

Supplementary Materials

Supplementary Materials Table S1.

Supplementary Materials Figure S1.

Supplementary Materials Table S1. Query CTcue

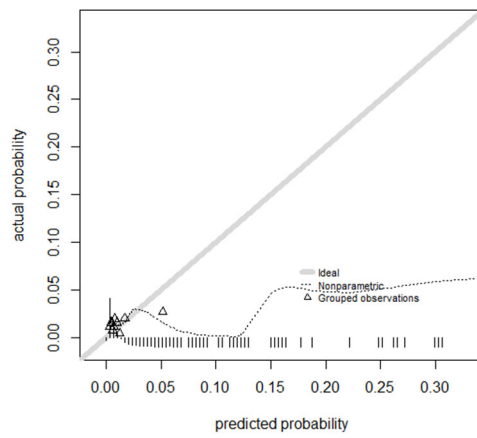
Question	Filter
Which procedure was performed? (THP, TKP or UKP)	
THP	<i>Specialism:</i> Orthopaedics <i>Start date:</i> ≥ 01-01-2017 <i>Age at time of event:</i> >12 years
TKP	<i>Specialism:</i> Orthopaedics <i>Start date:</i> ≥ 01-01-2017 <i>Age at time of event:</i> >12 years
UKP	<i>Specialism:</i> Orthopaedics <i>Start date:</i> ≥ 01-01-2017 <i>Age at time of event:</i> >12 years <i>Used term:</i> surgical procedures, specified with procedure codes <i>Result preferences:</i> oldest (ascending)
What is the length, weight and BMI of the patient?	
Length	<i>Description:</i> Length <i>Start date:</i> before <THP, TKP, UKP Include events that happened later on the same day
Weight	<i>Description:</i> Weight <i>Start date:</i> before <THP, TKP, UKP Include events that happened later on the same day
BMI	<i>Description:</i> BMI <i>Start date:</i> before <THP, TKP, UKP Include events that happened later on the same day <i>Used term:</i> vital signs <i>Result preferences:</i> newest (descending)
Does the patient smoke?	
Yes	<i>Description (reports):</i> smoking status: +, and search in context with specified texts <i>Description (forms):</i> smoking, yes <i>Start date:</i> before <THP, TKP, UKP Include events that happened later on the same day
No	<i>Description (reports):</i> smoking status: -, and search in context with specified texts <i>Description (forms):</i> stop smoking, never <i>Start date:</i> before <THP, TKP, UKP Include events that happened later on the same day <i>Used term:</i> reports, forms <i>Result preferences:</i> oldest (ascending)
Diabetes mellitus	
Yes	<i>Report type:</i> preoperative screening <i>Description (reports):</i> diabetes mellitus <i>Ingredient (medication administrations):</i> metformin, insulin, etcetera <i>Start date:</i> before <THP, TKP, UKP Include events that happened later on the same day <i>Used term:</i> reports, medication administrations <i>Result preferences:</i> newest (descending)
Lung disease	
Yes	<i>Report type:</i> preoperative screening, outpatient clinic first contact, outpatient clinic follow-up contact, outpatient clinic letter

	<i>Description (reports):</i> COPD, lung disease, asthma, etcetera <i>Start date:</i> before <THP, TKP, UKP Include events that happened later on the same day <i>Used term:</i> reports <i>Result preferences:</i> newest (descending)
Rheumatoid arthritis	
Yes	<i>Report type:</i> preoperative screening, outpatient clinic first contact, outpatient clinic follow-up contact, outpatient clinic letter <i>Description (reports):</i> rheumatic diseases, rheumatism, rheumatics <i>Start date:</i> before <THP, TKP, UKP Include events that happened later on the same day <i>Used term:</i> reports <i>Result preferences:</i> newest (descending)
Liver disease	
Yes	<i>Report type:</i> preoperative screening, outpatient clinic first contact, outpatient clinic follow-up contact, outpatient clinic letter <i>Description (reports):</i> fatty liver, liver cirrhosis, cirrhosis of liver, autoimmune hepatitis <i>Start date:</i> before <THP, TKP, UKP Include events that happened later on the same day <i>Used term:</i> reports <i>Result preferences:</i> newest (descending)
Immunological disorder	
Yes	<i>Report type:</i> preoperative screening, outpatient clinic first contact, outpatient clinic follow-up contact, outpatient clinic letter <i>Description (reports):</i> scleroderma, psoriasis, systemic sclerosis, etcetera <i>Start date:</i> before <THP, TKP, UKP <i>Used term:</i> reports <i>Result preferences:</i> newest (descending)
Heart disease	
Yes	<i>Report type:</i> preoperative screening, outpatient clinic first contact, outpatient clinic follow-up contact, outpatient clinic letter <i>Description (reports):</i> Coronary Artery Bypass Grafting, heart attack, etcetera <i>Start date:</i> before <THP, TKP, UKP <i>Used term:</i> reports <i>Result preferences:</i> newest (descending) <i>Specialism:</i> anesthesiology, orthopedics
Disease of the central nervous system	
Yes	<i>Report type:</i> preoperative screening, outpatient clinic first contact, outpatient clinic follow-up contact, outpatient clinic letter <i>Ingredient (medication administrations):</i> Levodopa, pramipexole, ropinirole <i>Description (reports):</i> Parkinson disease, multiple sclerosis, huntington disease, etcetera <i>Start date:</i> before <THP, TKP, UKP <i>Used term:</i> reports <i>Result preferences:</i> newest (descending) <i>Specialism:</i> anesthesiology, orthopedics
Previous thromboembolic event	
Yes	<i>Report type:</i> preoperative screening, outpatient clinic first contact, outpatient clinic follow-up contact, outpatient clinic letter <i>Description (reports):</i> (recurrent) deep vein thrombosis, pulmonary embolism <i>Start date:</i> before <THP, TKP, UKP

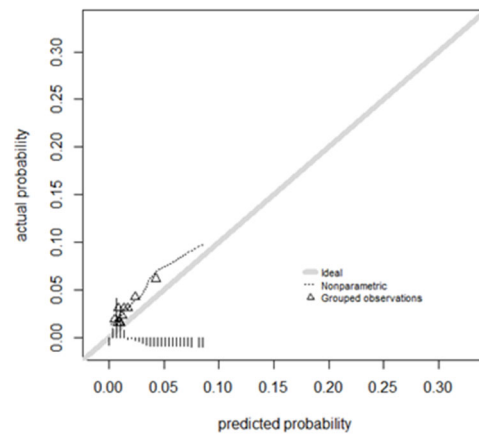
	<i>Used term:</i> reports <i>Result preferences:</i> newest (descending) <i>Specialism:</i> anesthesiology
Hip dysplasia	
Yes	<i>Report type:</i> preoperative screening, outpatient clinic first contact, outpatient clinic follow-up contact, outpatient clinic letter <i>Description (reports):</i> (congenital) hip dysplasia <i>Start date:</i> before <THP, TKP, UKP <i>Used term:</i> reports <i>Result preferences:</i> newest (descending) <i>Specialism:</i> anesthesiology, orthopedics
Use of vitamin K antagonist	
Yes	<i>Content (reports):</i> acenocoumarol, fenprocoumon <i>Ingredient (medication administrations):</i> acenocoumarol, fenprocoumon <i>Start date:</i> before <THP, TKP, UKP, AND <365 days before surgery Include events that happened later on the same day <i>Used term:</i> reports, medication administrations <i>Result preferences:</i> newest (descending)
Use of NSAIDs	
Yes	<i>Content (reports):</i> NSAIDs, coxibs <i>Ingredient:</i> indometacine, meloxicam, naproxen, etcetera <i>Start date:</i> before <THP, TKP, UKP, AND <365 days before surgery Include events that happened later on the same day <i>Used term:</i> reports, medication administrations <i>Result preferences:</i> newest (descending)
Outcomes	
Surgical site infection	
Yes	<i>Report type:</i> no specification <i>Description (reports):</i> surgical site infection, etcetera <i>Ingredient (medication administrations):</i> rifampicin <i>Start date:</i> between surgery date and 90 days after surgery date <i>Used term:</i> reports, medication administrations <i>Result preferences:</i> newest (descending)
Venous Thromboembolism	
Yes	<i>Report type:</i> no specification <i>Description (reports):</i> (recurrent) deep vein thrombosis, pulmonary embolism <i>Start date:</i> between surgery date and 90 days after surgery date <i>Used term:</i> reports <i>Result preferences:</i> newest (descending)
Postoperative bleeding	
Yes	<i>Report type:</i> no specification <i>Description (reports):</i> wound leakage, serosanguinal leakage, bleeding, etcetera <i>Start date:</i> between surgery date and 90 days after surgery date <i>Used term:</i> reports <i>Result preferences:</i> newest (descending)
Delirium	
Yes	<i>Report type:</i> no specification <i>Description (reports):</i> delirium <i>Start date:</i> between surgery date and 90 days after surgery date <i>Used term:</i> reports

	<i>Result preferences:</i> newest (descending)
Nerve damage	
Yes	<i>Report type:</i> no specification <i>Description (reports):</i> nerve damage, nerve damage N. femoralis, N. ischiadicus, N. peroneus <i>Start date:</i> between surgery date and 90 days after surgery date <i>Used term:</i> reports <i>Result preferences:</i> newest (descending)

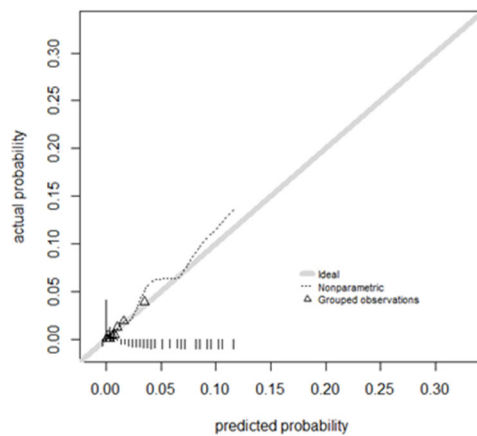
Supplementary Materials Figure S1. Calibration plot per surgical complication indicating the calibration of the models



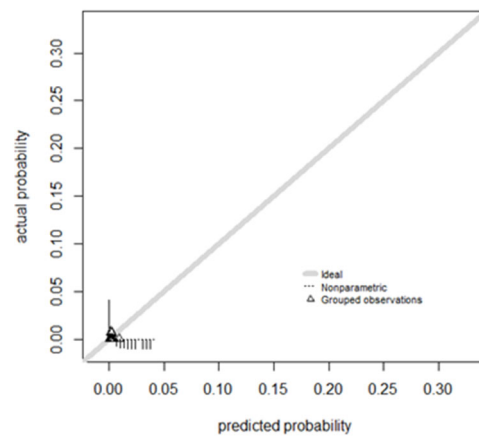
a. Surgical site infection



b. Postoperative bleeding



c. Delirium



d. Nerve damage