



Effective Health Care

DVT Prophylaxis for Special Populations: Low Molecular Weight Heparin (LMWH) versus Unfractionated Heparin (UFH) Nomination Summary Document

Results of Topic Selection Process & Next Steps

- DVT prophylaxis for surgery (hip and knee) patients: low molecular weight heparin (LMWH) versus unfractionated heparin (UFH) will go forward for refinement as an update to or expansion of an in-process systematic review. The scope of this topic, including populations, interventions, comparators, and outcomes, will be further developed in the refinement phase.
 - When key questions have been drafted, they will be posted on the AHRQ Web site and open for public comment. To sign up for notification when this and other Effective Health Care (EHC) Program topics are posted for public comment, please go to <http://effectivehealthcare.ahrq.gov/index.cfm/join-the-email-list1/>.
- DVT prophylaxis for obese, trauma, burn, and renally impaired patients who have already been identified for prophylaxis: low molecular weight heparin (LMWH) versus unfractionated heparin (UFH) will go forward for refinement as an update to or expansion of an existing AHRQ Evidence-based Practice Center (EPC) systematic review. The scope of this topic, including populations, interventions, comparators, and outcomes, will be further developed during the process of the review.
 - When key questions have been drafted, they will be posted on the AHRQ Web site. To sign up for notification when this and other EPC Program topics are posted, please go to https://subscriptions.ahrq.gov/service/multi_subscribe.html?code=USAHRQ.

Topic Description

Nominator: Policy maker/payer

Nomination Summary: The nominator is interested in the comparative effectiveness of low molecular weight heparin (LMWH) versus unfractionated heparin (UFH) for the prevention of deep vein thrombosis (DVT) in special populations. The nominator states that DVT prophylaxis is a major quality and preventive measure and a patient safety goal set by the Joint Commission. He asserts that clinical data on the use of LMWH in special populations is limited, and alternative treatment has substantially more issues with bleeding in patients with renal disease and is more costly. He suggests that an answer to his research question will help provide better treatment in special populations that are at high risk for DVT.

Population(s): Male and female patients aged 18-100 years with any of the following

diagnoses or conditions who have already been identified for prophylaxis: obesity, trauma, burns, hip or knee surgery, end stage renal disease. Additionally, low income groups.

Intervention(s): Unfractionated heparin (UFH).

Comparator(s): Low molecular weight heparin (LMWH).

Outcome(s): Improvements in rates of deep vein thrombosis and adverse bleeding events and proper dosing for high-risk DVT patients.

Key Questions

from Nominator: None

Considerations

- The topic meets all EHC Program selection criteria. (For more information, see <http://effectivehealthcare.ahrq.gov/index.cfm/submit-a-suggestion-for-research/how-are-research-topics-chosen/>.)
- The topic of prevention of deep vein thrombosis (DVT) in orthopedic surgery patients will be considered for inclusion in the scope of an in-process systematic review on venous thromboembolism in orthopedic surgery patients.
- No systematic review evaluating unfractionated heparin compared to low molecular weight heparin in a variety of subpopulations (e.g., burn, trauma, obese, and renally impaired patients) was identified. Existing guidance recognizes the benefits of low molecular weight heparin; however, the question remains about whether the choice of therapy should be different for the special populations of interest to the nominator. Therefore, the topic of prevention of DVT in other special populations such as obese, burn, trauma, and renally impaired patients who are already identified for prophylaxis treatment will move forward as an update to key question one of an existing EPC review published in 2000 titled *Prevention of Venous Thromboembolism After Injury*. This update and expansion of scope will address many aspects of this nomination. Key question one is listed below:
 1. What is the role of different chemical or mechanical methods in preventing venous thromboembolism?
 - Which is the best (most efficient, safe and cost-effective) method to prevent venous thromboembolism?
 - Are combination methods better than isolated methods?
 - What are the contraindications to using each method, and what are the best alternatives when contraindications exist?