VTE Prevention as an Accreditation Canada ROP

Knowledge and Tools for Success

Bill Geerts, MD
Artemis Diamantouros, BScPhm, MEd
The Venous Thromboembolism Prevention Hospital Award

A National Award Recognizing Excellence and Commitment

Is Presented To

Pfizer

safer healthcare now!
Outline

- VTE prevention as a key patient safety priority for all hospitals
- Current recommendations for thromboprophylaxis
- Accreditation Canada VTE ROP
- Meeting the ROP at your centre
Venous Thromboembolism (VTE) = DVT + PE

- **Pulmonary Embolism (PE)**
- **Deep Vein Thrombosis (DVT)**
1. Clots are common

2. Clots are bad

3. Clots are preventable (safely and inexpensively)

4. Preventing clots is standard of care for almost all hospital patients in 2010

Rationale for Thromboprophylaxis
Rationale for Thromboprophylaxis

- ~60% of all VTE is hospital-acquired
- Pulmonary embolism is the commonest preventable cause of hospital death
More than 400 randomized studies prove that VTE CAN be prevented safely and inexpensively.

Guidelines have recommended routine prophylaxis use for 25 years.

Thromboprophylaxis is the number 1 ranked patient safety strategy in hospitalized patients.

Low Dose Heparin Reduced DVT in 46 RCTs of Surgical Patients \((n=15,598)\)

Collins – NEJM 1988;318:1162
Reduction in **DVT** Correlates with Reduction in **Fatal PE**

- **DVT**
  - Control: 22%
  - Low dose heparin: 9%

- **Fatal PE**
  - Control: 0.8%
  - Low dose heparin: 0.3%

Risk Reduction:
- **DVT**: 59%
- **Fatal PE**: 63%

Reference: Collins – *NEJM* 1988;318:1162
8th ACCP Guidelines on Antithrombotic Therapy

Prevention of Venous Thromboembolism

W. Geerts
D. Bergqvist
G. Pineo
J. Heit
C.M. Samama
M. Lassen
C. Colwell

Thromboembolism Risk Groups

- General surgery
- Vascular surgery
- Gynecologic surgery
- Urologic surgery
- Thoracic surgery
- Bariatric surgery
- Laparoscopic surgery
- Coronary bypass surgery
- Hip arthroplasty
- Knee arthroplasty
- Knee arthroscopy
- Hip fracture surgery
- Spine surgery
- Lower extremity injuries
- Neurosurgery
- Major trauma
- Spinal cord injuries
- Burn patients
- Medical patients
- Cancer patients
- Central venous catheters
- Critical care patients
- Long distance travel

Geerts – Chest 2008;133:381S
Mechanical Methods of Prophylaxis

1. Graduated compression stockings (T.E.D.s™)
2. Pneumatic compression devices (IPC, SCDs™, leg squeezers)
3. Foot pumps

- If used properly, **these methods work in some patient groups**, **but**
- They generally **don’t work as well as anticoagulants**, and
- Compliance is poor → they require a **big effort to work** at all.
Mechanical Thromboprophylaxis

1. Only for patients who cannot have anticoagulant prophylaxis
2. Ensure they fit properly
3. Both legs
4. Start ASAP (preop or an admission)
5. Use ~24 hours/day – only remove
   - for leg washing
   - when patient actually walking (TEDS stay on)
6. Legal obligation to ensure compliance
Pharmacologic (anticoagulant) Methods of Prophylaxis

1. Low dose heparin / minidose heparin
2. Low molecular weight heparin
dalteparin (Fragmin®)
enoxaparin (Lovenox®)
tinzaparin (Innohep®)
3. Fondaparinux (Arixtra®)
4. Warfarin (Coumadin®)
5. Oral Factor Xa inhibitors, IIa inhibitors
dabigatran (Pradax®)
rivaroxaban (Xarelto®)
Does Warfarin still have a role as VTE Prophylaxis in 2010?

No:

- There are more effective, safer, and much easier to use alternatives that are not more costly and are more patient-friendly.
Some Patients Need Post-Discharge Thromboprophylaxis

(Readmissions to Hospital for VTE)

Discharge
N=43,645

THR
~3 months

TKR
~1 month

White - Arch Intern Med (1998)
Extended Thromboprophylaxis Reduces DVT after THR

Meta-analysis: 9 THR studies N=3,999

Eikelboom - Lancet 2001;358:9
Extended Thromboprophylaxis Reduces DVT and Symptomatic VTE

Meta-analysis: 9 THR studies  
N=3,999

No post-discharge major bleeding

Eikelboom - Lancet 2001;358:9
## 2010 Thromboprophylaxis Summary

<table>
<thead>
<tr>
<th>Patient Group</th>
<th>Options</th>
<th>Duration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute medical illness</td>
<td>LMWH, low dose heparin</td>
<td>Discharge</td>
</tr>
<tr>
<td>Surgery: gen’l, gyne, urol</td>
<td>LMWH, low dose heparin</td>
<td>Discharge</td>
</tr>
<tr>
<td>Major orthopedics (THR, TKR, HFS)</td>
<td>rivaroxaban, dabigatran, LMWH, fondaparinux</td>
<td>14-28 days</td>
</tr>
<tr>
<td>High bleeding risk</td>
<td>mechanical</td>
<td>Until anticoagulant can start</td>
</tr>
</tbody>
</table>
Thromboprophylaxis in Hospitalized Patients

How well do we do?
2006 Routine Use of Recommended Prophylaxis in 195 Canadian Hospitals

Appropriate use

- Hip/knee replacement: 94%
- Hip fracture surgery: 86%
- Major gynecology: 36%
- General surgery (cancer): 33%
- General surgery (benign): 30%
- Major trauma: 32%
- General Internal Medicine: 11%
Overall, more than 99% of THR patients received prophylaxis

**LMWH**
- 2003-2004: 65%
- 2004-2005: 68%
- 2005-2006: 72%
- 2006-2007: 74%

**Warfarin**
- 2003-2004: 39%
- 2004-2005: 34%
- 2005-2006: 23%
- 2006-2007: 22%

**SCDs**
- 2003-2004: 12%
- 2004-2005: 13%
- 2005-2006: 12%
- 2006-2007: 12%

---

N = 11,729, 14,427, 13,240 and 12,947 Hip Replacements With DVT Info.

*Canadian Joint Registry (CIHI) 2009*
Prophylaxis Use in Medical Patients

- 1,894 medical patients in 29 hospitals in 6 provinces

- 90% Prophylaxis indicated
- 23% Prophylaxis given
- 15% Recommended prophylaxis

TOPPS: Baseline Prophylaxis Use

- Quality improvement initiative in 8 Toronto area hospitals

<table>
<thead>
<tr>
<th></th>
<th>Adherence</th>
<th>Hip fracture (n=341)</th>
<th>Major general surgery (n=416)</th>
<th>Medical patients (n=418)</th>
<th>Combined (n=1,175)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>80%</td>
<td>79.2%</td>
<td>43.3%</td>
<td>31.1%</td>
<td>49.4%</td>
</tr>
</tbody>
</table>
The hospital “identifies medical and surgical clients at risk of venous thromboembolism (DVT and PE) and provides appropriate thromboprophylaxis.”

Hospital accreditation requirement starting January, 2011
1. The hospital has an organization-wide, written thromboprophylaxis policy or guideline.

2. Identifies patients at risk for VTE and provides appropriate, evidence-based VTE prophylaxis.

3. Establishes measures for appropriate thromboprophylaxis use, audits its implementation, and uses this for quality improvement.

4. Identifies major orthopedic surgery patients who require post-discharge prophylaxis and provides it.

5. Educates health professionals and patients about VTE and its prevention.

www.accreditation.ca
How can we do better?

Helping you to meet the Accreditation Canada ROP
1. The hospital has an organization-wide, **written thromboprophylaxis policy** or guideline.

2. Identifies patients at risk for VTE and provides appropriate, **evidence-based VTE prophylaxis**.

3. Establishes measures for appropriate thromboprophylaxis use, **audits its implementation**, and uses this for quality improvement.

4. Identifies major orthopedic surgery patients who require **post-discharge prophylaxis** and provides it.

5. **Educates** health professionals and patients about VTE and its prevention.

www.accreditation.ca
1.2 VTE Prophylaxis Policy

1.2.1 We recommend that every general hospital develop a formal, active strategy that addresses the prevention of VTE [Grade 1A].
POLICY STATEMENT

Venous thromboembolism (VTE) is one of the most common complications of hospitalization and the most common preventable cause of hospital death. It is Sunnybrook policy that best practices will be followed to ensure that hospitalized patients are assessed for their risk of VTE and that they receive appropriate thromboprophylaxis, if indicated.

SUNNYBROOK THROMBOPROPHYLAXIS POLICY

• Every hospitalized patient should be assessed for VTE risk at the time of admission to hospital, at the time of a significant change in clinical status, at the time of transfer from one type of care to another, and at discharge; AND

• Optimal, evidence-based TP should be provided to every hospitalized patient in whom it is indicated based on their risk of thrombosis, their risk of bleeding, and available options.

THROMBOPROPHYLAXIS GUIDELINES
1. The hospital has an organization-wide, **written thromboprophylaxis policy** or guideline.

2. Identifies patients at risk for VTE and provides appropriate, **evidence-based VTE prophylaxis**.

3. Establishes measures for appropriate thromboprophylaxis use, **audits its implementation**, and uses this for quality improvement.

4. Identifies major orthopedic surgery patients who require **post-discharge prophylaxis** and provides it.

5. **Educates** health professionals and patients about VTE and its prevention.
Incorporate strategies that work well together

1. Keep it Simple
   - patient selection
   - prophylaxis options

2. Build it into routine care
   - hospital policy
   - order sets – default or opt out

3. Audit and feedback
Which Hospital Patients Should Receive Thromboprophylaxis?

- Medical patients – acutely ill, bedrest, stroke, CHF, acute resp illness, infection
- Major general surgical, major gynecologic, major urology, bariatrics, cardiovascular, neurosurgery
- Orthopedics, trauma
- ICU
- High risk obstetrics

i.e. most patients in hospital
Simplifying DVT Prophylaxis: 2 Patient Groups

Low risk = no prophylaxis

At risk = routine evidence-based prophylaxis

~10%

~90%
“Patients without risk factors for VTE are called outpatients.”

G. Maynard (2010)
Too Little Guidance

A prompt is not a protocol

DVT PROPHYLAXIS ORDERS

- Anti-embolism stockings
- Sequential compression devices
- UFH 5000 units SC Q12h
- UFH 5000 units SC Q8h
- LMWH (enoxaparin) 40 mg SC QD
- LMWH (enoxaparin) 30 mg SC Q12h
- UFH 5000 units SC Q12h + SCDs
- Warfarin target INR 1.5-2.5
- No Prophylaxis, Ambulate
What Thromboprophylaxis Options Do We Have to Choose From?

Anticoagulant Options:
- LDH – BID or TID
- LMWH – dalteparin, enoxaparin, tinzaparin, etc
- Rivaroxaban, dabigatran

Mechanical Options:
- GC stockings
- Pneum compr devices

Choose 1 (or possibly 2):

Choose 1:

i.e. only 2 or 3 options
## Simplifying Thromboprophylaxis (2010)

<table>
<thead>
<tr>
<th>Patient group</th>
<th>Prophylaxis</th>
<th>Duration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Medical</td>
<td>LMWH</td>
<td>Discharge</td>
</tr>
<tr>
<td>General surgical</td>
<td>LMWH</td>
<td>Discharge</td>
</tr>
<tr>
<td>Orthopedics</td>
<td>LMWH</td>
<td>Discharge +10d</td>
</tr>
<tr>
<td></td>
<td>rivaroxaban</td>
<td>15 d</td>
</tr>
<tr>
<td>Trauma/ SCI</td>
<td>LMWH</td>
<td>Rehab d/ c</td>
</tr>
<tr>
<td>ICU</td>
<td>LMWH</td>
<td>Discharge</td>
</tr>
<tr>
<td>High bleeding risk</td>
<td>TEDS until</td>
<td>LMWH</td>
</tr>
<tr>
<td></td>
<td>risk ↓</td>
<td></td>
</tr>
</tbody>
</table>
What have we learned?

Tools for Success
TOPPS: Baseline, T1 and T2

- Quality improvement initiative in 8 Toronto area hospitals

Adherence

- Hip fracture: 79%, 71%, 90%
- Major general surgery: 43%, 56%, 65%
- Medical patients: 31%, 56%, 71%
- Combined: 49%, 61%, 75%
What were the Interventions in TOPPS?

1. Involvement of Pharmacy
2. Emphasis on order sets
3. Audit and feedback
4. Anything else the hospital thought might be useful
Build it into practice
**Surgical Safety Checklist**

**BRIEFING - Before induction of anaesthesia**

- Confirm all Team members have introduced themselves by Name and Role
- Patient information confirmed
  - Identify patient (2 identifiers)
  - Consent(s)
  - Procedure
  - Site, Side, and Level marked
  - Clinical documentation
    - Allergies - drugs, latex
    - History and physical, labs, biopsies, imaging
  - Review relevant test results
- Communicable disease / isolation precautions
- Anaesthesiologist Reviews
  - Equipment safety check completed
  - Patient ASA class
  - Difficult airway / Aspiration risk
  - Confirm equipment / assistance available
  - Monitoring
    - Pulse oximetry, ECG, BP, arterial line, CVP, temperature, urinary catheter
  - Warming devices
  - Any specific patient concerns
- Blood loss / Transfusion risk
  - Anticipated to be > 500 ml or 10% of blood volume
  - Patient grouped, screened, cross matched
  - Blood fridge eligible
  - Cell saver

**Medications**

- Currently on any infusions
- Currently on anticoagulant therapy
- Procedure specific meds to be considered

**Surgeon Reviews**

- Complexity of surgery
- Expected procedure time
- Critical steps
- Visually confirms special instruments and implants available
- Positioning of patient
- Essential imaging displayed
- Any specific patient concerns

**Nurse Reviews**

- Sterility / check indicator results
- Equipment / implant issues
- Skin integrity
- Family liaison
- Confirms post-op destination
- Any specific patient concerns

**VTE prophylaxis**

**Antibiotic prophylaxis**

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**TIME OUT - Before skin incision**

- Surgeon, Anaesthesiologist and Nurse verbally confirms
- Antibiotics
- Position
- Patient name
- Implants
- Procedure
- Everyone: Any concerns or questions before proceeding
- Laterality
- Equipment

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**DEBRIEFING - Before patient leaves OR (ENTIRE TEAM REVIEWS)**

- Surgeon Reviews
  - Procedure performed
  - Unexpected events
  - Changes to postoperative destination
- Anaesthesiologist Reviews
  - Intra-operative events
  - Unexpected events
  - Blood loss / Replacement
- Nurse Reviews
  - Surgical count
  - Documentation
    - OR procedure confirmed
    - Specimen labelling
    - Skin integrity
    - Intra-operative events (including equipment malfunction)
- Near miss / incident
  - E-safety report completed
  - Any avoidable or preventable event
- PACU / Critical Care Handover
- Family notification
**Embed Prophylaxis into Order Sets**

**Sunnybrook Health Sciences Centre**

**Physician’s Orders**

All orders shall be DATED, TIMED, and SIGNED
All medication orders shall be written in the GENERIC or non-proprietary name.
All orders shall be written legibly using ball point pen.

<table>
<thead>
<tr>
<th>YYYY/MM/DD</th>
<th>Yes</th>
<th>No</th>
<th>DVT Prophylaxis</th>
</tr>
</thead>
<tbody>
<tr>
<td>√</td>
<td></td>
<td></td>
<td>Choose one option below:</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>☐ enoxaparin 40 mg SC once daily</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>☐ enoxaparin 30 mg SC once daily if creat clearance &lt;30 mL/min or weight &lt;40 kg</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>☐ For high bleeding risk patients only, apply properly measured, bilateral, below-knee support stockings – reassess daily for conversion to enoxaparin</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>☐ No prophylaxis – state reason __________</td>
</tr>
</tbody>
</table>

**Signature of nurse**
Pharmacological Prophylaxis

If Creatinine less than 150 \( \mu \text{mol/L} \):   Enoxaparin 40 mg Subcutaneous once daily

If Creatinine is 150 \( \mu \text{mol/L} \) or greater:   Enoxaparin 30 mg Subcutaneous once daily

OR

Mechanical Prophylaxis (Consider only if high bleeding risk)

GCS: Bilateral Graduated Compression (Antiembolic) Stockings

IPC: Bilateral Intermittent Pneumatic Compression (Sequential Compression Device) with stockinettes

- If GCS or IPC ordered: use continuously on both legs except during bathing, walking and TID skin care

- If only Mechanical Prophylaxis ordered reassess daily for change to Pharmacological Prophylaxis

No DVT Prophylaxis Reason:

☐ Patient on therapeutic anticoagulation

Other: _____________________________________________

- Reassess DVT Prophylaxis daily if not ordered
1. The hospital has an organization-wide, written thromboprophylaxis policy or guideline.

2. Identifies patients at risk for VTE and provides appropriate, evidence-based VTE prophylaxis.

3. Establishes measures for appropriate thromboprophylaxis use, audits its implementation, and uses this for quality improvement.

4. Identifies major orthopedic surgery patients who require post-discharge prophylaxis and provides it.

5. Educates health professionals and patients about VTE and its prevention.
Audit it: Sunnybrook 1-Day Thromboprophylaxis Audit

- Every acute care patient
- Except: psychiatry, obstetrics
- Data analyzed by:
  - unit
  - service
  - program
  - department
<table>
<thead>
<tr>
<th>Unit type</th>
<th>No.</th>
<th>Excl.*</th>
<th>Prophylaxis</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Indicated</td>
<td>Ordered</td>
</tr>
<tr>
<td>Surgical</td>
<td>245</td>
<td>56</td>
<td>189</td>
<td>171 (89%)</td>
</tr>
<tr>
<td>Medical</td>
<td>200</td>
<td>61</td>
<td>139</td>
<td>100 (72%)</td>
</tr>
<tr>
<td>Major ICU</td>
<td>41</td>
<td>7</td>
<td>34</td>
<td>33 (97%)</td>
</tr>
<tr>
<td>All</td>
<td>486</td>
<td>124</td>
<td>362</td>
<td>300 (83%)</td>
</tr>
</tbody>
</table>

*receiving therapeutic anticoagulation or prophylaxis not indicated*
Appropriate Prophylaxis* Use in General IM Patients at Sunnybrook

*based on direct chart audit

Quality improvement in action!
Appropriate Prophylaxis* Use in General IM Patients at Sunnybrook

*based on direct chart audit

Now back to reality!
Involve everyone
<table>
<thead>
<tr>
<th>Routine Practices</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. If patient receiving continuous sedation:</td>
<td></td>
</tr>
<tr>
<td>• Has patient received daily interruption?</td>
<td></td>
</tr>
<tr>
<td>2. If patient’s pain/agitation/delirium score outside target:</td>
<td></td>
</tr>
<tr>
<td>• Have interventions been reassessed today?</td>
<td></td>
</tr>
<tr>
<td>3. If patient requiring physical restraints:</td>
<td></td>
</tr>
<tr>
<td>• Has need been reassessed and reordered today?</td>
<td></td>
</tr>
<tr>
<td>• Has initial consent been obtained and documented?</td>
<td></td>
</tr>
<tr>
<td>4. If patient has a central line:</td>
<td></td>
</tr>
<tr>
<td>• Has the line need been reassessed today?</td>
<td></td>
</tr>
<tr>
<td>5. Is patient receiving DVT prophylaxis medication?</td>
<td></td>
</tr>
<tr>
<td>6. If the patient has an artificial airway:</td>
<td></td>
</tr>
<tr>
<td>• Is patient receiving chlorhexidine mouth-rinse?</td>
<td></td>
</tr>
<tr>
<td>• Is patient HOB elevation &gt;30°?</td>
<td></td>
</tr>
<tr>
<td>7. If patient is receiving mandatory mechanical ventilation:</td>
<td></td>
</tr>
<tr>
<td>• Has patient received a spontaneous breathing trial?</td>
<td></td>
</tr>
<tr>
<td>8. Is patient receiving enteral or po nutrition?</td>
<td></td>
</tr>
<tr>
<td>9. If Braden skin risk &lt;9 and/or pressure ulcer present:</td>
<td></td>
</tr>
<tr>
<td>• Are prevention/intervention strategies appropriate?</td>
<td></td>
</tr>
</tbody>
</table>
PREVENTION OF VENOUS THROMBOEMBOLISM (VTE) SHOULD BE CONSIDERED FOR ALL PATIENTS ADMITTED TO ACUTE CARE

Risk Factors for VTE

- Major surgery
- Trauma or leg injury
- Active cancer
- Cancer treatments
- Immobilization, bedrest
- Acute medical illness
- Stroke
- Heart failure
- Previous history of VTE
- Family history of VTE
- Central venous catheter
- Pregnancy
- Birth control pill, hormone replacement therapy
- Severe obesity
- Increasing age

STEP 1: Is thromboprophylaxis NOT INDICATED?

Reasons
- Patient fully mobile
- Brief length of stay

Actions
- No routine prophylaxis
- Reassess daily

STEP 2: Is anticoagulant thromboprophylaxis CONTRAINDICATED?

Reasons
- Active bleeding
- High risk of bleeding

Actions
- TED stockings
- Reassess daily

STEP 3: PROVIDE THROMBOPROPHYLAXIS

For almost all patients, the recommended thromboprophylaxis is:
dalteparin (Fragmin®) 5,000 units SC qhs
Empower the patient....
What patients can do to reduce the risk of VTE:

- If hospital admission has been planned several weeks in advance, you can reduce your risk by:
  - Telling the doctors and nurses that you want them to prevent the development of blood clots
  - Telling your doctors and nurses if you have a previous history or family history of blood clots
  - Talking to your doctor about your risk factors:
    - Recent surgery
    - Cancer and its treatment
    - Major trauma or injuries to the leg
    - Heart or lung disease
    - Pregnancy
    - Use of birth control pill or hormone replacement therapy
    - Obesity
    - Smoking
    - Reduced mobility

- If you are hospitalized especially with major surgery or orthopaedic surgery:
  - Resume physical activity and walking as soon as your doctor permits it
  - Expect to receive an anticoagulant injection which reduces the chance of your blood clotting
  - Report any unexplained chest or leg symptoms to your health care team
  - Drink plenty of fluids to keep hydrated
  - Ask your doctor or nurse “What is being done to reduce my risk of VTE?”

- In general:
  - Stay active
  - Don’t smoke or stop smoking if you do
  - Maintain a healthy body weight

Safer healthcare now! Sunnybrook Health Sciences Centre
How does it all come together?
Adequate Thromboprophylaxis

Randomly sampled patients

Multi-component VTE Prevention QI

- risk assessment tool linked to recommended prophylaxis options
- active monitoring, feedback and interventions to improve adherence

<table>
<thead>
<tr>
<th></th>
<th>2005</th>
<th>2007</th>
<th>(P)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Patients at risk</td>
<td>9,720</td>
<td>11,207</td>
<td></td>
</tr>
<tr>
<td>Patient-days at risk</td>
<td>59,000</td>
<td>62,505</td>
<td></td>
</tr>
<tr>
<td>Appropriate prophylaxis</td>
<td>58%</td>
<td>98%</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Hospital-acquired VTE</td>
<td>131</td>
<td>92</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Preventable hospital-acquired VTE</td>
<td>44</td>
<td>7</td>
<td>&lt;0.001</td>
</tr>
</tbody>
</table>
Multi-faceted VTE QI Initiative

- Support of administration
- Consensus building with physician leaders
- Multidisciplinary QI team
- Simple risk assessment with preferred prophylaxis
- Education - rounds
- Mandatory use of standardized VTE prophylaxis modules in all admission/transfer order sets, CPOE
- Random daily patient audits for adequate prophylaxis (~80/mo)
- Feedback to physicians and nurses if their patient had inadequate prophylaxis

# Hierarchy of Reliability

<table>
<thead>
<tr>
<th>Level</th>
<th>Activities</th>
<th>Predicted prophylaxis rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>No protocol (&quot;state of nature&quot;)</td>
<td>40%</td>
</tr>
<tr>
<td>2</td>
<td>Decision support exists but is not linked to order writing e.g. have a policy or prompts but no decision support</td>
<td>50%</td>
</tr>
<tr>
<td>3</td>
<td>Protocol well-integrated into order sets at point-of-care</td>
<td>65-85%</td>
</tr>
<tr>
<td>4</td>
<td>Protocol enhanced by other QI / high reliability strategies</td>
<td>90%</td>
</tr>
<tr>
<td>5</td>
<td>Oversights identified and addressed daily in real time (&quot;measure-vention&quot;)</td>
<td>95+%</td>
</tr>
</tbody>
</table>

Maynard - 2010
Strategies to Improve Thromboprophylaxis Success

- Have a **written hospital policy** on prophylaxis
- Keep it **simple** (patient groups, options)
- Use **order sets, computer order entry**
- Make a prophylaxis **decision mandatory**
- Involve and educate everyone – MD, RN, pharm, patients
- **Audit adherence** and provide feedback
Prevention of VTE

Overall Objective: to improve hospital safety across Canada by increasing adherence to evidence-based guidelines on the use of thromboprophylaxis

www.saferhealthcarenow.ca
Prevention of VTE

Mission for 2010-11:

The “go-to” resource for VTE prevention in Canada oriented to the Accreditation Canada VTE ROP.

www.saferhealthcarenow.ca
Thromboprophylaxis Targets

100% appropriate prophylaxis for all patients at risk
The Venous Thromboembolism Prevention Hospital Award
A National Award Recognizing Excellence and Commitment

The Jewish General Hospital
Montreal, Quebec

and

The North Bay General Hospital
North Bay, Ontario

Congratulations to:
Marie-Claude Germain, Jessica Emed, Dr. Shannon Fraser, Markirit Artmutlu

and

Congratulations to:
Andree Brunette, Sue Linklater, Dr. Blair Bowker

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