

## DIVISION OF PEDIATRIC ORTHOPAEDIC SURGERY OUR TEAM

### MICHAEL G. VITALE, MD, MPH



Dr. Vitale is the Herbert Irving Assistant Professor of Orthopedic Surgery at Columbia University and Chief of the Pediatric Spine Service at Morgan Stanley Children's Hospital of New York-Presbyterian. Dr. Vitale completed his medical schooling in 1995 at Columbia University College of Physicians and Surgeons where he also earned a Masters in Public Health. He then completed his residency in Orthopaedic Surgery, and a Subspecialty Fellowship in Pediatric Orthopaedics at the Children's Hospital Los Angeles.

A significant part of Dr. Vitale's practice involves the nonoperative and operative treatment of children with spinal problems such as scoliosis. As part of the National Chest Wall and Spinal Deformity Study Group, he has a special interest in the treatment of scoliosis in the young child including use of the Vertical Expandable Titanium Rib Device (VEPTR) and growing rods.

Dr. Vitale also performs complex limb reconstruction surgery of the lower extremity for problems such as Blount's disease, leg length differences, and malunions of bones. Though a variety of techniques are used to address these problems, many are handled using a computer controlled external fixator called the Taylor Spatial Frame.

As Chief of Clinical Research for the Division of Pediatric Orthopaedics, Dr. Vitale directs a large research effort that focuses on the assessment of patient outcomes in children with various orthopedic problems, and ways to optimize the quality of life of these children. Dr. Vitale travels abroad regularly as part of volunteer efforts to help children with orthopaedic problems. He is available for consultation, with offices in Brooklyn and Manhattan.

In his spare time, Dr. Vitale runs marathons, skis, sails and scuba dives, and attempts to keep up with his partner, Dr. Roye, in triathlons.

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### CLINICAL INTERESTS

- Pediatric Trauma
- Hip Disease and Dysplasia
- Pediatric Spine Surgery
- Limb Lengthening
- Club Foot and Other Foot Deformities
- Cerebral Palsy and Neuromuscular Disease
- Sports Injuries

## **BOARD CERTIFICATIONS**

American Board of Orthopaedic Surgery - Board Eligible

## **LICENSURE**

New York  
New Jersey  
California

## **EDUCATION**

### **Fellowship**

**2000-2001**

Children's Hospital of Los Angeles  
University of Southern California  
Pediatric Orthopaedic Surgery  
Clinical Fellow

### **Residency**

**1996-2000**

Columbia-Presbyterian Medical Center  
Columbia University  
Orthopaedic Surgery

### **Internship**

**1995-1996**

Columbia-Presbyterian Medical Center  
Columbia University  
General Surgery

### **Public Health**

**1995**

Columbia University  
Mailman School of Public Health  
Concentration in Outcome Studies  
M.P.H.

### **Medical School**

**1995**

Columbia University  
College of Physicians & Surgeons  
M.D.

### **Undergraduate**

**1989**

Trinity College  
Hartford, CT  
B.S.

## **CURRENT HOSPITAL AND ACADEMIC APPOINTMENTS**

- Assistant Attending Surgeon  
Department of Orthopaedics,  
Division of Pediatric Orthopaedics,  
Children's Hospital of New York,  
Columbia-Presbyterian Medical Center
- Assistant Professor of Orthopaedic Surgery  
Children's Hospital of New York,  
Columbia-Presbyterian Medical Center
- Director of Pediatric Outcomes  
International Center for Health Outcomes and Innovation Research. (InCHOIR)  
Columbia-Presbyterian Medical Center

## **PROFESSIONAL ORGANIZATIONS AND SOCIETIES**

- American Academy of Orthopaedic Surgeons
- American Medical Association
- New York State Medical Society
- International Society of Technology Assessment in Health Care

## **VOLUNTEER ACTIVITIES**

- Orthopaedics Overseas, Orthopaedic Surgical Relief Team, St. Jude's Hospital, St. Lucia, West Indies
- REMEDY: Recovery of Medical Devices for the Developing World, Cofounder and Co-president, Columbia Chapter.

## **RECENT HONORS**

- Harrison McLaughlin Award in Orthopaedic Trauma, Fall 1998
- Frank Stinchfield Award in Orthopaedic Research, February 1997 Rosamond Cane Cummins, 1952 Memorial Award in Pediatric Orthopaedics, May 1995; April 1998; June 2000
- Pediatric Orthopaedic Society of New York,  
Award for Best Resident Research Paper, March 1998
- Pediatric Orthopaedic Society of New York,  
Award for Best Resident Research Paper, May 2000
- Medical Society of the State of New York,  
Community Service Award, May 1995
- Dean's / NIH Award For Basic Science in Orthopaedics, August 1993 - January 1994
- International Society for Quality of Life Research, November 2001 Awarded for Best Poster Presentation

## **SELECTED PUBLICATIONS**

- Lowenstein JE, Matsumoto H, Vitale MG, Weidenbaum M, Gomez JA, Lee FY, Hyman JE, Roye DP Jr. Coronal and Sagittal Plane Correction in Adolescent

- Idiopathic Scoliosis: A Comparison between All Pedicle Screw versus Hybrid Thoracic Hook Lumbar Screw Constructs. *Spine*. 2007 Feb 15;32(4):448-452.
- Vitale MG, Goss JM, Matsumoto H, Roye DP Jr. Epidemiology of Pediatric Spinal Cord Injury in the United States: Years 1997 and 2000. *J Pediatr Orthop*. 2006 November/December;26(6):745-749.
  - Skaggs DL, Lehmann CL, Rice C, Killelea BK, Bauer RM, Kay RM, Vitale MG. Access to orthopaedic care for children with medicaid versus private insurance: results of a national survey. *J Pediatr Orthop*. 2006 May-Jun;26(3):400-4.
  - Lehmann CL, Arons RR, Loder RT, Vitale MG. The epidemiology of slipped capital femoral epiphysis: an update. *Pediatr Orthop*. 2006 May-Jun;26(3):286-90.
  - Vitale MG, Vitale MA, Lehmann CL, Hyman JE, Roye DP Jr, Skaggs DL, Schmitz ML, Sponseller PD, Flynn JM. Towards a National Pediatric Musculoskeletal Trauma Outcomes Registry: the Pediatric Orthopaedic Trauma Outcomes Research Group (POTORG) experience. *J Pediatr Orthop*. 2006 Mar-Apr;26(2):151-6.
  - Vitale MA, Choe JC, Seski AM, Hyman JE, Lee FY, Roye DP, Vitale MG. The Effect of Limb Length Discrepancy on Health-related Quality of Life: is the '2 cm rule' Appropriate *Journal of Pediatric Orthopaedics B*. 2006;15:1-5.
  - Lee FY, Sinicropi SM, Lee FS, Vitale MG, Roye DP Jr, Choi IH. Treatment of congenital pseudarthrosis of the tibia with recombinant human bone morphogenetic protein-7 (rhBMP-7). A report of five cases. *J Bone Joint Surg Am*. 2006 Mar;88(3):627-33.
  - Vitale MG, Kessler MW, Choe JC, Hwang MW, Vernon T, Skaggs DL. Pelvic Fractures in Children: An Exploration of Practice Patterns and Patient Outcomes. *Journal of Pediatric Orthopaedics*. 2005;25: 581-587.
  - Vitale MG, Roye EA, Choe JC, Hyman JE, Lee FY, Roye DP. Assessment of Health Status in Patients With Cerebral Palsy: What is the Role of Quality-of-Life Measures *Journal of Pediatric Orthopaedics*. 2005; 25: 792-797.
  - Andrea SM, Choe JC, Vitale MA, Ugwionali O, Vitale MG, Hyman JE. Pediatric orthopaedic injuries: The impact of treatment on school attendance. *Journal of Pediatric Orthopaedics*. 2005;25.
  - Vitale MG, Choe JC, Vitale MA, Lee FY, Hyman JE, Roye DP Jr. Patient-based outcomes following clubfoot surgery: A sixteen year follow-up study. *Journal of Pediatric Orthopaedics*. 2005;25.
  - Vitale MA, Arons RR, Hyman JE, Skaggs DL, Roye DP, Vitale MG. The contribution of hospital volume, payer status, and other factors on the surgical outcomes of scoliosis patients: A review of 3,606 cases in the state of california. *Journal of Pediatric Orthopaedics*. 2005;25:393-399.
  - Galano GJ, MA, Kessler MW, Hyman JE, Vitale MG. The most frequent traumatic orthopaedic injuries from a national pediatric inpatient population. *Journal of Pediatric Orthopaedics*. 2005;25:39-44.
  - Heyworth BE, Galano GJ, Vitale MA, Vitale MG. Management of closed femoral shaft fractures in children, ages 6 to 10: national practice patterns and emerging trends. *Journal of Pediatric Orthopaedics*. 2004; 24:393-399.
  - Ugwionali OF, Lomas G, Choe JC, Hyman JE, Lee FY, Vitale MG, Roye DP Jr. Effect of bracing on the quality of life of adolescents with idiopathic scoliosis. *Spine Journal: Official Journal of the North American Spine Society*. 2004;4: 254-60 .
  - Vitale MG, Choe JC, Hwang MW, Bauer RM, Hyman JE, Lee FY, Roye DP Jr. Use of ketorolac tromethamine in children undergoing scoliosis surgery. an

analysis of complications. *Spine Journal: Official Journal of the North American Spine Society*. 2003;3 : 55-62.

- Vitale MG, Guha A, Skaggs DL. Orthopaedic manifestations of neurofibromatosis in children: an update. *Clinical Orthopaedics & Related Research*. 2002;401:107-18.
- Vitale MG, Levy DE, Park MC, Choi H, Choe JC, Roye DP Jr. Quantifying risk of transfusion in children undergoing spine surgery. *Spine Journal: Official Journal of the North American Spine Society*. 2002;2:166-72.
- Skaggs DL, Roy AK, Vitale MG, Pfieffer C, Baird G, Femino D, Kay RM. Quality of evaluation and management of children requiring timely orthopaedic surgery before admission to a tertiary pediatric facility. *Journal of Pediatric Orthopedics*. 2002;22:265-7.
- Vitale MG, Skaggs DL. Developmental dysplasia of the hip from six months to four years of age. *Journal of the American Academy of Orthopaedic Surgeons*. 2001;9:401-11.
- Vitale MG, Levy DE, Moskowitz AJ, Gelijns AC, Spellmann M, Verdisco L, Roye DP Jr. Capturing quality of life in pediatric orthopaedics: two recent measures compared. *Journal of Pediatric Orthopedics*. 2001; 21:629-35.
- Vitale MG, Levy DE, Johnson MG, Gelijns AC, Moskowitz AJ, Roye BP, Verdisco L, Roye DP Jr. Assessment of quality of life in adolescent patients with orthopaedic problems: are adult measures appropriate *Journal of Pediatric Orthopedics*. 2001;21:622-8.
- Skaggs DL, Clemens SM, Vitale MG, Femino JD, Kay RM. Access to orthopedic care for children with medicaid versus private insurance in California. *Pediatrics*. 2001;107:1405-8.
- Vitale M, Roye DP Jr. Short-term outcomes analysis in pediatric orthopaedics. *Journal of Bone & Joint Surgery - American Volume*. 2001;83:619-20.
- Roye BD, Vitale MG, Gelijns AC, Roye DP Jr. Patient-based outcomes after clubfoot surgery. *Journal of Pediatric Orthopedics*. 2001;21:42-9.
- Vitale MG, Higgs GB, Liebling MS, Roth N, Roye DP Jr. Superior mesenteric artery syndrome after segmental instrumentation: a biomechanical analysis. *American Journal of Orthopedics (Chatham, Nj)*. 1999;28:461-7.
- Vitale MG, Krant JJ, Gelijns AC, Heitjan DF, Arons RR, Bigliani LU, Flatow EL. Geographic variations in the rates of operative procedures involving the shoulder, including total shoulder replacement, humeral head replacement, and rotator cuff repair. *Journal of Bone & Joint Surgery - American Volume*. 1999;81:763-72.
- Vitale MG, Stazzone EJ, Gelijns AC, Moskowitz AJ, Roye DP Jr. The effectiveness of preoperative erythropoietin in averting allogenic blood transfusion among children undergoing scoliosis surgery. *Journal of Pediatric Orthopaedics, Part B*. 1998;7:203-9.

### **SELECTED PRESENTATIONS AND POSTERS (last 5 years)**

- Michael G. Vitale, Hiroko Matsumoto, David M. Privitera, Joshua E. Hyman, Linda M. Waters, David P. Roye, Jr. The Efficacy of Preoperative Erythropoietin Administration in Pediatric Neurogenic Scoliosis Patients. Presented at Scoliosis Research Society; Monterey CA. September 2006.
- David P. Roye, Jr., MD, Hiroko Matsumoto, MA, Michael R. Bye, MD, Joshua E. Hyman, MD, Jaime A. Gomez, MD, Whitney A. Booker, BS, Michael G. Vitale, MD, MPH. A Retrospective Cohort Study of Pulmonary Function, Radiographic

Measures and Quality of Life in Children with Congenital Scoliosis: An Evaluation of Patient Outcomes after Traditional Spine Surgery. Presented at Scoliosis Research Society; Monterey CA. September 2006.

- DL Skaggs, M Ramachandran, H Crawford, D Eastwood, F Lalonde, M Vitale, R Tharani, R Kay. Delaying the Treatment of Supracondylar Fractures: Has the Pendulum Swung too Far? Presented at the Annual meeting of the Pediatric Orthopaedic Society of North America, San Diego, CA, May 3rd 2006.
- Jason E. Lowenstein, MD, Hiroko Matsumoto, MA, Michael Vitale, MD, MPH, Mark Weidenbaum, MD, Francis Y. Lee, MD, Joshua E. Hyman, MD, David P. Roye, Jr., MD. Coronal and Sagittal Plane Correction in Adolescent Idiopathic Scoliosis: A Comparison Between Thoracic Pedicle Screw and Hook Constructs; EPOS 2006 Annual Meeting, Dresden, Germany, April 5-8, 2006. Presented at AAOS 2006 Annual Meeting, Chicago, IL, Mar. 22-26, 2006.
- Vitale MA, Heyworth BE, Skaggs DL, Roye DP Jr, Lipton CB, Vitale MG, Comparison of the Volume of Scoliosis Surgery Between Spine and Pediatric Orthopaedic Fellowship-Trained Surgeons in New York and California; Presented at EPOS 2006 Annual Meeting, Dresden, Germany, April 5-8, 2006.
- Jordan M. Goss, BA, Michael G. Vitale, MD, MPH. The Epidemiology of Pediatric Spinal Cord Injury in the U.S. Columbia University; Children's Hospital of New York, Presented at AAOS 2006 Annual Meeting, Chicago, IL, Mar. 22-26, 2006.
- MG Vitale, C Lehmann. The Epidemiology of Slipped Capital Femoral Epiphysis: An Update. Poster presented at The American Association of Orthopaedic Surgeons 2004 Meeting, Washington, DC, February 2004; Poster presented at The Annual Meeting of the Pediatric Orthopaedic Society of North America, Ottawa, ON, Canada, May 2005; Poster presented at AAP 2005 National Conference and Exhibition, Washington, DC, October 2005.
- MG Vitale, MA Vitale, BE Heyworth, DL Skaggs, DP Roye, Jr., CB Lipton. Volume of Scoliosis Surgery Among Surgeons with Spine versus Pediatric Orthopaedic Fellowship Training in the States of New York and California. Poster presented at The Annual Meeting of the Pediatric Orthopaedic Society of North America, Ottawa, ON, Canada, May 2005; Poster presented at the 12th IMAST Meeting, Banff, Canada, July 2005.
- MG Vitale, BE Heyworth, CB Lipton, MA Vitale, DP Roye, Jr., DL Skaggs. Operative Treatment of Scoliosis by Surgeons with Pediatric vs. Spine Fellowship Training, Part I: New York State. Poster presented at Assistant Professor Pediatric Research Symposium, New York, New York, December 2004.
- MG Vitale, BE Heyworth, MA Vitale, DL Skaggs. Operative Treatment of Scoliosis by Surgeons with Pediatric vs. Spine Fellowship Training, Part II: New York State. Poster presented at Assistant Professor Pediatric Research Symposium, New York, New York, December 2004.
- MG Vitale, BE Heyworth, GJ Galano, MA Vitale. Management of Closed Femoral Shaft Fractures in Children, Ages 6-10: National Practice Patterns and Emerging Trends. Poster presented at Assistant Professor Pediatric Research Symposium, New York, New York, December 2004.
- MG Vitale, JC Choe, MA Vitale, FY Lee, JE Hyman, DP Roye, Jr. Patient-Based Outcomes Following Clubfoot Surgery: A Sixteen Year Follow-Up Study. Poster presented at Assistant Professor Pediatric Research Symposium, New York, New York, December 2004.

- MG Vitale, MA Subeh, JC Choe, DP Roye, Jr. Dose Response of Preoperative Erythropoietin Use in Pediatric Neurogenic Scoliosis Patients Undergoing Corrective Surgery. Poster presented at The American Academy of Pediatrics 2004 National Conference and Exhibition, San Francisco, CA, October 2004.

#### **LANGUAGES SPOKEN IN OFFICE OTHER THAN ENGLISH**

- Spanish
- Italian