

Supplementary data

Appendix 1: ICD 10 and NOMESCO codes used for definition of adverse events

Table 1. Source of included variables

Variables	Hospital medical records	SHAR	Regional patient register	HOSP
10-digit PIN	X	X	X	
Age	X	X	X	
Sex	X	X		
BMI		X		
Name of hospital	X	X	X	
Level of hospital	X	X	X	
Date of surgery	X	X	X	
Name of surgeon	X			
Date of license to practise				X
Date of orthopedic specialist certification				X
Diagnosis for implantation	X	X		
Fixation technique	X	X		
ICD-10 codes 365-days prior to the index THA			X	
ICD-10 codes within 90 days postoperatively			X	
Mortality within 90 days post-operatively		X		

PIN = personal identity number, BMI = body mass index, ICD = International Codes of Diseases, SHAR = Swedish Hip Arthroplasty Register, HOSP = Swedish National Board of Health and Welfare register of licensed healthcare professionals.

DA Diagnosis for complications (ICD-10 codes). Whether they occur as main or secondary diagnosis for readmission

G97.8	Other postprocedural disorders of nervous system
G97.9	Postprocedural disorder of nervous system, unspecified
M96.6F	Fracture of bone following insertion of orthopedic implant, joint prosthesis, or bone plate
M96.8	Other postprocedural musculoskeletal disorders
M96.9	Postprocedural musculoskeletal disorder, unspecified
T81.0	Hemorrhage and hematoma complicating a procedure, not elsewhere classified
T81.2	Accidental puncture and laceration during a procedure, not elsewhere classified
T81.3	Disruption of operation wound, not elsewhere classified
T81.4	Infection following a procedure, not elsewhere classified
T81.5	Foreign body accidentally left in body cavity or operation wound following a procedure
T81.6	Acute reaction to foreign substance accidentally left during a procedure
T81.7	Vascular complications following a procedure, not elsewhere classified
T81.8	Other complications of procedures, not elsewhere classified
T81.8W	Other complications of procedures, not elsewhere classified
T81.9	Unspecified complication of procedure
T84.0	Mechanical complication of internal joint prosthesis
T84.0F	Mechanical complication of internal joint prosthesis
T84.3	Mechanical complication of other bone devices, implants, and grafts
T84.3F	Mechanical complication of other bone devices, implants, and grafts
T84.4	Mechanical complication of other internal orthopedic devices, implants, and grafts
T84.5	Infection and inflammatory reaction due to internal joint prosthesis
T84.5F	Infection and inflammatory reaction due to internal joint prosthesis
T84.7	Infection and inflammatory reaction due to other internal orthopedic prosthetic devices, implants, and grafts
T84.7F	Infection and inflammatory reaction due to other internal orthopedic prosthetic devices, implants, and grafts
T84.8	Other complications of internal orthopedic prosthetic devices, implants, and grafts
T84.8F	Other complications of internal orthopedic prosthetic devices, implants, and grafts
T84.9	Unspecified complication of internal orthopedic prosthetic device, implant, and graft
T88.8	Other specified complications of surgical and medical care, not elsewhere classified
T88.9	Complication of surgical and medical care, unspecified

F = hip/femur, W = cause of the injury fall/object

BD Diagnosis for hip-related complications (ICD-10 codes). Whether they occur as main or secondary diagnosis for readmission

G57.0	Lesion of sciatic nerve
G57.1	Meralgia paraesthetica
G57.2	Lesion of femoral nerve
M00.0	Staphylococcal arthritis and polyarthritis
M00.0F	Staphylococcal arthritis and polyarthritis
M00.2F	Other streptococcal arthritis and polyarthritis
M00.8F	Arthritis and polyarthritis due to other specified bacterial agents
M00.9F	Pyogenic arthritis, unspecified
M24.3	Pathological dislocation and subluxation of joint, not elsewhere classified
M24.4	Recurrent dislocation and subluxation of joint
M24.4F	Recurrent dislocation and subluxation of joint
S73.0	Dislocation of hip
S74*	Injury of nerves at hip and thigh level
S75*	Injury of femoral artery
S76*	Injury of muscle and tendon of hip

F = hip/femur

BD2 Diagnosis for hip-related complications (ICD-10 codes). Whether they occur as main diagnosis for readmission

M24.0F	Loose body in joint
M24.5F	Contracture of joint
M24.6F	Ankylosis of joint
M61.0F	Myositis ossificans traumatica
M62.1F	Other rupture of muscle (nontraumatic)
M66.2F	Spontaneous rupture of extensor tendons
M66.3F	Spontaneous rupture of flexor tendons
M84.3F	Stress fracture
M86.0F	Acute hematogenous osteomyelitis
M86.1F	Other acute osteomyelitis
M86.6	Other chronic osteomyelitis, hip/femur
M86.6F	Other chronic osteomyelitis
M89.5E	Osteolysis

F = hip/femur, E = pelvis

DC Diagnosis for serious cardiovascular complication (ICD-10 codes). Whether they occur as main or secondary diagnosis for readmission

I21.*	Acute myocardial infarction
I24.*	Other acute ischemic heart diseases
I26.0	Pulmonary embolism with mention of acute cor pulmonale
I26.9	Pulmonary embolism without mention of acute cor pulmonale
I46.0	Cardiac arrest with successful resuscitation
I46.1	Sudden cardiac death, so described
I46.9	Cardiac arrest, unspecified
I49.0	Ventricular fibrillation and flutter
I60.*	Subarachnoid hemorrhage
I61.*	Intracerebral hemorrhage
I62.*	Other nontraumatic intracranial hemorrhage
I63.*	Cerebral infarction
I64.9	Stroke, not specified as hemorrhage or infarction
I65.*	Occlusion and stenosis of precerebral arteries, not resulting in cerebral infarction
I66.*	Occlusion and stenosis of cerebral arteries, not resulting in cerebral infarction
I72.*	Other aneurysm and dissection
I74.*	Arterial embolism and thrombosis
I77.0	Arteriovenous fistula, acquired
I77.1	Stricture of artery
I77.2	Rupture of artery
I81.9	Portal vein thrombosis
I82.*	Other venous embolism and thrombosis
I97.8	Other postprocedural disorders of circulatory system, not elsewhere classified
I97.9	Postprocedural disorder of circulatory system, unspecified
J80.9	Adult respiratory distress syndrome
J81.9	Pulmonary edema
T81.1	Shock during or resulting from a procedure, not elsewhere classified

DM Diagnosis of medical complication (ICD-10 codes). Whether they occur as main or secondary diagnosis for readmission

I80*	Phlebitis and thrombophlebitis
J95.2	Acute pulmonary insufficiency following nonthoracic surgery
J95.3	Chronic pulmonary insufficiency following surgery
J95.5	Postprocedural subglottic stenosis
J95.8	Other postprocedural respiratory disorders
J95.9	Postprocedural respiratory disorder, unspecified
J96*	Respiratory failure, not elsewhere classified
J98.1	Pulmonary collapse
K25.*	Gastric ulcer
K26.*	Duodenal ulcer
K27.*	Peptic ulcer, site unspecified
L89*	Decubitus ulcer and pressure area
N17.*	Acute renal failure
N99.0	Postprocedural renal failure
N99.8	Other postprocedural disorders of genitourinary system
N99.9	Postprocedural disorder of genitourinary system, unspecified
R33.9	Retention of urine
J13.*	Pneumonia due to Streptococcus pneumoniae
J14.*	Pneumonia due to Haemophilus influenzae
J15.*	Bacterial pneumonia, not elsewhere classified
J16.*	Pneumonia due to other infectious organisms, not elsewhere classified
J17.*	Pneumonia in diseases classified elsewhere
J18.*	Pneumonia, organism unspecified

DM 2 Diagnosis of medical complication (ICD-10 codes). Whether they occur as main diagnosis for readmission

K29.*	Gastritis and duodenitis
K59.0	Constipation
N99.1	Postprocedural urethral stricture
J20.*	Acute bronchitis
J21.*	Acute bronchiolitis
J22.*	Unspecified acute lower respiratory infection

A Codes for hip surgery (NOMESCO). Whether they occur as main procedure during the readmission

NFA02	Exploration of soft tissue in hip or thigh, open surgery
NFA11	Diagnostic arthroscopy of hip joint
NFA12	Exploration of hip joint, open surgery
NFA20	Biopsy of soft tissue in hip joint/femur, percutaneous
NFA21	Biopsy of hip joint, arthroscopic
NFA22	Biopsy of hip joint, open surgery
NFC*	Revision hip arthroplasty
NFF*	Surgery on synovial membranes or joint surfaces, hip point/femur
NFG*	Reconstruction or arthrodesis, hip point/femur
NFH*	Surgery due to dislocation or loose body, hip point/femur
NFJ*	Surgery due to fracture, hip point/femur
NFK*	Surgery on the bony structures, hip point/femur
NFL*	Surgery on muscle or tendon, hip point/femur
NFM*	Surgery on fascia and "bursa," hip point/femur
NFQ09	Exarticulation of the hip joint
NFS*	Surgery due to infection, hip point/femur
NFT*	Reconstructive surgery, hip point/femur
NFU*	Extractions of implants, hip point/femur
NFW*	Reoperations, hip point/femur
QDA10	Incision
QDB*	Suture, wound readjustment, wound dressing
QDE35	Reconstruction of defective skin
QDG30	Secondary suture
TNF05	Incision (abscess)
TNF10	Arthrocentesis of hip joint

NOMESCO = Nordic Medico-Statistical Committee.