

Appendix

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

Study	Orthopaedic Area	PROM: MCID Value	Source Article	Use
Werner (2016) ²²	Shoulder arthroplasty	ASES: 12	Michener (2002) ¹² , Tashjian (2010) ¹¹	Individual scores
Shannon (2016) ²³	Reverse shoulder arthroplasty	ASES: 10	References not reported	Sample size
Denard (2016) ²⁴	Shoulder arthroplasty	ASES: 6.4	Tashjian (2010) ¹¹	Sample size
Chalmers (2015) ²⁵	Long thoracic nerve palsy	ASES: 12 to 17	Tashjian (2010) ¹¹	Group mean
Li (2014) ²⁶	Proximal humeral fractures	ASES: 6.4	Michener (2002) ¹²	Sample size
Athwal (2015) ²⁷	Shoulder arthroplasty	ASES: 6.4	Michener (2002) ¹²	Sample size
Chan (2014) ²⁸	Arthroscopic rotator cuff repair	ASES: 6.4	Roy (2009) ¹⁵	Group mean; meta-analysis
Vavken (2016) ²⁹	Adolescent shoulder instability	ASES: 6.4	Michener (2002) ¹²	Group mean
Abrams (2014) ³⁰	Arthroscopic rotator cuff repair	ASES: 10	Roy (2009) ¹⁵ Tashjian (2010) ¹¹	Sample size
Steen (2015) ³¹	Shoulder arthroplasty	ASES: 12; SST: 2	Tashjian (2010) ¹¹ ; Roy (2010) ¹⁶	Sample size
Kruse (2015) ³²	Teres minor fatty atrophy	ASES: 12 to 17; SST: 2	Tashjian (2010) ¹⁴	Group mean
Pappou (2014) ³³	Shoulder arthroplasty	ASES: 6.4 to 17; SST: 2 to 3	Michener (2002) ¹² ; Tashjian (2010) ¹¹ ; Roy (2010) ¹⁶	Group mean
LeBlanc (2015) ³⁴	Humeral fracture	ASES: 9; DASH: 10; SST: 2	Roy (2009) ¹⁵ ; Tashjian (2010) ¹¹	Group mean
Mulligan (2015) ³⁵	Shoulder disorders	ASES: 6.4 (MDC = 9.4); NRS: 2.17	Michener (2002) ¹² , Michener (2011) ⁶⁹	Group mean
Miller (2016) ³⁶	Supraspinatus tears	ASES: 6.4; DASH: 10.2; WORC: 245.26	Roy (2009) ¹⁵ ; Kirkley (2003) ⁷⁰	Group mean
Huang (2015) ³⁷	Review of PROMs	ASES: 6.4 (MDC = 9.4); DASH: 10.2 (MDC = 12.2); SPADI: 13.2 (MDC = 18.1); SST: 2.05 (MDC = 3.27)	Michener (2002) ¹² ; Schmitt (2004) ⁷¹ ; MacDermid (2006) ⁷²	Review
Keener (2015) ³⁸	Rotator cuff tear	ASES: NR; SST: NR	Tashjian (2010) ¹¹	Group mean
Wylie (2016) ³⁹	Rotator cuff tear	ASES: NR; SST: NR; VAS pain: NR; VAS function: NR	MCID values and references not reported	Group mean
Rubright (2014) ⁴⁰	Claviclectomy	ASES: 6.4; DASH: 10.2	Wright (2010) ⁷³	Group mean
Russell (2014) ⁴¹	Rotator cuff tear	ASES: 6.4 to 12; VAS pain: 1.4 (0 to 10)	Michener (2002) ¹² ; Smith (2012) ⁷⁴ ; Tashjian (2010) ¹¹ ; Tashjian (2009) ¹⁴	Group mean; meta-analysis
Moosmayer (2014) ⁴²	Rotator cuff tear	ASES: 6.4, 12 to 17; Constant score: 10.4	Kukkonen (2013) ¹³ ; Michener (2002) ¹² ; Tashjian (2010) ¹¹	Group mean
Shields (2014) ⁴³	Arthroscopic rotator cuff and Bankart repair	ASES: 12; Constant score: 10	Tashjian (2010) ¹¹ ; Kukkonen (2013) ¹³	Sample size; individual scores
Hsu (2016) ⁴⁴	Shoulder arthroplasty	SST: 3	Roy (2010) ¹⁶	Individual scores
Hartzler (2015) ⁴⁵	Shoulder	SST: 2 to 3	Roy (2010) ¹⁶ ; Tashjian	Individual

	arthroplasty		(2010) ¹¹	scores
Young (2016) ⁴⁶	Rib fracture	SST: 17.0 to 19.4; DASH: 15	Tashjian (2010) ¹¹ ; Beaton (2001) ⁷⁵	Case report
van der Meijden (2015) ⁴⁷	Clavicular fracture	DASH: 6	Hudak (1996) ⁷⁶	Sample size
Wellman (2015) ⁴⁸	Olecranon fractures	DASH: 10	Gummesson (2003) ¹⁷	Group mean
Brehmer (2014) ⁴⁹	Radial fracture	DASH: 10.1	Gummesson (2003) ¹⁷	Sample size; group mean
Olsen (2014) ⁵⁰	Biceps tendon repair	DASH: 10.2	Grewal (2012) ⁷⁷ ; Roy (2009) ¹⁵	Sample size; group mean
Nelson (2015) ⁵¹	Radial malunion	QuickDASH: 12; VAS pain: NR	Sorensen (2013) ⁷⁸ ; Tashjian (2009) ¹⁴ ; Kelly (2001) ⁷⁹	Sample size; group mean
Osei (2014) ⁵²	Carpal tunnel	QuickDASH: 12	Calfee (2012) ⁸⁰	Sample size
Dunn (2014) ⁵³	Rotator cuff repair	VAS pain: 1.4 cm	Tashjian (2009) ¹⁴	Group mean
Okoroha (2016) ⁵⁴	Shoulder arthroplasty	VAS pain: 13 mm	Gallagher (2001) ⁸¹	Sample size
Kukkonen (2015) ⁵⁵	Rotator cuff tears	VAS pain: NR; Constant score: 10	Tashjian (2009) ¹⁴ ; Kukkonen (2013) ¹³	Group mean
Gracitelli (2016) ⁵⁶	Humeral surgical neck fractures	Constant-Murley score: 12	Kukkonen (2013) ¹³	Sample size
Lambers Heerspink (2015) ⁵⁷	Rotator cuff tear	Constant-Murley score: 10.4	Kukkonen (2013) ¹³	Group mean
Russell (2014) ⁵⁸	Frozen shoulder	Constant score: 15	Authors' clinical practice	Sample size; group mean
Louer (2016) ⁵⁹	Radial fracture	DMA: 22	Norman (2003) ¹⁹	Sample size
Rudge (2015) ⁶⁰	Shoulder arthroplasty	OSS: 4.5	Wilson (2009) ⁸²	Group mean
Singh (2014) ⁶¹	Subacromial decompression	OSS: 6, 12 (authors' preference)	Van Kampen (2013) ⁸³	Group mean
Hollman (2016) ⁶²	Arthroscopic rotator cuff repair	WORC: 16.7	Wessel (2013) ⁸⁴	Individual scores
Rasmussen (2016) ⁶³	Shoulder arthroplasty	WOOS: 190	Kukkonen (2013) ¹⁴ ; Christiansen (2015) ⁸⁵	Group mean
Buckley (2014) ⁶⁴	Shoulder arthroplasty	WOOS: 15	No reference reported	Group mean
Shaha (2015) ⁶⁵	Arthroscopic labral repair	WOSI: 200	Kirkley (1998) ⁸⁶	Group mean
Benegas (2014) ⁶⁶	Humeral fracture	UCLA: 6	No reference reported	Sample size
London (2014) ⁶⁷	Atraumatic hand or wrist conditions	MHQ: 6 to 23	Shauver (2009) ⁸⁷ ; Jensen (2006) ⁸⁸	Sample size
Kim (2014) ⁶⁸	Rotator cuff tear	VAS satisfaction: 2.5	Expert opinion	Sample size

*DASH = Disabilities of the Arm, Shoulder and Hand; DMA = Dynamic Motion Analysis; QuickDASH = abbreviated version of the DASH Outcome Measure; MHQ = Michigan Hand Outcomes Questionnaire; NR = not reported; NRS = Numerical Rating Scale; OSS = Oxford Shoulder Score; SPADI = Shoulder Pain and Disability Index; UCLA = University of California Los Angeles Activity Level Score; WORC = Western Ontario Rotator Cuff Index; WOOS = Western Ontario Osteoarthritis of the Shoulder Index; and WOSI = Western Ontario Shoulder Instability.