success story

vte risk and prophylaxis in the hospitalized inpatient

<table>
<thead>
<tr>
<th>Low</th>
<th>Moderate</th>
<th>High</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Ambulatory patient without additional VTE Risk Factors</td>
<td>• All other patients. Most patients! (not LOW or HIGH category)</td>
<td>• Elective major lower extremity arthroplasty</td>
</tr>
<tr>
<td>• Ambulatory patient with expected LOS ≤ 2 days, or same day/minor surgery</td>
<td>• Hip, pelvic, or severe lower extremity fractures</td>
<td>• Acute spinal cord injury with paresis</td>
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<tr>
<td>• Only a few patients!</td>
<td>• Multiple major trauma</td>
<td>• Abdominal or pelvic surgery for cancer</td>
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Ambulation and Education

LMWH or UFH 5000 units q 8h

LMWH or Arixtra or Coumadin, AND IPC

vte risk factors

age > 50 years | Prior history of VTE | Actue or chronic lung disease |
myeloproliferative disorder | Impaired mobility | Obesity |
dehydration | Inflammatory bowel disease | Known thrombophilic state |
CHF | Active rheumatic disease | Varicose veins/chronic stasis |
active malignancy | Sickle cell disease | Recent post-partum w/immobility |
hormonal replacement | Estrogen-based contraceptives | Nephrotic syndrome |
moderate to major surgery | Central venous catheter | Myocardial infarction |

physicians at UCSD use these checklists to assess all adult inpatients when they are admitted, transferred between units, or post-op.

The program was so successful that the VTE prevention protocol has become the foundation of a VTE Prevention Collaborative, which was organized by the Society of Hospital Medicine (SHM) and so far includes 30 medical centers. As part of the collaborative, Maynard connects via phone and e-mail with hospitalists across the country who are dedicated to increasing VTE prophylaxis at their facilities.

Lessons learned

- The simpler the risk assessment model the more likely it is to be integrated seamlessly into the workflow. “An ideal VTE risk assessment model does not require the user to add up points to ascertain the patient’s risk level,” said Ian H. Jenkins, ACP Member, a hospitalist and member of the VTE Prevention Team. “Also, the model has to be convenient, but still maintain an adequate level of accuracy and detail.”

- Measurement drives improvement. “If it’s done correctly with sampling and/or automation, and if you use digital imaging, like we did, you can get good data without a burdensome amount of work,” said Dr. Maynard.


How patients benefit

Of course, UCSD patients benefit from the reduction in PE and VTE, which is the leading cause of preventable death in hospitalized patients. Patients at other hospitals are now benefitting from the spread of the protocol.

Next steps

Dr. Maynard said there’s still work to be done as long as hospital-acquired VTE has not been eradicated. “There are still a lot of cases where there’s a relative contraindication to pharmacologic prophylaxis, so clinicians justify not putting these patients on prophylaxis because of that. But the risk of clots is probably higher than the risk of bleeding from pharmacologic prophylaxis, so we plan to focus more on those patients,” he said.

The team also continues to collect data on VTEs and use that knowledge to further refine the system. “When patients develop a clot, we investigate why,” said Dr. Jenkins.

Words of wisdom

- “Don’t reinvent the wheel. Use the VTE Prevention Collaborative tools on the SHM Web site. We put a lot of information into the toolkit that people can use to achieve the same results much more quickly than we did,” said Dr. Maynard.

- “If you involve and solicit the advice of everyone who may have their workflow altered, you’ll have allies rather than people who you are trying to make compliant,” said Dr. Jenkins.

Rochelle Nataloni is a freelance writer in Sewell, N.J.