
BIOGRAPHICAL SKETCH

Provide the following information for the key personnel and other significant contributors in the order listed on Form Page 2. Follow this format for each person. **DO NOT EXCEED FOUR PAGES.**

NAME Sohail K. Mirza	POSITION TITLE Professor and Chair of Orthopaedics		
eRA COMMONS USER NAME SOHAILMIRZA			
EDUCATION/TRAINING <i>(Begin with baccalaureate or other initial professional education, such as</i>			
INSTITUTION AND LOCATION	DEGREE <i>(if applicable)</i>	YEAR(s)	FIELD OF STUDY
Colorado College, Colorado Springs, CO	BA	1985	Physics
University of Colorado, Denver, CO	MD	1989	Medicine
University of Washington, Seattle, WA	Residency	1994	Orthopaedic Surgery
Harvard Medical School, Boston, MA	Fellowship	1995	Spine Surgery
University of Washington, Seattle, WA	MPH	2005	Health Services

A. Personal Statement

My interest in clinical research has focused on the safety of spinal surgery. My initial laboratory research was in spinal biomechanics, but I was unable to apply that work to my clinical practice. I realized I needed more training in clinical research methods, and I was able to obtain that through an NIH patient-oriented research career development award (K23AR048979, Safety of Lumbar Fusion) mentored by Dr. Richard Deyo, an MCRC Scientific Advisor. Research under this award led to seminal work on tools for measuring spinal surgery case-mix and complications. The measures have helped adjust for surgical complexity in clinical settings and document patterns of spine surgery in the U.S. The work has been extended to scientific approaches to characterizing the comparative effectiveness of back surgery (Variation in Safety of Lumbar Fusion, PI: S. Mirza; Complications of Spinal Stenosis Surgery, PI: R. Deyo; Comparative Effectiveness of Treatments for Degenerative Spine Disease, PI: A. Tosteson). My other academic interest has focused on issues of professionalism and conflicts of interest in orthopedic surgery. I am currently Professor and Chair of the Department of Orthopaedic Surgery at Dartmouth Medical School and Professor at The Dartmouth Institute for Health Policy and Clinical Practice.

B. Positions and Honors

Chair, Department of Orthopaedics, Dartmouth-Hitchcock Medical Center June 2010-present
Vice-Chair, Department of Orthopaedics, DHMC September 2008-June 2010
Attending Spine Surgeon, Dartmouth-Hitchcock Medical Center, Lebanon, NH September 2008 - present
Attending Orthopaedic Surgeon, University of Washington, Seattle, WA September 1995 - Aug 2008
(Harborview Medical Center, University of Washington Medical Center, Children's Hospital and Medical Center, Veteran's Administration Puget Sound Health Care System)
Director, Spine Trauma Research, Department of Orthopaedics October 1996 - Aug 2008

Assistant Professor, Department of Orthopaedics, University of Washington September 1995 – June 2001
Assistant Professor, Department of Neurologic Surgery, Univ. of Washington July 1997 – June 2001
Associate Professor, Department of Orthopaedics, University of Washington July 2001 – Present
Associate Professor, Department of Neurologic Surgery, University of Washington July 2001 – June 2006
Professor, Department of Orthopaedics, University of Washington July 2006– Aug 2008
Professor, Department of Neurologic Surgery, University of Washington July 2006 – Aug 2008
Visiting Professor, Department of Orthopaedics, Dartmouth Medical School Sep 2008– present
Visiting Professor, The Dartmouth Institute, Dartmouth Medical School Sep 2008– present
Professor, Department of Orthopaedics and The Dartmouth Institute September 2009-present

American Orthopedic Association: ABC Traveling Fellowship 2003
University of Washington Service Excellence Award 2002 and 2008
American Orthopedic Association membership 2002
Cervical Spine Research Society Award 1998
American Orthopaedic Association North American Traveling Fellowship 1997
Daniel E. Hogan Spine Fellowship, 1995 Harvard Medical School
Laurnen Award for Spine Research 1994 University of Washington
Distinction and Honors, Medicine 1989 University of Colorado
Alpha Omega Alpha 1988 University of Colorado
Carbon Gillespie Award, Surgical Anatomy 1986 University of Colorado
Robert C. Lewis Award, Biochemistry 1986 The Colorado College
Phi Beta Kappa 1985 University of Colorado
Magna Cum Laude, Physics 1985 The Colorado College

C. Publications

1. Deyo RA, Nachemson A, Mirza SK. Spinal-fusion surgery - the case for restraint. *N Engl J Med* 2004; 350:722-6.
 2. Mirza SK. Accountability of the accused: facing public perceptions about financial conflicts of interest in spine surgery. *Spine J* 2004; 4(5):491-4.
 3. Mirza SK. Point of view: Commentary on the research reports that led to Food and Drug Administration approval of an artificial disc. *Spine* 2005;30(14):1561-4.
 4. Mirza SK. The Noninferiority Principle: Design Considerations Relevant to Noninferiority Trials of Artificial Disc Replacement. *North American Spine Society SpineLine* 2006;VII(1):17-20.
 5. Martin BI, Deyo RA, Mirza SK, Turner JA, Comstock BA, Hollingworth W, Sullivan SD. Expenditures and health status among adults with back and neck problems. *JAMA*. 2008 Feb 13;299(6):656-64. Erratum in: *JAMA* 2008 Jun 11;299(22):2630.
 6. Mirza SK, Deyo RA, Heagerty PJ, et al. Development of an index to characterize the "invasiveness" of spine surgery: validation by comparison to blood loss and operative time. *Spine* 2008;33:2651-61; discussion 62.
 7. Juratli SM, Mirza SK, Fulton-Kehoe D, Wickizer TM, Franklin GM. Mortality after lumbar fusion surgery. *Spine* 2009;34:740-7.
 8. Deyo RA, Mirza SK, Martin BI, Kreuter W, Goodman DC, Jarvik JG. Trends, major medical complications, and charges associated with surgery for lumbar spinal stenosis in older adults. *JAMA*. 2010;303(13):1259-65;
 9. Gelberman RH, Samson D, Mirza SK, Callaghan JJ, Pellegrini VD, Jr. Orthopaedic surgeons and the medical device industry: the threat to scientific integrity and the public trust. *J Bone Joint Surg Am*. 2010;92(3):765-77;
 10. Deyo RA, Mirza SK. The case for restraint in spinal surgery: does quality management have a role to play? *Eur Spine J*. 2009 Aug;18 Suppl 3:331-7. PMID: 19266220
 11. Deyo RA, Ching A, Matsen L, Martin BI, Kreuter W, Jarvik JG, Angier H, Mirza SK. Use of Bone Morphogenetic Proteins in Spinal Fusion Surgery for Older Adults with Lumbar Stenosis: Trends, Complications, Repeat Surgery, and Charges. *Spine (Phila Pa 1976)*. 2011 Apr 7. PMID: 21494195
 12. Deyo RA, Mirza SK, Martin BI, Kreuter W, Goodman DC, Jarvik JG. Trends, major medical complications, and charges associated with surgery for lumbar spinal stenosis in older adults. *JAMA*. 2010 Apr 7;303(13):1259-65 PMID: 20371784
 13. Martin BI, Turner JA, Mirza SK, Lee MJ, Comstock BA, Deyo RA. Trends in health care expenditures, utilization, and health status among US adults with spine problems, 1997-2006. *Spine (Phila Pa 1976)*. 2009 Sep 1;34(19):2077-84. PMID: 19675510
 14. Gelberman RH, Samson D, Mirza SK, Callaghan JJ, Pellegrini VD Jr. Orthopaedic surgeons and the medical device industry: the threat to scientific integrity and the public trust. *J Bone Joint Surg Am*. 2010 Mar;92(3):765-77. PMID: 20194337
 15. Mirza SK. Folly of FDA-approval studies for bone morphogenetic protein. *The spine journal : official journal of the North American Spine Society* 2011;11(6):495-9.
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16. Martin BI, Mirza SK, Flum DR, et al. Repeat surgery after lumbar decompression for herniated disc: the quality implications of hospital and surgeon variation. *The spine journal : official journal of the North American Spine Society* 2012;12(2):89-97.
 17. Pearson A, Lurie J, Tosteson T, et al. Who should have surgery for an intervertebral disc herniation? Comparative effectiveness evidence from the spine patient outcomes research trial. *Spine* 2012;37(2):140-9.

C. Research Support.

Ongoing Research Support

R01 HS018405 Tosteson, A (PI) 10/01/09-8/31/12
Agency for Health Care Research and Quality
Comparative Effectiveness of Treatments for Degenerative Spine Disease
Major project goals are to provide policy-relevant evidence on the comparative clinical effectiveness, safety, and economic value of emerging devices/biologics to treat common back-pain-related degenerative spine conditions in the elderly. Dr. Mirza is a co-investigator.

Completed Research Support

RC1 AG036268 Mirza (PI) 09/30/09-08/31/11
NIH/NIA
Variation in the Safety of Back Pain-Related Surgery
The goal of this project is to characterize variations in complications associated with surgery for intervertebral disc herniation for the purpose of understanding safety of these procedures.

R01 AR054912 Deyo (PI); Mirza (sub-award PI) 9/16/2008-7/31/11
NIH/NIAMS
Complications of Surgery for Spinal Stenosis: A Clinical Prediction Rule
The project will develop a clinical prediction rule for complications from spinal stenosis surgery. Dr. Mirza is a co-investigator.

K23AR048979 Mirza (PI) 9/30/2002-6/30/2007
NIH/NIAMS
Safety of Lumbar Fusion Surgery for Chronic Back Pain
This patient-centered career development award addressed the relative benefits and risks of lumbar fusion surgery in treating back pain.
