

Beth Israel Deaconess Medical Center 2012-2013 Chief's Report

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Over the past 10 years, the Department of Orthopaedic Surgery at the Beth Israel Deaconess Medical Center (BIDMC) has grown into a dynamic and exciting department. Our goals are to provide excellent clinical care, while maintaining a strong commitment to education and research. Orthopaedics accounts for over 25% of the surgical volume at BIDMC. We are one of the medical center's most productive services, and we continue to expand in the coming year, both at the Medical Center and in the surrounding community. It has been another busy year! Here are some of the highlights:

Teaching Experience

We are continuing to develop our resident teaching program. We are excited to have 12 HCORP residents starting this year. Residents continue to work with the sports, spine, joints, hand, trauma, and foot and ankle services, both in the clinic and operating room under the direction of Drs. Ramappa, Day, McGuire and Rodriguez, Ayres, along with Drs. Davis, White, Rozental, Duggal and Appleton. Residents to date have been pleased with their rotations in the PGY 2, 3, 4 and PGY 5. We owe this in large part to the talent and dedication that our faculty members possess for teaching.

The following is a very brief synopsis of our faculty accomplishments and activities for the academic year:

Tumor Service

While I have been busy clinically this past year with my tumor practice at both BIDMC and

Boston Children's Hospital, my administrative duties for BIDMC and HMS occupy a large part of my time. I continue to participate in several local, national and international orthopaedic organizations as well as continuing collaborative research and publications. My time has been recently focused on starting practices at other sites: we welcomed the Needham Orthopaedic group into our full time faculty this year and are helping to develop a vibrant orthopaedic service in Brockton with our partner Signature Health Care. BIDMC is busy expanding to Jordan Hospital, Cambridge Health Alliance and other sites which creates orthopaedic opportunities. I was also recently named Chairman for the Executive Committee for Orthopaedics at Harvard Medical School. In my free time, I enjoy playing the clarinet and cycling. I am a long-time member of the Longwood Symphony Orchestra. I am also an avid cyclist and just recently completed my sixth 192 mile Pan Mass Challenge to raise money for cancer research with my team "Pedal for Pediatrics".

All of this is possible because of my able colleague, Dr. Megan E. Anderson who is busy taking care of patients while I'm in meetings! Dr. Anderson continues to grow her practice in musculoskeletal oncology both at BIDMC and Boston Children's Hospital, and recently also began seeing patients at Dana Farber. She has been involved in several research initiatives including the PARITY study (a randomized study looking at length of postoperative antibiotics following tumor surgery), for which she is a site PI. She is also looking at our long term functional and quality of life outcomes for our pediatric limb salvage patients. She is involved in the Musculoskeletal Tumor Society

as well as New England Orthopedic Society. She is a member of the faculty of the annual Boston Pathology Course and continues to organize the Tumor Core Curriculum for residents. She is also expecting her second child later this fall!

Hand Service

The Hand Service continues as one of our most clinically productive services. **Charles Day, M.D.**, is the Chief of our Hand and Upper Extremity Service, as well as the director of the Orthopaedic Hand Fellowship. Dr. Day is an extremely active researcher. His research team is working on over 15 projects; two of his current research projects have received NIH funding. He has been very active in local and national leadership positions for both AAOS and the American Society for Surgery of the Hand. He maintains a busy practice in both Boston and Needham. Dr. Day was named a Top Doctor in 2012 by Boston Magazine.

Tamara Rozental, M.D. has had an extremely busy and productive year. Dr. Rozental maintains a busy surgical practice and sees patients in Boston and Needham. She has published numerous manuscripts over the past year. She has received funding from two major grants from the Orthopaedic Research and Education Foundation as well as the American Society for Surgery of the Hand, both to study 25-Hydroxy-Vitamin D and Bone Turnover marker levels in patients with distal radius fractures. She was also recently promoted to Associate Professor. We are extremely proud of her accomplishments!

Trauma Service

The Orthopaedic Trauma Service is led by **Ken Rodriguez M.D.-Ph.D.** and **Paul Appleton, M.D.** They are busy as usual with fracture care but have also significantly increased their basic science and clinical research activities. In collaboration with the Center of Advanced Orthopaedic Sciences at BIDMC, the Trauma Service is an active collaborator in translation research studies.

Drs. Nazarian (CAOS), Rodriguez (BIDMC) and Grinstaff (BU) were awarded in 2012 a National Institutes of Health R21 grant for development of a Portable Wound Hemostasis System Using a Hydrogel Polymeric Foam. They are also working to develop a transcutaneous magnetically activated system for infection prevention in implants, and a new approach to femoroplasty for fracture prevention in severely osteoporotic hips.

This fall, Dr. Rodriguez will be traveling to Germany as a Distinguished Visiting Surgeon to the Landstuhl Regional Medical Center with the US Army. In this rotation, he will provide surgical care for servicemen and women wounded in Iraq and Afghanistan. We are extremely proud of his accomplishments!

Orthopaedic Trauma residents continue to consistently rank the BIDMC trauma rotation as one of the most rewarding in the residency program and have also taken the initiative in several clinical trauma studies based at BIDMC. We have also developed closer ties with our other Harvard affiliated institutions within the context of the developing Harvard Orthopedic Trauma Service. We have done so by increasing research collaboration in multicenter studies and by credentialing the MGH-Brigham trauma fellows to participate in cases at the BIDMC. The trauma service is looking forward to an exciting and productive 2013-2014 academic year.

Foot and Ankle Service

We were sad to see Naven Duggal, MD leave us this summer to be closer to family, but we are excited this year to welcome **Joshua Lamb, M.D.**, to our Department as our primary foot and ankle surgeon. Prior to his starting his practice at BIDMC, Josh had worked abroad in Rwanda as a Global Surgery Fellow with Brigham and Women's Hospital. In collaboration with Partners in Health, Dr. Lamb worked to help improve medical and surgical services at Butaro Hospital. He has only been here a short time and is already quite busy both in Boston and Needham. Dr. Lamb is

excited to provide excellent clinical care and a great experience for residents!

Joint Arthroplasty Service

Doug Ayres, M.D., is the Chief of the Arthroplasty service. He continues to maintain an exceptionally busy clinical practice at BIDMC. **Ayesha Abdeen, M.D.**, has also been extremely busy this year; she specializes in hip, knee, and shoulder replacement and reconstruction as well as reconstruction following bone tumor resection. She continues this year in her role of Quality Assurance Director of the BIDMC. She is also expecting her second child! **Harris Yett, M.D.**, works closely with the geriatrics service to provide specialized care for the elderly patients with fracture and arthroplasty needs. **Robert Davis, M.D.** continues to enjoy a busy clinical schedule total joints and sports medicine. He takes an active role in teaching the junior residents during their Sports and Arthroplasty rotations.

Spine Service

Kevin J. McGuire, M.D. is the Co-Director of the Spine Center, a joint venture with the Departments of Neurosurgery, Neurology, Anesthesia, Radiology and Physical Therapy. He has expanded to his practice to several of our off-site locations including Lexington, Needham, and Newburyport. Dr. McGuire has been working diligently over the past few years on BIDMC Lean OR initiatives, including reducing Spine implant waste, instrument reduction and new technology and procedure cost avoidance. **Andrew White, M.D.** maintains an extremely active surgical practice. In 2012, Dr White also became Director of the ACGME accredited Spine Surgery Fellowship at BIDMC.

Stefan Muzin, M.D., continues to grow his psychiatry practice in Boston and Needham. He continues his part-time position as on-site Psychiatrist for General Electric (GE) Aviation where he

leads a team of Physical and Massage Therapists, Family Physicians and Nurse Practitioners. He has worked to build an on-site musculoskeletal practice and has been working with GE to identify best practices and potential areas of cost savings.

Sports Medicine and Shoulder Service

Arun Ramappa, M.D. provides expertise in sports medicine and shoulder surgery, serving as the Chief of the Division of Sports Medicine. He works with the Senior Resident on their Sports rotation and was recently recognized for his research, along with **Ara Nazarian, Ph.D.** and **Joe DeAngelis, M.D.** on the throwing shoulder. Their work in the Center for Advanced Orthopaedic Studies continues to be supported by a grant from Major League Baseball to study glenohumeral and scapulothoracic kinematics. **Joseph DeAngelis, M.D.**, has continued to expand his clinical practice and now sees patients in Boston, Milton and Brockton. Dr. DeAngelis was recently accepted to the executive MBA program at the MIT Sloan School of Management. **Drs. Lars Richardson** and **Jeffrey Zilberfarb** continue their sports medicine practice as well, making a significant contribution to the education of both the junior and senior residents during the rotation as well as to the education of HMS students. **Dr. Louis Meeks** recently retired after over 20 years of clinical practice.

Ryan Friedberg, M.D., continues to develop his busy practice as a primary care sports medicine physician and was joined by **Bridget Quinn, M.D.**, a primary care sports medicine physician, who continues to develop her clinical practice and has expanded to several off site locations such as Lexington, Chelsea and Boston. She is the Director of BIDMC's Women's Orthopaedic Initiative, which is a multi-disciplinary center focused on caring for unique female musculoskeletal health needs. Dr. Quinn's particular area of interest is dance medicine, and she continues to give lectures on issues unique to female athletes and

dancers. She recently finished first place for her poster on Multiple Physeal Metatarsal Stress Fractures in a dancer at the International Association of Dance Medicine and Science meeting.

We are also pleased to welcome new clinician, **Preeti Shastri, M.D.** to the Division of Sports Medicine. She is primary care sports medicine physician. Her emphasis is on the treatment of musculoskeletal injuries caused by sports participation and exercise. She has only been here a few months and is already quite busy!

Musculoskeletal Medicine Unit

Fadi Badlissi, M.D., M.Sc. leads the Musculoskeletal Medicine Unit within the Department of Orthopaedics. Fadi is a rheumatologist and geriatrician with a joint appointment in the orthopaedic and rheumatology division. His clinical interests include rheumatic diseases in the elderly, regional pain syndromes and inflammatory arthritis. Research interests include inflammatory arthritis in the elderly, depression in rheumatoid arthritis, foot disorders and their relation to pain and function. He, and **Sharon Gates, NP**, continue to provide excellent care for non-operative musculoskeletal disorders in close collaboration with our Department members.

The Center for Advanced Orthopaedic Studies

Laboratory-based research within the Department of Orthopaedic Surgery at BIDMC is centralized at the Center for Advanced Orthopaedic Studies (CAOS) in the Research North building opposite Fenway Park. There are currently six Principal Investigators within CAOS: **Drs. Ron Alkalay, Mary Bouxsein, Christopher Evans, Ara Nazarian, Ryan Porter and Brian Snyder.** We are sad this year to announce that Dr. Christopher Evans has accepted a position at Mayo Clinic, Rochester and we be leaving BIDMC in November. It is a terrific and well-deserved opportunity for him to further his gene therapy studies, but he

will be greatly missed.

It is common knowledge that NIH funding for research has fallen dramatically in the past few years. We are thus pleased to report a number of successes.

Dr. Bouxsein was awarded NIH funding to explore possible mechanisms underlying atypical femoral fractures that have been reported in long-term bisphosphonate users. In addition, Dr. Bouxsein and **Dr. Douglas Kiel** are co-principal investigators on a newly awarded 5-year NIH grant to study the association between in vivo measurements of bone microarchitecture and risk of fractures in the Framingham Heart Study cohort.

In Rome on April 17, 2013, Dr. Bouxsein was awarded the ESCEO-IOF Herbert Fleisch Medal in honor of her work in the field of skeletal fragility. The annual award from the European Society for Clinical and Economic Aspects of Osteoporosis and Osteoarthritis (ESCEO) and the International Osteoporosis Foundation (IOF), valued at 20,000 EUR, recognizes a researcher who has made outstanding and groundbreaking achievements in basic bone science.

Dennis Anderson, Ph.D., a member of Dr. Bouxsein's lab, was recently promoted to Instructor in Orthopaedic Surgery at HMS. He was also awarded a K99/R00 Pathway to Independence Grant from the National Institute of Aging in August!

Dr. Brian Snyder is currently engaged in a 3 year Department of Defense funded study to evaluate the kinematics of the cervical spine and biomechanics of the IVD when troops are performing in extreme environments such as helicopter, fast-boat and combat conditions.

Dr. Ara Nazarian's work focuses on basic biomechanics and bioimaging of normal and pathologic cancellous and cortical bone, with emphasis on fracture prediction resultant from local and systemic skeletal pathologies. His current projects are the CT-based Structural Rigidity Analysis (CTRA) methodology, which he has worked on for the past eight years with Dr. Brian Snyder, and

the major league baseball funded study with Drs. Ramappa and DeAngelis, a Major League Baseball concerning thrower's shoulder. He also has a K99/R00 award.

Summary

In summary, there are a lot of exciting things going on at BIDMC and HCORP. The residency program is thriving and at BIDMC we contin-

ue to expand our clinical, teaching and research activities. The new world of health care certainly presents challenges, but also opportunities to provide care for the 21st century that is better than we could have imagined in the past. There is a huge focus on patient safety and preventing harm at BIDMC and we were just awarded 2013 AHA-McKesson Quest for Quality Prize for leadership in patient safety and quality issues. All of this makes coming to work each day exciting!