

## Appendix A

**Identification of total joint arthroplasty procedures:** Total joint replacements were identified by searching acute care hospital discharge records for specific procedure codes

Canadian Classification of Diagnostic, Therapeutic and Surgical Procedures (CCP) procedure codes for TJA (through March, 2003)		Canadian Classification of Health Intervention (CCI) procedure codes for TJA (April, 2003 onward)	
93.41	Total knee replacement	1.VG.53	Implantation of internal device, knee joint
93.51	Total hip replacement with use of methyl methacrylate	1.VA.53.LA-PN	Implantation of internal device, hip joint, dual component prosthetic device [femoral & acetabular], open approach
93.59	Other total hip replacement	1.VA.53.PN-PN	Implantation of internal device, hip joint, dual component prosthetic device [femoral & acetabular], robotics assisted approach

Discharge records were checked to ensure that the procedures were not cancelled, previous, “out of hospital”, or “abandoned after onset”.

**Identification of revision joint replacements:** Revision joint replacements were identified using one of three different methods, depending on the time frame.

Time frame	TJAs were assumed to be revisions if the discharge record contained .....
Prior to April, 2000	An International Classification of Diseases, 9 <sup>th</sup> Revision (ICD-9) diagnosis of: <ul style="list-style-type: none"> <li>• osteomyelitis of joint (730.0 – 730.3, 730.8, and 730.9),</li> <li>• mechanical complications of internal prosthetic device (996.4 and 996.7),</li> <li>• dislocation of the joint (835.0 for hip, and 836.3 and 836.4 for knee), or</li> <li>• post-operative infection (996.6, 998.5 and 998.6).</li> </ul>
April, 2000 to March 2002.	Specific CCP procedure codes for revisions <ul style="list-style-type: none"> <li>• Hip revision: 93.52, 93.53, 93.65, 93.66, 93.67, 93.68</li> <li>• Knee revision: 93.40</li> </ul>
April, 2002 onward	Under the CCI system, revisions are identified by the presence of the supplementary status attribute ‘R’.

**Identification of Primary TJAs for Cancer, Fracture, or Trauma**

A diagnosis of cancer, fracture, or trauma was identified from the diagnosis codes contained in the hospital discharge abstract.

	International Statistical	International Statistical
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	Classification of Diseases and Related Health Problems, 9 <sup>th</sup> Revision (ICD-9)	Classification of Diseases and Related Health Problems, 10 <sup>th</sup> Revision, Canada (ICD-10-CA)
<b>Cancer</b>		
Malignant neoplasm of bone, lower limb	170.7, 170.8, 170.9	C40.2, C40.3, C40.8, C40.9
Secondary malignant neoplasm, bone	198.5	C79.5
<b>Injury</b>		
Fracture of acetabulum	808.0, 808.1	S32.4
Fracture of femur, patella, tibia, fibula	820, 821, 822, 823, 827, 828	S72.x, S82.0, S82.1, S82.2, S82.4, S82.7, S82.9
<b>External Cause of Injury</b>		
Transport accident	E800 – E848	V01.x – V99.x
Accidental fall	E880 – E888	W00.x – W19.x

**Appendix B:**

**Identification of Arthritis-Attributable Costs:** Physician services, acute care hospitalizations and same day surgery, and Emergency Department (ED) visits were classified as arthritis-related or not arthritis-related, on the basis of diagnostic code(s) found in the relevant records

Source	Diagnosis Codes	
Physician services, and ED visits identified using OHIP physician billing records	274	Gout
	711	Pyogenic arthritis
	714	Rheumatoid arthritis
	715	Osteoarthritis
	716	Traumatic arthritis
	718	Joint derangement, recurrent
		dislocation, ankylosis
	720	Ankylosing spondylitis
	734	Flat foot, pes planus
735	Hallux valgus, hallux varus, hammer toe	
Inpatient and same day surgery hospitalizations discharge abstracts using ICD-9 diagnoses (through March, 2002)	274+	Gouty arthropathy
	711+	Pyogenic arthritis
	712+	Crystal arthropathies
	713+	Arthropathy
	714+	Rheumatoid arthritis
715+	Osteoarthritis	

	716+	Other and unspecified arthropathies
	717+	Internal derangement of knee
	718+	Other derangement of joint
	719+	Other and unspecified disorders of joint
	720+	Ankylosing spondylitis and other inflammatory spondylopathies
	734+	Flat foot
	735+	Acquired deformities of toe
	736+	Other acquired deformities of limbs
Inpatient discharge abstracts, and same day surgery and ED visits recorded in the NACRS database, using ICD-10-CA diagnoses (April, 2002 onward)	M00+ – M25+	Arthropathies
	M45+ – M46.1	Ankylosing spondylitis, spinal enthesopathy, sacroiliitis not elsewhere classified
	M46.8+ – M46.9+	Inflammatory spondylopathies
	M67.3+	Transient synovitis
	M67.8+	Other specified disorders of synovium and tendon
Inpatient discharge abstracts,	M00 – M03	Infectious arthropathies

and same day surgery and ED visits recorded in the NACRS database, using ICD-10-CA diagnoses (April, 2002 onward)	M05 – M14	Inflammatory polyarthropathies
	M15 – M19	Arthrosis
	M20 – M25	Other joint disorders
	M45	Ankylosing spondylitis
	M46.0 – M46.1	Spinal enthesopathy
	M46.8 and M46.9	Other specified inflammatory spondylopathies and inflammatory spondylopathy, unspecified
	M67.3	Transient synovitis
	M67.8	Other specified disorders of synovium and tendon

‘+’ indicates that all diagnosis codes which start with the indicated characters were included.