

Appendix

TABLE E-1 CCI Procedure Codes and OHIP Fee Codes Used to Identify a Total Knee Arthroplasty (TKA) and Total Hip Arthroplasty (THA), or Hospital Admission for PJI*

	Description
THA: CCI code	
1VA53LAPN	Implantation of internal device, hip joint open approach uncemented dual-component prosthetic device [femoral and acetabular]
1VA53LAPNA	Implantation of internal device, hip joint open approach using bone autograft [uncemented] dual-component prosthetic device [femoral and acetabular]
1VA53LAPNK	Implantation of internal device, hip joint open approach using bone homograft [uncemented] dual-component prosthetic device [femoral and acetabular]
1VA53LAPNN	Implantation of internal device, hip joint open approach with synthetic material (e.g., bone paste, cement, Dynagraft, Osteoset) using dual-component prosthetic device [femoral and acetabular]
1VA53LAPNQ	Implantation of internal device, hip joint using combined sources of tissue (e.g., bone graft, cement, paste) using dual-component prosthetic device [femoral and acetabular]
1VA53PNPN	Implantation of internal device, hip joint robotics assisted approach [e.g., telemanipulation of tools] uncemented dual-component prosthetic device [femoral and acetabular]
1VA53PNPNA	Implantation of internal device, hip joint robotics assisted approach [e.g., telemanipulation of tools] using bone autograft [uncemented] dual-component prosthetic device [femoral and acetabular]
1VA53PNPNK	Implantation of internal device, hip joint robotics assisted approach [e.g., telemanipulation of tools] using bone homograft [uncemented] dual-component prosthetic device [femoral and acetabular]
1VA53PNPNN	Implantation of internal device, hip joint robotics assisted approach [e.g., telemanipulation of tools] with synthetic material (e.g., bone paste, cement, Dynagraft, Osteoset) using dual-component prosthetic device [femoral and acetabular]
1VA53PNPNQ	Implantation of internal device, hip joint robotics assisted approach [e.g., telemanipulation of tools] using combined sources of tissue (e.g., bone graft, cement, paste) using dual-component prosthetic device [femoral and acetabular]
THA: OHIP code	
R440	JOINT-RECONST-ARTHROPLASTY-HIP BIPOLAR
TKA: CCI code	
1VG53LAPN	Implantation of internal device, knee joint uncemented using dual component prosthetic device
1VG53LAPNA	Implantation of internal device, knee joint with bone autograft dual component prosthetic device
1VG53LAPNK	Implantation of internal device, knee joint with bone homograft dual component prosthetic device
1VG53LAPNN	Implantation of internal device, knee joint with synthetic material (e.g., bone paste, cement, Dynagraft, Osteoset) using dual component prosthetic device
1VG53LAPNQ	Implantation of internal device, knee joint with combined sources of tissue (e.g., bone graft, cement, paste) dual component prosthetic device
1VG53LAPP	Implantation of internal device, knee joint uncemented tri component prosthetic device
1VG53LAPPA	Implantation of internal device, knee joint with bone autograft tri component prosthetic device
1VG53LAPPK	Implantation of internal device, knee joint with bone homograft tri component prosthetic device
1VA53LAPN	Implantation of internal device, knee joint with synthetic material
1VG53LAPPQ	Implantation of internal device, knee joint with combined sources of tissue
TKA: OHIP code	
R441	JOINT-RECONST-ARTHROPLASTY-COMPL. REPLACE-KNEE
ICD-10 diagnosis codes for a hospital admission for PJI	
T8453	Infection and inflammatory reaction due to hip prosthesis
T8454	Infection and inflammatory reaction due to knee prosthesis
T847	Infection and inflammatory reaction due to unspecified internal orthopaedic prosthetic devices

*DynaGraft is demineralized bone matrix manufactured by SeaSpine, and Osteoset is bone graft substitute manufactured by Wright Medical.

TABLE E-2 CCI Procedure Codes and ICD-9/10 Codes Used to Identify Primary and Secondary Risk Factors (Postoperative Urinary Retention and Urinary Tract Infection) in CIHI-DAD/SDS, NACRS, and OHIP Databases*

Code	Data Source	Description
UTI		
N111	ICD-10	Chronic obstructive pyelonephritis
N136	ICD-10	Pyonephrosis
N151	ICD-10	Renal and perinephric abscess
N159	ICD-10	Renal tubulo-interstitial disease, unspecified
N160	ICD-10	Renal tubulo-interstitial disorders in infectious and parasitic diseases classified elsewhere
N300	ICD-10	Acute cystitis
N308	ICD-10	Other cystitis
N309	ICD-10	Cystitis, unspecified
N340	ICD-10	Urethral abscess
N390	ICD-10	Urinary tract infection, site not specified
T835	ICD-10	Infection and inflammatory reaction due to prosthetic device, implant and graft in urinary system
595	ICD-9	Acute cystitis, cystitis in diseases classified elsewhere, cystitis cystica, other specified types of cystitis, cystitis unspecified, urethral abscess, urethritis, urinary tract infection site not specified, acute pyelonephritis without lesion of renal medullary necrosis, acute pyelonephritis with lesion of renal medullary necrosis
Retention		
1PZ37JAGJ	CCI	Installation of external appliance, urinary system NEC of urine collection apparatus
1PZ38JAGJ	CCI	Management of external appliance, urinary system NEC of urine collection apparatus
1PM52BATS	CCI	Drainage, bladder using endoscopic per orifice approach and drainage catheter
1PM52BT	CCI	Drainage, bladder using endoscopic per orifice approach and incision technique
1PM52CATS	CCI	Drainage, bladder using per orifice approach and drainage catheter
1PM52HA	CCI	Drainage, bladder using percutaneous (needle) approach (e.g., cyst aspiration)
1PM52HHTS	CCI	Drainage, bladder using percutaneous transcatheter approach and drainage catheter
1PM52JA	CCI	Drainage, bladder using manual compression technique (e.g., suprapubic pressure, Crede maneuver)
1PM52LATS	CCI	Drainage, bladder using open approach and drainage tube NOS
1PM54CATS	CCI	Management of internal device, bladder of catheter using per orifice approach
1PM54DATS	CCI	Management of internal device, bladder NEC of percutaneously inserted catheter (e.g., suprapubic)
1PM54HHTS	CCI	Management of internal device, bladder of catheter (suprapubic) using percutaneous approach
2ZZ13RH	CCI	Specimen collection (for diagnostic testing), total body urine by catheterization
7SC59QC	CCI	Instruction, personal care for catheter care
7SJ59QC	CCI	Instruction, support activity for catheter care
R33	ICD-10	Retention of urine
R3912	ICD-10	Feeling of incomplete bladder emptying
Z466	ICD-10	Fitting and adjustment of urinary device
Y846	ICD-10	Urinary catheterization as the cause of abnormal reaction or later complication, without mention of misadventure at the time of the procedure
Z602	OHIP	Placement/change urinary catheter
Z480	OHIP	Suprapubic catheter placement
E750	OHIP	Suprapubic catheter placement

*Codes were selected after review of Canadian Classification of Health Intervention (CCI) and International Classification of Diseases, Ninth and Tenth Revisions (ICD-9/10) code description/evolution guides and yearly coding frequency. CIHI-DAD/SDS = Canadian Institute for Health Information's Discharge Abstract and Same Day Surgery, NACRS = National Ambulatory Care Reporting System, OHIP = Ontario Health Insurance Plan, NEC = not elsewhere classified, and NOS = not otherwise specified.

TABLE E-3 CCI Procedure Codes and ICD-9/10 Codes Used to Identify Covariates*

Diabetes
E1020, E10200, E10201, E10202, E10203, E10204, E10209, E1021, E10210, E10211, E10212, E10213, E10214, E10219, E1022, E10220, E10221, E10222, E10223, E10224, E10229, E1023, E1028, E10280, E10281, E10282, E10283, E10284, E10289, E10290, E10291, E10292, E10293, E10294, E10299, E1120, E11200, E11201, E11202, E11203, E11204, E11209, E1121, E11210, E11211, E11212, E11213, E11214, E11219, E1122, E11220, E11221, E11222, E11223, E11224, E11229, E1123, E1128, E11280, E11281, E11282, E11283, E11284, E11289, E11290, E11291, E11292, E11293, E11294, E11299, E1320, E13200, E13201, E13202, E13203, E13204, E13209, E1321, E13210, E13211, E13212, E13213, E13214, E13219, E1322, E13220, E13221, E13222, E13223, E13224, E13229, E1323, E1328, E13280, E13281, E13282, E13283, E13284, E13289, E13290, E13291, E13292, E13293, E13294, E13299, E1420, E14200, E14201, E14202, E14203, E14204, E14209, E1421, E14210, E14211, E14212, E14213, E14214, E14219, E1422, E14220, E14221, E14222, E14223, E14224, E14229, E1423, E1428, E14280, E14281, E14282, E14283, E14284, E14289, E14290, E14291, E14292, E14293, E14294, E14299, 2504, 25040, 25041
Renal insufficiency
I12, I13, N08, N080, N081, N082, N083, N0831, N0832, N0833, N0834, N0835, N0838, N0839, N084, N085, N088, N18, N180, N181, N182, N183, N184, N185, N188, N189, N19, 4030, 40300, 40301, 4031, 40310, 40311, 4039, 40390, 40391, 4040, 40400, 40401, 40402, 40403, 4041, 40410, 40411, 40412, 40413, 4049, 40490, 40491, 40492, 40493, 585, 5850, 586, 5860, 5888, 5889, 403, 585
Obesity
Z602
Malignancy
C18, C180, C181, C182, C183, C184, C185, C186, C187, C188, C189, C19, C20, C34, C3400, C3401, C3409, C3410, C3411, C3419, C342, C3430, C3431, C3439, C3480, C3481, C3489, C3490, C3491, C3499, C50, C5000, C5001, C5009, C5010, C5011, C5019, C5020, C5021, C5029, C5030, C5031, C5039, C5040, C5041, C5049, C5050, C5051, C5059, C5060, C5061, C5069, C5080, C5081, C5089, C5090, C5091, C5099, C61, D010, D011, D012, D022, D05, D050, D051, D057, D059, D075, 1540, 1541, 1542, 1543, 1548, 1620, 1622, 1623, 1624, 1625, 1628, 1629, 1740, 1741, 1742, 1743, 1744, 1745, 1746, 1748, 1749, 1750, 1759, 185, 1850, 2303, 2304, 2307, 2312, 2330, 2334, 154, 162, 174, 175, 185
Rheumatoid arthritis
M05, M050, M051, M052, M053, M058, M059, M06, M060, M061, M062, M063, M064, M068, M069, 7140, 7141, 7142, 7143, 71430, 71431, 71432, 71433, 7144, 7148, 71481, 71489, 7149, 714
CHF
I255, I500, I501, I509, J81, 4250, 4251, 4252, 4253, 4254, 4255, 4257, 4258, 4259, 4280, 4281, 4289, 514, 5140, 5184, 428
PVD
I700, I702, I7020, I7021, I708, I709, I731, I738, I739, K551, 4402, 4408, 4409, 4439, 4440, 4441, 4442, 44421, 44422, 4448, 44481, 44489, 4449, 5571, E626, E649, E672, R780, R783, R784, R785, R786, R787, R791, R794, R797, R804, R809, R813, R814, R815, R855, R856, R860, R861, R867, R875, R933, R934, R936, R937, 11A87LA, 11A87LAXXA, 11A87LAXXK, 11A87LAXXL, 11A87LAXXN, 11B87LA, 11B87LAXXA, 11B87LAXXK, 11B87LAXXL, 11B87LAXXN, 11B87LAXXQ, 11C87LA, 11C87LAXXA, 11C87LAXXK, 11C87LAXXL, 11C87LAXXN, 11C87LAXXQ, 11D87LA, 11D87LAXXA, 11D87LAXXK, 11D87LAXXN, 11D87LAXXQ, 1KA50, 1KA50GQBD, 1KA50GQOA, 1KA50GSBD, 1KA76, 1KA76MZXXA, 1KA76MZXXK, 1KA76MZXXN, 1KA76MZXXQ, 1KA76NBXXA, 1KA76NBXXK, 1KA76NBXXN, 1KA76NBXXQ, 1KA87LA, 1KA87LAXXA, 1KA87LAXXK, 1KA87LAXXN, 1KE57, 1KE57GQAG, 1KE57GQAGA, 1KE57GQAGK, 1KE57GQAGL, 1KE57GQAGN, 1KE57GQFV, 1KE57GQFVA, 1KE57GQFVK, 1KE57GQFVL, 1KE57GQFVN, 1KE57GQGX, 1KE57GQGXA, 1KE57GQGXX, 1KE57GQGXL, 1KE57GQGXN, 1KE57GQOB, 1KE57GQOBA, 1KE57GQOBK, 1KE57GQOBL, 1KE57GQOBN, 1KE57GQOC, 1KE57GQOCA, 1KE57GQOCK, 1KE57GQOCL, 1KE57GQOCN, 1KE57GSAG, 1KE57GSAGA, 1KE57GSAGK, 1KE57GSAGN, 1KE57GSFV, 1KE57GSFVA, 1KE57GSFVK, 1KE57GSFVN, 1KE57GSGX, 1KE57GSGXA, 1KE57GSGXK, 1KE57GSGXN, 1KE57LAAG, 1KE57LAAGA, 1KE57LAAGK, 1KE57LAAGL, 1KE57LAAGN, 1KE57LAFV, 1KE57LAFVA, 1KE57LAFVK, 1KE57LAFVL, 1KE57LAFVN, 1KE57LAGX, 1KE57LAGXA, 1KE57LAGXK, 1KE57LAGXL, 1KE57LAGXN, 1KE57LAOB, 1KE57LAOBA, 1KE57LAOBK, 1KE57LAOBL, 1KE57LAOBN, 1KE57LAOC, 1KE57LAOCA, 1KE57LAOCK, 1KE57LAOCL, 1KE57LAOCN, 1KE57VSAG, 1KE57VSAGA, 1KE57VSAGK, 1KE57VSAGN, 1KE57VSFV, 1KE57VSFVA, 1KE57VSFVK, 1KE57VSFVN, 1KE57VSGX, 1KE57VSGXA, 1KE57VSGXK, 1KE57VSGXN, 1KE76, 1KE76MUXXA, 1KE76MUXXK, 1KE76MUXXN, 1KE76MUXXQ, 1KE76MZXXA, 1KE76MZXXK, 1KE76MZXXN, 1KE76MZXXQ, 1KG50, 1KG50GQBD, 1KG50GQBF, 1KG50GQBP, 1KG50GQOA, 1KG50GSBD, 1KG50LABD, 1KG50LABP, 1KG50LAOA, 1KG57, 1KG57GQAG, 1KG57GQAGA, 1KG57GQAGK, 1KG57GQAGL, 1KG57GQAGN, 1KG57GQFV, 1KG57GQFVA, 1KG57GQFVK, 1KG57GQFVL, 1KG57GQFVN, 1KG57GQGX, 1KG57GQGXA, 1KG57GQGXX, 1KG57GQGXL, 1KG57GQGXN, 1KG57GQOB, 1KG57GQOBA, 1KG57GQOBK, 1KG57GQOBL, 1KG57GQOBN, 1KG57GQOC, 1KG57GQOCA, 1KG57GQOCK, 1KG57GQOCL, 1KG57GQOCN, 1KG57GSAG, 1KG57GSAGA, 1KG57GSAGK, 1KG57GSAGN, 1KG57GSFV, 1KG57GSFVA,

1KG57GSFVK, 1KG57GSFVN, 1KG57GSGX, 1KG57GSGXA, 1KG57GSGXK, 1KG57GSGXN, 1KG57LAAG, 1KG57LAAGA, 1KG57LAAGK, 1KG57LAAGL, 1KG57LAAGN, 1KG57LAFV, 1KG57LAFVA, 1KG57LAFVK, 1KG57LAFVL, 1KG57LAFVN, 1KG57LAGX, 1KG57LAGXA, 1KG57LAGXK, 1KG57LAGXL, 1KG57LAGXN, 1KG57LAOB, 1KG57LAOBA, 1KG57LAOBK, 1KG57LAOBL, 1KG57LAOBN, 1KG57LAOC, 1KG57LAOCA, 1KG57LAOCK, 1KG57LAOCL, 1KG57LAOCN, 1KG57VSAG, 1KG57VSAGA, 1KG57VSAGK, 1KG57VSAGN, 1KG57VSFV, 1KG57VSFVA, 1KG57VSFVK, 1KG57VSFVN, 1KG57VSGX, 1KG57VSGXA, 1KG57VSGXK, 1KG57VSGXN, 1KG76MIXXA, 1KG76MIXXN, 1KG76MIXXQ, 1KG87, 1KG87LA, 1KG87LAXXA, 1KG87LAXXL, 1KG87LAXXN, 5014, 5016, 5018, 5028, 5038, 5125, 5126, 5129, 5159
MI
I20, I200, I201, I2080, I2088, I209, I21, I210, I211, I212, I213, I214, I2140, I2141, I2142, I2149, I219, I22, I220, I221, I228, I229, I23, I230, I231, I232, I233, I234, I235, I236, I2380, I2381, I2382, I2388, I2389, I24, I240, I241, I248, I249, I25, I250, I251, I2510, I2511, I2512, I2513, I2514, I2515, I2519, I252, I253, I254, I255, I256, I258, I259, R931, T822, Z955, Z958, Z959, 4100, 41000, 41001, 41002, 4101, 41010, 41011, 41012, 4102, 41020, 41021, 41022, 4103, 41030, 41031, 41032, 4104, 41040, 41041, 41042, 4105, 41050, 41051, 41052, 4106, 41060, 41061, 41062, 4107, 41070, 41071, 41072, 4108, 41080, 41081, 41082, 4109, 41090, 41091, 41092, 4110, 4111, 4118, 41181, 41189, 412, 4120, 4130, 4131, 4139, 4140, 4141, 41410, 41411, 41419, 4148, 4149, 4292, 4296, 4297, 42971, 42979, 410, 412, 413
Afib
I48, I480, I4800, I4801, I4802, I481, I483, I484, I4890, I4891, 4273, 42731, 42732, 427
Alcohol abuse
E244, E512, F10, F100, F101, F102, F103, F104, F105, F106, F107, F108, F109, G312, G621, G721, I426, K292, K70, K700, K701, K702, K703, K704, K709, K860, T510, X45, X65, Y15, Y573, Z502, Z714, Z721, 3030, 30300, 30301, 30302, 30303, 3039, 30390, 30391, 30392, 30393, 3050, 30500, 30501, 30502, 30503
Depression
F320, F321, F322, F323, F328, F329, F330, F331, F332, F333, F334, F338, F341, 311, 3110, A190, A191, A192, A193, A194, A195, A196, A395, A695, A795, A895, 311
Radical prostatectomy
1QT91BQ, 1QT91DA, 1QT91PB, 1QT91PK, 7240
Corticosteroids (DIN numbers)
15016, 15024, 16438, 16446, 16462, 21695, 28096, 28185, 29300, 29351, 30600, 30619, 30627, 30635, 30643, 30651, 30678, 30740, 30759, 30767, 30910, 30929, 30988, 36129, 36366, 93629, 210188, 213624, 232378, 249963, 252417, 271373, 280437, 285471, 295094, 297151, 312770, 349100, 354309, 460761, 489158, 501050, 504416, 550957, 598194, 610623, 664227, 888230, 990876, 1934325, 1964070, 1964976, 1977547, 1999761, 1999869, 2086026, 2152541, 2194082, 2194090, 2194155, 2229293, 2229540, 2229550, 2230619, 2240684, 2240687, 2245400, 2245406, 2245532, 2250055, 2261081, 9854537, 9857120, 9857128
Alpha-blockers
2238123, 2245565, 2270102, 2281392, 2294265, 2294885, 2295121, 2298570, 2304678, 2314282, 2315866, 2317494, 2319217, 2322900, 2331780, 2333333, 2340208, 2349450, 2352419, 2361663, 2361671, 2362406, 2368242, 2413612, 2414759, 2427117, 2429667, 2443201, 2447576
5-alpha reductase inhibitors
2010909, 2247813, 2306905, 2310112, 2322579, 2348500, 2348888, 2349361, 2350270, 2354462, 2355043, 2356058, 2357224, 2365383, 2371820, 2372010, 2374404, 2375303, 2376113, 2376709, 2389878, 2393220, 2404206, 2405814, 2408287, 2412691, 2416298, 2421712, 2424444, 2427753, 2427842, 2428741, 2428873, 2429012, 2434369, 2443058, 2445077, 2447541, 9991085
Prior acute urinary retention
R33, R3912, Y846, Z466, 7882, E750, S478, Z480, Z602, 1PM52BATS, 1PM52BT, 1PM52CATS, 1PM52HA, 1PM52HHTS, 1PM52JA, 1PM52LATS, 1PM54CATS, 1PM54DATS, 1PM54HHTS, 1PZ37JAGJ, 1PZ38JAGJ, 2ZZ13RH, 7SC59QC, 7SJ59QC, 6914, 6916, 6994, 6995
Prior TURP
S654, S655, 1QT59BAAG, 1QT59BAAW, 1QT59BACG, 1QT59BAGX, 1QT59CACG, 1QT59HAAG, 1QT59HAAW, 1QT59HACG, 1QT59HAX7, 1QT59JAAQ, 7210, 7220, 7230
Prior UTI
N111, N136, N151, N159, N160, N300, N308, N309, N340, N390, T835, 5950, 5954, 5958, 59581, 59582, 59589, 5959, 5970, 5978, 59780, 59781, 59789, 5990, 5991, 595, 597, 599
Prior cystoscopy
Z606, Z607
Urology visits
A353, A354, A355, A356, A935, C353, C354, C355, C356, C935, W355, W356

Orthopaedic visits
A063, A064, A065, A066, A935, C063, C064, C065, C066, C935, W065, W066
Antibiotics (names provided instead of DINs)
Gentamicin, tobramycin, neomycin, amikacin, imipenem, meropenem, ertapenem, doripenem, cephalixin, cephalothin, cephradine, cefazolin, cefamandole, ceftaxime, cefaclor, cefuroxime, cefadroxil, cefotaxime, ceftazidime, ceftriaxone, cefotetan, cefepime, cefprozil, ceftibuten, levofloxacin, norfloxacin, ciprofloxacin, ofloxacin, grepafloxacin, trovafloxacin, gatifloxacin, moxifloxacin, ampicillin, carbenicillin, cloxacillin, penicillin G, dicloxacillin, methicillin, oxacillin, penicillin, ticarcillin, Bacampicillin, amoxicillin, piperacillin, nafcillin, amoxicillin clavulanate, piperacillin tazobactam, sulfadiazine, sulfamethoxazole, sulfisoxazole, sulfacetamide, sulfamethoxazole trimethoprim, erythromycin, nitrofurantoin, fosfomycin

*CHF = congestive heart failure, PVD = peripheral vascular disease, MI = myocardial infarction, afib = atrial fibrillation, DIN = drug identification number, and TURP = transurethral resection of the prostate.

TABLE E-4 Full-Cohort Demographics for Primary Exposure of Urinary Tract Infection*

	Entire Cohort (N = 113,061)	UTI		Standardized Difference†
		No (N = 84,805)	Yes (N = 28,256)	
Age				
Mean and stand. dev. (yr)	74.63 ± 5.87	74.35 ± 5.80	75.44 ± 6.02	0.18
Median (IQR) (yr)	74 (70-79)	74 (70-78)	75 (71-80)	0.18
Range (no. of patients)				
66-69 yr	26,425 (23.4%)	20,917 (24.7%)	5,508 (19.5%)	0.12
70-74 yr	33,191 (29.4%)	25,485 (30.1%)	7,706 (27.3%)	0.06
75-79 yr	29,221 (25.8%)	21,467 (25.3%)	7,754 (27.4%)	0.05
80-84 yr	17,345 (15.3%)	12,317 (14.5%)	5,028 (17.8%)	0.09
85-89 yr	5,904 (5.2%)	3,981 (4.7%)	1,923 (6.8%)	0.09
≥90 yr	975 (0.9%)	638 (0.8%)	337 (1.2%)	0.04
Sex (no. of female patients)	69,104 (61.1%)	50,300 (59.3%)	18,804 (66.5%)	0.15
Rural (no. of patients)				
Data missing	32 (0.0%)	26 (0.0%)	6 (0.0%)	0.01
No	94,063 (83.2%)	69,962 (82.5%)	24,101 (85.3%)	0.08
Yes	18,966 (16.8%)	14,817 (17.5%)	4,149 (14.7%)	0.08
Income quintile (no. of patients)				
Data missing	335 (0.3%)	252 (0.3%)	83 (0.3%)	0
Quintile 1 (lowest)	19,177 (17.0%)	14,176 (16.7%)	5,001 (17.7%)	0.03
Quintile 2	22,819 (20.2%)	17,155 (20.2%)	5,664 (20.0%)	0
Quintile 3	22,403 (19.8%)	16,974 (20.0%)	5,429 (19.2%)	0.02
Quintile 4	23,173 (20.5%)	17,317 (20.4%)	5,856 (20.7%)	0.01
Quintile 5 (highest)	25,154 (22.2%)	18,931 (22.3%)	6,223 (22.0%)	0.01
Patient LHIN (no. of patients)				
Data missing	32 (0.0%)	26 (0.0%)	6 (0.0%)	0.01
LHIN 1	6,648 (5.9%)	4,978 (5.9%)	1,670 (5.9%)	0
LHIN 2	11,014 (9.7%)	8,544 (10.1%)	2,470 (8.7%)	0.05
LHIN 3	5,861 (5.2%)	4,634 (5.5%)	1,227 (4.3%)	0.05
LHIN 4	15,369 (13.6%)	11,597 (13.7%)	3,772 (13.3%)	0.01
LHIN 5	4,690 (4.1%)	3,541 (4.2%)	1,149 (4.1%)	0.01
LHIN 6	7,299 (6.5%)	5,211 (6.1%)	2,088 (7.4%)	0.05
LHIN 7	7,232 (6.4%)	5,237 (6.2%)	1,995 (7.1%)	0.04
LHIN 8	11,486 (10.2%)	7,818 (9.2%)	3,668 (13.0%)	0.12
LHIN 9	12,447 (11.0%)	9,345 (11.0%)	3,102 (11.0%)	0
LHIN 10	6,165 (5.5%)	4,636 (5.5%)	1,529 (5.4%)	0
LHIN 11	10,794 (9.5%)	8,370 (9.9%)	2,424 (8.6%)	0.04
LHIN 12	4,779 (4.2%)	3,850 (4.5%)	929 (3.3%)	0.06
LHIN 13	6,757 (6.0%)	5,184 (6.1%)	1,573 (5.6%)	0.02
LHIN 14	2,488 (2.2%)	1,834 (2.2%)	654 (2.3%)	0.01
Relevant comorbidities (5 yr prior data)				
Charlson comorbidity index				
Mean score and stand. dev.	0.32 ± 0.89	0.29 ± 0.85	0.41 ± 1.01	0.12
Median score (IQR)	0 (0-0)	0 (0-0)	0 (0-0)	0.13
Score (no. of patients)				
0	94,236 (83.3%)	71,717 (84.6%)	22,519 (79.7%)	0.13
1	9,121 (8.1%)	6,509 (7.7%)	2,612 (9.2%)	0.06
2	6,048 (5.3%)	4,167 (4.9%)	1,881 (6.7%)	0.07
≥3	3,656 (3.2%)	2,412 (2.8%)	1,244 (4.4%)	0.08
Comorbidities‡ (no. of patients)				
Diabetes	28,617 (25.3%)	21,033 (24.8%)	7,584 (26.8%)	0.05
Chronic renal insufficiency	6,491 (5.7%)	4,363 (5.1%)	2,128 (7.5%)	0.1
End stage renal disease	183 (0.2%)	125 (0.1%)	58 (0.2%)	0.01
Obesity	7,328 (6.5%)	5,392 (6.4%)	1,936 (6.9%)	0.02

Malignancy	12,833 (11.4%)	9,326 (11.0%)	3,507 (12.4%)	0.04
Arthritis	3,387 (3.0%)	2,433 (2.9%)	954 (3.4%)	0.03
Congestive heart failure	10,136 (9.0%)	7,035 (8.3%)	3,101 (11.0%)	0.09
Peripheral vascular disease	1,227 (1.1%)	863 (1.0%)	364 (1.3%)	0.03
Myocardial infarction	39,661 (35.1%)	28,711 (33.9%)	10,950 (38.8%)	0.1
Atrial fibrillation	21,388 (18.9%)	15,043 (17.7%)	6,345 (22.5%)	0.12
History of alcohol abuse	746 (0.7%)	525 (0.6%)	221 (0.8%)	0.02
History of depression	4,364 (3.9%)	2,934 (3.5%)	1,430 (5.1%)	0.08
Urologic history (<i>no. of patients</i>)				
Prior AUR (5 yr)	3,196 (2.8%)	1,850 (2.2%)	1,346 (4.8%)	0.14
Prior TURP (5 yr)	1,893 (1.7%)	1,221 (1.4%)	672 (2.4%)	0.07
Prior cystoscopy (1 yr)	4,455 (3.9%)	2,386 (2.8%)	2,069 (7.3%)	0.21
Prior cystoscopy (5 yr)	14,256 (12.6%)	8,419 (9.9%)	5,837 (20.7%)	0.3
Prior prostatectomy (5 yr)	496 (0.4%)	390 (0.5%)	106 (0.4%)	0.01
Prior UTI (1 yr)	13,230 (11.7%)	6,107 (7.2%)	7,123 (25.2%)	0.5
Medication usage (prior yr) (<i>no. of patients</i>)				
Prior alpha blocker exposure	5,196 (4.6%)	3,507 (4.1%)	1,689 (6.0%)	0.08
Prior antibiotic exposure	42,265 (37.4%)	28,308 (33.4%)	13,957 (49.4%)	0.33
Prior 5ARI exposure	2,743 (2.4%)	1,866 (2.2%)	877 (3.1%)	0.06
Prior corticosteroid exposure	19,680 (17.4%)	14,087 (16.6%)	5,593 (19.8%)	0.08
Health-care utilization (prior yr)				
No. of urology visits				
Mean and stand. dev.	0.27 ± 0.95	0.21 ± 0.83	0.43 ± 1.24	0.21
Median (IQR)	0 (0-0)	0 (0-0)	0 (0-0)	0.23
No. of visits (<i>no. of patients</i>)				
0	99,912 (88.4%)	76,593 (90.3%)	23,319 (82.5%)	0.23
1	5,198 (4.6%)	3,425 (4.0%)	1,773 (6.3%)	0.1
2	3,894 (3.4%)	2,463 (2.9%)	1,431 (5.1%)	0.11
≥3	4,057 (3.6%)	2,324 (2.7%)	1,733 (6.1%)	0.17
No. of visits to general practitioner				
Mean and stand. dev.	7.66 ± 5.69	7.26 ± 5.39	8.87 ± 6.34	0.27
Median (IQR)	7 (4-10)	6 (4-9)	8 (5-12)	0.3
No. of visits (<i>no. of patients</i>)				
0	3,043 (2.7%)	2,497 (2.9%)	546 (1.9%)	0.07
1-2	10,248 (9.1%)	8,482 (10.0%)	1,766 (6.3%)	0.14
3-4	20,063 (17.7%)	16,111 (19.0%)	3,952 (14.0%)	0.14
5-6	22,962 (20.3%)	17,742 (20.9%)	5,220 (18.5%)	0.06
7-8	18,513 (16.4%)	13,904 (16.4%)	4,609 (16.3%)	0
9-10	13,000 (11.5%)	9,336 (11.0%)	3,664 (13.0%)	0.06
≥11	25,232 (22.3%)	16,733 (19.7%)	8,499 (30.1%)	0.24
No. of orthopaedic visits				
Mean and stand. dev.	1.95 ± 1.52	1.93 ± 1.47	2.02 ± 1.64	0.06
Median (IQR)	2 (1-2)	2 (1-2)	2 (1-3)	0.05
No. of visits (<i>no. of patients</i>)				
0	5,153 (4.6%)	3,830 (4.5%)	1,323 (4.7%)	0.01
1	50,732 (44.9%)	38,458 (45.3%)	12,274 (43.4%)	0.04
2	30,840 (27.3%)	23,283 (27.5%)	7,557 (26.7%)	0.02
≥3	26,336 (23.3%)	19,234 (22.7%)	7,102 (25.1%)	0.06
No. of hospitalizations				
Mean and stand. dev.	0.13 ± 0.43	0.12 ± 0.40	0.17 ± 0.50	0.12
Median (IQR)	0 (0-0)	0 (0-0)	0 (0-0)	0.12
No. of hospitalizations (<i>no. of patients</i>)				
0	101,049 (89.4%)	76,603 (90.3%)	24,446 (86.5%)	0.12
1	9,868 (8.7%)	6,820 (8.0%)	3,048 (10.8%)	0.09

2	1,625 (1.4%)	1,070 (1.3%)	555 (2.0%)	0.06
≥3	519 (0.5%)	312 (0.4%)	207 (0.7%)	0.05
No. of ED visits				
Mean and stand. dev.	0.55 ± 1.22	0.49 ± 1.10	0.74 ± 1.51	0.19
Median (IQR)	0 (0-1)	0 (0-1)	0 (0-1)	0.2
No. of visits (<i>no. of patients</i>)				
0	78,730 (69.6%)	60,916 (71.8%)	17,814 (63.0%)	0.19
1	20,668 (18.3%)	14,842 (17.5%)	5,826 (20.6%)	0.08
2	7,494 (6.6%)	5,171 (6.1%)	2,323 (8.2%)	0.08
≥3	6,169 (5.5%)	3,876 (4.6%)	2,293 (8.1%)	0.15
Other				
Fiscal year (FY) of index procedure (<i>no. of patients</i>)				
FY 2003	7,756 (6.9%)	5,921 (7.0%)	1,835 (6.5%)	0.02
FY 2004	8,623 (7.6%)	6,481 (7.6%)	2,142 (7.6%)	0
FY 2005	10,400 (9.2%)	7,814 (9.2%)	2,586 (9.2%)	0
FY 2006	10,860 (9.6%)	8,220 (9.7%)	2,640 (9.3%)	0.01
FY 2007	10,801 (9.6%)	8,142 (9.6%)	2,659 (9.4%)	0.01
FY 2008	10,587 (9.4%)	7,918 (9.3%)	2,669 (9.4%)	0
FY 2009	10,657 (9.4%)	8,026 (9.5%)	2,631 (9.3%)	0.01
FY 2010	10,926 (9.7%)	8,143 (9.6%)	2,783 (9.8%)	0.01
FY 2011	11,396 (10.1%)	8,446 (10.0%)	2,950 (10.4%)	0.02
FY 2012	11,614 (10.3%)	8,659 (10.2%)	2,955 (10.5%)	0.01
FY 2013	9,441 (8.4%)	7,035 (8.3%)	2,406 (8.5%)	0.01
Institution teaching status (<i>no. of patients</i>)				
No	86,116 (76.2%)	64,402 (75.9%)	21,714 (76.8%)	0.02
Yes	26,945 (23.8%)	20,403 (24.1%)	6,542 (23.2%)	0.02
Anesthetic (<i>no. of patients</i>)				
General	28,209 (25.0%)	20,871 (24.6%)	7,338 (26.0%)	0.03
Spinal	83,820 (74.1%)	63,149 (74.5%)	20,671 (73.2%)	0.03
Regional	919 (0.8%)	702 (0.8%)	217 (0.8%)	0.01
Other	113 (0.1%)	83 (0.1%)	30 (0.1%)	0

*IQR = interquartile range, LHIN = local health integration network (provincial region), TURP = transurethral resection of the prostate, 5ARI = 5-alpha reductase inhibitor, and ED = emergency department. †Standardized differences of the mean are less sensitive to large sample sizes; a value of >10% is considered a potentially meaningful difference between groups. Due to the large sample size of administrative data studies, p values often identify small, significant differences that are not clinically relevant.

‡Some patients had >1 comorbidity.

TABLE E-5 Full-Cohort Demographics for Secondary Exposure of Acute Urinary Retention (AUR)

	Entire Cohort (N = 113,061)	AUR		Standardized Difference†
		No (N = 110,545)	Yes (N = 2516)	
Age				
Mean and stand. dev. (yr)	74.63 ± 5.87	74.58 ± 5.86	76.53 ± 6.07	0.33
Median (IQR) (yr)	74 (70-79)	74 (70-79)	76 (72-81)	0.33
Range (no. of patients)				
66-69 yr	26,425 (23.4%)	26,055 (23.6%)	370 (14.7%)	0.23
70-74 yr	33,191 (29.4%)	32,587 (29.5%)	604 (24.0%)	0.12
75-79 yr	29,221 (25.8%)	28,478 (25.8%)	743 (29.5%)	0.08
80-84 yr	17,345 (15.3%)	16,803 (15.2%)	542 (21.5%)	0.16
85-89 yr	5,904 (5.2%)	5,690 (5.1%)	214 (8.5%)	0.13
≥90 yr	975 (0.9%)	932 (0.8%)	43 (1.7%)	0.08
Sex (no. of female patients)	69,104 (61.1%)	68,371 (61.8%)	733 (29.1%)	0.7
Rural				
Data missing	32 (0.0%)	32 (0.0%)	0 (0.0%)	0.02
No	94,063 (83.2%)	91,930 (83.2%)	2,133 (84.8%)	0.04
Yes	18,966 (16.8%)	18,583 (16.8%)	383 (15.2%)	0.04
Income quintile				
Quintile 1 (lowest)	19,177 (17.0%)	18,775 (17.0%)	402 (16.0%)	0.03
Quintile 2	22,819 (20.2%)	22,328 (20.2%)	491 (19.5%)	0.02
Quintile 3	22,403 (19.8%)	21,889 (19.8%)	514 (20.4%)	0.02
Quintile 4	23,173 (20.5%)	22,646 (20.5%)	527 (20.9%)	0.01
Quintile 5 (highest)	25,154 (22.2%)	24,577 (22.2%)	577 (22.9%)	0.02
Patient LHIN				
Data missing	32 (0.0%)	32 (0.0%)	0 (0.0%)	0.02
LHIN 1	6,648 (5.9%)	6,364 (5.8%)	284 (11.3%)	0.2
LHIN 2	11,014 (9.7%)	10,699 (9.7%)	315 (12.5%)	0.09
LHIN 3	5,861 (5.2%)	5,717 (5.2%)	144 (5.7%)	0.02
LHIN 4	15,369 (13.6%)	15,136 (13.7%)	233 (9.3%)	0.14
LHIN 5	4,690 (4.1%)	4,607 (4.2%)	83 (3.3%)	0.05
LHIN 6	7,299 (6.5%)	7,120 (6.4%)	179 (7.1%)	0.03
LHIN 7	7,232 (6.4%)	7,024 (6.4%)	208 (8.3%)	0.07
LHIN 8	11,486 (10.2%)	11,212 (10.1%)	274 (10.9%)	0.02
LHIN 9	12,447 (11.0%)	12,259 (11.1%)	188 (7.5%)	0.12
LHIN 10	6,165 (5.5%)	6,019 (5.4%)	146 (5.8%)	0.02
LHIN 11	10,794 (9.5%)	10,582 (9.6%)	212 (8.4%)	0.04
LHIN 12	4,779 (4.2%)	4,683 (4.2%)	96 (3.8%)	0.02
LHIN 13	6,757 (6.0%)	6,650 (6.0%)	107 (4.3%)	0.08
LHIN 14	2,488 (2.2%)	2,441 (2.2%)	47 (1.9%)	0.02
Relevant comorbidities (5 yr prior data)				
Charlson comorbidity index				
Mean and stand. dev.	0.32 ± 0.89	0.32 ± 0.89	0.47 ± 1.11	0.15
Median (IQR)	0 (0-0)	0 (0-0)	0 (0-0)	0.14
Score (no. of patients)				
0	94,236 (83.3%)	92,270 (83.5%)	1,966 (78.1%)	0.14
1	9,121 (8.1%)	8,904 (8.1%)	217 (8.6%)	0.02
2	6,048 (5.3%)	5,850 (5.3%)	198 (7.9%)	0.1
≥3	3,656 (3.2%)	3,521 (3.2%)	135 (5.4%)	0.11
Comorbidities (no. of patients)				
Diabetes	28,617 (25.3%)	27,871 (25.2%)	746 (29.7%)	0.1
Chronic renal insufficiency	6,491 (5.7%)	6,249 (5.7%)	242 (9.6%)	0.15
End stage renal disease	183 (0.2%)	177 (0.2%)	6 (0.2%)	0.02
Obesity	7,328 (6.5%)	7,168 (6.5%)	160 (6.4%)	0.01
Malignancy	12,833 (11.4%)	12,456 (11.3%)	377 (15.0%)	0.11

Arthritis	3,387 (3.0%)	3,338 (3.0%)	49 (1.9%)	0.07
Congestive heart failure	10,136 (9.0%)	9,814 (8.9%)	322 (12.8%)	0.13
Peripheral vascular disease	1,227 (1.1%)	1,182 (1.1%)	45 (1.8%)	0.06
Myocardial infarction	39,661 (35.1%)	38,591 (34.9%)	1,070 (42.5%)	0.16
Atrial fibrillation	21,388 (18.9%)	20,791 (18.8%)	597 (23.7%)	0.12
History of alcohol abuse	746 (0.7%)	720 (0.7%)	26 (1.0%)	0.04
History of depression	4,364 (3.9%)	4,281 (3.9%)	83 (3.3%)	0.03
Urologic history				
Prior AUR (5 yr)	3,196 (2.8%)	3,017 (2.7%)	179 (7.1%)	0.2
Prior TURP (5 yr)	1,893 (1.7%)	1,742 (1.6%)	151 (6.0%)	0.23
Prior cystoscopy (1 yr)	4,455 (3.9%)	4,261 (3.9%)	194 (7.7%)	0.17
Prior cystoscopy (5 yr)	14,256 (12.6%)	13,721 (12.4%)	535 (21.3%)	0.24
Prior prostatectomy (5 yr)	496 (0.4%)	474 (0.4%)	22 (0.9%)	0.06
Prior UTI (1 yr)	13,230 (11.7%)	12,861 (11.6%)	369 (14.7%)	0.09
Medication usage (prior yr)				
Prior alpha-blocker exposure	5,196 (4.6%)	4,896 (4.4%)	300 (11.9%)	0.28
Prior antibiotic exposure	42,265 (37.4%)	41,243 (37.3%)	1,022 (40.6%)	0.07
Prior 5ARI exposure	2,743 (2.4%)	2,584 (2.3%)	159 (6.3%)	0.2
Prior corticosteroid exposure	19,680 (17.4%)	19,286 (17.4%)	394 (15.7%)	0.05
Health-care utilization (prior yr)				
No. of urology visits				
Mean and stand. dev.	0.27 ± 0.95	0.26 ± 0.94	0.59 ± 1.45	0.27
Median (IQR)	0 (0-0)	0 (0-0)	0 (0-0)	0.36
No. of visits (<i>no. of patients</i>)				
0	99,912 (88.4%)	98,024 (88.7%)	1,888 (75.0%)	0.36
1	5,198 (4.6%)	4,941 (4.5%)	257 (10.2%)	0.22
2	3,894 (3.4%)	3,720 (3.4%)	174 (6.9%)	0.16
≥3	4,057 (3.6%)	3,860 (3.5%)	197 (7.8%)	0.19
No. of visits to general practitioner				
Mean and stand. dev.	7.66 ± 5.69	7.66 ± 5.69	7.75 ± 5.53	0.02
Median (IQR)	7 (4-10)	7 (4-10)	7 (4-10)	0.02
No. of visits (<i>no. of patients</i>)				
0	3,043 (2.7%)	2,980 (2.7%)	63 (2.5%)	0.01
1-2	10,248 (9.1%)	10,019 (9.1%)	229 (9.1%)	0
3-4	20,063 (17.7%)	19,612 (17.7%)	451 (17.9%)	0
5-6	22,962 (20.3%)	22,464 (20.3%)	498 (19.8%)	0.01
7-8	18,513 (16.4%)	18,136 (16.4%)	377 (15.0%)	0.04
9-10	13,000 (11.5%)	12,702 (11.5%)	298 (11.8%)	0.01
≥11	25,232 (22.3%)	24,632 (22.3%)	600 (23.8%)	0.04
No. of orthopaedic visits				
Mean and stand. dev.	1.95 ± 1.52	1.95 ± 1.51	1.98 ± 1.58	0.02
Median (IQR)	2 (1-2)	2 (1-2)	2 (1-2)	0.02
No. of visits (<i>no. of patients</i>)				
0	5,153 (4.6%)	5,024 (4.5%)	129 (5.1%)	0.03
1	50,732 (44.9%)	49,661 (44.9%)	1,071 (42.6%)	0.05
2	30,840 (27.3%)	30,105 (27.2%)	735 (29.2%)	0.04
≥3	26,336 (23.3%)	25,755 (23.3%)	581 (23.1%)	0
No. of hospitalizations				
Mean and stand. dev.	0.13 ± 0.43	0.13 ± 0.43	0.17 ± 0.51	0.08
Median (IQR)	0 (0-0)	0 (0-0)	0 (0-0)	0.07
No. of hospitalizations (<i>no. of patients</i>)				
0	101,049 (89.4%)	98,855 (89.4%)	2,194 (87.2%)	0.07
1	9,868 (8.7%)	9,621 (8.7%)	247 (9.8%)	0.04
2	1,625 (1.4%)	1,572 (1.4%)	53 (2.1%)	0.05
≥3	519 (0.5%)	497 (0.4%)	22 (0.9%)	0.05

No. of ED visits				
Mean and stand. dev.	0.55 ± 1.22	0.55 ± 1.22	0.62 ± 1.23	0.06
Median (IQR)	0 (0-1)	0 (0-1)	0 (0-1)	0.09
No. of visits (<i>no. of patients</i>)				
0	78,730 (69.6%)	77,079 (69.7%)	1,651 (65.6%)	0.09
1	20,668 (18.3%)	20,144 (18.2%)	524 (20.8%)	0.07
2	7,494 (6.6%)	7,300 (6.6%)	194 (7.7%)	0.04
≥3	6,169 (5.5%)	6,022 (5.4%)	147 (5.8%)	0.02
Other				
Fiscal year (FY) of index procedure (<i>no. of patients</i>)				
FY 2003	7,756 (6.9%)	7,606 (6.9%)	150 (6.0%)	0.04
FY 2004	8,623 (7.6%)	8,490 (7.7%)	133 (5.3%)	0.1
FY 2005	10,400 (9.2%)	10,165 (9.2%)	235 (9.3%)	0
FY 2006	10,860 (9.6%)	10,634 (9.6%)	226 (9.0%)	0.02
FY 2007	10,801 (9.6%)	10,564 (9.6%)	237 (9.4%)	0
FY 2008	10,587 (9.4%)	10,342 (9.4%)	245 (9.7%)	0.01
FY 2009	10,657 (9.4%)	10,403 (9.4%)	254 (10.1%)	0.02
FY 2010	10,926 (9.7%)	10,664 (9.6%)	262 (10.4%)	0.03
FY 2011	11,396 (10.1%)	11,151 (10.1%)	245 (9.7%)	0.01
FY 2012	11,614 (10.3%)	11,324 (10.2%)	290 (11.5%)	0.04
FY 2013	9,441 (8.4%)	9,202 (8.3%)	239 (9.5%)	0.04
Institution teaching status (<i>no. of patients</i>)				
No	86,116 (76.2%)	84,113 (76.1%)	2,003 (79.6%)	0.08
Yes	26,945 (23.8%)	26,432 (23.9%)	513 (20.4%)	0.08
Anesthetic (<i>no. of patients</i>)				
General	28,209 (25.0%)	27,445 (24.8%)	764 (30.4%)	0.12
Spinal	83,820 (74.1%)	82,084 (74.3%)	1,736 (69.0%)	0.12
Regional	919 (0.8%)	NR	NR	0.03
Other	113 (0.1%)	NR	≤5 (0.1%)	0.01

*IQR = interquartile range, LHIN = local health integration network (provincial region), TURP = transurethral resection of the prostate, 5ARI = 5-alpha reductase inhibitor, ED = emergency department, and NR = not reported due to small patient group, in keeping with provincial privacy legislation. †Standardized differences of the mean are less sensitive to large sample sizes; a value of >10% is considered a potentially meaningful difference between groups. Due to the large sample size of administrative data studies, p values often identify small, significant differences that are not clinically relevant.

TABLE E-6 Expanded Multivariate Analysis for PJI According to UTI with Additional Covariates

Parameter*	Subdistribution Hazard Model			
	Hazard Ratio	Lower 95% CI	Upper 95% CI	P Value
UTI exposure	1.209	1.141	1.280	<0.0001
Age	1.003	0.992	1.014	0.570
Sex (ref. = female)	1.471	1.289	1.678	<0.0001
Charlson	1.087	1.020	1.158	0.010
History of AUR	1.137	0.819	1.578	0.443
History of cystoscopy	1.282	1.057	1.556	0.012
History of UTI	1.013	0.832	1.235	0.895
Prior antibiotic exposure	1.016	0.888	1.163	0.814
No. of prior urology visits	0.945	0.884	1.010	0.096
No. of prior GP visits	1.008	1.000	1.017	0.058
No. of prior hospital visits	1.129	1.010	1.264	0.034
No. of prior ED visits	1.076	1.049	1.105	<0.0001
Chronic renal insufficiency	1.180	0.929	1.500	0.176
History of MI	0.932	0.814	1.067	0.309
History of atrial fibrillation	1.227	1.055	1.428	0.008
Prior alpha blocker exposure	0.908	0.672	1.226	0.529
Prior 5ARI exposure	0.973	0.658	1.439	0.891

*GP = general practitioner, ED = emergency department, MI = myocardial infarction, and 5ARI = 5-alpha reductase inhibitor.

TABLE E-7 Expanded Multivariate Analysis for PJI According to AUR with Additional Covariates

Parameter	Subdistribution Hazard Model			
	Hazard Ratio	Lower 95% CI	Upper 95% CI	P Value
AUR exposure	0.994	0.602	1.642	0.981
Age	1.014	1.001	1.028	0.041
Sex (ref. = female)	1.365	1.157	1.611	0.000
Charlson	1.069	0.984	1.160	0.114
History of AUR	1.152	0.753	1.762	0.515
History of cystoscopy	1.294	1.014	1.651	0.039
History of UTI	0.994	0.774	1.277	0.961
Prior antibiotic exposure	1.029	0.870	1.218	0.735
No. of prior urology visits	0.964	0.885	1.050	0.404
No. of prior GP visits	1.005	0.994	1.016	0.349
No. of prior hospital visits	1.108	0.966	1.271	0.144
No. of prior ED visits	1.089	1.058	1.121	<0.0001
Chronic renal insufficiency	1.124	0.833	1.518	0.445
Malignancy	0.966	0.760	1.227	0.774
History of MI	1.011	0.853	1.197	0.902
History of atrial fibrillation	1.167	0.963	1.414	0.116
History of TURP	0.871	0.511	1.486	0.613
Prior alpha blocker exposure	0.946	0.642	1.394	0.780
Prior 5ARI exposure	0.903	0.537	1.518	0.700

*GP = general practitioner, ED = emergency department, MI = myocardial infarction, TURP = transurethral resection of the prostate, and 5ARI = 5-alpha reductase inhibitor.

TABLE E-8 UTI Modeled as a Categorical Variable to a Maximum of 3 UTIs*

Parameter	Subdistribution Hazard Model			
	Hazard Ratio	Lower 95% CI	Upper 95% CI	P Value
UTI exposure (1 vs. 0)	1.389	1.123	1.716	0.0024
UTI exposure (2 vs. 0)	1.139	0.667	1.945	0.633
UTI exposure (≥ 3 vs. 0)	2.947	1.933	4.493	<0.0001
Age	1.004	0.994	1.015	0.4356
Sex (male vs. female)	1.466	1.291	1.665	<0.0001
Charlson	1.100	1.037	1.167	0.0015
History of AUR	1.138	0.820	1.580	0.4387
History of cystoscopy	1.273	1.049	1.545	0.0147
History of UTI	1.011	0.829	1.232	0.9152
Prior antibiotic exposure	1.015	0.887	1.161	0.8284
No. of urology visits	0.943	0.881	1.008	0.0847
No. of GP visits	1.009	1.000	1.017	0.0393
No. of hospital visits	1.136	1.016	1.270	0.025
No. of ED visits	1.078	1.051	1.106	<0.0001

*GP = general practitioner, and ED = emergency department.