COPAY ET AL.
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A SYSTEMATIC REVIEW
http://dx.doi.org/10.2106/JBJS.RVW.17.00160
Page 1

Appendix

TABLE E-1 2014 to 2016 Lower-Extremity Articles Using the MCID as a Gauge*

Study	Orthopaedic Subspecialty	PROM: MCID Values	Source Article(s)	Use
Bobman (2016)[15]	Hip arthroplasty	WOMAC: 10.21 to 33.20, SF-12 PCS: 4.97, SF-12 MCS: 5.11	Quintana (2005)[83], SooHoo (2015)[5]	Individual scores
Koutras (2015)[16]	Hip resurfacing arthroplasty	WOMAC: 25	Quintana (2005)[83]	Meta-analysis group mean
Mahmood (2015)[17]	Hip arthroplasty	WOMAC: 10	No references reported	Sample size
Jevsevar (2015)[18]	Knee osteoarthritis	WOMAC: 8.0 to 10.1, VAS pain: 19.9 mm	Angst (2002)[84], Tubach (2005)[85], Johnston (2010)[86]	Meta-analysis: mean score change expressed as percentage of MCID
Burgers (2015)[19]	Femoral neck fracture	WOMAC pain: 8 to 10	Tubach (2005)[85], Ehrich (2000)[87]	Group mean
Moffet (2015)[20]	Knee arthroplasty	WOMAC: 12%	Angst (2001)[88]	Sample size
Nepple (2014)[21]	Femoroacetabular impingement	WOMAC: 4 to 5, 12% from baseline, HHS: 7 to 9	Smith (2012)[89]	Group mean
Morey (2016)[22]	Knee arthroplasty	WOMAC: 5, SF-36: 6%	Angst (2001)[88]	Group mean
Wilkin (2014)[23]	Labral debridement	WOMAC: 12, HHS: 8% from baseline, mHHS: 8% from baseline (authors' assumption), SF-12 PCS: 2.5 to 12.6	Ehrich (2000)[87], Hoeksma (2003)[90], Schmitt (2004)[91]	Group mean
Marsh (2014)[24]	Hip and knee arthroplasty	WOMAC: 9 to 12, SF-12: 3 to 5	Ehrich (2000)[87], Drummond (2001)[92]	Group mean
Gwynne-Jones (2016)[25]	Hip and knee arthroplasty	OHS: 2 to 5, OKS: 2 to 5, WOMAC: 12%	Beard (2013)[93] (abstract), Murray (2007)[94], Angst (2001)[88]	Group mean
Stambough (2016)[26]	Hip arthroplasty	WOMAC: 9 to 12 or 16% to 18% of baseline, mHHS: no reported value, UCLA activity: no reported value	Angst (2001)[88], Hmamouchi (2012)[95]	Sample size, group mean
Machhindra (2015)[27]	Knee arthroplasty	WOMAC: 6% max. score, SF-36: 6% max. score	Angst (2001)[88]	Group mean
Abdel Messih (2014)[28]	Hip and knee arthroplasty	OKS: 3, OHS: 3	Murray (2007)[94]	Sample size
Chen (2016)[29]	Knee arthroplasty	OKS: 5	Clement (2014)[3]	Sample size, group mean
Jiang (2016)[30]	Knee arthroplasty	OKS: 5	Clement (2014)[3]	Group mean
Thiam (2016)[31]	Knee arthroplasty	OKS: 5, KSS: 34.5	Clement (2014)[3], Na (2012)[96]	Individual scores
Rebal (2014)[32]	Knee arthroplasty	KSS: 34.5	Jacobs (2009)[97]	Group mean, meta-analysis
Spencer-Gardner (2016)[33]	Hip arthroplasty	mHHS: 10 to 20	Chahal (2014)[98], Achten (2010)[99]	Sample size
Edwards (2016)[34]	Hip arthroplasty	mHHS: 8, HHS: 8	Kemp (2013)[100]	Group mean
Fabricant (2015)[35]	Femoroacetabular impingement	mHHS: 8, HOS: 5 to 6, iHOT-33: 10	Kemp (2013)[100]	Individual scores
Vasileiadis (2015)[36]	Hip arthroplasty	HHS: 6	Shi (2010)[101]	Sample size
Tian (2015)[37]	Patellar fracture	HSS: 7	Teng (2014)[102], Lee (2014)[103]	Sample size
Clarke-Jenssen (2016)[38]	Acetabular fracture	HHS: NR, modified Merle d'Aubigné score: NR	MCID values and references: NR	Group mean
Bumpass (2015)[39]	Femoral and pelvic fracture	VAS pain: 1.3	Bijur (2003)[104]	Group mean
Cherian (2015)[40]	Brace for knee	VAS pain: 2	Parker (2011)[105]	Group mean

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Page 2

	osteoarthritis			
Gong (2015)[41]	Sleep quality after knee arthroplasty	VAS pain: 20% reduction	Kelly (2001)[106]	Sample size
Tsukada (2014)[42]	Knee arthroplasty	VAS pain: 20	Authors' own value	Sample size
Tanikawa (2014)[43]	Knee arthroplasty	VAS pain: 1 to 1.3	Affas (2011)[107], Gallagher (2001)[108]	Sample size
Nawoczenski (2015)[44]	Achilles tendinopathy	FAAM: 8, VAS pain: 2 cm	Martin (2005)[109], Crossley (2004)[110]	Sample size, group mean
Luttjeboer (2016)[45]	Knee arthroplasty	VAS satisfaction: 7 to 11	Singer (1998)[111]	Group mean
Ewald (2015)[46]	Ankle fracture	NRS pain: 1.5	Bijur (2010)[112]	Sample size
Hamdy (2016)[47]	Pediatric lower-limb lengthening	NRS pain: 1	Dworkin (2008)[113]	Group mean
Brennan (2015)[48]	Knee arthroplasty	KOS activities of daily living: 8, NRS pain: 2	Impellizzeri (2011)[114], Marx (2001)[115], Williams (2012)[116], Salaffi (2004)[117]	Group mean
Huang (2015)[49]	Knee arthroplasty	KSS: 5	Lizaur-Utrilla (2012)[118]	Sample size
Chimenti (2016)[50]	Hip arthroplasty	HOOS pain: 24	Paulsen (2014)[119]	Group mean
Lin (2016)[51]	Tibial fractures	SF-36: 3 to 20	Keurentjes (2012)[120]	Sample size
Krause (2016)[52]	Hindfoot and ankle fusion	AOFAS-AHS: 8.9, FFI: 7, SF-12: 4.5	Dawson (2007)[121], Landorf (2010)[122], Clement (2014)[3]	Group mean
Chalmers (2014)[53]	ACL reconstruction	Lysholm: 8.9, IKDC: 16.7	Briggs (2009)[123], Greco (2010)[124]	Group mean
Brown (2014)[54]	Defect of articular condyle of femur	IKDC: 12, KOOS: 8	Crawford (2012)[125]	Individual scores
Blackman (2016)[55]	Adolescent arthroscopic lateral retinacular release	IKDC: 11.5	Irrgang (2006)[126]	Individual scores
Kim (2014)[56]	ACL reconstruction	IKDC: 11.5, Lysholm: 8.9	Irrgang (2006)[126], Briggs (2009)[123]	Group mean
Kim (2014)[57]	ACL reconstruction	IKDC: 11.5	Irrgang (2006)[126]	Group mean
Cox (2014)[58]	ACL reconstruction	KOOS: 8	Reference NR	Group mean
Fabre-Aubrespy (2016)[59]	Hip arthroplasty	KOOS: 8 to 10	Berliner (2017)[127]	Sample size
Laflamme (2015)[60]	Ankle syndesmosis rupture	Olerud-Molander: 15	Reference NR	Group mean
Pedersen (2014)[61]	Total ankle arthroplasty	SF-36 MCS: 2.5	Strand (2008)[128]	Group mean
Altman (2016)[62]	Knee osteoarthritis	WOMAC pain scale: 0.37	Rutjes (2012)[129]	Meta-analysis group mean
Chahal (2015)[63]	Femoroacetabular impingement	mHHS: 8, HOS activities of daily living: 5 and 9, HOS Sport: 6	Kemp (2013)[100], Martin (2008)[130]	Mention
Domb (2016)[64]	Hip arthroscopy	HOS: 6 to 9, VAS: 0.9	Smith (2012)[89]	Group mean
Dragoo (2014)[65]	Patellar tendinopathy	VISA: 13, Tegner: 1, Lysholm: 10, VAS: 2, SF-12: 6.8	Hernandez-Sanchez (2014)[131], Briggs (2009)[123], Crossley (2004)[110], Kelly (2001)[106], Schmitt (2004)[91]	Group mean
Failla (2016)[66]	ACL reconstruction	IKDC: 11.5, KOOS: 10	Irrgang (2006)[126], Roos (2003)[132]	Group mean
Gomoll (2014)[67]	Patellar cartilage repair	IKDC: NR, WOMAC: NR	Collins (2011)[133], White (2010)[134]	Individual scores
Kim (2014)[68]	ACL reconstruction	IKDC: 11.5	Irrgang (2006)[126]	Group mean
Lafave (2016)[69]	Patellofemoral instability	BPII: 7	Hiemstra (2013)[135]	Individual scores

Nwachukwu (2016)[70]	Femoroacetabular impingement	SF-12: 3.2 to 6.1	Clement (2014)[3], Parker (2012)[136], Parker (2013)[137]	Meta-analysis group mean
Oak (2015)[71]	Knee injuries	IKDC: 6.3 to 20.5	Collins (2011)[133]	Group mean
Premkumar (2016)[72]	ACL reconstruction	NRS pain: 2	Salaffi (2004)[117]	Sample size
Ramski (2014)[73]	ACL tears	IKDC: 9, Lysholm: 10	Irrgang (2001)[138], Briggs (2006)[139]	Meta-analysis group mean
Sawyer (2015)[74]	Arthroscopic hip labral repair	HOS-activities of daily living: 9	Martin (2008)[130]	Group mean
Westermann (2014)[75]	Meniscal repair	IKDC: 11.5, KOOS: 8, WOMAC: 12%	Irrgang (2006)[126], Roos (2003)[132], Wright (2009)[140], Angst (2001)[88]	Group mean
MARS Group (2014)[76]	ACL revision	IKDC: 11, KOOS: 8 to 10, WOMAC: 8 to 10, Marx activity: 2 (no reference)	Irrgang (2006)[126], Roos (2003)[132], Wright (2009)[140], Wright (2005)[141]	Group mean
Baumhauer (2016)[77]	First metatarsophalangeal arthrodesis	FAAM Sport: 9, VAS: ≥30%	Reference NR	Individual scores
Celik (2016)[78]	Plantar fasciitis	FAAM-activities of daily living: 8	Martin (2005)[109]	Sample size
Chambers (2016)[79]	Total ankle replacement	FAOS: 15	Escobar (2007)[142]	Group mean
McClinton (2015)[80]	Plantar heel pain	FAAM: 8, NRS pain: 2	Martin (2005)[109], Childs (2005)[143], Farrar (2001)[144], Jensen (1993)[145], Jensen (1999)[146]	Individual scores
Soukup (2016)[81]	Adult acquired flatfoot deformity reconstruction	NRS pain: 15%	Salaffi (2004)[117]	Group mean
Souza (2016)[82]	Foot and ankle neuroma	PROMIS: 5	Cella (2010)[147], Rothrock (2010)[148], Stone (2016)[149]	Only mentioned

*PCS = Physical Component Summary, MCS = Mental Component Summary, KSS = Knee Society Score, HOS = Hip Outcome Score, iHOT-33 = International Hip Outcome Tool-33, NR = not reported, FAAM = Foot and Ankle Ability Measure, KOS = Knee Outcome Survey, HOOS = Hip Disability and Osteoarthritis Outcome Score, AOFAS-AHS = American Orthopaedic Foot & Ankle Society Ankle-Hindfoot Scale, FFI = Foot Function Index, ACL = anterior cruciate ligament, Lysholm = Lysholm Knee Ligament Scale, IKDC = International Knee Documentation Committee Subjective Knee Form, KOOS = Knee Injury and Osteoarthritis Outcome Score, Olerud-Molander = Olerud-Molander ankle fracture score, VISA = Victorian Institute of Sports Assessment, BPII = Banff Patella Instability Instrument, Marx = Marx activity rating scale for disorders of the knee, and PROMIS = Patient-Reported Outcomes Measurement Information System.