**IMPROVING APPROPRIATE USE OF NOACS: SUCCESS OF ONLINE CME**

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**BACKGROUND**

- Anticoagulant therapy is often not appropriately initiated in patients with venous thromboembolism (VTE), resulting in poor patient outcomes.
- This study was conducted to determine if an online continuing medical education (CME) intervention could improve knowledge and competence of cardiologists and hematologists/oncologists (hem/oncs) regarding appropriate use of non-vitamin K antagonist oral anticoagulants (NOACs) in management of VTE.

**METHODS**

- An online CME activity was developed as a 15-minute video-based discussion between 2 leading experts on appropriate initiation of NOAC therapy. The goal of the discussion was to improve adherence in the setting of VTE.
- The effects of education were assessed for learners completing all pre- and post-assessment questions using a repeated-pairs pre-post-assessment design, with each participant serving as his/her own control.
- For all questions combined, the McNemar’s chi-square test assessed differences from pre- to post-assessment. P values are shown as a measure of significance; P values < 0.05 are considered statistically significant. Cramer’s V was used to calculate the effect size (> 0.3 are large, 0.16-0.3 are medium, and < 0.16 are small).
- The study launched on September 23, 2015 with data were collected through January 25, 2016.

**RESULTS**

- Comparisons of aggregated linked individual learner pre-assessment question responses to the respective post-assessment question responses demonstrated statistically significant improvements for cardiologists (N = 31; P < .05; V = 0.243) and hem/oncs (N = 48; P < .05; V = 0.186).
- An average of 42% of cardiologists and 47% of hem/oncs answered the best response on pre-assessment, those percentages rose to an average of 67% on post-assessment for each specialty group.
- Whereas only 10% of cardiologists and 13% of hem/oncs answered all pre-assessment questions correctly, 42% in each specialty group answered all post-assessment questions correctly (Figure 1).
- Statistically significant relative percentage improvements in knowledge and competence related to several clinical themes were observed (all P < .05) (Figures 2 and 3):
  - A 74% improvement among hem/oncs and a 72% improvement among cardiologists in knowledge of strategies to improve adherence to NOAC therapy.
  - A 55% improvement among hem/oncs in recognition of dosing regimens for the different NOACs.
  - A 103% improvement for cardiologists in selection of effective strategies to improve adherence to NOAC therapy.

**CONCLUSIONS**

- The statistically significant improvements observed after participation in this CME activity demonstrate the benefits of using well-designed online education in the form of 15-minute video-based discussion for clinically relevant target audiences.
- This assessment also identified education gaps that support the need to develop additional CME activities on VTE management, including strategies to improve adherence to NOACs to optimize outcomes.

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**REFERENCES**

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**FIGURE 1. Correct Responses by Question**

**FIGURE 2. Correct Responses by Question**

**FIGURE 3. Assessment Questions**

**QUESTIONS**

**QUESTION 1.** A 53-year-old male mechanic presents 1 month after a fall on a bicycle with left leg and thigh swelling. Ultrasonography reveals deep venous thrombosis of the iliofemoral veins. The patient is started on NOAC monotherapy in the primary care provider’s office. Medication adherence for this patient can be enhanced by:

- A 74% improvement among hem/oncs and a 72% improvement among cardiologists in knowledge of strategies to improve adherence to NOAC therapy.
- A 55% improvement among hem/oncs in recognition of dosing regimens for the different NOACs.
- A 103% improvement for cardiologists in selection of effective strategies to improve adherence to NOAC therapy.