



**Combined Massachusetts General Hospital and Brigham and Women's Hospital
Orthopaedic Trauma Service Fellowship
Introductory Manual**

For Interested Orthopaedic Surgeons

First Edition: October 2008; M. Vrahas; M. Harris; S. Morrison

Introduction and Welcome

Thank you for your interest in the Combined Massachusetts General Hospital and Brigham and Women's Hospital Orthopaedic Trauma Fellowship Program! This booklet is intended to give you an overview of the fellowship year.

We expect that the time you spend with us will be a tremendously productive, thought-provoking, and fun experience. While a member of the Trauma team you will have the opportunity to experience a blend of trauma that is both hot and not so hot, complex and more routine. You will frequently be asked to demonstrate independent clinical judgment and will be expected to function with a degree of autonomy.

Unlike most Orthopaedic subspecialties, trauma is a team effort. To deliver quality patient care it is essential that we work together with everyone thinking, spotting problems and developing solutions. Working as a team lessens the burden for all of us, but it also means that we are as strong as our weakest link. We hope you will do your part to make our service the best in the country and that your experience with us is one you will share with future generations of Orthopaedists.

This is the first edition of this manual. We have put together the following information with the expectations it will assist you in our continuing efforts to provide outstanding patient care, give understanding about the operational details involved with your clinical responsibilities, and to provide some guidance with your clinical decision making. Please feel free to let Drs. Vrahas, Smith, or Harris know of any suggestions you may have for future editions.

Fellowship Structure

The program offers two one-year fellowships. The fellowship is divided into two 6-month blocks. Each fellow spends six months at the MGH and six months at the BWH. The fellows are credentialed as attending surgeons, and are allotted progressive responsibility under staff supervision for increasingly complex trauma cases. The fellows have trauma specialist backup at all times and all of their clinical activity is monitored daily by trauma specialists. Combined institutional specific educational conferences take place throughout the year. Both institutions are certified by the American College of Surgery as Level One Trauma Centers, and have designated orthopaedic trauma operating rooms available for acute and emergent cases. A common database (Ortho DUDE) exists for all cases performed by the orthopaedic trauma service at the two institutions.

The hospital at which you start your fellowship is considered your "primary" hospital, which means that you will be considered an employee of that hospital throughout your fellowship.

While you will practice at one hospital for six months at a time, you are encouraged to travel to the other hospital whenever there are good cases at the other hospital – i.e. pelvic and acetabular cases. You are also encouraged to attend trauma-related meetings and seminars at the other hospital whenever you are available. We encourage our fellows to stay in close contact with one another so that you can stay aware of these cases and meetings.

Faculty

During the fellowship year, you will work closely with faculty on both the Trauma and Hand & Upper Extremity Services at the MGH and BWH. Below are the faculty and their affiliations.

Trauma Service

Mark Vrahas, MD – Fellowship Director
Partners Chief of Orthopaedic Trauma
Massachusetts General Hospital
Brigham and Women's Hospital
Associate Professor of Orthopaedic Surgery

R. Malcolm Smith, M.D.
Massachusetts General Hospital Chief of Orthopaedic Trauma
Associate Professor of Orthopaedic Surgery
Partners Orthopaedic Trauma

Mitch Harris, M.D.
Brigham and Women's Hospital Chief of Orthopedic Trauma
Associate Professor of Orthopaedic Surgery
Partners Orthopaedic Trauma

David Lhowe, M.D.
Massachusetts General Hospital
Assistant Professor of Orthopaedic Surgery
Partners Orthopaedic Trauma

Hand & Upper Extremity Service

Jesse Jupiter, M.D.
Massachusetts General Hospital
Hansjorg Wyss AO Professor
Professor of Orthopedic Surgery

David Ring, M.D., PhD
Massachusetts General Hospital
Assistant Professor of Orthopaedic Surgery
Medical Director, Orthopaedic Hand Service
Director of Research, Orthopaedic Hand Service

Phil Blazar, M.D.
Brigham and Women's Hospital
Assistant Professor of Orthopaedic Surgery
Hand and Upper Extremity Service

Brandon Earp, MD
Brigham and Women's Hospital
Instructor in Orthopaedic Surgery
Hand and Upper Extremity Service

George Dyer, MD
Brigham and Women's Hospital
Instructor in Orthopaedic Surgery
Hand and Upper Extremity Service

Additionally, we strongly encourage you to take advantage of the many areas of clinical expertise available both at MGH and BWH. You are encouraged to discuss cases with other services and when appropriate assist in cases with other attendings and fellows.

Educational Program – Basic Curriculum

General Requirements: In accordance with the general competencies endorsed by the ACGME, our Fellowship Program emphasizes the following core competencies: professionalism, patient care, medical knowledge, practice-based learning, interpersonal and communication skills and system-based practices.

Professionalism: The Fellow is expected to demonstrate respect, compassion, and integrity. He/She is expected to be responsive to the needs of his/her patients and demonstrate commitment to excellence and on-going professional development. Additionally, the Fellow will be expected to demonstrate a commitment to ethical principles pertaining to provision or withholding of clinical care, confidentiality of patient information, informed consent, and business practices. The Fellow will also be expected to demonstrate sensitivity and responsiveness to patients' culture, age, gender, and disability.

Clinical Competence: The Fellowship Program has been designed to permit fellows to develop advanced technical competence in the field of orthopaedic trauma. The fellows must be able to provide patient care that is compassionate, appropriate, and effective for the treatment of health problems and the promotion of health. This will require effective communication and respectful behaviors when interacting with patients and their families. The Fellow will be responsible for making informed decisions about diagnostic and therapeutic interventions based on patient information and preferences, up-to-date scientific evidence, and clinical judgment. He/she will need to be able to develop and carry out patient management plans and to counsel and educate patients and their families.

At each hospital the fellow will function as a junior attending with graduated responsibility as the year progresses and his or her abilities advance. Throughout the year, faculty will be available for consultation and assistance as necessary. Periodic performance reviews will occur with the program director or the site director. These will be based on evaluation by the individual faculty and, separately, by the PGY5 residents.

The surgical experience: At each hospital the fellow is scheduled to be in the operating room 3.5 days per week along with an attending. Each morning the trauma services at each hospital meet to review surgeries and admissions from the previous day and to review that day's operative cases. At this morning report the staff critically reviews the previous day's cases and discusses operative strategies and logistics for the day's cases. The staff then assigns cases to the fellow and residents based on the complexity of the cases. For complex cases the fellow operates with the attending either as the surgeon or first assistant depending on the case

complexity and the fellow's ability. For less complex cases the fellow may be assigned to work with the resident either as the surgeon or as first assistant to the resident. The faculty review and evaluate all of the fellow's cases both preoperatively and post-operatively to provide constructive criticism.

Knowledge and skill sets that are specifically focused upon include but are not limited to:

- a. An understanding and appreciation of the integral role of the orthopaedist in the management of the multiply injured patient.
 1. Timing of orthopaedic procedures
 2. Magnitude of procedures: Damage control *vs.* definitive treatment
 3. Indications for early or immediate limb amputation, fasciotomy for compartment syndromes, and the appropriate clinical setting for limb salvage and reconstruction
 4. Indications and techniques of for various types of internal and external fixation devices
 5. The diagnosis and management of complications related to orthopaedic trauma
 - a. Soft tissue
 - b. Hardware related
 - c. Boney complications: nonunions, malunions, osteomyelitis
 - d. Psychological effects of trauma on the patient and family
 - e. Familiarity with recuperative and rehabilitation techniques and the utilization of physical and occupational therapy enabling the injured patient to return to (near) normal function.

The fellowship provides a busy operative experience with each fellow involved in over 350 cases either as surgeon or first assistant. By the end of the program the fellow is expected to be proficient in the management of complex pelvic and acetabular trauma, complex intra-articular fractures, the multiply-injured patient, and to be expert in the management of basic fractures.

More specifically:

- Pelvic and acetabular fractures represent the most complex of orthopaedic trauma cases. Between the two hospitals we see approximately 150 of these cases per year. An effort is made to ensure that one or both fellows are involved in all these cases.
- Both campuses have trauma surgeons who have completed fellowship training that includes the management of spinal fractures. The Fellows will be afforded the opportunity to participate in these cases, but it will not be required.

The outpatient clinics – At the MGH the fellow conducts 1.5 outpatient clinics per week to see a total of about 55 patients. The full day clinic is conducted in conjunction with a faculty clinic and the half-day clinic is conducted separately. At the BWH the fellow conducts one half-day clinic per week and sees about 20 patients and assists in faculty clinics when available. The outpatient clinics allow the fellow the chance to follow patients he or she has operated on and to see new patients and devise management plans. With these clinics the fellow has his “own patients” and is expected to deal with all patient phone calls and related paper work. The fellow will have an administrative assistant at both sites.

These arrangements are designed to accomplish three essential goals:

1. Teach the fellow how to do complex orthopaedic trauma cases.
2. Provide the fellow with an independent operative experience with back up as necessary and next day constructive criticism.
3. Allows the fellow the experience of teaching the residents.

Within each practice site the Fellow will be asked to practice cost-effective health care and resource allocation that does not compromise quality of care. He/she will need to advocate for quality patient care and assist patients in dealing with system complexities. Additionally, the faculty will emphasize the importance of knowing how to partner with health care managers and health care providers to assess, coordinate, and improve health care.

We are acutely aware of the need to train our residents. The fellows are expected to be proficient in basic fracture surgery. Thus, basic fracture cases are reserved for the residents under the supervision of the attending or the fellow (junior attending). There will be active, on-going monitoring by the faculty to ensure that the fellowship educational and surgical experience does not interfere with the educational or surgical experience of the residents.

Inpatient responsibilities: The PGY5 residents are expected to run the inpatient services. The fellow's role is as an attending on the service.

Call responsibilities: The fellow is included in the regular call schedule as an attending and takes the same amount of call as other trauma attendings. The fellow is assigned one call day per week and one weekend per month. If the fellow volunteers to cover additional uncovered days he or she receives additional pay for that day. On average the fellows cover one additional day per month. When on call, the fellow is expected to operate only on true emergency cases. Faculty backup is always available. The fellow is expected to call the Faculty for advice and assistance before taking a complex case to the OR

Research

The Trauma Service has a very active basic science and clinical research program. Fellows are expected to complete a research project during the academic year. By the end of the fellowship, you are expected to have a manuscript prepared for publication.

In order to participate in research at Partners, you must complete the on-line CITI exam, which tests your knowledge about working with human subjects. Please go to the CITI website to access and complete the test: www.citiprogram.org. This should optimally be completed shortly after your initial arrival.

Ortho DUDE – Data Utility for Documentation and Education

Since April 2002, the Partners Orthopaedic Trauma Service has been using a database application called Ortho DUDE to track all fractures, dislocations, and major soft tissue injuries and their operative treatments. To date, there are over 25,000 patients in DUDE. You will be able to mine the associated data for projects and papers.

The application – which is primarily a registry - also contains scheduling and billing functions, and a patient education component. Clinical data are entered when the patient is first seen in the

Emergency Department, at the time of definitive management, and if any complications arise. As a Fellow, you will use DUDE to code (bill) your surgical billing and your ED and Inpatient consults.

Miscellaneous

For more information about the Brigham and the Mass General, please check out our websites:

<http://www.brighamandwomens.org/orthopedics/>

<http://www.massgeneral.org/ortho/>

Past Orthopaedic Trauma Fellows

We maintain great relationships with all of our former fellows. Please feel free to contact them.

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