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# Atrial fibrillation, a contemporary sign of multimorbidity and irregular social inequity



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Atrial fibrillation (AF) is an important burden on patients, physicians, and healthcare systems globally. AF simultaneously represents the consequence and the cause of the most prevalent cardiovascular diseases, including hypertension, atherosclerotic disease and stroke. The prevalence of AF among adults is estimated between 2% and 4%, with a likely steep rise in its prevalence over the following years.<sup>1</sup>

In the current edition of *The Lancet Regional Health - Europe*, Wu and colleagues<sup>2</sup> present the temporal trends and patterns in AF incidence, in a population-based study of 3.4 million individuals in England. In this study the incidence of AF increased by 30% from 1998 to 2017 among individuals of the same age and sex. The increase in AF incidence is accompanied by an increase of risk factors and comorbidities related to AF while the burden of coronary artery disease and heart failure showed a trend towards reductions over time. Moreover, AF incidence was significantly correlated with socioeconomic status, being more common in the most deprived individuals.

Given how common it is, AF commonly presents to a wide range of healthcare professional, including primary care, as well as non-cardiologists and cardiologists in secondary care, necessitating a more integrated care approach to AF management,<sup>3</sup> as recommended in guidelines,<sup>4</sup> especially since adherence to such holistic care is associated with improved clinical outcomes.<sup>5</sup> Based on its dynamic characteristics, AF is not always easy to detect. During recent years, opportunities for AF detection have improved with more resources such as Holter devices, wearables, patches and implantable recorders, which significantly helped towards more AF identification.<sup>6</sup> From an optimistic point of view, *If you seek you shall find*, and since it is getting easier to seek,

we shall find and treat more AF holistically in order to reduce the burden of stroke and other cardiovascular events.

On the contrary, the natural history of ageing and accumulation of cardiovascular risk factors (which change in a dynamic way) may play an essential role in the increased risk of AF and its complications such as stroke.<sup>7,8</sup> The continuously aging population, together with associated multimorbidity and the lower thresholds of hypertension diagnosis, have led to an increase in AF prevalence. Similarly, comorbidities such as diabetes mellitus, chronic kidney disease and obesity which increased over time, may also contribute to the increasing prevalence of AF. Despite the increase of several cardiovascular risk factors, major adverse cardiovascular events related to atherosclerotic disease such as heart failure and ischemic heart disease seem to have a decreasing age-related incidence.<sup>9</sup> On the contrary, ischemic stroke increases over time,<sup>9</sup> which represents a potentially devastating outcome of AF, despite the focus and many developments in stroke prevention.<sup>4,5</sup>

Another important issue pointed out by Wu and colleagues,<sup>2</sup> is the socioeconomic discrepancy between the most deprived and affluent individuals and how this translates into cardiovascular morbidity. Individuals who were in the most deprived quintile had a significantly higher incidence of AF, while the prevalence of comorbidities was higher among these patients. Previous studies highlight the correlation of socioeconomic and educational status with an increased prevalence of AF.<sup>10</sup> The increasing prevalence of AF in socioeconomically deprived individuals may be a sign of healthcare inequity, calling healthcare systems and physicians to action.

It seems that an *irregular heart rhythm*, with a growing prevalence through the years, turns into a sign of *irregular equity* in the healthcare systems worldwide (especially with the impact of multimorbidity associated with AF and its complications) (Figure). This emphasises the importance of a potential paradigm shift in healthcare policies towards a more integrated and holistic patient-oriented approach in primary and secondary cardiovascular prevention.

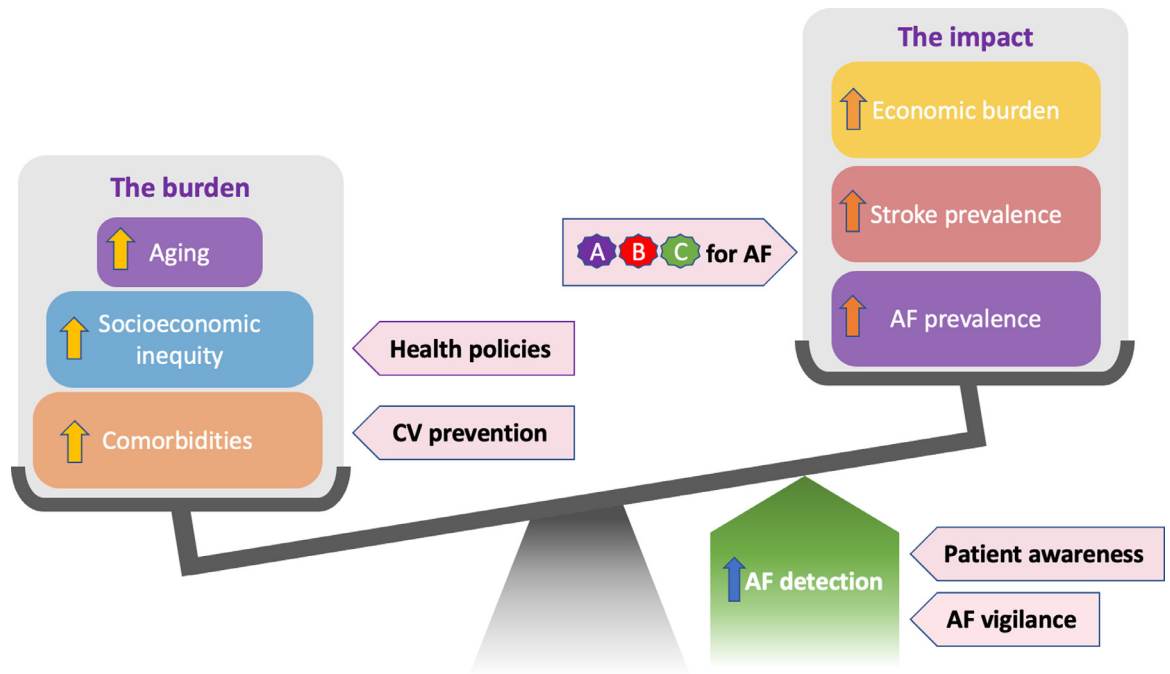
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**Figure.** The burden and the impact of comorbidities and socioeconomic inequity in atrial fibrillation and the potential actions towards a more integrated and holistic patient-oriented approach in primary and secondary cardiovascular prevention

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