

Appendix Table 2. Designs of the Modeled Analyses of the Costs of Using Low-Molecular-Weight Heparin Compared with Unfractionated Heparin for Treatment of Venous Thromboembolism*

Study, Year (Reference)	Aims	Design	Perspective and Time Horizon	Comparisons	Sources of Cost Estimates	Sources of Event Rate Estimates	Units of Benefits
Hull et al., 1997 (115)	To perform an economic evaluation comparing tinzaparin to UFH for inpatient treatment of proximal DVT	CE	Third-party payer; 3 mo	Inpatient tinzaparin therapy (175 U/kg daily) Inpatient UFH	Direct medical costs in patients enrolled (1992 Canadian and U.S. dollars)	Observed in trial	Deaths averted, recurrences averted
Rodger et al., 1998 (118)	To assess the cost-effectiveness of LMWH and unfractionated heparin using data from a meta-analysis and patient-specific case-costing data	CE	Third-party payer; 3 mo	Outpatient LMWH if eligible; inpatient LMWH if not Outpatient LMWH if eligible; inpatient UFH if not Inpatient LMWH Inpatient UFH	Case-costing using an online resource utilization-based patient-specific cost accounting system (1995 Canadian dollars)	Systematic literature review	Deaths averted
Gould et al., 1999 (14)	To evaluate the costs and health effects of LMWH compared with unfractionated heparin for inpatient treatment of acute DVT	CE	Societal; death or age 99 y	Inpatient enoxaparin (1 mg/kg twice daily) Inpatient UFH (includes secondary analyses of outpatient enoxaparin)	Medicare reimbursement rates, therapy costs, wholesale prices (1997 U.S. dollars); analysis included 3%/y discounting	From the literature, also used U.S. lifetable to construct survival curves	Quality-adjusted and unadjusted life-years
Estrada et al., 2000 (112)	To evaluate the overall inpatient cost of treating acute VTE with enoxaparin versus unfractionated heparin	CE	Third-party payer; 3 mo	Outpatient LMWH if eligible, inpatient LMWH if not Outpatient LMWH if eligible, inpatient UFH if not Inpatient UFH	Direct medical costs taken from literature review, institutional accounting, and costs to Medicare (1996 U.S. dollars)	Literature	Deaths averted, recurrences averted
Lloyd et al., 1997 (116)	To evaluate the inpatient cost of treating DVT with nadroparin compared with UFH	CM	Third-party payer; 5 d	Inpatient nadroparin (weight-based, twice daily) Inpatient UFH (2 routes: SC or IV)	Direct costs measured as hospital charges to payer (Swiss sickness fund), list prices of drugs	Assumed equivalent in all arms	U.S. dollars
van den Belt et al., 1998 (114)	To assess the cost consequences of outpatient management in the treatment of DVT	CM	Third-party payer; 6 mo	Outpatient fraxaparine (weight-adjusted) Inpatient UFH	Direct medical costs measured in 1 site of multi-center clinical trial (1993 Dutch guilders)	Rates observed in all trial sites, considered equivalent in both groups	Guilders

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Study, Year (Reference)	Aims	Design	Perspective and Time Horizon	Comparisons	Sources of Cost Estimates	Sources of Event Rate Estimates	Units of Benefits
O'Brien et al., 1999 (117)	To evaluate the costs of treating a patient with proximal DVT with outpatient enoxaparin versus unfractionated heparin as inpatient therapy	CM	Societal; 3 mo	Outpatient enoxaparin (1 mg/kg twice daily) Inpatient UFH	Canadian national data systems, local labor and therapy costs (1997 Canadian dollars)	Observed in trial, measured health-related quality of life	Canadian dollars (also reported health-related quality of life)
DeLissovoy et al., 2000 (109)	To perform an economic evaluation comparing LMWH with unfractionated heparin for treating a DVT in inpatients and outpatients	CM	Third-party payer; 3 mo	Inpatient enoxaparin (1.5 mg/kg daily or 1.0 mg/kg twice daily) Inpatient UFH	Direct medical costs from 33 U.S. sites participating in multicenter trial (1997 U.S. dollars)	Observed in the 33 U.S. trial sites	U.S. dollars
Tillman et al., 2000 (119)	To evaluate the clinical and economic outcomes associated with implementation of outpatient DVT treatment with LMWH	Decision model	Third-party payer; 3 mo	Outpatient enoxaparin (1 mg/kg twice daily) Inpatient UFH	Direct medical cost measured in outpatients in HMO; source of inpatient costs is unclear (1998 U.S. dollars)	Measured in outpatients	U.S. dollars
Boucher et al., 2003 (121)	To compare the cost of contemporary outpatient and historical inpatient management of proximal lower-limb DVT	CM	Hospital; 7 days	Outpatient tinzaparin or dalteparin Inpatient UFH	Direct hospital costs measured in 1 hospital (2000 Canadian dollars)	Assumed equivalent in both arms	Canadian dollars
Caro et al., 2002 (122)	To evaluate economic and health implications of tinzaparin versus UFH in treatment of DVT	CE	Third-party payer; 3 mo and 50 y	Outpatient tinzaparin once daily Inpatient UFH	Direct medical costs from administrative data, fee schedules, survey data, literature (1999 U.S. dollars)	Event rates from the literature and patient-level data from Massachusetts	Quality-adjusted life-years
Avritscher et al., 2004 (120)	To determine whether the use of dalteparin or UFH is less expensive for inpatient management of patients with cancer who have DVT	CM	Provider (hospital), time horizon not specified; presumed to be duration of hospitalization	Inpatient dalteparin, once daily Inpatient UFH	Two retrospective cohorts of patients in 1 institution, included a process flow analysis (2003 U.S. dollars)	Two retrospective cohorts of patients in 1 institution; assumed equivalent in both arms	U.S. dollars
Aujesky et al., 2005 (110)	To compare medical and economic outcomes for PE treatment with LMWH or UFH	CE	Societal; 6 mo	Inpatient enoxaparin (1 mg/kg twice daily for 6 d) Inpatient IV UFH	Direct medical costs from literature, Medicare reimbursement data (2002 U.S. dollars)	Literature (meta-analysis)	Quality-adjusted life-years

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Study, Year (Reference)	Aims	Design	Perspective and Time Horizon	Comparisons	Sources of Cost Estimates	Sources of Event Rate Estimates	Units of Benefits
Gómez-Outes et al., 2006 (111)	To compare costs and cost-effectiveness of 2 regimens with LMWH to UFH and oral anticoagulation for treatment of DVT	CE	Payer; 3 mo	Inpatient bemiparin (115 U/d) and oral anticoagulant Inpatient bemiparin (115 U/d) and long-term bemiparin Inpatient UFH and oral anticoagulant	Published medical resource cost data (2002 euros)	Clinical trial by authors	Quality-adjusted life-years, also reported cost per recurrence avoided

* CE = cost-effectiveness; CM = cost minimization; DVT = deep venous thrombosis; HMO = health maintenance organization; IV = intravenous; LMWH = low-molecular-weight heparin; PE = pulmonary embolism; SC = subcutaneous; UFH = unfractionated heparin; VTE = venous thromboembolism.