

# Electronic Alerts Cut VTE in High-Risk Patients

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NEW ORLEANS — An automated electronic alert program aimed at physicians responsible for high-risk patients not receiving prophylaxis against venous thromboembolism resulted in a substantial reduction in thromboembolic events in a large randomized trial, Nils Kucher, M.D., said at the annual scientific sessions of the American Heart Association.

“Our results suggest that hospitals with adequate information system resources should consider implementation of electronic alerts to increase the awareness of venous thromboembolism [VTE] risk, improve utilization of prophylaxis, and reduce rates of leg deep vein thrombosis and pulmonary embolism,” said Dr. Kucher of Brigham and Women’s Hospital, Boston.

Studies have consistently shown that mechanical as well as pharmacologic pro-

phylaxis against VTE is underutilized in at-risk patients.

In an effort to rectify this situation, Dr. Kucher and his coworkers developed a computer program to electronically search the medical records of in-hospital patients and identify those at increased risk for VTE who were not receiving prophylaxis.

The program sent an e-mail alert to the physician in charge of the patient’s care that included mention of the full range of

prophylactic options, such as compression stockings, low-molecular-weight heparin, unfractionated heparin, warfarin, and pneumatic compression boots. The physician was then forced to acknowledge the alert but could choose to order or withhold prophylaxis.

The randomized trial involved 2,506 consecutive hospitalized patients at high risk for VTE who were not on prophylaxis. Physicians responsible for those in the intervention arm were issued an electronic alert.

The alert was withheld from physicians caring for patients in the control group.

Use of the computerized electronic alert program resulted in more than a doubling of orders for prophylaxis, from 14.5% in the control group to 33.5% in the intervention group.

The primary study end point was the overall VTE rate at 90 days, which was 4.9% in the intervention arm and 8.2%

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among controls. This translated into a highly significant 41% relative risk reduction, Dr. Kucher said during the meeting.

Pulmonary embolism was reduced by 60% in the intervention group, while proximal leg deep venous thromboembolism was decreased by 53%.

These benefits were achieved without an increase in major hemorrhage, which occurred in 1.5% of patients in both the intervention and control arms, Dr. Kucher pointed out.

In addition, 90-day mortality was 22% in each group.

The computer program identified patients as being at increased risk for VTE by using a scoring system that assigned 3 points each for prior VTE, cancer, or hypercoagulability; 2 points each for major surgery or a bed-rest order; and 1 point each for acute trauma, obesity, hormone therapy, or use of an OC.

Patients with 4 or more points were defined as high-risk.

The reduction in VTE events seen with use of the electronic alert system was equally robust in patients with or without cancer, in both young and elderly patients, in men and women, and in those with or without a history of VTE.

Venous thromboembolism is said to be the No. 1 cause of unexpected in-hospital death.

A 2003 conference sponsored by the American Public Health Association and the Centers for Disease Control and Prevention concluded that greater public and physician awareness of VTE and its prophylaxis is a high priority, because the annual incidence of VTE is 200,000-600,000 cases, resulting in up to 200,000 deaths. ■

## is more than a cough

### Asking the patient about Stress and Urge Urinary Incontinence

Approximately 2/3 of women with Stress Urinary Incontinence (SUI) have not discussed their symptoms with their physicians.<sup>5</sup> Because many women are too embarrassed to initiate the discussion, asking questions about symptoms may help them discuss their incontinence.

Questions that can help distinguish between Stress and Urge Urinary Incontinence include:

- Do you experience involuntary loss of urine associated with activities like sneezing, coughing, laughing, lifting, or exercising?
- Do you experience involuntary loss of urine preceded by a sensation of urgency or uncontrollable voiding with little or no warning beforehand?

Answers to these questions can help determine whether the patient’s symptoms may be associated with Stress Urinary Incontinence (SUI) or urge urinary incontinence.

### Research directions for Stress Urinary Incontinence (SUI)

Eli Lilly and Company and Boehringer Ingelheim are partnering to lead the way with their research in Stress Urinary Incontinence (SUI). As the scientific community enhances its understanding of the relationship between the central nervous system and lower urinary tract function, more information will become available to better understand Stress Urinary Incontinence (SUI).

[SUI.com](http://SUI.com)

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