

First randomized trial shows education for health care professionals can improve guideline implementation

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Adherence to atrial fibrillation (AF) guideline recommendations was found to be poor in clinical practice across Europe, but a structured

educational program for health care professionals improved implementation of heart rhythm control recommendations in patients, according to late-breaking research presented in a Hot Line session Sept. 1 at the [ESC Congress 2024](#) and concurrently [published](#) in *Europace*.

Explaining why the research was conducted, Chief Investigator, Professor Dipak Kotecha from the University of Birmingham, U.K., said, "While guidelines, such as those from the ESC, aim to support health care professionals in applying optimal care, their recommendations are often not implemented in [clinical practice](#), with education of health care staff identified as a major barrier.

"We conducted STEER-AF, the ESC's first randomized controlled trial, with the European Heart Rhythm Association (EHRA) and the ESC Council on Stroke, to test whether a structured educational program for health care professionals could improve guideline-adherent provision of AF care across Europe.

"We found that [adherence](#) to [guideline recommendations](#) for heart rhythm control was low, but there were improvements using a short and targeted educational intervention for health care staff."

STEER-AF was a cluster randomized trial conducted in France, Germany, Italy, Poland, Spain and the U.K. Treatment centers, rather than individuals, were randomized to one of two groups. In centers randomized to the intervention group, health care professionals received an additional structured education program over 16 weeks, which targeted stroke prevention, rhythm control and integrated care, with learning supported by expert local trainers.

The intervention was developed by ESC Education, EHRA, external content leads and an independent medical education agency. Health care professionals spent an average of 9.2 hours on the online learning

platform. In centers randomized to the [control group](#), health care professionals received only their existing educational activities.

The co-primary endpoints were adherence to ESC Class I and III recommendations, at the level of each individual patient, for stroke prevention and rhythm control, re-evaluated 6–9 months after randomization using objective methods at each center.

In total, 1,732 patients with AF were studied from 70 randomized centers. The mean age was 69 years, 37% were women and the mean CHA2DS2-VASc score was 3.2, consistent with a real-world population.

There was no significant improvement in guideline adherence for [stroke prevention](#), which changed from 63.4% to 67.5% in the intervention group and from 58.6% to 60.9% in the control group (adjusted risk ratio [RR] 1.10; 95% confidence interval [CI] 0.97–1.24; $p=0.13$).

Significant 51% improvement was observed in guideline adherence for rhythm control, which increased from 21.4% to 33.9% in the intervention group and from 20.5% to 22.9% in the control group (adjusted RR 1.51; 95% CI 1.04–2.18; $p=0.03$).

There was also a significant improvement in the patient-reported secondary outcome that evaluated eight domains of integrated AF management, which improved to 77.0% with the intervention and to 71.0% in the control group (baseline-adjusted 5.1% improvement; 95% CI 1.4 to 8.9; $p=0.01$).

"The STEEER-AF trial demonstrates that targeted education for health care professionals can improve patient-level guideline adherence where there are substantial gaps in implementation, as clearly demonstrated for rhythm control in AF.

"Overall, the care of AF was poorly adherent to prior guideline recommendations, requiring a total re-think of how guidelines are constructed, disseminated and implemented. As a result of STEEER-AF, the new 2024 ESC Guidelines for the management of AF incorporate numerous approaches to enhance 'AF-CARE,' with new patient pathways designed to make implementing recommendations easier and more consistent.

"In addition, we have simultaneously launched a patient version of the 2024 AF Guidelines, to empower [patients](#) and encourage a shared-care approach with multidisciplinary health care staff," concluded Professor Kotecha.

More information: Maciej Sterliński et al, Design and deployment of the STEEER-AF trial to evaluate and improve guideline adherence: a cluster-randomized trial by the European Society of Cardiology and European Heart Rhythm Association, *Europace* (2024). [DOI: 10.1093/europace/euae178](#)

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