# Patient Self-Management of Anticoagulation: The New Standard of Care?

*Menendez-Jandula B, Souto JC, Oliver A, et al. Comparing self-management of oral anticoagulant therapy with clinic management: a randomized trial. Ann Intern Med 2005;142:1–10.*

## Study Overview

Objective. To compare the quality of control and clinical outcomes of oral anticoagulant therapy in self-managed patients versus patients following conventional management.

Design. Single-center, unblinded, randomized controlled trial.

Setting and participants. Between January 2001 and July 2002, 737 patients with indications for anticoagulant treatment were randomized to either self-management or to conventional management in a university-affiliated hospital anticoagulation clinic in Barcelona, Spain.

Main outcome measure. Percentage of international normalized ratio values within therapeutic range and major related complications (ie, severe hemorrhage, thromboembolism).

Main results. The median follow-up period was 11.8 months. The dropout rate in the self-management group was 21%. In unadjusted intention-to-treat analyses, self-managed patients had slightly higher percentages of in-range international normalized ratios when compared with clinic-managed patients (58.6% versus 55.6%; $P = 0.02$). The time within target range was comparable between the groups (64.3% versus 64.9%; $P > 0.2$). Fewer patients in the self-management group had major complications (2.2%) compared with the conventional group (7.3%) (risk difference, 5.1% [95% confidence interval {CI}, 1.7%–8.5%]). Fewer patients had minor hemorrhages in the self-management group (14.9%) than in the conventional management group (36.4%) (risk difference, 21.4% [95% CI, 15.2%–27.5%]). No difference in mortality was found between the groups.

Conclusion. Compared with conventional management, self-management of oral anticoagulant treatment achieved a similar level of control with fewer major complications and minor hemorrhages.

## Commentary

Despite the increase in indications for anticoagulation therapy and the resultant rise in the number of patients requiring chronic management, the optimal outpatient management strategy remains unclear [1]. Prior studies have demonstrated the feasibility of patient self-management with portable coagulometers; however, no trials have conclusively demonstrated equivalent or better outcomes [2,3]. In this study, Menendez-Jandula and colleagues have demonstrated that patient self-management of anticoagulant therapy can achieve similar control rates and reduce the occurrence of major and minor complications when compared with the gold standard of care at specialized anticoagulation clinics. Patients of all ages with varying educational backgrounds, indications, comorbid diseases, and concurrent medications participated, demonstrating the generalizability of this patient care model.

There are several possible reasons why self-management resulted in similar control and better outcomes. Most obvious are the increases in frequency of testing, the timeliness of testing, and consistency from using the same monitoring machine. However, self-management may have also resulted in higher patient compliance, satisfaction, and empowerment, all of which may have contributed to the better outcome. Self-testing and management is already the standard of care in other chronic diseases (eg, diabetes). Although not possible for every patient, successful self-testing and management of anticoagulant therapy can be implemented after two 2-hour structured training sessions with nurse educators, a portable coagulometer, and a simple card system.

## Applications for Clinical Practice

Despite the limitations of being unblinded and conducted at a single institution, this study demonstrates that patient self-management of oral anticoagulant therapy is as effective as and safer than clinic management. Health care providers should consider transitioning their patients to self-management of chronic oral anticoagulant therapy.

*–Review by Mark S. Horng, MD*

### References

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3. Ansell J, Hirsh J, Dalen J, et al. Managing oral anticoagulant therapy. Chest 2001;119(1 Suppl):22S–38S.