

Successes & Challenges of VTE Protocol Implementation

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**Della Abboud, PharmD, MBA has
nothing to disclose.**

Design Process- Challenges

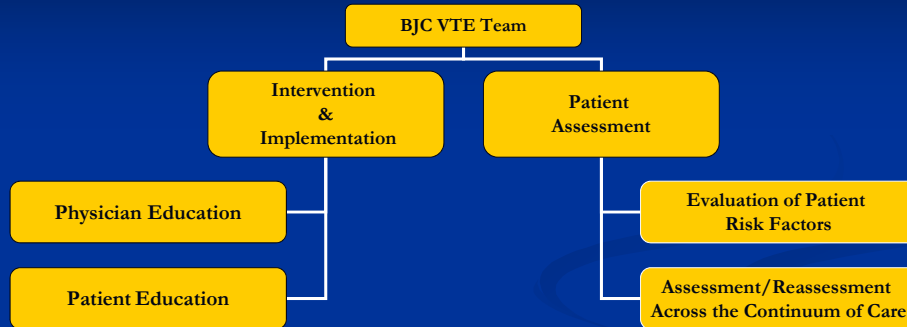
1. **Convene team of content experts – March 2006**
Representatives from 10 system hospitals participated
2. **Conduct literature search**
3. **Develop precise definitions – including populations of study & inclusion/exclusion criteria**
4. **Design & execute an initial short term study (develop surveillance plan)**
5. **Establish plan for long term surveillance and data management**
6. **Design interventions**
7. **Test effectiveness of interventions**
8. **Develop education & marketing plan**
9. **Disseminate effective interventions and educational plan across business units**

Barriers to Overcome

- **Drug Selection**
- **Scoring method**
- **Physician perspectives and experiences**
- **Budget effects and “the bottom line”**

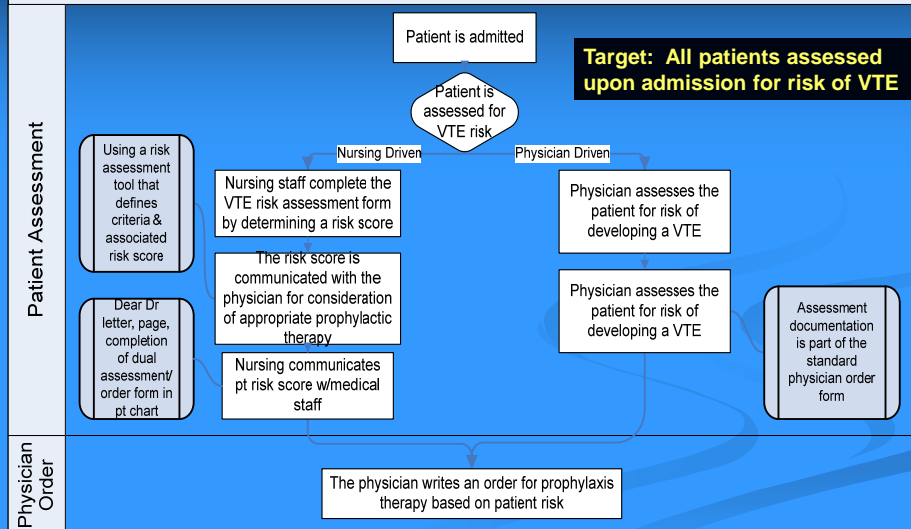
Timeline

- May/June 2006 – team subgroups developed



- Subgroups met twice in the month of June
- End of June, team reconvened and shared subgroup discussions and recommendations
- Overall process fine-tuned and rolled-out to hospitals

Patient Assessment & VTE Prophylaxis - Process Flow Demonstrating Best System Practices



Common Risk Factors

- Age > 40 years old
- Pregnancy
- Birth control pills or estrogen therapy
- Prior history of DVT/PE or family history
- Active collagen-vascular disorders
- Swollen legs or varicose veins
- Stroke
- Surgery (currently or w/in 30 days)
- Chronic lung disease (acute respiratory failure/severe COPD)
- Cancer (current/malignancy)
- Infection/Sepsis
- Paralysis/Immobilization
- Acute rheumatic disorders
- Inflammatory bowel disease
- Closed head injury/Major Trauma/Spinal Cord Injury

Additional Risk Factors

with differences of opinion

- BMI (overweight >25, obesity >35)- scoring
- Dehydration
- Timeframe for surgery
- Timeframe for cancer & treatment

**Barnes-Jewish
West County Hospital**
U of M HealthCare

**INPATIENT DVT PROPHYLAXIS
ASSESSMENT/ORDER**

**ORDERS ON THIS FORM SUPERSEDE ANY ORDERS ON
PREPRINTED ORDER FORMS OR WRITTEN PHYSICIAN ORDERS.**

ADDRESSOGRAPH

Ambulating (walking in hallways TID) nonoperative patients do not routinely require DVT prophylaxis

Risk factors for immobile & operative patients:	Possible exclusion criteria for pharmacologic prophylaxis:
Birth control pills or estrogen replacement therapy	1. Heparin or Enoxaparin Induced Thrombocytopenia (may consider using fondaparinux)
Currently pregnant or postpartum within 6 weeks	2. Active bleeding (i.e. ICH, active GI bleeding, traumatic)
Age greater than 40 years	3. Preoperative within 12 hours or postoperative within 4-8 hours
BMI greater than 25 (wt Kg/height cm/height cm x 10,000)	4. Renal insufficiency (creatinine clearance less than 10 ml/min)
Previous DVT/PE	5. Spinal tap or epidural within 6-10 hours
Family history of DVT/PE	6. Recent intraocular or intracranial surgery
Thrombophilia (congenital or acquired)	7. Coagulopathy
Cardiac dysfunction (heart failure, arrhythmia, MI)	Physicians are advised to consider other risk factors and conditions for patients that may be contraindications to DVT prophylaxis.
Chronic lung disease	
Malignancy	
Inflammatory disorder (i.e. IBD, lupus)	1. Enoxaparin, unfractionated heparin (UFH), fondaparinux, and warfarin are appropriate pharmacologic strategies for DVT prophylaxis.
Swollen legs or varicose veins	2. Sequential Compression Device, Plantar Pneumatic Compression, and Graduated Compression Stockings are appropriate mechanical strategies for DVT prophylaxis. An IVC filter may be considered in the highest risk patients with contraindications to anticoagulation.
Active collagen-vascular disorder	
Embolic stroke	
Dehydration	
Acute respiratory failure	
Serious infection	
ICU admission or burn greater than 20% BSA	
Indwelling central venous catheter	
Surgery	
Poly trauma or acute spinal cord injury (with deficit)	
Spine, hip, pelvic or lower extremity surgery or fracture	
CHI (GCS less than 13 not attributable to ETOH or drugs)	

Risk Factors	Prophylaxis	If Contraindication exists
0	Early ambulation	SCD
≥1 medical	Enoxaparin 40mg Daily	SCD
≥1 surgical	Enoxaparin 40mg Daily & SCD	SCD

