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Prevention of Venous Thromboembolism in the At-Risk Patient

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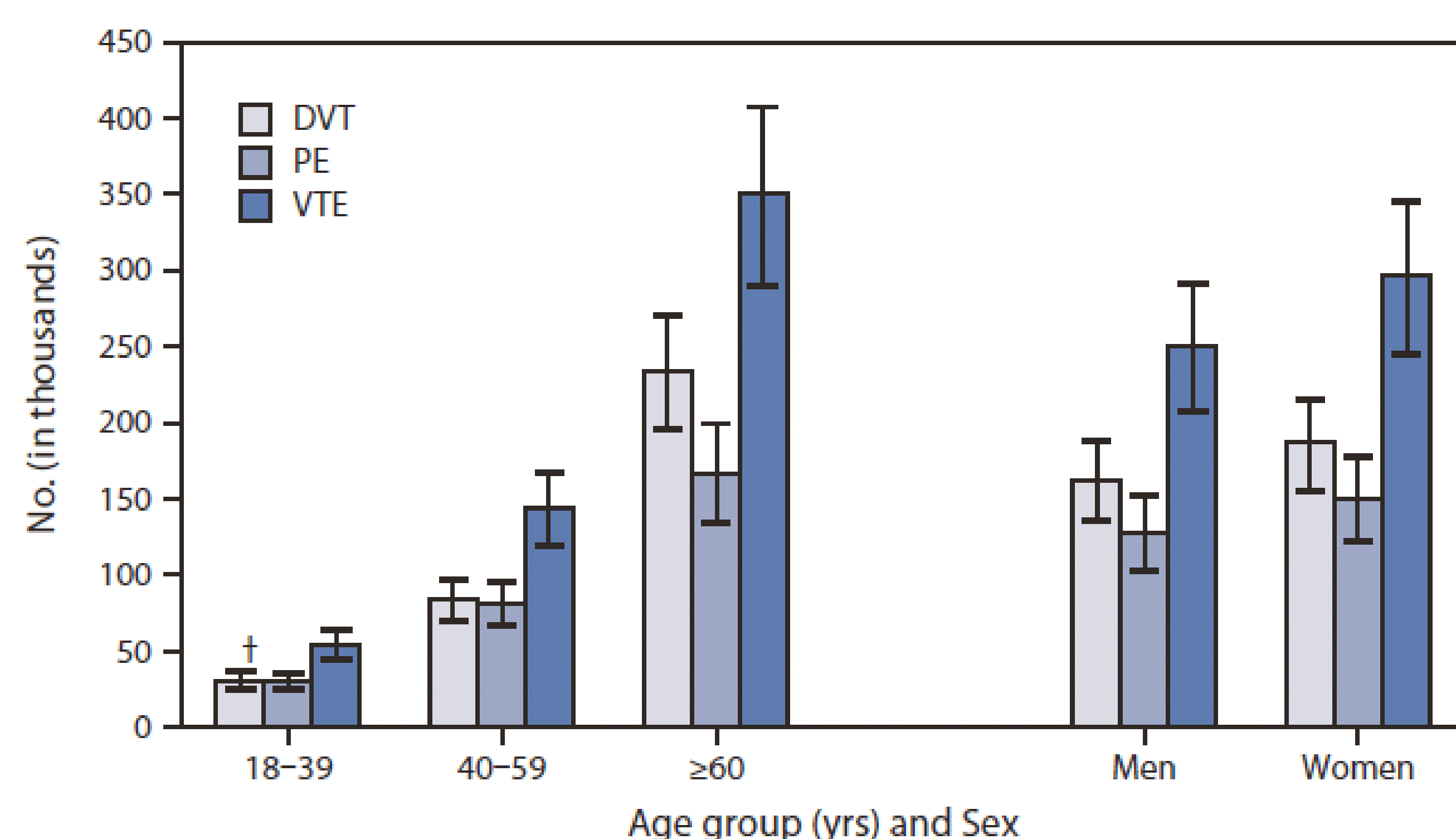
Prevention of Venous Thromboembolism in the At-Risk Patient

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PATIENT CARE ISSUE

- Venous thromboembolism effects between 200,000 and 600,000 Americans each year (1).
- VTE has become the third most common cause of death in the United States.
- VTE accounts for 15% of maternal related deaths in developed countries worldwide (2).
- Those who are most at risk are ones who have experienced trauma, surgery, upcoming or recent childbirth, CHF, cancer, paralysis, are elderly, and those who are immobile (1).



National Hospital Discharge Survey. 2007-2009

EVIDENCE-BASED PRACTICE QUESTION

Question: What is the most effective prevention method of VTE in the at-risk patient?

- P- Patients at-risk for developing a VTE
- I- Heparin vs. Sequential Compression Devices
- C- 10 current evidence-based practice articles
- O- Prevention of VTE

METHODS

- Databases/Search Engines: PUBMED; CINAHL; Google Scholar
- Key Words: Prevention of VTE/DVT/PE, LMWH, Sequential Compression Devices, Heparin, Postoperative Patients
- Inclusion Criteria:
 - Articles published within the last five years
 - Articles pertain to patients who are more at risk for the development of DVT over the general population
 - Researchers/publishers must be of credible standing
- Exclusion Criteria:
 - Published later than the past five years
 - Articles focused on patients not at an increased risk for the development of VTE
 - Whose researchers/publishers were not of credible standing

REGISTERED NURSE INTERVIEWS

- Grandview Medical Center- Jenna, RN:
 - Follows the Chest Physicians Evidence Based Practice Guide 8th ed.
 - LMWH in conjunction with SCD in patients with mobile impairment
 - Ultimately physicians discretion
- Springfield Regional Medical Center- MaryBeth, RN:
 - Heparin is contraindicated for postpartum and C-section mothers
 - SCD ordered until mom is ambulatory on her own

SYNTHESIS OF EVIDENCE

SCD

- Most effective when used in conjunction with LMWH
- Proven effective in cases where the use of LMWH is contraindicated

LMWH

- Prophylactic use for 1 week reduced proximal DVT, symptomatic VTE, and all cause mortality more than graduated compression stockings (3)
- 7-day prophylactic regimen lowers the incidence of VTE events in patients by 2.3% (3)

RESULTS

- Search resulted in 15 articles; and 10 relevant articles were included in final draft
- Prevention most effective with compression devices and LMWH (4)
- SCD when LMWH contraindicated
 - Ex: postpartum mothers, C-section patients, bleeding disorders, etc. (6)
- Ultimately left to physician discretion (5)

EVIDENCE-BASED PRACTICE RECOMMENDATIONS

- Continue current practice and standards
- Agree with protocol and current practices of Grandview and Springfield Medical Centers
- **Combination heparin and SCD is the most effective method in preventing DVT unless otherwise contraindicated. (4)**

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