

TABLE E-1: Abbreviations used in this article and other common Medicare health policy abbreviations

AAHKS	American Association of Hip and Knee Surgeons
AAOS	American Academy of Orthopaedic Surgeons
AMA	American Medical Association
BBA	Balanced Budget Act of 1997
BCBS	Blue Cross/Blue Shield
CBO	Congressional Budget Office
CF	conversion factor
CMS	Centers for Medicare and Medicaid Services
CPEP	Clinical Practice Expert Panel
CPI	consumer price index
CPR	customary, prevailing, and reasonable (payment system)
CPT	Current Procedural Terminology
DRG	diagnosis-related group
E&M	Evaluation and management (i.e. clinic visits)
FFS	Fee for service
FPL	federal poverty line
GDP	gross domestic product
GPCI	geographic practice cost index
HCFA	Health Care Financing Administration
HHS	(Department of) Health and Human Services
HI	hospital insurance (i.e. Medicare Part A)
HMO	health maintenance organization
HQID	Hospital Quality Incentive Demonstration Project
IRS	Internal Revenue Service
MCO	managed care organization
MedPAC	Medicare Payment Advisory Commission
MEI	Medicare Economic Index
MFS	Medicare Fee Schedule (referring to the schedule for physician service reimbursement)
MMA	Medicare Prescription Drug Improvement and Modernization Act of 2003, a.k.a. Medicare Modernization Act (established Medicare Part D)
MVPS	Medicare Volume Performance Standards
NHDS	National Hospital Discharge Survey
OBRA	Omnibus Budget Reconciliation Act of 1989
P4P	Pay for performance
PAC	political action committee
PE	practice expense
PEAC	Practice Expense Advisory Committee
PERC	Practice Expense Review Committee
PLI	professional liability insurance (malpractice)
PPS	prospective payment system
PQRI	Physician Quality Reporting Initiative
PVRP	Physician Voluntary Reporting Program
RBRVS	resource-based relative value system
RUC	Relative Value Scale Update Committee
RVU	relative value unit
SGR	sustained growth rate
SMI	supplemental medical insurance (i.e. Medicare Part B)
SMS	Socioeconomic Monitoring System
TRHCA	Tax Relief and Health Care Act of 2006
QIO	Quality Improvement Organizations

TABLE E-2: The twenty-five most commonly performed inpatient orthopaedic surgical procedures according to the 2004 National Hospital Discharge Survey (NHDS).

# Performed (in 1000s)	CPT Code	CPT Procedure
478	27447	Arthroplasty, knee, condyle and plateau; medial AND lateral compartments with or without patellar resurfacing (total knee arthroplasty)
324	63075	Discectomy, anterior, with decompression of spinal cord and/or nerve root(s), including osteophylectomy; cervical, single interspace
240	27125	Hemiarthroplasty, hip, partial (e.g., femoral stem prosthesis, bipolar arthroplasty)
234	27130	Arthroplasty, acetabular and proximal femoral prosthetic replacement (total hip arthroplasty), with or without autograft or allograft
178	27506	Open treatment of femoral shaft fracture, with or without external fixation, with insertion of intramedullary implant, with or without cerclage and/or locking screws
143	27814	Open treatment of bimalleolar ankle fracture, with or without internal or external fixation
122	22630	Arthrodesis, posterior interbody technique, including laminectomy and/or discectomy to prepare interspace (other than for decompression), single interspace; lumbar
117	22558	Arthrodesis, anterior interbody technique, including minimal discectomy to prepare interspace (other than for decompression); lumbar
115	22554	Arthrodesis, anterior interbody technique, including minimal discectomy to prepare interspace (other than for decompression); cervical below C2
73	22842	Posterior segmental instrumentation (e.g., pedicle fixation, dual rods with multiple hooks and sublaminar wires); 3 to 6 vertebral segments
69	20900	Bone graft, any donor area; minor or small (e.g., dowel or button)
59	20690	Application of a uniplane (pins or wires in one plane), unilateral, external fixation system
57	20610	Arthrocentesis, aspiration and/or injection; major joint or bursa (e.g., shoulder, hip, knee joint, subacromial bursa)
54	28820	Amputation, toe; metatarsophalangeal joint
46	25575	Open treatment of radial AND ulnar shaft fractures, with internal or external fixation; of radius AND ulna
46	27134	Revision of total hip arthroplasty; both components, with or without autograft or allograft
40	27487	Revision of total knee arthroplasty, with or without allograft; femoral and entire tibial component
38	20605	Arthrocentesis, aspiration and/or injection; intermediate joint or bursa (e.g., temporomandibular, acromioclavicular, wrist, elbow or ankle, olecranon bursa)
37	27244	Treatment of intertrochanteric, pertrochanteric, or subtrochanteric femoral fracture; with plate/screw type implant, with or without cerclage
34	24515	Open treatment of humeral shaft fracture with plate/screws, with or without cerclage
33	23410	Repair of ruptured musculotendinous cuff (e.g., rotator cuff) open; acute
32	25440	Repair of nonunion, scaphoid carpal (navicular) bone, with or without radial styloidectomy (includes obtaining graft and necessary fixation)
30	27590	Amputation, thigh, through femur, any level
29	26320	Removal of implant from finger or hand
28	63277	Laminectomy for biopsy/excision of intraspinal neoplasm; extradural, lumbar

TABLE E-3: Changes in Medicare reimbursement rates for the twenty-five most commonly performed inpatient orthopedic surgical procedures. The three points in time studies are: (1) 1992 (the year that the resource-based relative value system was implemented), (2) 1998 (the year that the sustained growth rate was implemented and the year before the practice expense relative value units became resource-based), and (3) 2007 (the current value).

Procedure Name	Change 1992 to 2007	Change 1992 vs 1998	Change 1998 vs 2007	CPI-adjusted: 1992 vs 2007
Total knee arthroplasty	-19%	1%	-20%	-44%
Cervical discectomy	14%	31%	-13%	-21%
Hip hemiarthroplasty	-8%	9%	-15%	-36%
Total hip arthroplasty	-20%	1%	-21%	-44%
Intramedullary rod femur	12%	19%	-6%	-22%
Open reduction and internal fixation of an ankle fracture	9%	17%	-7%	-25%
Posterior lumbar arthrodesis	3%	12%	-8%	-28%
Anterior lumbar arthrodesis	-6%	13%	-17%	-35%
Cervical arthrodesis	-10%	14%	-21%	-37%
Pedicle screws, 3-6 segments	-46%	-47%	1%	-62%
Bone graft	63%	20%	36%	13%
External fixator placement	-5%	12%	-15%	-34%
Injection major joint	11%	12%	-1%	-23%
Toe amputation	54%	27%	21%	7%
Open reduction and internal fixation of a both bone forearm fracture	18%	18%	-1%	-18%
Revision total hip arthroplasty	-16%	9%	-23%	-42%
Revision total knee arthroplasty	-20%	2%	-22%	-45%
Injection intermediate joint	2%	12%	-9%	-29%
Open reduction and internal fixation of a hip fracture	1%	17%	-14%	-30%
Open reduction and internal fixation of a humerus fracture	15%	16%	-1%	-20%
Rotator cuff repair	6%	15%	-7%	-26%
Repair of scaphoid nonunion	14%	15%	-1%	-21%
Above-the-knee amputation	11%	22%	-9%	-23%
Removal of hardware hand	24%	16%	7%	-14%
Biopsy of lumbar spine	-8%	13%	-19%	-36%
<b>AVERAGE:</b>	<b>4%</b>	<b>12%</b>	<b>-7%</b>	<b>-28%</b>

CPI = consumer price index