

Table 1.10.1: Musculoskeletal System Procedures Performed More than 12,000 Times, All Provider Settings, United States 2013

ICD-9-CM Code	Description	Number of Procedures (in 000s) [1]					Total
		Hospital [2]	Emergency Dept [3]	Outpatient [4]	Physician Office [5]	(Subgroup Total)	
81.92	Injection of therapeutic substance into joint or ligament	39.1	5.8	244.1	3,838.8		4,127.8
83.98	Injection of locally-acting therapeutic substance into other soft tissue	2.4	0.7	*	1,639.0		1,642.1
81.91	Arthrocentesis (joint aspiration)	76.9	22.9	*	689.6		789.4
81.54	Total knee replacement (bi-, tri-, and unicompartmental)	662.5	*	*	*		662.5
79.30	Open reduction of fracture with internal fixation	366.6	13.5	*	*		380.1
81.62	Fusion or refusion of 2-3 vertebrae	346.1	0.2	*	*		346.3
81.51	Total hip replacement	343.6	*	*	*		343.6
80.51	Excision of intervertebral disk (discectomy, removal of herniated nucleus pulposus)	315.4	0.9	*	*		316.3
84.51	Insertion of interbody spinal fusion device	263.0	*	*	*		263.0
77.70	Excision of bone for graft	235.4	*	*	*		235.4
79.00	Closed reduction of fracture without internal fixation	65.2	91.4	*	*		156.6
81.07	Lumbar and lumbosacral fusion, lateral transverse process technique	150.2	*	*	*		150.2
81.02	Other cervical fusion, anterior technique	146.7	*	*	*		146.7
79.10	Closed reduction of fracture with internal fixation	117.4	6.7	*	*		124.1
78.60	Removal of implanted devices from bone	118.6	0.4	*	*		119.0
81.52	Partial hip replacement	97.2	*	*	*		97.2
81.08	Lumbar and lumbosacral fusion, posterior technique	84.9	*	*	*		84.9
81.63	Fusion or refusion of 4-8 vertebrae	81.2	*	*	*		81.2
All codes	Revision of knee replacement						71.8
	00.80 Revision of knee replacement, total (all components)	25.6	*	*	*	25.6	
	00.81 Revision of knee replacement, tibial component (baseplate and liner) (partial)	14.5	*	*	*	14.5	
	00.82 Revision of knee replacement, femoral component (liner)	11.7	*	*	*	11.7	
	00.83 Revision of knee replacement, patellar component	4.4	*	*	*	4.4	
	00.84 Revision of knee replacement, tibial insert (liner)	12.6	*	*	*	12.6	
	81.55 Revision of knee replacement, not otherwise specified	3.0	*	*	*	3.0	
77.60	Local excision of lesion or tissue of bone	72.1	0.9	*	*		73.0
84.52	Insertion of recombinant bone morphogenetic protein	70.9	*	*	*		70.9
78.50	Internal fixation of bone without fracture reduction	66.1	0.7	*	*		66.8
79.71	Closed reduction of dislocation of shoulder	5.5	50.4	*	*		55.9
All Codes	Revision of hip replacement						50.5
	00.70 Revision of hip replacement, both acetabular and femoral components (total hip revision)	22.5	*	*	*	22.5	
	00.71 Revision of hip replacement, acetabular component (partial)	7.6	*	*	*	7.6	
	00.72 Revision of hip replacement, femoral component (partial)	9.6	*	*	*	9.6	
	00.73 Revision of hip replacement, acetabular liner and/or femoral head only	8.6	*	*	*	8.6	
	81.53 Revision of hip replacement, not otherwise specified	2.2	*	*	*	2.2	
77.40	Biopsy of bone	48.5	0.7	*	*		49.2
83.39	Excision of lesion of other soft tissue	47.3	0.3	*	*		47.6
81.06	Lumbar and lumbosacral fusion, anterior technique	44.4	*	*	*		44.4

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83.45	Other myectomy	42.2	0.5	*	*		42.7
79.72	Closed reduction of dislocation of elbow	1.5	38.0	*	*		39.5
80.10	Other arthrotomy	37.0	0.8	*	*		37.8
77.80	Other partial ostectomy	36.9	0.7	*	*		37.6
84.11	Amputation of toe	37.2	0.3	*	*		37.5
81.05	Dorsal and dorsolumbar fusion, posterior technique	35.0	*	*	*		35.0
78.10	Application of external fixator device	34.0	0.7	*	*		34.7
81.80	Total shoulder replacement	34.2	*	*	*		34.2
84.15	Other amputation below knee	33.3	*	*	*		33.3
80.80	Other local excision or destruction of lesion joint	32.4	0.3	*	*		32.7
78.00	Bone graft	32.4	0.2	*	*		32.6
81.03	Other cervical fusion, posterior technique	29.9	*	*	*		29.9
80.90	Other excision of joint	28.7	*	*	*		28.7
80.70	Synovectomy (resection of synovial membrane)	28.3	*	*	*		28.3
79.75	Closed reduction of dislocation of hip	12.0	13.9	*	*		25.9
81.66	Percutaneous vertebral augmentation (Vertebroplasty, Kyphoplasty, Skphoplasty, Spineoplasty)	23.9	1.6	*	*		25.5
83.09	Other incision of soft tissue (fascia)	23.0	2.1	*	*		25.1
83.44	Other fasciectomy	24.6	0.2	*	*		24.8
84.17	Amputation above knee	22.3	*	*	*		22.3
83.82	Graft of muscle or fascia	22.1	*	*	*		22.1
79.74	Closed reduction of dislocation of hand and finger	1.5	19.5	*	*		21.0
83.88	Other plastic operations on tendon (myotenoplasty, fixation, tenodesis, tenoplalsty)	20.3	0.3	*	*		20.6
84.56	Insertion or replacement if (cement) spacer	19.3	*	*	*		19.3
83.65	Other suture of muscle or fascia	14.9	3.4	*	*		18.3
84.12	Amputation through foot	18.3	*	*	*		18.3
83.14	Fasciotomy (division of fascia)	17.5	*	*	*		17.5
77.30	Other division of bone	16.1	*	*	*		16.1
81.37	Refusion of lumbar and lumbosacral spine, lateral transverse process technique	16.1	*	*	*		16.1
80.00	Arthrotomy for removal of prosthesis	16.0	*	*	*		16.0
80.40	Division of joint capsule, ligament or cartilage	15.3	*	*	*		15.3
84.57	Removal of (cement) spacer	14.6	*	*	*		14.6
84.30	Revision of amputation stump	14.4	*	*	*		14.4
84.55	Insertion of bone void filler	14.1	*	*	*		14.1
81.64	Fusion or refusion of 9 or more vertebrae	13.5	*	*	*		13.5
83.64	Other suture of tendon (achillorrhaphy, aponeurorrhaphy)	11.4	1.6	*	*		13.0

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	All Musculoskeletal procedures (except facial bones and joints)	3,060.5	306.3	765.6	7,586.6		11,719.0
	All procedures	35,589.9	134,862.8	125,721.4	928,630.0		1,224,804.1
	Proportion all procedures	8.6%	0.2%	0.6%	0.8%		1.2%

* Does not meet standards for reliability.

[1] Includes all possible procedures. The number of procedure variables varies in the databases (NIS up to 15; NEDS up to 9; NAMCS and NHAMCS_OP up to 3).

[2] Source: HCUP Nationwide Inpatient Sample (NIS). Healthcare Cost and Utilization Project (HCUP). 2013. Agency for Healthcare Research and Quality, Rockville, MD. www.hcup-us.ahrq.gov/nisoverview.jsp

[3] Source: HCUP Nationwide Emergency Department Sample (NEDS). Healthcare Cost and Utilization Project (HCUP). 2013. Agency for Healthcare Research and Quality, Rockville, MD. www.hcup-us.ahrq.gov/nedsoverview.jsp

[4] Source: National Hospital Ambulatory Medical Care Survey_Outpatient Department (NHAMCS_OP), 2011. www.cdc.gov/nchs/ahcd/ahcd_questionnaires.htm January 14, 2016.

[5] Source: National Ambulatory Medical Care Survey (NAMCS), 2012. www.cdc.gov/nchs/ahcd/ahcd_questionnaires.htm January 14, 2016