TABLE E-1 Search Strategy*

Journal/Database	Total No. of Studies	No. of Eligible Studies	No. of Studies Included†
J Bone Joint Surg (American)	338	98	28
J Bone Joint Surg (British)	233	36	11
Clin Orthop Relat Res	392	29	2
J Orthop Trauma	96	50	30
Acta Orthop	105	15	7
J Pediatr Orthop	142	31	0
Spine	487	22	10
N Engl J Med	1049	4	1
JAMA	705	9	4
BMJ	1327	3	0
Lancet	1081	3	1
Cochrane Database	618	7	4
Total	6573	307	98

*All databases and journals searched from June 2007 to May 2008. †Following review of titles, abstracts, and level of evidence scores.

TABLE E-2 Current Evidence in Orthopaedic Trauma

Study	Level of Evidence	Sample Size	Summary
Therapy			
Lefevre-Colau et al., 2007	I	74	Early mobilization for impacted nonoperatively treated proximal humeral fractures is safe and is more effective for quickly restoring the physical capability and performance of the injured arm than is conventional immobilization followed by physiotherapy.
Leung et al., 2008	I	137	Plate fixation is better than external fixation combined with percutaneous pin fixation for the treatment of intra-articular fractures of the distal part of the radius.
Lozano-Calderón et al., 2008	I	60	Plate fixation of the distal part of the radius is believed to improve wrist motion by allowing earlier exercises. The initiation of wrist exercises six weeks after volar plate fixation of a fracture of the distal part of the radius does not lead to decreased wrist motion compared with the initiation of wrist motion within two weeks after surgery.
Peyser et al., 2007	I	104	The percutaneous compression plate (PCCP) is a recently introduced device for the fixation of intertrochanteric fractures with minimal exposure. The PCCP device was associated with reduced intraoperative blood loss, less postoperative pain, and a reduced prevalence of collapse of the fracture.
White et al., 2008	I	42	Compared with conscious sedation, an intra-articular lidocaine block provides a similar degree of analgesia and sufficient analgesia to achieve closed reduction of ankle fracture-dislocations.
Bajammal et. al, 2008	I	14	The use of calcium phosphate bone cement for the treatment of fractures in adult patients is associated with a lower prevalence of pain at the fracture site in comparison with the rate in controls.
Kiel et al., 2007	I	1042	In this clinical trial of an energy-absorbing/shunting hip protector conducted in United States nursing homes, the authors were unable to detect a protective effect on the risk of hip fracture, despite good adherence to protocol.
Lyles et al., 2007	I	1127	An annual infusion of zoledronic acid within ninety days after repair of a low-trauma hip fracture was associated with a reduction in the rate of new clinical fractures and with improved survival.
Wells et al., 2008 (risedronate)	I	14,049	Women receiving at least one year of risedronate for postmenopausal osteoporosis were compared with those receiving placebo or concurrent calcium/vitamin D or both. At 5 mg/day, a significant and clinically important benefit in the secondary prevention of vertebral, nonvertebral, and hip fractures was observed, but no such benefit was observed for the wrist.
Wells et al., 2008 (etidronate)	I	1248	Etidronate, at 400 mg/day, demonstrated a significant and clinically important benefit in the secondary prevention of vertebral fractures.
Wells et al., 2008 (alendronate)	I	12,068	Alendronate, at 10 mg/day, both significant and clinically important reductions in vertebral, nonvertebral, hip, and wrist fractures were observed for secondary prevention.
Poeze et al., 2008	II	1656	A significant relationship between the deep infection rate, traumatic subtalar arthritis, and the fracture load may indicate a need for specialized institutional trauma care to improve outcomes associated with the operative treatment of calcaneal fractures.
Papadokostakis et al., 2008	II	465	There were no significant differences between spanning and sparing fixation systems with regard to the rate of infection, the rate of nonunion, or the time to union. Patients managed with spanning frames had significantly greater prevalence of malunion as compared with patients managed with sparing frames.
Ricci et al., 2001	II	283	Retrograde and antegrade nailing techniques provided similar results in union and malunion rates. There were more complications related to the knee after retrograde nailing and more complications related to the hip after antegrade nailing.
Ricci et al., 2006	II	108	A femoral nail specially designed for trochanteric insertion resulted in equally high union rates, equally

			low complication rates, and functional results similar to conventional antegrade femoral nailing through the piriformis fossa. The greater trochanter entry portal coupled with an appropriately designed nail represents a rational alternative for antegrade femoral nailing, with the benefit of decreased fluoroscopy time and decreased operative time in patients who are obese.
Schock et al., 2007	II	29	Examination of gravity-stress is as reliable and is perceived as more comfortable than that of manual stress. Recommended as the initial diagnostic screening examination for the detection of occult medial ligamentous injuries in supination-external rotation fractures of the ankle.
Watanabe et al., 2007	II	17	Measurement of intramedullary oxygen tension of the femoral head and neck during internal fixation using the Hansson hook-pin system. This method of measuring intramedullary oxygen tension is simpler and less invasive than other currently used methods and has the possibility for intraoperatively identifying a risk group that can have development of a late segmental collapse of the femoral head secondary to avascular necrosis.
Grafe et al., 2008	II	40	Calcium phosphate cement, e.g., Calcibon (Biomet), is as effective and safe as conventional polymethylmethacrylate cement with regard to immediate and sustained pain reduction and improvement of mobility after kyphoplasty in patients with painful osteoporotic vertebral fractures. Calcium phosphate cement has the potential of being resorbed and replaced by newly formed bone tissue.
Mullis and Sagi, 2008	II	23	In the treatment of vertically displaced, pure sacroiliac joint dislocations, an anatomic reduction (whether closed or open), followed by iliosacral screw fixation should be the goal because this appears to be the only predictor of a more favorable functional outcome in patients with this injury.
Gjertsen et al., 2007	III	8577	Total hip arthroplasty showed good results in fracture patients, but there was an increased risk of early dislocations and periprosthetic fractures in comparison with that in osteoarthrosis patients.
Herrera et al., 2008	III	415	Retrograde nailing was associated with relative risk reduction for the development of a nonunion and for requiring revision surgery as compared with traditional (nonlocking) plating methods. The authors' interpretation was that modern-day treatment methods are superior to conventional treatment options for the treatment of distal femoral fractures proximal to a total knee replacement.
Koval et al., 2007	III	21	A standardized protocol involving the use of magnetic resonance imaging to evaluate ankle stability and the need for surgery following a positive manual stress test for isolated lateral malleolar fractures. Using this protocol, the authors were able to identify and provide effective nonoperative care to nineteen patients who otherwise might have undergone operative treatment after an isolated lateral malleolar fracture.
Peskun et al., 2008	III	26	The purpose of this study was to compare the functional outcome of patients with ipsilateral intertrochanteric and femoral shaft fractures that were treated with a reconstruction nail as opposed to a sliding hip screw and retrograde nail. For most outcome measures, no significant differences in functional outcome scores were observed between the two treatment groups.
Porter et al., 2008	III	323	Direction of force is important in the etiology of nonskeletal injury patterns. The possibility of additional nonskeletal injury increases from the rates seen in axial load patterns to those in lateral load patterns involving the anterior column.
Vallier et al., 2008	III	111	Distal tibial fractures may be treated successfully with plates or nails. Delayed union, malunion, and secondary procedures were more frequent after nailing.
Anglen et al., 2008	III	27,244	From 1999 to 2006, a dramatic change in surgeon preference for the fixation device used for the treatment of intertrochanteric fractures has occurred among young orthopaedic surgeons. This change has occurred despite a lack of evidence in the literature supporting the change and in the face of the potential for more complications.
Krause et al., 2007	III	58	In patients managed with hemiarthroplasty for a proximal humeral fracture, the reattachment of the

			tuberosities with cable wire and bone-grafting gave consistently better radiographic and functional results as compared with suture fixation alone.
Agudelo et al., 2007	IV	153	The purpose of this study was to determine the efficacy of proximal humeral locking plates and to clarify predictors of loss of fixation. Our findings suggest that avoiding varus should substantially decrease the risk of postoperative failures.
Anderson et al., 2007	IV	32	Congruent anatomic plating is a safe, effective option for the treatment of olecranon fractures, with a low rate of hardware removal and stability with early motion.
Dimakopoulos et al., 2007	IV	165	The clinical and radiographic results of this transosseous suture technique in a series of selected displaced fractures of the proximal part of the humerus were found to be satisfactory at an average of 5.4 years postoperatively. Advantages of this technique include less surgical soft-tissue dissection, a low rate of humeral head osteonecrosis, fixation sufficient to allow early passive joint motion, and the avoidance of bulky and expensive implants.
Doornberg et al., 2007	IV	30	The long-term results of open reduction and internal fixation of AO type-C fractures of the distal part of the humerus are similar to those reported in the short term, suggesting that the results are durable. Functional ratings and perceived disability were predicated more on pain than on functional impairment and did not correlate with radiographic signs of arthrosis.
Droll et al., 2007	IV	30	Stabilization with internal plate fixation following fracture of both bones of the forearm restores nearly normal anatomy and motion. However, a moderate reduction in the strength of the forearm, the wrist, and grip should be expected following this injury. Perceived disability as measured with the DASH and SF-36 questionnaires is determined by pain more than by objective physical impairment.
Egol et al., 2008	IV	51	The purpose of this study was to examine the rate of early complications that occurs in association with the Proximal Humeral Internal Locking System (PHILOS). The major complication reported in this study was screw penetration, suggesting that exceptional vigilance must be taken when estimating the appropriate number and length of screws used in order to prevent articular penetration.
Gardner et al., 2008	IV	52	Displaced and unstable fractures of the proximal part of the humerus are notoriously difficult to treat. The anterolateral acromial approach allowed direct access to the lateral fracture planes for fracture reduction and plate placement or safe nail and interlocking screw placement.
Gundlach and Eygendaal, 2008	IV	21	Posttraumatic stiffness is a common complication of elbow injury and can result in considerable impairment in daily life. A column procedure resulted in an increase in motion and functional scores at the time of the two-year follow-up. Outcome at three months after treatment was the same as after two years.
Kettler et al., 2007	IV	87	Flexible intramedullary nailing, a minimally invasive technique for stabilization of displaced midshaft clavicular fractures, has minor risks and complications.
Laflamme et al., 2008	IV	34	The purpose of this study was to evaluate the safety and functional outcome of a recently described surgical technique of percutaneous plating for proximal humeral fractures. This study demonstrated that the functional outcome results correspond with a normal age-adjusted score, signifying an acceptable result.
Lindenhovius et al., 2008	IV	20	This study assessed the long-term results of operative treatment of anterior and posterior olecranon fracture-dislocations and compared them with the results recorded fewer than two years after surgery. The initial results of operative treatment of fracture-dislocations of the olecranon were durable over time.
Linhart et al., 2007	IV	97	The purpose of this study was to assess the functional outcome after treatment of proximal humeral fractures with a new antegrade nail that provides angular and sliding stability. Treatment with this nail provided sufficient fixation of the fragments to allow early mobilization.
Maquieira et al.,	IV	14	Traumatic anterior dislocation of the shoulder associated with a large displaced glenoid rim fracture can

2007			be successfully treated nonoperatively, providing the glenohumeral joint is concentrically reduced on the anteroposterior radiograph.
Moonot et al., 2007	IV	32	Patients were managed with open reduction and internal fixation with use of the Proximal Humeral Internal Locking System (PHILOS) plate. This plate provides a stable fixation in young patients with good-quality bone, sufficient to permit early mobilization. Failure of the screws to maintain fixation in the elderly remains a problem.
Mueller et al., 2007	IV	32	Intramedullary stabilization of midclavicular fractures with a titanium elastic nail is a minimally invasive technique with good cosmetic and functional results. Intramedullary fixation can be seen as an alternative to plate fixation and nonoperative treatment.
Owsley and Gorczyca, 2008	IV	53	The use of locking plates in the surgical treatment of proximal humeral fractures is associated with an unexpectedly high rate of screw cutout and revision surgery, especially in patients older than sixty years who have a three or four-part fracture.
Robinson et al., 2007	IV	28	The use of open reduction and internal fixation to treat acute complex posterior fracture-dislocations of the shoulder is associated with a relatively low risk of postoperative complications, and the functional outcome is generally favorable.
Ruchelsman et al., 2008	IV	16	Despite the presence of greater flexion contractures at the time of follow-up in elbows with Type-IV fractures or with an ipsilateral radial head fracture, good-to-excellent outcomes with functional ulnohumeral motion can be achieved following internal fixation of these complex fractures.
Zhiquan et al., 2007	IV	13	Closed reduction and internal fixation of middle or distal-third humeral shaft fractures with use of minimally invasive percutaneous osteosynthesis (MIPO) is a safe and effective surgical treatment method and is an alternative option to open techniques.
Collinge et al., 2007	IV	26	Minimally invasive medial plating will restore limb alignment and yield successful clinical outcomes for high-energy metaphyseal fractures of the distal part of the tibia.
Frey et al., 2007	IV	37	Sacroplasty appears to be a safe and effective treatment for painful sacral insufficiency fractures (SIF). The rate of improvement is rapid and sustained through one year.
Grose et al., 2007	IV	43	When applied in a staged fashion, the lateral surgical approach for pilon fractures provides excellent protection of the soft-tissue envelopes by creating thick flaps while allowing excellent visualization for reconstruction of the anterior and lateral aspects of the distal part of the tibia.
Howard et al., 2008	IV	42	Despite a measured skin bridge of <7 cm in 83% of cases, the soft-tissue complication rate was low in this group of tibial plafond fractures. With careful attention to soft-tissue management and surgical timing, incisions for tibial plafond fractures may be placed <7 cm apart, allowing the surgeon to optimize exposures on the basis of injury pattern.
Issack et al., 2007	IV	10	Sciatic nerve release during reconstructive acetabular surgery can decrease the sensory symptoms of preoperative sciatic neuropathy associated with a previous acetabular fracture. Motor symptoms, however, are less likely to resolve following nerve release.
Kakar and Tornetta, 2007	IV	51	Nonreamed nailing regarding the treatment of segmental tibial fractures is associated with high union rates, few complications, and limited indications for secondary procedures in the treatment of segmental tibia fractures.
Karladani et al., 2007	IV	71	Anterior knee pain and young age have been considered justification for removal of a tibial intramedullary nail. The results of nail removal to alleviate pain are poor. Removal of a nail should not be undertaken unless there is a convincing indication.
LeBus and Collinge, 2008	IV	25	Computed tomography angiography (CTA) appears to be a safe and potentially useful tool for the assessment and preoperative planning of high-energy tibial plafond fractures.

Lenarz and Moed, 2007	IV	6	The authors described a form of anterior wall acetabular fracture with involvement of the anterior acetabular rim but without involvement of the pelvic brim. It can occur in young patients with high-energy mechanisms of injury as well as in the elderly with low-energy trauma. With appropriate surgical management involving a modified Smith-Petersen approach, good-to-excellent clinical outcomes should be expected.
Rightmire et al., 2008	IV	69	The authors evaluated the effectiveness of treating infections with retained hardware, irrigation, débridement, and antibiotic suppression. Treatment was successful in forty-seven cases (68%) and unsuccessful in twenty-two (32%). The average time to healing was 130 days.
Stark et al., 2007	IV	238	The authors found syndesmotic instability to be common after anatomic and stable osseous fixation in unstable Weber type-B supination-external rotation pattern lateral malleolar fractures.
Korovessis et al., 2008	IV	23	Balloon kyphoplasty with calcium phosphate cement secured with posterior long and short fixation in the thoracolumbar and lumbar spine, respectively, provided excellent immediate reduction of post-traumatic segmental kyphosis and significant spinal canal clearance and restored vertebral body height in the fracture level in an equal amount in association with both the short and the long instrumentation.
Forte et al., 2008	IV	212,821	There was substantial geographic variation in the use of intramedullary nailing by state from 2000 through 2002 that was largely not explained by patient-related factors.
Prognosis			
Forward et al., 2007	I	51	Grade-3 scapholunate ligament tears can be associated with ulnar positive variance at the time of initial presentation of a distal radial fracture and can be associated with more scapholunate joint pain at one year. These injuries could lead to scapholunate dissociation at the time of follow-up, particularly in patients with intra-articular fractures.
Totterman et al., 2007	I	31	The majority of patients who were managed surgically for pelvic injuries associated with displaced sacral fractures achieved independent living; intermediate-term follow-up indicated substantial residual disability.
Cauley et al., 2007	I	9704	Low bone mineral density and prevalent vertebral fractures were independently related to new vertebral fractures over fifteen years of follow-up. Women with a prevalent vertebral fracture had a substantially increased absolute risk of an incident fracture, especially if they had osteoporosis diagnosed on the basis of bone mineral density.
Gerdhem and Akesson, 2007	I	1604	According to the questionnaire, fewer of the respondents had sustained at least one previous fracture when compared with the attendees. Any study concerning the risk of fracture may attract those with experience of a fracture, which explains the higher previous lifetime prevalence among the attendees.
Holt et al., 2008	I	1896	Patients who were fifty to sixty-four years of age had significantly better outcome measures after surgery for hip fracture in terms of survival and function.
Hovelius et al., 2008	I	257	After twenty-five years, half of the primary anterior shoulder dislocations that had been treated nonoperatively in patients with an age of twelve to twenty-five years had not recurred or had become stable over time.
Mackey et al., 2007	I	14,017	Similar to low-trauma nonspinal fractures, high-trauma nonspinal fractures are associated with low bone mineral density and increased risk of subsequent fracture in older adults. High-trauma nonspinal fractures should be included as outcomes in osteoporosis trials and observational studies.
Robinson et al., 2008	I	88	Following a first-time anterior dislocation of the shoulder, there is a marked treatment benefit from primary arthroscopic repair of a Bankart lesion, which is distinct from the so-called background therapeutic effect of the arthroscopic examination and lavage of the joint.
Ström et al., 2008	I	684	The sample of vertebral fracture patients was fairly small and included a high proportion of fractures

			leading to hospitalization, but the results indicated higher long-term costs and greater loss in quality of life related to vertebral fracture than previously believed.
Tang et al., 2007	I	63,897	Evidence supports the use of calcium, or calcium in combination with vitamin D supplementation, for the preventive treatment of osteoporosis in people aged fifty years or older.
Tosi et al., 2008	I	635	The Own the Bone initiative offers tools to improve the prevention of secondary fractures and a structure to monitor physician compliance.
van Helden et al., 2008	I	797	Men and women over fifty years of age who had recently sustained a clinical fracture had, at the time of that fracture, bone and fall-related risk factors that were greater than the risk predicted by the presence of osteoporosis. An integrated bone and fall-related risk-factor assessment is a preferable means for identifying elderly subjects at risk for fracture.
Barei et al., 2008	II	57	The morphologic features of a posteromedial fragment may have clinical implications when currently available laterally applied fixed-angle screw/plate implants are used to stabilize these bimalleolar injuries. Alternate or supplementary fixation methods may be required when treating this injury pattern.
O'Donnell et al., 2008	II	33	Antegrade intramedullary nailing of fractures of the shaft of the humerus is reported to cause impairment of the shoulder joint. These injuries may contribute to pain and dysfunction of the shoulder following treatment, and their presence indicates that antegrade nailing is only partly, if at all, responsible for these symptoms.
O'Toole et al., 2008	II	463	Patient satisfaction after surgical treatment of lower extremity injury is predicted more by function, pain, and the presence of depression at two years than by any underlying characteristic of the patient, injury, or treatment.
Starr et al., 2008	II	112	The prevalence of loss of reduction after percutaneous screw fixation of pubic ramus fractures was 15%. Loss of reduction was more common in elderly and female patients and in patients in whom ramus screws were placed in a retrograde fashion. Also, loss of reduction appeared to be more common in fractures medial to the lateral border of the obturator foramen.
Strauss et al., 2007	II	279	Obese patients had a higher number of medical comorbidities and more Orthopaedic Trauma Association type-B and C fracture types than non-obese patients did. At two years after the injury, however, the presence of obesity did not affect the prevalence of complications, the time to fracture union, or the level of function.
Tejwani et al., 2007	II	456	The functional outcome for patients with a bimalleolar fracture was worse than that for those with a lateral malleolar fracture and disruption of the deltoid ligament, possibly because of the injury pattern and the energy expended.
Bagnall et al., 2008	II	Reviewed 68 studies	The current evidence does not enable conclusions to be drawn about the benefits or harms of spinal fixation surgery in patients with traumatic spinal cord injury. Well-designed, prospective experimental studies with appropriately matched controls are needed.
Daniels et al., 2007	II	24,098	Hospital teaching status and spine fracture volume affected rates of spine arthrodesis in thoracolumbar fracture patients with and without neurologic injury. Variability in fusion rate for thoracolumbar spine trauma appeared to be lower than that reported for elective spine procedures, especially in the presence of a neurologic injury.
Dvorak, Aarabi, et al., 2007	II	90	Unilateral facet injuries of the subaxial cervical spine led to reported levels of pain and disability that were significantly worse than those of the healthy population.
Moller et al., 2007	II	20	Stable vertebral fractures in childhood with no neurologic deficits at the time of injury did not render more degenerative changes than can be expected according to age, but they were associated with more Schmorl nodes at adjacent disc levels.

Mulpuri et al., 2007	II	25	The deformity index was significantly higher in patients with a concomitant abdominal injury and significantly higher in patients managed operatively.
Platzer, Oberleitner, et al., 2007	II	56	A satisfactory outcome can be achieved with surgical treatment of a dens fracture in geriatric patients. It appears that anterior screw fixation may maintain better mobility of the cervical spine, but it appears to be associated with a higher rate of fracture nonunion and a greater potential for reoperation.
Platzer, Ostermann, et al., 2007	II	110	The authors noted encouraging results in association with the use of anterior screw fixation for surgical treatment of odontoid fractures and favored this method as the preferred management strategy for the stabilization of these fractures. With regard to fracture-healing as well as morbidity and mortality, younger patients had a superior outcome.
Neviaser et al., 2008	II	70	Low-energy fractures of the femoral shaft with a simple, transverse pattern and hypertrophy of the diaphyseal cortex are associated with alendronate use.
Radcliff et al., 2008	II	5683	A surgical delay of four days or more after admission was associated with a higher adjusted mortality risk but a reduced risk of readmission. Compared with spinal or epidural anesthesia, general anesthesia was related to a significantly higher risk of both mortality and complications.
Rozental et al., 2008	II	298 (1st study); 50 (2nd study)	The rates of evaluation and treatment for osteoporosis after fragility fractures remain low. Patients who undergo a bone mineral density examination are more likely to receive treatment. Ordering a bone mineral density examination in the orthopaedic clinic can dramatically improve osteoporosis evaluation and treatment rates following fragility fractures of the distal part of the radius.
von Knoch et al., 2007	IV	23	The outcome after fracture of the lateral process of the talus in snowboarders is favorable, provided that an early diagnosis is made and adequate treatment, which is related to the degree of displacement and associated injuries, is undertaken.
Minkowitz et al., 2007	IV	60	Following fracture-healing, removal of hardware is safe, with minimal risk. Improvement in terms of pain relief and function can be expected.
Lakshmanan et al., 2007	IV	43	Occult fracture of the hip and of the pelvic ring appear to be mutually exclusive, and, if an acute fracture of the pubic ramus is diagnosed radiologically, further investigations are not needed to rule out an occult fracture of the hip.
Diagnosis			
Moed and McMichael, 2007	I	46	The total Musculoskeletal Function Assessment (MFA) scores for patients with a posterior wall fracture of the acetabulum were significantly worse than normative reference values. Although the modified Merle d'Aubigné score may be useful for evaluating isolated hip function in patients who have been managed for an acetabular fracture, its shortcomings limit its usefulness as a method for evaluating functional outcome in these patients.
Marsh et al., 2007	II	Overview of system	The OTA and AO classification will now have a unified alpha-numeric code, eliminating the differences that have existed between the two codes. This publication should stimulate new developments and interest in a unified language to code and classify fractures.
Robbins et al., 2007	II	93,676	The predictive algorithm, based on eleven clinical factors, may be useful to predict the five-year risk of hip fracture among postmenopausal women of various ethnic backgrounds.
Stuermer and Stuermer, 2008	III	214	Due to the obvious injury of the tibia, the potential instability of the ankle joint is often overlooked, and the risk of development of secondary osteoarthritis is often consequently underestimated. Added attention should be paid to the ankle in the tibial fracture cases involving pronation-eversion trauma, spiral fracture of the tibia, proximal fibular fracture, or an intact fibula.
Tezval et al., 2007	III	41	The Hawkins sign is a good indicator of talar vascularity following fracture. If a full or partial positive Hawkins sign is detected, it is unlikely that osteonecrosis will develop at a later stage after the injury.

Slongo and Audige, 2007	IV	Overview of system	This study outlines the first comprehensive classification of pediatric long-bone fractures.
Not Graded			
Dvorak, Fehlings, et al., 2007	N/A	Reviewed 26 articles	This algorithm, derived from the Subaxial Injury Classification scoring system, will assist surgeons in answering the two most common questions they face when managing subaxial cervical spine trauma: “Should I operate”? and “Which surgical approach should I select”?
Economic Analysis			
Sander et al., 2008	II	500	Employment of an osteoporosis coordinator to manage outpatients and inpatients who have fragility fractures was predicted to reduce the prevalence of future hip fractures and to save money (a dominant strategy).