EXAMPLE OF STRONG APPLICATION
Includes Entries from COTA Awarded Programs

(NOTE—only blinded submissions will be accepted and distributed for COTA review)

Orthopaedic Trauma Fellowship Program

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This one year program is under the direction of --- MD and ----
Co-Director, and offers a comprehensive approach to the diagnosis, treatment and post-operative rehabilitation of adult orthopaedic trauma at ---
Medical Center and ---. The fellow will be exposed to and participate in all aspects of trauma surgery including complex acetabular and pelvic fracture surgery, as well as advanced techniques in extremity trauma.

Goals and Objectives

The goals and objectives of the orthopaedic trauma fellowship are to help advance the orthopaedic surgeon's understanding of the treatment of severely injured polytraumatized patients with significant musculoskeletal injuries. This includes how these injuries affect the overall well-being of the patient, understanding the treatment of multiply injured patients in a critical care setting; the timing and titration of necessary musculoskeletal surgery and the effects it may have on the overall well-being of the patient. In addition to further complimenting their didactic education, attempts to advance their psycho motor skill set will be made. "Fine tuning" their ability to manage complicated articular fractures of the upper and lower extremity as well as management of significant pelvic ring disruptions and acetabular fractures will be emphasized.
The goals and objectives of the fellowship will include

1. Evaluation of injured patients both isolated and polytraumatized.
2. Perform a thorough musculoskeletal exam of the polytraumatized injured patient.
3. Order appropriate studies of injured patients.
4. Determine the diagnosis of the patient.
5. Discern the principles of acute fracture management, both operative and non-operative and how these apply to each patient.

6. Communicate with other services including trauma surgery, neurosurgery, plastic surgery, to delineate the care needed to treat their musculoskeletal injuries and facilitate their best outcome.
7. To learn to appropriately diagnose and manage the musculoskeletal complications that occur in the multiply injured patient.
8. To discern the treatment plan in cases requiring surgical intervention with preoperative, intraoperative and post-operative planning.
9. To learn to appropriately manage the multi trauma patient with more severe peri-articular fractures including but not limited to articular injury to the shoulder, elbow, wrist, hip, knee and ankle as well as pelvis and acetabulum.
10. Develop a psycho motor skill set to perform difficult and invasive procedures throughout the body including the pelvis and acetabulum.
11. Learn management of common post traumatic conditions such as, limb lengthening discrepancy, recurring infection, deformity and severe post traumatic arthritis.

Summary of responsibilities

I. Orthopaedic trauma fellow

A. Clinical service

The fellow's responsibilities are to be involved in all aspects of the care in the trauma patients including preoperative, intraoperative and postoperative management. The fellow will be under the direct supervision of the orthopaedic trauma faculty. When a chief resident is involved, the orthopaedic fellow will be secondary to the chief resident in the management plan, although their treatment plan will be reviewed with the orthopaedic trauma faculty member responsible for that patient. The chief resident will run the service with the fellow acting in a support role. When the chief resident is not involved, the fellow will be expected to manage the treatment of that patient.

Assistance in Surgery

The orthopaedic trauma fellow, in conjunction with the orthopaedic chief resident on the trauma rotation, and in addition to a faculty member on the orthopaedic trauma team will be responsible for the timing and titration and planning of all the surgical procedures on each trauma patient. The fellow is expected to have read prior to all surgical procedures in order to obtain maximum educational benefit. The fellow will have unlimited textbooks available as well as pertinent articles that will support the treatment arm and further the understanding of the patient's condition and treatment modalities. Discussion of the surgical case with the attending preoperatively, intraoperatively and postoperatively will be a critical part of their education process.

Assistance in Clinic

The orthopaedic trauma fellow will be responsible in assisting the chief resident in evaluating all patients that attend the trauma clinic. They will assist in the formulation of treatment plans much to the level of an attending surgeon but all plans will be reviewed by the orthopaedic trauma faculty. Physical and radiographic examinations of

each patient will be reviewed with the attending orthopaedic surgeon staffing the clinic. Teaching junior level residents the physical and diagnostic skill sets will be part of the orthopaedic trauma fellow's responsibilities.

B. Administration

The orthopedic trauma fellow will assist the trauma attendings in the administration of the orthopedic trauma services. The attendings, particularly the director and associate director, will provide opportunity for the fellow to observe and be mentored in the organizational and administrative aspects of internal and external trauma system development.

C. Meetings

The fellow will attend the annual meeting of the Orthopaedic Trauma Association in the fall. The department of Orthopedic Surgery will subsidize travel, hotel and meeting costs.

D. Case Logs

Fellows will submit a case log to the OTA online case recording database. Only cases in which the fellow is the primary surgeon will be recorded. Multiple procedures may be recorded separately. Case logs are due August 1st of each year.

E. Evaluations

The fellowship director must conduct a confidential evaluation of the fellow on a semi-annual basis, using objective assessments of patient care, medical knowledge, and technical skills. All other faculty will evaluate the fellow mid-year.
The fellowship director must provide a final evaluation upon completion of the program. The evaluations will be part of the fellow's permanent record and will be accessible for review by the fellow as well as the OTA Fellowship Committee or Sanctions Committee. The fellow will evaluate individual faculty members on an annual basis.

II. Faculty

A. Full-Time

Fellowship trained orthopaedic trauma surgeons take responsibility for all of the on-call responsibilities seven days a week, 52 weeks a year. The X has X faculty and 5 full-time fellowship trained orthopaedic trauma surgeons at the hospitals described above.

B. Part-Time

The X also has X part-time fellowship trained orthopaedic trauma surgeons that contribute to call coverage and case volume: these blinded provide assistance with volume and coverage at the level 1 hospital, and see patients at other local hospitals as well for both trauma and general orthopaedics.

III. Support Staff

A. Administrative

There is an Administrative Assistant for the Fellowship program.

B. Research

Both clinical and basic science research are a major component of the blinded. The day to day function of the research department at blinded, grant applications and IRB submission is managed by our Research Manager, overseen by both the Director of the Fellowship program and the Director of the blinded, co-directors of blinded Research. Two research nurses and an research assistant work with the research manager in the day to day activities of blinded Research, data acquisition, patient follow-up, consenting of patients, and chart and radiograph retrieval, and trauma data base implementation.

Clinical Sites/Institutions

Hospital #1

Our fellowship training is conducted at an acute care hospital serving as the only Level-1 Trauma Center on the blinded of our state for both adult and paediatric trauma patients. It is serviced by five helicopters, a spinal cord injury unit, burn unit, and specialized rehabilitation hospital. The hospital sees between 200 – 250 trauma admissions per month.

Hospital #2

This facility is a 500-bed Level-2 Trauma Center for both adult and pediatric trauma. It is serviced by three helicopters and sees approximately 100 trauma admissions per month.

Operational Structure

The fellowship is directed by a fellowship trained orthopaedic trauma surgeon. The Director is board certified in orthopaedic surgery, an active member of both the American Academy of Orthopaedic Surgeons and Orthopaedic Trauma Association, serves on the blinded Committee for the OTA, and the blinded Committee for the AAOS. The Director is also an Associate Clinical Professor of Orthopaedic Surgery with the local University.

The fellowship is 12 months in duration, beginning August 1st and ending July 31st. Three orthopaedic trauma fellows are trained annually, each spending four months on three separate rotations. The trauma service is structured so that each rotation and site is staffed by at least one attending each day of the week. Each rotation provides for operative care four days per week, and outpatient clinic exposure one day per week.

Hospital #1 Rotation

The rotation at Hospital #1 spans four months. Fellows will operate four days per week and spend one day in clinic with the attending faculty member. The fellow will see a high volume of upper and lower extremity trauma, complex peri-articular fractures, and pelvic / acetabular surgery, complex lower extremity trauma focusing on the hind-foot and distal tibia, as well osteomyelitis and non-union / mal-union surgery. Additionally, collaboration with the trauma-critical care service is provided to educate the fellow on the multi-disciplinary approach to care of the multiply injured patient. Soft tissue reconstructive experience is provided by collaboration with the Plastic Surgical Service.

Hospital #2 Rotation

The rotation at Hospital #2 spans four months. Fellows will operate here four days per week. The fellow will be exposed to upper and lower extremity trauma, pelvic and acetabular trauma with both surgeons, in addition to peri-acetabular osteotomies and hip and knee arthroplasty for post-traumatic arthritis. Outpatient trauma clinic is one day per week.

Research Rotation

The research provides an opportunity for the fellow to pursue both clinical and basic science research endeavors, gathering and analyzing data, manuscript preparation and publication. While on this rotation, clinical duties are still a responsibility. The two fellows at Hospital #1 rotate weeks, one clinical and one research. While not a formally required rotation, the fellow has the opportunity to operate with an affiliated colleague in the neighboring city for peri-acetabular osteotomies and pelvic / acetabular fractures.

Clinical expectations

I. Call

The trauma fellows take call in a 1:3 rotation. Fellows do not take primary call as one of the trauma attendings is on call every night as primary. Each of the two sites has its own

complement of residents covering the ED call and the fellow serves as the interface between the resident and attending.

II. Resident involvement

The fellow is expected to be actively involved with resident education. Foremost, it is the responsibility of the fellow and attending to ensure that appropriate division of caseload is achieved. It is expected that the X fellow will guide, in concert with the attending, residents (based on their level of training and personal skill level/knowledge) through mid-level operations that include but are not limited to diaphyseal fracture plating or nailing, as well as reduction and fixation of ankle and hip fractures. Residents come with the understanding that while they are welcome to participate in the cases, complex peri-articular fractures, complex mal-unions and non-unions, and pelvic / acetabular cases are reserved primarily for the fellow. Fellows are also expected to involve the resident in monthly M/M rounds and journal club, and participate in their education through fracture conference and didactic teaching.

III. Operative Exposure

Fellows will operate four days per week, supervised by the attending of record for that particular day.

IV. Pre-operative planning

Fellows are taught and expected to perform pre-operative planning prior to becoming involved with any operative procedure. Depending on the particular characteristics of the individual case, this may take the form of simply demonstrating knowledge of the case and its specific nuances relative to the operation at hand, or formal illustration and written explanation of the planned procedure in great detail. Pre-operative planning forces the fellows to engrain within themselves the habit of ensuring that all necessary equipment is available, an operative strategy with back- up is formulated, and post-operative care is delineated to help expedite care in a safe and effective manner.

V. Operative cases

The fellow is exposed to a high volume of acute and sub- acute trauma involving the upper and lower extremities, pelvis and acetabulum, and spine, in both isolated trauma and multiply injured patients. A detailed breakdown of the fracture types operated by the blinded is shown in the attached fellows' case logs. Additionally, a high volume of osteomyelitis, non-union and mal- union surgery is provided. The fellow is expected to perform between 750 and 1000 operative cases in the course of the fellowship year. The fellow will be exposed to all of the currently available techniques for fracture fixation (medullary nailing and internal fixation) and non-union / mal-union repair (ring fixators and distraction osteosynthesis).

VI. On-Call Rotations

Fellows are expected to participate in the on-call roster. Fellows will not be on-call by themselves as an attending as there is always one fellowship trained attending on call

each night. The call rotation will be 1:3 home call with an orthopaedic resident who is in-house.

VII. In-patient Rounds
Fellows are expected to round on the in-patients currently admitted to the trauma service daily, with the trauma team consisting of an attending, senior and junior resident, medical student and physician extender.

VIII. Out-patient Clinic
Each rotation has one day per week of outpatient trauma clinic. An attending, fellow, senior resident, medical assistant, radiology technician and cast technician staff the clinic. The clinic is for one full day, and attendance is mandatory.

Research Requirements and Support

I. Research Projects
Graduation from the X fellowship and receipt of a diploma is contingent upon the completion of ONE research project with submission of a publishable manuscript. Projects may encompass basic science or biomechanical topics, or involve prospective or retrospective clinical data. Fellows receive training in research methods including: human subjects research protections (CITI - Collaborative Institutional Training Initiative); development of a research question; study design; protocol writing; data management; data analysis; and manuscript preparation.

II. Support Staff

A. Research Coordinator

The Research department is managed by a masters- prepared nurse Research Manager certified in clinical research. Grant writing and Institutional Review Board submission and approval is obtained as part of the day to day function of the Research Coordinator. Additionally, monitoring of patient enrollment, complications, and coordination with principal investigators through local and multi-center randomized trials is performed.

B. Statistician

A Ph.D. level statistician affiliated with blinded and is available for consultation on study design and assists with statistical analysis of data.

C. Biomechanics Laboratory and Engineers

X is dedicated to basic science, biomechanical / clinical research, continuing medical education, and product development in the field of orthopaedic surgery. There is a lecture theatre, conference room, and surgical skills lab and biomechanics laboratory. It is staffed by multiple technicians and RN's, including a PhD biomechanical engineer. The fellows and residents have full access to the technicians and PhD at this facility to assist with grant application, research design, biomechanical testing, computer modeling, and data analysis.

Educational curriculum and schedule

6:30 AM to 7:15 AM – Morning Fracture Conference (Daily)
This conference is cased based discussion of the cases treated in the past 24 hours. The on call orthopaedic trauma attending for the past 24 hours moderates this session. The fellows are involved through question and answers concerning the cases. This session is focused on acute decision making for management issues of the presented cases. It provides the fellow with a gauge of where he or she is with regards to knowledge and ability to synthesize this information efficiently. Assessment of performance is done on an individual basis with the fellow and their assigned attending traumatologist.

7:00 AM to 8:00 AM – Orthopaedic Trauma Service Cadaver Lab (3rd and 4th Tuesday monthly).
This session is designed to teach surgical approaches and pertinent anatomy to the residents. These sessions are moderated by the orthopaedic trauma attending faculty. The fellows are responsible for acting as table instructors for the residents. This session provides the fellows with a review of pertinent anatomy as well as learning the skills of teaching in small groups.

5:00 PM to 7:00 PM – Weekly Orthopaedic Trauma Service Conference (Wednesday)
This session is an in-depth cases based discussion of all the cases managed for the past week. The residents present the cases. The attending orthopaedic trauma surgeons using a question and answer format involve the fellows in the discussion of the cases. This session allows for a complete analysis of each presented case including controversies in management. All residents, fellows and orthopaedic traumalogists attend the session. An orthopaedic radiologist and physiatrist whose major interests are in the rehabilitation of trauma and amputees also attend the conference. The reconstructive orthopaedic trauma service is responsible for the presentation of a complex reconstructive case with a pertinent literature review.

7:00 AM to 8:00 AM – Orthopaedic Trauma Service Morbidity and Mortality Conference. (3rd Thursday every two months). This session reviews the mortalities and complication of the orthopaedic trauma service. The chief resident on the orthopaedic trauma service presents the cases. Case discussion is led by the orthopaedic trauma surgeon responsible for the departmental quality improvement program. Discussion is focused on root cause analysis and solutions for the complications are suggested. This session provides the fellow with an opportunity to interact in the M and M process as an attending and prepares them for leading their M&M session when in practice.

7:00 AM to 8:00 AM – “Coffee with the Fellows”, Ortho Trauma Fellows Weekly X-Ray/Didactic Conference (1st, 2nd, alternating 3rd and 5th Thursday monthly)
Fellows meet with each Faculty on a rotating basis. The educational format varies from didactic lectures to case presentations by the either faculty or fellows. Location will be determined each week by the faculty mentor).