The real cost of treating atrial fibrillation

Yaariv Khaykin*

Southlake Regional Health Center, 105-712 Davis Drive, Newmarket, ON, Canada L3Y 8C3

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This editorial refers to ‘The costs of atrial fibrillation in patients with cardiovascular comorbidities—a longitudinal analysis of German health insurance data’ by T. Reinhold et al., on page 1275.

Atrial fibrillation (AF) is the most common sustained cardiac arrhythmia greatly impairing the quality of life as well as increasing morbidity and mortality in an ever-growing cohort of patients in the ageing society, many also suffering from concomitant cardiac conditions. Domains of care for AF patients include stroke prevention, control of the ventricular rate, and symptom management in the form of medical or invasive rhythm control. As the prevalence of this condition rises and ongoing research offers more effective, yet costlier, solutions, concerns over cost containment arise. A number of investigators have previously reported on estimated costs of AF at patient and societal levels. These data established the foundation for further studies comparing costs of conservative and invasive therapeutic strategies.

The article published in this issue of the Journal by Reinhold and colleagues1 sheds further light on the issue. The investigators used a previously validated German insurance database of patients with other cardiovascular disorders to identify individuals who were in the database for a 2-year study period and who had an AF episode resulting in an inpatient stay. The investigators were then able to report exact weekly cost of care in the 10 weeks prior to the inpatient stay and for a year following the index event. Furthermore, they were able to separate out the cost of inpatient and outpatient care, costs related to drug and non-traditional remedies, and costs related to sickness benefits.

Patients in the database were older than typically reported in prospective AF studies at 72 ± 10 years of age with a preponderance of female patients who were substantially older than males. These patients had a nearly 13% annual mortality—similar to that identified in other studies.2,3 Only 13% of patients had a second admission for AF during the year following the index event with an average length of stay during the index hospitalization of 6.55 ± 6.77 days. While women tended to spend more time in hospital following the AF event, after age-adjusted analysis the cost of care was higher in males. Close to 80% of the cost of care in the first year following an AF-related hospitalization was due to the index event with 15% attributable to the cost of drugs, and 3% to the outpatient care. The costs of non-traditional adjuvants and remedies as well as that of sickness benefits—typically not included in other AF cost analyses was at par with the cost of outpatient care—contributing about 4% of the overall treatment cost which came in at an astounding 7688 ± 954 Euro per patient. The weekly cost of care attributable to AF was the highest in the first 10 weeks following the index event and subsequently settled down to preadmission levels.

While it is important to keep in mind the differences between the cohort studied here with patients typically reported in studies comparing costs of conservative vs. invasive therapy for AF, the difference with some of the prior projections is remarkable. In the study reported by Weerasooriya et al.,7 the annual cost of care was estimated at 1590 Euro including hospitalizations. This was supported by the findings of the Euro Heart Survey on AF publishing estimated annual costs of AF care ranging from 698 Euro in Poland to 1544 Euro in the Netherlands earlier this year.8 In another study, based on a number of sources our group estimated annual cost of care in an AF patient at 4840 Canadian dollars.6

Again, it is important to remember that the latter studies looked at substantially younger cohorts of patients, yet the cost reported here is five-fold higher and unlikely to be explained purely on the basis of differences in age and comorbidities. It is far more likely that studies estimating costs of AF care underestimated the true cost captured in this administrative database. In light of this report, it becomes apparent that not only is the economic burden of AF greater than previously estimated but therapies targeting key contributors to this cost are of tremendous importance considering struggling global economy. Dronedarone has recently been shown to reduce AF-related hospitalizations with a hazard ratio of 0.626 compared with placebo in a similar population to that reported here by Reinhold and colleagues.7 This would potentially reduce the cost of care by 2875 Euro per patient per year. Furthermore, if we were to use this cost in our model comparing the cost of medical therapy to that of ablation, the costs of these two strategies would equalize after only 2 years compared with a recent estimate of 6–9 years.8

In their paper Reinhold and colleagues make an important contribution to our understanding of the economic impact and demographics of AF in the real world allowing the readers to contrast...
the true cost collected in an administrative database with that reported based on survey data and clinical projections.

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**References**


