Appendix O: Excluded health economic studies

O.1 Risk assessment for people admitted to hospital

O.1.1 Patients admitted to hospital

No studies were excluded.

O.1.2 Hospital admissions

No studies were excluded.

O.1.3 Risk assessment tools in patients admitted to hospital

No studies were excluded.

O.2 Risk assessment for people having day procedures

O.2.1 VTE day procedures

No studies were included.

O.2.2 Major bleeding day procedures

No studies were excluded.

O.2.3 Risk assessment tools in patients who are having day procedures (including surgery and chemotherapy) at hospital

No studies were excluded.

O.3 Reassessment

O.3.1 Reassessment of people who are admitted to hospital

No studies were excluded.

O.3.2 Reassessment of people who are having day procedures at hospital

No studies were excluded.

O.4 Risk assessment for pregnant women and women up to 6 weeks postpartum

No studies were excluded.

O.5 Giving information to patients and planning for discharge

No studies were excluded.

O.6 General VTE prevention for everyone in hospital

No studies were excluded.

O.7 Nursing care: Early mobilisation and hydration

No studies were excluded.

O.8 Obesity

No studies were excluded.

O.9 People using antiplatelets

No studies were excluded.

O.10 People using anticoagulation therapy

No studies were excluded.

O.11 Acute coronary syndromes

No studies were excluded.

O.12 Acute stroke patients

No studies were excluded.

O.13 Acutely ill medical patients

No studies were excluded.

O.14 Cancer

No studies were excluded.

O.15 Patients with central venous catheters

No studies were excluded.

O.16 Palliative care

No studies were excluded.

O.17 Critical care

No studies were excluded.

O.18 Pregnant women and women up to 6 weeks postpartum

No studies were excluded.

O.19 People with psychiatric illness

No studies were excluded.

O.20 Anaesthesia

No studies were excluded.

O.21 Lower limb immobilisation

No studies were excluded.

O.22 Fragility fractures of the pelvis, hip and proximal femur

Table 267: Studies excluded from the health economic review

Reference	Reason for exclusion
Capri 2010[149]	This study was assessed as not applicable. The population considered is all major orthopaedic surgery combined (HFS, THR, TKR). Uncertainty regarding the applicability of resource use and costs from Italy in 2007 to current NHS context. QALYs are not used as measure of outcome. It is not clear whether costs and outcomes were discounted and if so, at what rate. Time horizon is short and unlikely to capture all differences. Only symptomatic events are included in the analysis and HIT is not included.
Dranistaris 2009[269]	This study was assessed as partially applicable with very serious limitations. Uncertainty regarding the applicability of resource use and cost data from Canada in 2007 to current NHS context. QALYs were not used as measure of outcome. The structure of the model does not include PE, asymptomatic DVT, any of the long-term outcomes (PTS and CTEPH) or Major bleeding in the post-discharge period (even for the extended prophylaxis strategies). The time horizon is short and does not capture all likely differences in costs and outcomes. Resource use data is based on a survey of only 3 Canadian hospitals so may not be representative of all Canadian hospitals. Some of the unit costs are based on local unit costs, so may not represent National unit costs. Only one-way sensitivity analysis was undertaken. There is a potential conflict of interest.

O.23 Elective hip replacement surgery

Table 268: Studies excluded from the health economic review

Reference	Reason for exclusion
Annemans 2004[41]	This study was assessed as partially applicable with potentially serious limitations. However, given that a more applicable UK analysis was

Reference	Reason for exclusion
	developed, this study was selectively excluded.
Bischof 2006[103]	This study was assessed as partially applicable with potentially serious limitations. However, given that a more applicable UK analysis was developed, this study was selectively excluded.
Bjorvatn and Kristiansen 2005[104]	This study was assessed as partially applicable with potentially serious limitations. However, given that a more applicable UK analysis was developed, this study was selectively excluded.
Braidy 2011[125]	This study was assessed as not applicable. QALYs are not used as measure of outcome. The population was a mixed population including patients with AF and those treated from VTE. Uncertainty regarding the applicability of unit costs and resource use from the Australia in 2009 to current NHS context.
Capri 2010[149]	This study was assessed as not applicable. The population considered is all major orthopaedic surgery combined (HFS, THR, TKR). Uncertainty regarding the applicability of resource use and costs from Italy in 2007 to current NHS context. QALYs are not used as measure of outcome. It is not clear whether costs and outcomes were discounted and if so, at what rate. Time horizon is short and unlikely to capture all differences. Only symptomatic events are included in the analysis and HIT is not included.
Dahl and Pleil 2003[228]	This study was assessed as partially applicable with potentially serious limitations. However, given that a more applicable UK analysis was developed, this study was selectively excluded.
Davies 2000[234]	This study was assessed as partially applicable with potentially serious limitations. However, given that a more applicable UK analysis was developed, this study was selectively excluded.
Diamantopoulos 2010[257]	This study was assessed as partially applicable with potentially serious limitations. However, given that a more applicable UK analysis was developed, this study was selectively excluded.
Dranitsaris 2004[267]	This study was assessed as partially applicable with potentially serious limitations. However, given that a more applicable UK analysis was developed, this study was selectively excluded.
Dranistaris 2009[269]	This study was assessed as partially applicable with very serious limitations. Uncertainty regarding the applicability of resource use and cost data from Canada in 2007 to current NHS context. QALYs were not sued as measure of outcome. The structure of the model does not include PE, asymptomatic DVT, any of the long-term outcomes (PTS and CTEPH) or Major bleeding in the post-discharge period (even for the extended prophylaxis strategies). The time horizon is short and does not capture all likely differences in costs and outcomes. Resource use data is based on a survey of only 3 Canadian hospitals so may not be representative of all Canadian hospitals. Some of the unit costs are based on local unit costs, so may not represent National unit costs. Only one way sensitivity analysis was undertaken. The study is industry funded.
Gommez-Outes 2014[352]	This study was assessed as partially applicable with potentially serious limitations. However, given that a more applicable UK analysis was developed, this study was selectively excluded.
Gordois 2003[354]	This study was assessed as partially applicable with potentially serious limitations. However, given that a more applicable UK analysis was developed, this study was selectively excluded.
Haentjens 2004[374]	This study was assessed as partially applicable with potentially serious limitations. However, given that a more applicable UK analysis was developed, this study was selectively excluded.
Hamidi 2013[381]	This study was assessed as partially applicable with potentially serious

Reference	Reason for exclusion
	limitations. However, given that a more applicable UK analysis was developed, this study was selectively excluded.
Lundkvist 2003[587]	This study was assessed as partially applicable with potentially serious limitations. However, given that a more applicable UK analysis was developed, this study was selectively excluded.
McCullagh 2009[620] and McCullagh 2012[621]	This study was assessed as partially applicable with potentially serious limitations. However, given that a more applicable UK analysis was developed, this study was selectively excluded.
McDonald 2012[622]	This study was assessed as partially applicable with potentially serious limitations. However, given that a more applicable UK analysis was developed, this study was selectively excluded.
Migliaccio-Walle 2012[638]	This study was assessed as partially applicable with potentially serious limitations. However, given that a more applicable UK analysis was developed, this study was selectively excluded.
NICE 2007 (CG46)[670]	This study was assessed as partially applicable with potentially serious limitations. However, given that a more applicable UK analysis was developed, this study was selectively excluded.
NCGC 2010 [CG92][666]	This study was assessed as partially applicable with potentially serious limitations. However, given that a more applicable UK analysis was developed, this was selectively excluded.
Postma 2012[766]	This study was assessed as not applicable. QALYs are not used as measure of outcome. Uncertainty regarding the applicability of unit costs and resource use from the Netherland in 2010 to current NHS context. The interventions are different from considered representative to UK standard practice, with nardoparin and dabigatran 150 mg included and prophylaxis administered for 50 days post THR and 36 days after TKR
Reeves 2004[793]	This study was assessed as partially applicable with potentially serious limitations. However, given that a more applicable UK analysis was developed, this study was selectively excluded.
Revankar 2013[797]	This study was assessed as partially applicable with potentially serious limitations. However, given that a more applicable UK analysis was developed, this study was selectively excluded.
Ryttberg 2011[833]	This study was assessed as partially applicable with potentially serious limitations. However, given that a more applicable UK analysis was developed, this study was selectively excluded.
Sterne 2017[919]	This study was assessed as partially applicable with potentially serious limitations. However, given that a more applicable UK analysis was developed, this study was selectively excluded.
TA245 2012 & Riemsma 2011 [678, 801]	This TA and accompanying ERG report were assessed as partially applicable with potentially serious limitations. However, given that a more applicable UK analysis was developed, this was selectively excluded
TA157 2008[675]	This TA was assessed as partially applicable with potentially serious limitations. However, given that a more applicable UK analysis was developed, this was selectively excluded
TA170 2009 & Stevenson 2009 [677, 921]	This TA and the accompanying ERG report was assessed as partially applicable with potentially serious limitations. However, given that a more applicable UK analysis was developed, this was selectively excluded.
Wade 2015 [985]	This study was assessed as partially applicable with potentially serious limitations. However, given that a more applicable UK analysis was developed, this study has been selectively excluded.
Wolowacz, 2009[1017]	This study was assessed as partially applicable with potentially serious limitations. However, given that a more applicable UK analysis was

Reference	Reason for exclusion
	developed, this study has been selectively excluded.
Wolowacz, 2010[1018]	This study was assessed as partially applicable with potentially serious limitations. However, given that a more applicable UK analysis was developed, this study has been selectively excluded.
Zindel 2012[1051]	This study was assessed as not applicable. QALYs are not used as measure of outcome. Uncertainty regarding the applicability of unit costs and resource use from Germany in 2010 to current NHS context. The time horizon is only 3 months. The results are reported from the perspective of the German statutory health insurance.

O.24 Elective knee replacement

Table 269: Studies excluded from the health economic review

Reference	Reason for exclusion
Annemans 2004[41]	This study was assessed as partially applicable with potentially serious limitations. However, given that a more applicable UK analysis was developed, this study was selectively excluded.
Bischof 2006[103]	This study was assessed as partially applicable with potentially serious limitations. However, given that a more applicable UK analysis was developed, this study was selectively excluded.
Bjorvatn and Kristiansen 2005[104]	This study was assessed as partially applicable with potentially serious limitations. However, given that a more applicable UK analysis was developed, this study was selectively excluded.
Braidy [125]2011	This study was assessed as not applicable. QALYs are not used as measure of outcome. The population was a mixed population including patients with AF and those treated from VTE. Uncertainty regarding the applicability of unit costs and resource use from the Australia in 2009 to current NHS context.
Capri 2010[149]	This study was assessed as not applicable. The population considered is all major orthopaedic surgery combined (HFS, THR, TKR). Uncertainty regarding the applicability of resource use and costs from Italy in 2007 to current NHS context. QALYs are not used as measure of outcome. It is not clear whether costs and outcomes were discounted and if so, at what rate. Time horizon is short and unlikely to capture all differences. Only symptomatic events are included in the analysis and HIT is not included.
Diamantopoulos 2010[257]	This study was assessed as partially applicable with potentially serious limitations. However, given that a more applicable UK analysis was developed, this study was selectively excluded.
Dranitsaris 2004[267]	This study was assessed as partially applicable with potentially serious limitations. However, given that a more applicable UK analysis was developed, this study was selectively excluded.
Dranistaris 2009[269]]	This study was assessed as partially applicable with very serious limitations. Uncertainty regarding the applicability of resource use and cost data from Canada in 2007 to current NHS context. QALYs were not sued as measure of outcome. The structure of the model does not include PE, asymptomatic DVT, any of the long-term outcomes (PTS and CTEPH) or Major bleeding in the post-discharge period (even for the extended prophylaxis strategies). The time horizon is short and does not capture all likely differences in costs and outcomes. Resource use data is based on a survey of only 3 Canadian hospitals so may not be representative of all Canadian hospitals. Some of the unit costs are based on local unit costs, so may not represent National unit costs. Only one way sensitivity

Reference	Reason for exclusion
	analysis was undertaken. The study is industry funded.
Gommez-Outes 2014[352]	This study was assessed as partially applicable with potentially serious limitations. However, given that a more applicable UK analysis was developed, this study was selectively excluded.
Gordois 2003[354]	This study was assessed as partially applicable with potentially serious limitations. However, given that a more applicable UK analysis was developed, this study was selectively excluded.
Haentjens 2004[374]	This study was assessed as partially applicable with potentially serious limitations. However, given that a more applicable UK analysis was developed, this study was selectively excluded.
Hamidi 2013[381]	This study was assessed as partially applicable with potentially serious limitations. However, given that a more applicable UK analysis was developed, this study was selectively excluded.
Lundkvist 2003[587]	This study was assessed as partially applicable with potentially serious limitations. However, given that a more applicable UK analysis was developed, this study was selectively excluded.
McCullagh 2012[621]	This study was assessed as partially applicable with potentially serious limitations. However, given that a more applicable UK analysis was developed, this study was selectively excluded.
McDonald 2012[622]	This study was assessed as partially applicable with potentially serious limitations. However, given that a more applicable UK analysis was developed, this study was selectively excluded.
Migliaccio-Walle 2012[638]	This study was assessed as partially applicable with potentially serious limitations. However, given that a more applicable UK analysis was developed, this study was selectively excluded.
NICE 2007 (CG46)[670]	This study was assessed as partially applicable with potentially serious limitations. However, given that a more applicable UK analysis was developed, this study was selectively excluded.
NCGC 2010 [CG92][666]	This study was assessed as partially applicable with potentially serious limitations. However, given that a more applicable UK analysis was developed, this was selectively excluded.
Postma 2012[766]	This study was assessed as not applicable. QALYs are not used as measure of outcome. Uncertainty regarding the applicability of unit costs and resource use from the Netherland in 2010 to current NHS context. The interventions are different from considered representative to UK standard practice, with nardoparin and dabigatran 150 mg included and prophylaxis administered for 50 days post THR and 36 days after TKR
Reeves 2004[793]	This study was assessed as partially applicable with potentially serious limitations. However, given that a more applicable UK analysis was developed, this study was selectively excluded.
Revankar 2013[797]	This study was assessed as partially applicable with potentially serious limitations. However, given that a more applicable UK analysis was developed, this study was selectively excluded.
Ryttberg 2011[833]	This study was assessed as partially applicable with potentially serious limitations. However, given that a more applicable UK analysis was developed, this study was selectively excluded.
Sterne 2017[919]	This study was assessed as partially applicable with potentially serious limitations. However, given that a more applicable UK analysis was developed, this study was selectively excluded.
TA245 2012 & Riemsma 2011 [678, 801]	This TA and accompanying ERG report were assessed as partially applicable with potentially serious limitations. However, given that a more applicable UK analysis was developed, this was selectively excluded

Reference	Reason for exclusion
TA157 2008[675]	This TA was assessed as partially applicable with potentially serious limitations. However, given that a more applicable UK analysis was developed, this was selectively excluded
TA170 2009 & Stevenson 2009 [677, 921]	This TA and the accompanying ERG report were assessed as partially applicable with potentially serious limitations. However, given that a more applicable UK analysis was developed, this was selectively excluded.
Wade 2015 [985]	This study was assessed as directly applicable with potentially serious limitations. However, given that a more applicable UK analysis was developed, this study has been selectively excluded.
Wolowacz, 2009[1017]	This study was assessed as partially applicable with potentially serious limitations. However, given that a more applicable UK analysis was developed, this study has been selectively excluded.
Wolowacz, 2010[1018]	This study was assessed as partially applicable with potentially serious limitations. However, given that a more applicable UK analysis was developed, this study has been selectively excluded.
Zindel 2012[1051]	This study was assessed as not applicable. QALYs are not used as measure of outcome. Uncertainty regarding the applicability of unit costs and resource use from Germany in 2010 to current NHS context. The time horizon is only 3months. The results are reported from the perspective of the German statutory health insurance.

O.25 Non-arthroplasty orthopaedic knee surgery

No studies were excluded.

O.26 Foot and ankle orthopaedic surgery

No studies were excluded..

O.27 Upper limb orthopaedic surgery

No studies were excluded.

O.28 Spinal surgery

No studies were excluded.

O.29 Cranial surgery

No studies were excluded.

O.30 Spinal injury

No studies were excluded.

O.31 Major trauma

No studies were excluded.

O.32 Abdominal surgery (excluding bariatric surgery)

Table 270: Studies excluded from the health economic review

Reference	Reason for exclusion
Morimoto 2014[654]	This study was assessed as partially applicable with very serious limitations. Uncertainty regarding the applicability of unit costs and prophylaxis regimens used in Japan to current NHS context. QALYs were not used as an outcome. The prophylaxis regimens described in the paper are not standard practice in the NHS. The analysis is based on data collected retrospectively and comparison with hypothetical scenarios. The health states considered in the analysis do not include any long term outcomes such as CTEPH and PTS. The interventions examined were assumed to have 100% efficacy, with no supporting evidence. The sources of the unit costs, the currency year and the perspective of the analysis are not described. No sensitivity analysis has been undertaken.
National Collaborating Centre for Acute Care 2007[670]	This was assessed as partially applicable with potentially serious limitations. However, given that a more applicable UK analysis was available, [666] this study was selectively excluded.
Gozzard 2004[357]	This study was assessed as partially applicable with potentially serious limitations. However, given that a more applicable UK analysis was available, [666] this study was selectively excluded.
Reeves 2004[793]	This study was assessed as partially applicable with potentially serious limitations. However, given that a more applicable UK analysis was available, [666] this study was selectively excluded.

O.33 Bariatric surgery

No studies were excluded.

O.34 Cardiac surgery

No studies were excluded.

O.35 Thoracic surgery

No studies were excluded.

O.36 Vascular surgery

No studies were excluded.

O.37 Head and neck surgery

O.37.1 Oral and maxillofacial surgery

No studies were excluded.

O.37.2 Ear, nose and throat (ENT) surgery

No studies were excluded.