

Comments on “Safe and effective anticoagulation use: case studies in anticoagulation stewardship”

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Quoting Jake Elwood, after reading the review by May *et al.*,¹ “we’ve seen the light.” Indeed, the term “*anticoagulation stewardship*” can serve as a programmatic manifesto for every scientific society dealing with hemostasis and thrombosis. The expression “*antimicrobial stewardship*” has become widely used and integrated into healthcare service planning, so why not start thinking in terms of “*anticoagulation stewardship*”?

All the epidemiological premises are there: in the U.S. (and likely in Italy and Europe as well), anticoagulants are the leading class of drugs responsible for emergency department visits due to adverse events. They account for approximately 15% of all visits for this reason, followed by prescription opioids (11%) and diabetes medications (10%). While the trend for the latter is declining, that of anticoagulants is constantly increasing.²

With approximately 1,500,000 patients on anticoagulant therapy, including both DOACs and VKAs, and an incidence of

major bleeding slightly below 2% per year, one can expect around 30,000 major hemorrhages annually. This is a more than reasonable price to pay for the expected benefits, but it still represents a public health issue.

“*Anticoagulation stewardship*” is an emerging model designed to improve the effectiveness of anticoagulation while reducing harm and costs. It can be defined as a set of coordinated, efficient, and sustainable system-wide initiatives aimed at achieving the best health outcomes from anticoagulant therapies and reducing avoidable adverse drug events (ADEs) through:

- i) the application of optimal, evidence-based care;
- ii) appropriate prescribing, dispensing, and administration of anticoagulants and antithrombotic agents in general;
- iii) ensuring patients receive adequate monitoring and timely, appropriate clinical responses”.³

This concept was developed by modeling antimicrobial stewardship, which has been widely and successfully adopted, as demonstrated by the decline in emergency department visits due to antibiotic-related ADEs.³

The Anticoagulation Forum, a multidisciplinary non-profit organization, funded by the U.S. Food and Drug Administration, published the Core Elements of Anticoagulation Stewardship Programs in 2019.⁴ This group later developed an implementation guide in collaboration with the National Quality Forum in 2022,⁵ also working with the American Society of Health-System Pharmacists to create a two-year specialization course in Thrombosis and Hemostasis Management.

This article presents four commonly encountered clinical cases that exemplify how anticoagulation stewardship can positively impact patient care. These include:

- i) a case of inappropriate prescribing of direct oral anticoagulants (DOACs);⁶⁻⁸
- ii) a case of heparin-induced thrombocytopenia (HIT);⁹
- iii) a case concerning perioperative anticoagulation management;¹⁰ and
- iv) last but not least, a case highlighting the challenges of managing heavy menstrual bleeding (HMB) during anticoagulant therapy.¹¹

Regarding the latter issue, the authors propose an interesting, standardized framework for assessing menstrual blood loss in women undergoing anticoagulant therapy - an often underestimated but highly impactful aspect of patient well-being.^{11,12}

In their conclusions, the Authors cite numerous scientific publications reporting experiences in anticoagulation stewardship with positive impacts on patients and healthcare systems.¹³

Moreover, the International Society on Thrombosis and Hemostasis has long identified the core competencies necessary to define clinical specialists in thrombosis and hemostasis.¹⁴ These

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competencies form the essential individual prerequisite, but they are not sufficient on their own. Implementing the role of the clinical specialist in thrombosis and hemostasis within healthcare settings requires an organized framework, such as that provided by anticoagulation stewardship.

In Italy, both scientific societies dedicated to hemostasis and thrombosis -the *Società Italiana per lo Studio dell'Emostasi e Trombosi* (SISET) and the *Federazione dei Centri per la Diagnosi della Trombosi e la Sorveglianza delle Terapie Anticoagulanti* (FCSA) - have long promoted the recognition of the role of the «hemostasis expert» through various educational activities. These include university master's programs, residential courses, distance learning (FAD) programs, and professional accreditation initiatives for their members.

On these grounds, we believe the expression “*anticoagulation stewardship*” should be widely implemented across many healthcare settings and become a mantra for those working in hemostasis and thrombosis. This would help reinforce awareness of the value of their work and renew their motivation to seek appropriate recognition for this crucial service to society.

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