Atrial fibrillation prevalence estimates in England: Application of recent population estimates of AF in Sweden
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Atrial fibrillation prevalence estimates in England

Background

Atrial fibrillation (AF) prevalence estimates have been calculated on a whole population basis in England using latest known age and sex distributions of AF diagnosed in a Swedish region.

The estimates show the estimated prevalence of AF assuming that the population structure of a given area is the same as that of the reference population.

The estimates were developed using data from the NHS Digital using population estimates and diagnosed prevalence of AF in 2015/16. The estimates have been calculated using age-sex specific prevalence rates from a reference population which have then been applied to each local population. AF is often asymptomatic; these estimates are an update to the ones published by NCVIN in 2015.

Full details of the method and data sources used to calculate the estimates can be found in the ‘Technical document’. AF estimates have been produced for General Practice (GP), clinical commissioning group (CCG), and for the whole of England. The estimates and the technical document are available to download at: https://www.gov.uk/government/publications/atrial-fibrillation-prevalence-estimates-for-local-populations.

Current prevalence of AF in England

It is estimated that 1.4 million people in England have AF. This is equal to 2.5% of the population.

AF prevalence is higher in men than in women, 2.9% versus 2.0%.

AF prevalence increases with age; 2.8% of the total estimated AF in the population is likely to occur in people aged under 45, 16.6% in people aged 45-65 and 80.5% in people aged over 65.

At CCG level, estimated AF prevalence ranges from 1.0% to 3.9%. At GP level, AF prevalence ranges from less than 0.1% to 17.1%. AF prevalence is higher in CCGs in Northern England, East of England and the South West and lower in the CCGs in London and Bradford. Undiagnosed AF prevalence is higher in CCGs in and around London. Other CCGs with higher proportions of undiagnosed AF are located in the West Midlands.

Comparisons with the 2015/16 Quality and Outcomes Framework suggest that 70% of people with AF are recorded on the AF registers.

Across England, it is estimated that 425,000 people are living with undiagnosed and untreated AF.

Key information

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Across England, it is estimated that 425,000 people are living with undiagnosed and untreated AF.
AF prevalence is higher in males than females, at 2.9% versus 2.0%. Increasing age results in increasing prevalence of AF. The estimates reported here show the overall burden in terms of the number of people with AF increasing with age.

The highest number of estimated cases of AF in males occurs in the 75-79 age group; for females, the peak in numbers occurs in the 80-84 age group. Very few cases of AF are estimated to occur in males aged 95+ compared to females, reflecting the expected life expectancy advantage in females.

**Figure 1. Summary of estimated atrial fibrillation prevalence in England, 2016**

At the CCG level, AF prevalence ranges from 1.0% to 3.9%.

CCGs with the lowest estimated prevalence of AF were Tower Hamlets, Bradford City and Newham. (Table 1). CCGs with the highest estimated prevalence were North Norfolk, Eastbourne, Isle of Wight and Fylde & Wyre (Table 2).

The quintiles of estimated prevalence are shown in Map 1, with the highest quintiles mainly situated in the north and along the southern coastal and eastern coastal regions, and lowest quintiles in London and central England.

The estimated prevalence largely reflects the age structure of the population, with AF highest in CCGs that have high proportions of elderly people, although greater levels of ethnic diversity can be drivers of lower prevalence.
Comparison against QOF estimates

Comparisons between the new estimates presented here and the 2015/16 Quality and Outcomes Framework (QOF) suggest that 65% of people who have AF are included on AF registers. An estimated 425,000 people may have undiagnosed AF.

The ratio of observed prevalence divided by the estimated prevalence was calculated (Map 2) to highlight the greatest disparity between observed and estimated AF.

A number of CCGs with lower ratios are located around London, including Newham, Brent and Haringey CCG. These are among the CCGs with the lowest estimated AF prevalence, with less than 75% of AF cases diagnosed.

The CCG with the highest ratio of observed to estimated AF prevalence was NHS Ashford CCG where the ratio was more than 0.9. Suggesting 90% or more of AF cases are diagnosed.