

TABLE E-1 Perioperative Variables, Stratified According to Type of Operation

	Primary Arthroplasty (N = 40,135)	Revision Arthroplasty (N = 2166)	Partial Revision Arthroplasty (N = 848)	P Value
Year of operation (%)				<0.001
1997	10.6	11.3	10.4	
1998	10.5	12.2	14.3	
1999	11.1	12.6	12.7	
2000	12.2	12.6	13.4	
2001	13.2	12.3	13.2	
2002	15.7	15.1	12.7	
2003	18.0	15.1	14.2	
2004 (January to June)	8.7	8.8	9.1	
Same-day arthroplasty of the contralateral knee (%)	8.0	1.0	3.0	<0.001
Type of implanted prosthesis (%)				<0.001
Unicondylar	3.6	0.2	0.1	
Cruciate-retaining, posteriorly stabilized	85.9	26.5	99.3	
Constrained	9.8	53.9	0.5	
Hinged	0.8	19.4	0.1	
Patellar component implanted (%)	30.5	44.1	71.8	<0.001
Fixation (%)			(Not included)	
Cemented femoral component	92.8	91.7		0.071
Cemented tibial component	97.4	95.7		<0.001
Both components cemented	92.5	88.7		<0.001
Both components cementless	2.3	9.9		
Hybrid fixation	5.1	1.3		
Antibiotic-impregnated cement	83.3	89.8	60.6	
Intravenous antibiotic prophylaxis (%)	98.3	97.0	95.6	<0.001
Antibiotic prophylaxis (%)				<0.001
None	0.4	1.0	4.4	
Intravenous	16.3	9.4	93.0	
In cement	1.2	2.0	0.0	
Both intravenously and in cement	82.0	87.5	2.6	
Any postoperative complication (%)	1.1	1.4	0.6	0.146
For reoperations	(Not included)			
Time since previous arthroplasty* (mo.)		69 (0.03 to 351)	37 (0.3 to 201)	<0.001
Early revision (<2 yrs) (%)		25.0	36.3	<0.001
Late revision (>2 yrs) (%)		75.0	63.7	
Reason for revision (%)				<0.001
Loosening		24.4	1.8	

Infection		13.4	1.9	
Malpositioned prosthesis		11.9	1.3	
Fracture of prosthesis		5.1	4.2	
Luxation		3.4	2.1	
Fracture of bone		3.1	0.6	
Patellar complication		2.7	34.2	
Other		25.5	52.1	
Unknown		10.9	1.8	
Hospitalization (n = 41,308)				
Source of referral (%)				<0.001
Primary health care	40.9	29.5	28.6	
Occupational health care	0.7	0.4	0.1	
Specialty health care	22.6	46.6	41.5	
Private care	27.9	14.8	20.6	
Other	7.8	8.6	9.2	
Queued for treatment* ( <i>mo.</i> )	6 (0 to 101)	2 (0 to 81)	3 (0 to 43)	<0.001
Hospitalization				
Arrival on day of operation (%)	12.2	9.7	13.0	0.002
Arrived from home (%)	97.2	96.0	95.6	<0.001
Arrived from other health-care facility (%)	2.8	4.0	4.4	
Length of stay* ( <i>days</i> )	8 (1 to 106)	9 (1 to 90)	8 (1 to 70)	<0.001
Discharged home (%)	67.0	57.5	71.0	<0.001
Discharged to other health-care facility (%)	33.0	42.5	29.0	

\*The values are given as the median, with the range in parentheses.

TABLE E-2 Infection Rate and Risk Factors for Reoperation Because of Infection After Primary Knee Arthroplasty and Revision Total Knee Arthroplasty\*

	Primary Knee Arthroplasty		Revision Total Knee Arthroplasty	
	Infection Rate† (%)	Univariate Analysis† (hazard ratio)	Infection Rate† (%)	Univariate Analysis† (hazard ratio)
Age				
<65 years	0.83 (0.67 to 1.02)	1	3.14 (1.94 to 5.04)	1
65 to 75 years	0.73 (0.62 to 0.86)	0.94 (0.68 to 1.30)	3.73 (2.72 to 5.09)	1.29 (0.57 to 2.93)
>75 years	0.69 (0.55 to 0.86)	0.94 (0.65 to 1.37)	2.41 (1.49 to 3.88)	1.26 (0.52 to 3.05)
Sex				
Female	0.66 (0.57 to 0.76)	1	2.46 (1.80 to 3.34)	1
Male	0.97 (0.80 to 1.17)	<b>1.47 (1.11 to 1.95)</b>	5.18 (3.65 to 7.30)	<b>2.40 (1.30 to 4.43)</b>
Diagnosis				
Primary osteoarthritis	0.66 (0.58 to 0.75)	1	3.25 (2.54 to 4.15)	1
Secondary osteoarthritis	1.58 (0.99 to 2.51)	<b>2.02 (1.07 to 3.83)</b>	0	—
Rheumatoid arthritis	1.32 (0.97 to 1.79)	<b>2.29 (1.57 to 3.35)</b>	3.24 (1.49 to 6.89)	1.11 (0.40 to 3.12)
Other arthritis	1.28 (0.55 to 2.95)	1.65 (0.53 to 5.17)	3.23 (0.57 to 16.19)	—
Other illness	0.91 (0.31 to 2.65)	2.02 (0.65 to 6.34)	3.57 (0.63 to 17.71)	1.86 (0.25 to 13.54)
Type of implanted prosthesis				
Unicondylar	0.35 (0.15 to 0.79)	0.55 (0.20 to 1.48)	0	—
Cruciate-retaining/substituting	0.70 (0.61 to 0.79)	1	2.44 (1.46 to 4.05)	1
Constrained	1.17 (0.88 to 1.55)	<b>2.29 (1.70 to 3.06)</b>	3.60 (2.67 to 4.83)	1.32 (0.61 to 2.83)
Hinged	2.22 (1.08 to 4.50)	<b>4.12 (2.44 to 6.98)</b>	3.09 (1.81 to 5.21)	1.23 (0.47 to 3.19)
Patellar component				
Not implanted	0.67 (0.58 to 0.77)	1	3.88 (2.93 to 5.12)	1
Implanted	0.91 (0.76 to 1.10)	<b>1.35 (1.05 to 1.73)</b>	2.30 (1.53 to 3.46)	0.81 (0.43 to 1.51)
Fixation method				
Both cemented	0.72 (0.64 to 0.81)	1	3.12 (2.43 to 4.00)	1
Hybrid	0.93 (0.59 to 1.44)	1.15 (0.72 to 1.83)	3.26 (1.59 to 6.57)	1.06 (0.48 to 2.31)
Cementless	1.17 (0.65 to 2.08)	1.47 (0.81 to 2.69)	6.90 (1.91 to 21.96)	2.41 (0.59 to 9.86)
Same-day contralateral arthroplasty				
No	0.76 (0.68 to 0.85)	1	3.22 (2.55 to 4.05)	1
Yes	0.56 (0.35 to 0.88)	<b>0.48 (0.26 to 0.91)</b>	0	—

Bone grafts				
None	0.74 (0.66 to 0.83)	1	3.36 (2.62 to 4.30)	1
Any	0.83 (0.38 to 1.80)	1.35 (0.69 to 2.62)	2.37 (1.25 to 4.44)	0.51 (0.18 to 1.42)
Intravenous antibiotic prophylaxis				
Any	0.74 (0.66 to 0.83)	1	3.10 (2.44 to 3.93)	1
None	0.60 (0.23 to 1.53)	1.74 (0.86 to 3.51)	6.06 (2.38 to 14.57)	<b>3.54 (1.26 to 9.92)</b>
Antibiotic cement				
Any	0.69 (0.60 to 0.78)	1	2.78 (2.14 to 3.61)	1
None	1.00 (0.78 to 1.29)	1.35 (0.98 to 1.86)	6.60 (3.90 to 10.96)	<b>2.59 (1.19 to 5.64)</b>
Antibiotic prophylaxis				
None	0 (0 to 2.16)	—	9.09 (2.53 to 27.82)	3.01 (0.73 to 12.38)
Intravenous only	1.05 (0.83 to 1.33)	<b>1.32 (1.01 to 1.74)</b>	6.37 (3.76 to 10.60)	2.01 (1.09 to 3.71)
Cement only	0.81 (0.32 to 2.07)	1.18 (0.44 to 3.16)	4.55 (1.26 to 15.14)	1.88 (0.46 to 7.74)
Combined	0.68 (0.60 to 0.78)	1	2.74 (2.10 to 3.58)	1
Postoperative complications				
None	0.70 (0.62 to 0.78)	1	3.04 (2.39 to 3.86)	1
Any	4.90 (2.85 to 6.94)	<b>8.80 (5.63 to 13.74)</b>	13.33 (5.31 to 29.68)	<b>6.57 (2.03 to 21.28)</b>
Type of operating hospital				
University hospital	1.01 (0.82 to 1.25)	1	3.31 (2.31 to 4.71)	1
Central hospital	0.66 (0.54 to 0.81)	<b>0.55 (0.40 to 0.75)</b>	4.24 (2.89 to 6.18)	0.92 (0.43 to 1.94)
District hospital	0.72 (0.59 to 0.87)	<b>0.59 (0.43 to 0.80)</b>	1.16 (0.40 to 3.36)	0.37 (0.09 to 1.61)
Other	0.58 (0.40 to 0.84)	<b>0.63 (0.42 to 0.95)</b>	2.72 (1.56 to 4.70)	
Time since previous arthroplasty in months	—			
<2 years			4.63 (3.16 to 6.74)	1
>2 years			2.71 (2.03 to 3.62)	0.80 (0.41 to 1.56)
Reason for revision	—			
Loosening			2.46 (1.44 to 4.17)	1
Infection			8.25 (5.60 to 11.98)	<b>4.00 (1.63 to 9.81)</b>
Luxation			3.70 (1.27 to 10.33)	2.90 (0.75 to 11.23)
Malposition			1.16 (0.40 to 3.36)	0.88 (0.23 to 3.39)
Fracture of bone			0	—
Fracture of prosthesis			3.64 (1.42 to 8.98)	1.37 (0.29 to 6.60)
Other reason			1.99 (1.12 to 3.53)	0.82 (0.28 to 2.45)

Patellar complication			1.69 (0.30 to 9.00)	—
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\*Stratified by type of operation. Significant differences are marked in bold ( $p < 0.05$ ) or in italics ( $p < 0.10$ ). †The 95% confidence intervals are given in parentheses