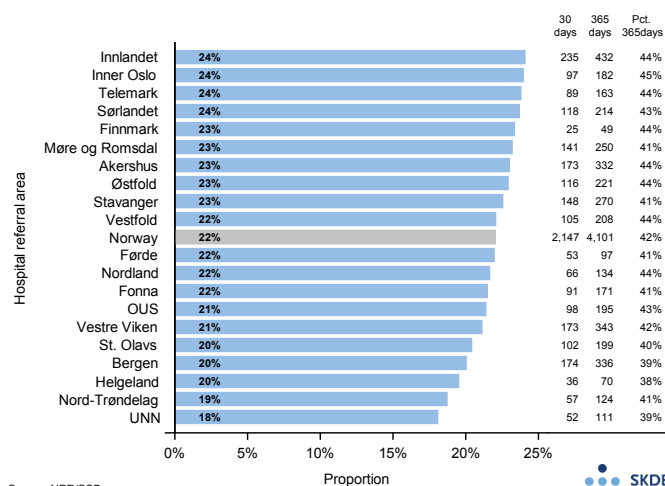
Source: NPR/SSB

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



Source: NPR/SSB

Readmissions as a proportion of primary admissions, adjusted for gender and age. Av. number of readmissions, primary admissions and length of stay for primary admissions.



Source: NPR/SSB

30-day mortality proportion following the last admission, adjusted for gender and age. Av. number of deaths within 30 days, number and proportion who die within one year.

Comments

The variation between hospital referral areas in admissions for pneumonia is considered to be moderate. Neither the readmission rate nor the proportion of patients who die within 30 days varies much between hospital referral areas.

There is a clear correlation between the average length of stay for primary admissions and the readmission rate. However, the variation in readmissions and mortality do not necessarily reflect differences in quality, but could instead be due to the health services being organised differently. For example, different thresholds for admitting patients will influence both the number of readmissions and the proportion who die within 30 days.

Elderly patients admitted to hospital with pneumonia as the primary diagnosis are seriously ill and have long stays, a high readmission rate and a high proportion of deaths both within 30 days and within one year.