



Quality Matters

Communicating performance issues & activities • APRIL 2007

As part of Memorial Hospital's participation in the *Protecting 5 million Lives From Harm* campaign led by the Institute for Healthcare Improvement, we have included information in this issue of Quality Matters that we believe will assist us all in providing the best care possible to our hospitalized patients.

Please feel free to contact us:

Jan Lange, MD
All day Thursdays & Fridays
249-5132
janl@prodigy.net

Carl Olden, MD
All day Thursdays and every morning from 7-10:00 a.m.
249-5324
carl.olden@yvmh.org

We work together to make it easier for you to provide the best evidence-based care for your patients.



JCAHO Site Visit Follow-up

At our recent review, the three findings directly related to physicians were:

1. Verbal Orders—physicians were observed giving verbal orders to nurses rather than writing the orders directly. This adds another opportunity for errors in communication and transcription, and must be eliminated. **Write your own orders.**
2. Despite our leadership role, physicians continue to write unapproved abbreviations, the most common being “u” for “units” and “qd” for “daily”.
3. Each department/specialty needs to develop two or three specific performance parameters that are meaningful and effectively reflect “standard of care”, and which can be used for ongoing performance evaluation and reappointment purposes. ■

Peer Conflict Resolution

Many of the peer conflict and quality of care issues, which arise in the day-to-day operations of the hospital and medical staff, could be prevented or minimized if we all adhered to the “Golden Rule”. It is

important that we articulate our expectations of membership on the medical staff and in the exercise of the privileges we have been granted to practice here at Memorial. ■

As a reminder, here is the “CLIFF’S NOTES” version of our Yakima Valley Memorial Hospital Medical Staff Standards of Behavior:

Peer and coworker relationships:

At all times, act in a professional, respectful manner to enhance cooperation, mutual respect, and trust among members of the patient care team.

Patient safety and patient rights:

Participate in the hospital's efforts to create a patient safety culture and to reduce medical errors.

Technical quality of care:

Use evidence-based medicine to consistently provide the most effective and appropriate approaches to diagnosis and treatment.

Quality of service:

Ensure timely and continuous care of patients by clearly identifying covering physicians and appropriate electronic communications availability.

Resource use:

Provide accurate, timely discharge instructions in collaboration with other caregivers.

Performance Improvement:

Review your individual and specialty data for all dimensions of performance, and use this data to improve care continuously.

Venous thromboembolism (VTE) prophylaxis is one of the seven indicators measured at Memorial as part of the Surgical Care Improvement Project (SCIP). VTE prophylaxis has been implemented in greater than 90% of surgical patients at Yakima Valley Memorial Hospital in the last year. The following information is provided to you in regards to knowing the risk factors associated with patients acquiring a VTE.

Fatal pulmonary embolism occurs with the following frequency in patients who do not receive prophylaxis:

- 0.1–0.8% in patients undergoing elective general surgery
- 2–3% in patients undergoing elective hip replacement
- 4–7% in patients undergoing surgery for a fractured hip

Additional risk factors that increase the risk of venous thrombosis are:

- Previous venous thromboembolism
- Obesity
- Heart failure
- Paralysis
- Presence of an inhibitor deficiency state, inherited thrombophilia

Venous Thromboembolism

Most risk factors for venous thromboembolic disease have been identified in surgical populations. In one large prospective cohort study, 21,903 consecutive surgical patients were followed for 30 days postoperatively. Deep vein thrombosis and pulmonary embolism were rare, diagnosed in 0.11 and 0.14% of patients, respectively. Independent risk factors for thromboembolism included:

- Age > 50 years
- History of varicose veins (OR 7.2, 95% CI 3.8-13.7)
- History of myocardial infarction (OR 2.9, 95% CI 1.8-4.8)
- History of cancer (OR 2.4, 95% CI 1.9-3.2)
- History of atrial fibrillation (OR 2.1, 95% CI 1.2-3.4)
- History of ischemic stroke (OR 1.8, 95% CI 1.3-2.7)
- History of diabetes mellitus (OR 1.7, 95% CI 1.2-2.2)

Risk for Hospitalized Patients.

Medical patients who are immobilized

(eg, with congestive heart failure, cancer, stroke, or following myocardial infarction) also present a significant risk for venous thromboembolism. There is a high risk of developing VTE while hospitalized for a reason other than DVT or pulmonary embolus. Based upon a review of residents of Olmsted County for the period from 1980 through 1990, the age- and sex-adjusted incidence of VTE was more than 130 times greater among hospitalized patients than among community residents. For both groups, the incidence of VTE increased with advancing age, and, with the exception of women <40 years of age, was higher in hospitalized men than women.

Approximately one-half of community-based cases occurred in patients who developed VTE while residing in a nursing home or within 90 days of hospital discharge. The net result was that approximately 60% of all cases of VTE occurred in hospitalized, recently discharged, or nursing home patients.

Prevention of VTE

There are two approaches to the prevention of fatal pulmonary embolism. Primary prophylaxis is carried out using either drugs or physical methods that are effective for preventing deep vein thrombosis. Secondary prevention involves the early detection and treatment of subclinical venous thrombosis by screening postoperative patients with objective tests that are sensitive

for venous thrombosis. Primary prophylaxis is preferred in most clinical circumstances; it is more cost-effective than treatment of complications when they occur. Secondary prevention should never replace primary prophylaxis; it is reserved for patients in whom primary prophylaxis is either contraindicated or ineffective.

(VTE) Risks and Prevention

Risk for Surgical Patients.

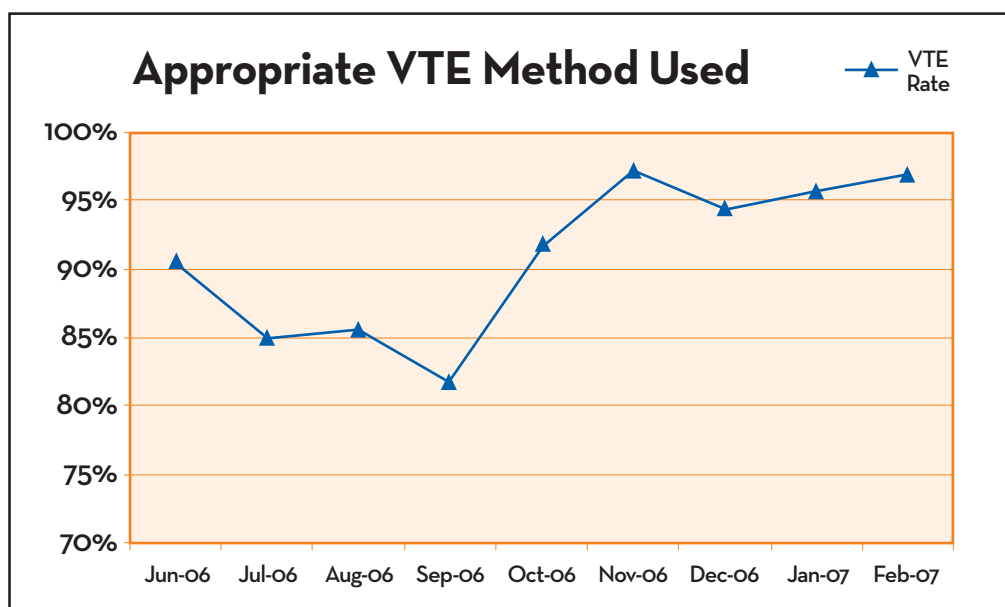
Patients undergoing surgical procedures are divided into the following risk categories:

Low risk—Low risk patients are under the age of 40, have none of the risk factors listed above, will require general anesthesia for less than 30 minutes, and are undergoing minor elective, abdominal, or thoracic surgery. Without prophylaxis their risk of proximal vein thrombosis is less than 1.0%, and risk of fatal pulmonary embolism is less than 0.01%.

Moderate risk—Moderate risk patients are over the age of 40, will require general anesthesia for more than 30 minutes, and have one or more of the above risk factors. Without prophylaxis, their risk of proximal vein thrombosis is 2–10%, and their risk of fatal pulmonary embolism is 0.1–0.7%.

High risk—High risk patients include those over the age of 40 who are having surgery for malignancy or an orthopedic procedure of the lower extremity lasting more than 30 minutes, and those who have an inhibitor deficiency state or other risk factors. The risk of proximal vein thrombosis and fatal pulmonary embolism in this group is 10–20% and 1.0–5.0%, respectively.

The high risk associated with orthopedic surgery results from a number of factors that contribute to venous stasis, including the supine position on the operating table, the anatomic positioning of the extremity, and, in patients undergoing total knee replacement, inflation of a thigh tourniquet to obtain a bloodless field. In addition, intimal injury may result from positioning of the extremity, and compression of the femoral vein may occur due to flexion and adduction of the hip during surgery on this joint. ■



Intermittent pneumatic leg compression prevents venous thrombosis by enhancing blood flow in the deep veins of the legs, thereby preventing venous stasis. Pneumatic compression also reduces plasminogen activator inhibitor-1 (PAI-1) levels via an unknown mechanism and consequently increases endogenous fibrinolytic activity. Thus, intermittent leg compression has both local and systemic effects. Intermittent pneumatic compression

is virtually free of clinically important side effects and offers a valuable alternative in patients who have a high risk of bleeding. It may produce discomfort in some patients, and should not be used in those with overt evidence leg ischemia caused by peripheral vascular disease. It is also contraindicated if a patient has been at bed rest or immobilized for more than 72 hours without any form of prophylaxis, since it may cause a newly formed clot to dislodge.

PRIMARY PROPHYLAXIS

The prophylactic measures most commonly used include:

- Low dose **heparin**
- Low molecular weight heparin
- Use of the substituted pentasaccharide **fondaparinux**
- Oral anticoagulants (*International Normalized Ratio [INR] of 2.0 to 3.0*)
- Intermittent pneumatic compression (IPC)

