The Institution Manual (http://z.umn.edu/gmeim) is designed to be an umbrella policy manual. Some programs may have policies that are more rigid than the Institution Manual in which case the program policy will be followed. Should a policy in a Program Manual conflict with the Institution Manual, the Institution Manual will take precedence. Please refer to the The Institution Manual (http://z.umn.edu/gmeim) for University of Minnesota Graduate Medical Education specific policies.

Subsequent updates of this manual will be found at online and on the Orthopaedic Surgery Residency Google site.
INTRODUCTION

Welcome to the University of Minnesota Medical School Department of Orthopaedic Surgery Residency Program. Our residency program is truly outstanding. Our department has a long tradition of prioritizing education through exceptional teaching, superb patient care and commitment to advancing orthopaedics though innovation and research.

We pride ourselves in offering a comprehensive experience that will provide the resident an exceptional basis for a career as a general orthopaedist, orthopaedic subspecialist or academic orthopaedic surgeon.

The information contained in this program policy manual pertains to all residents and fellows in the department’s programs except as otherwise identified in the program policy manual or fellowship addendum.

Denis R. Clohisy, MD
Professor
Department Chair

Ann E. Van Heest, MD
Professor
Residency Program Director

Betsy Wehrwein
Program Associate, Education Coordinator
Phone: (612) 273-8043
Fax: (612) 273-8099
wehrw005@umn.edu

Erik Solberg
Education Lead
Phone: (612) 273-1313
Fax: (612) 273-8099
esolberg@umn.edu
**Department Mission Statement**
First in outcomes and patient experience through scholarship, leadership and education.

**Program Mission Statement**
It is the objective of the graduate program in orthopaedic surgery to provide a comprehensive educational experience in the management of diseases and injuries of the musculoskeletal system for the physician seeking accreditation as an orthopaedic surgeon. It is the goal of this program to train ethical, competent orthopaedic surgeons as leaders with a commitment to life-long learning and advancing the profession with service to all people.

**Program Overview**
The program includes education in collaboration with six institutions, with a faculty of over 60 regionally and nationally known orthopaedic surgeons. These sites include

- **University of Minnesota Medical Center, Fairview (UMH)**
  - Riverside Campus (West Bank)
  - University Campus (East Bank)
- **Gillette Children’s Specialty Healthcare (GCSH)**
- **Hennepin County Medical Center (HCMC)**
- **Regions Hospital (RGHP)**
- **TRIA Orthopaedic Center (TRIA)**
- **Veterans Affairs Medical Center (VAMC)**

In compliance with ABOS requirements, the PGY-1 year comprises of six months of structured education on non-orthopaedic rotations, including surgery, emergency medicine, surgical intensive care, neurological surgery, anesthesiology and six months of orthopaedics. Rotations during the PGY-2 and PGY-3 years provide a comprehensive background working with faculty to provide a solid base in general orthopaedics, adult reconstruction, pediatric orthopaedics, traumatology, and exposure in sports. During the PGY-4 year, specialty rotations in, foot and ankle, hand, joints, musculoskeletal tumor, spine and sports are the focus of the curriculum; residents also revisit pediatrics with an emphasis on trauma. The PGY-5 year completes the program and is spent with chief rotations at the Veterans Affairs Medical Center, Hennepin County Medical Center and Regions Hospital, as well as additional experience in sports medicine and career development.
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ABOS Rules and Procedures for Residency Education Part I and Part II Examinations

ABOS Resident Skill Assessment

ACGME Program Requirements for Graduate Medical Education in Orthopaedic Surgery

FAQs Orthopaedic Surgery, ACGME

ACGME Resident Case Log System for Operative Log Reporting

ACGME Orthopaedic Surgery Milestones

AAMC Compact Between Resident Physicians and Their Teachers

Ortho Bullets
SECTION 1 – STUDENT SERVICES

Campus Mail

The Department of Orthopaedic Surgery is located on the West Bank or Riverside Campus of the University of Minnesota.

Mailboxes are assigned in the department to all residents and are located at 2512 South 7th Street, R200. These boxes are NOT LOCKED. Important communication concerning the program will be placed in these boxes. It is expected that PGY-2 through PGY-5 residents will check their boxes at least weekly when coming to the department office. Important communication for PGY-1 through PGY-5 levels will also be emailed to residents, using x.500 email addresses.

Outgoing mail should be stamped and placed in the US Mail bin in the department’s mailroom.

The University of Minnesota Twin Cities does not have a central mailing address. All University mail must be postmarked with the appropriate college or department and building address. The US postal address for this program is

Department of Orthopaedic Surgery
2450 Riverside Ave. South
Room 200
Minneapolis, MN 55454

If a package is to be shipped by special delivery, the address for the street building is

2512 South 7th Street
Room 200
Minneapolis, MN 55454

The Campus mail address is

Orthopaedic Surgery
F282/2A West-B
8393C (Campus Delivery Code)
2450 Riverside Ave
Minneapolis, MN 55454

The General Number for the Orthopaedic Surgery Department is (612) 273-1177.

Email and Internet Access

The University of Minnesota assigns every student an internet ID. This ID also serves as the beginning of an assigned email address. The University of Minnesota email address will be used by the program as an important communication tool. Management of such email is the responsibility of the resident.
Residents should check to make sure they are in the University of Minnesota system. This can be done by going to the U of MN-Twin Cities home page at http://twin-cities.umn.edu/. Click on Search icon. Under search for people, type in the name and click on search. If a resident does not know his/her ID or is not registered, access to the system will be denied. Please contact Betsy Wehrwein at (612) 273-8043 or wehrw005@umn.edu for further assistance.

The Office of Technology at the University of Minnesota http://www.oit.umn.edu can assist residents with email and internet access. The 1-Help Technology Helpline can be reached by calling (612) 301-4357 or through email at help@umn.edu. Regular Helpline hours can be found at http://www.oit.umn.edu.

**HIPAA**

Please see https://www.healthprivacy.umn.edu/training.

**Text Messages**

At no time is any PHI to be sent in text message format. PHI includes patient name, Medical Record Number, date of birth, patient telephone number, etc. If a faculty member asks a resident to text them with any PHI, the response should be a text that says "The information you want has been sent to your UMN email account." UMN email is considered secure and HIPAA compliant. Text messages are not.

**Library Services**

Throughout the program, residents are expected to develop their study, clinical and research skills. The University of Minnesota Library has created a website for evidence-based resources for orthopaedic surgeons, available at https://www.lib.umn.edu/libdata/page.phtml?page_id=2054.

Caitlin Bakker, MLIS is the Liaison Librarian assigned to work with the medical school. Contact information for her is at https://hsl.lib.umn.edu/about/staff/caitlin-bakker.

Global Help is another online resource, where Henry’s *Extensile Exposure* and other publications are available at http://global-help.org/products/extensile_exposure.

Residents will have access to the Journal of the American Academy of Orthopaedic Surgeons (JAAOS, aka “The Yellow Journal”) upon registration by the department with AAOS. Resident will also receive a subscription to *The Journal of Bone and Joint Surgery* (JBJS), dependent on annual subscription policies determined by JBJS. All copies of JBJS and other educational journals are available online through University of Minnesota Library Services. Further Library and Academic Resources can be found on the Orthopaedic Surgery Residency Moodle site.
Pagers
Residents will be assigned a pager and pager number upon entering the program through the Department of Orthopaedic Surgery. These are Fairview maintained pagers that will remain with residents for the duration of their training and should be used for all rotations.

For malfunctioning pagers residents must go to either the UMH main Information Desks at 500 Harvard Street SE or University Children’s Hospital 5th floor Surgery front desk for assistance; both locations are available 24-hours. New batteries can be obtained from the Department of Orthopaedic Surgery stockroom, located behind the reception desk at R200.

*When on duty and paged, residents will answer their pages within the time required by the site.*

Photo Id Badges

Site-Specific ID Badges
All other rotation sites will require identification badges. Details will be given during specific rotation site orientations.

University Card (U Card)
Please refer to the [The Institution Manual](http://z.umn.edu/gmeim). Information on obtaining a U Card can be found at [https://ucard.umn.edu/](https://ucard.umn.edu/).

SAC
SAC is the Surgical Administrative Center that supports the Graduate Medical Education’s programs for the Departments of Surgery, Orthopaedic Surgery, Urologic Surgery, and Otolaryngology. Their website [https://hub.med.umn.edu/administrative-services/administrative-centers/sac](https://hub.med.umn.edu/administrative-services/administrative-centers/sac) outlines services provided and contacts. Please consider the following contacts.

**Chrissy Reding**  
Education Manager  
612-624-7149  
creding@umn.edu

**Alex Lunde**  
Human Resources Partner  
Phone: 612-624-5640  
lunde341@umn.edu

**Kirk Skogen**  
Payroll Manager  
Phone: 612-625-3954  
k-skog@umn.edu

Tuition and Fees
Only trainees enrolled in Graduate School pay tuition and fees.
SECTION 2 – BENEFITS

Book and Education Fund
A book and education fund has been established to provide each resident with $1,000 per year for PGY-1 through PGY-4 years, to be used for various education expenses. Any rollover money not used can be spent during the PGY-5 year. This money can be used for the following purchases.
- Books
- Journal subscriptions
- Travel\(^1\)
- USMLE Step 3 exam
- PGY-5 registration for boards

Questions about this account can be directed to Erik Solberg at esolberg@umn.edu or 612-273-1313. A University of Minnesota expense worksheet (form: um 1612) must be submitted for reimbursement.

Educational Activities, Program Department-Sponsored
All residents on orthopaedic surgery rotations are to be released from regular clinical duties for the following educational activities:
- Friday Grand Rounds and Core Curriculum
- Arthroscopy Labs at TRIA (scheduled for specific PGY-level groups): eight sessions for the program are scheduled throughout the year
- Gross Anatomy Dissection Sessions (Mandatory for PGY-2s)
- Assigned skills labs as determined by the program

\(^1\) PGY-4 travel to the AAOS annual meeting is paid for by the department out of a separate account. Fellowship interviews cannot be reimbursed. Job interview travel is not reimbursable. Travel to educational courses related to the program is reimbursable. Grant money may be available for some travel.
Specific Resident Release Days have been established for local educational opportunities.  
- Pediatric/Geriatric Trauma Conference  
- Minnesota Memorial Pediatric Conference  
- Orthopaedic In-Training Examination  
- HCMC/Excelen Orthopaedic & Trauma Seminar  
- Minnesota Orthopaedic Society Annual Meeting  
- Visiting Hand Professor and Hand Skills Lab  
- TRIA Sports Medicine and Orthopaedic Conference  
- Residents Visiting Graduation Professor/Gustilo Scientific Research Day

Individual sites may also schedule labs or other didactic sessions in which residents will be released.

**PGY-1 Year Department-Sponsored Time**

PGY-1 residents will be released for skills labs as part of Objectives Structured Assessment of Technical Skills (OSATS). These are mandatory and are incorporated into semi-annual resident reviews. The USMLE Step 3 Exams is also department-sponsored time away. PGY-1 residents will be released to participate in a week of Surgical Skills Week training; this is part of the ABOS training requirement. Finally, PGY-1 residents are given the opportunity to attend the AO Trauma Course-Basic Principles of Fracture Management; all hours for this course are to be recorded as department sponsored “off-site conference” and will count towards duty/work hours.

**PGY-2 Year Department-Sponsored Time**

PGY-2 residents are required to attend eight Gross Anatomy Dissection Sessions, scheduled in the spring.

**PGY-4 Year Department-Sponsored Time**

The department sponsors a trip to the AAOS Annual Meeting in the PGY-4 year. All hours are to be recorded as department sponsored “off-site conference” and will count towards duty hours. The first five days away for fellowship interviews will be considered department-sponsored; subsequent days away will count as personal time off (PTO).

**PGY-5 Year Department-Sponsored Time**

Two days of department sponsored time away have been allocated during the PGY-5 year so residents have the option to attend a Program Director approved educational course. Residents who attend an educational course will be required to present at a combined Grand Rounds to

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2 It is the program’s expectation that residents would choose the event which would enhance their life-long learning in the most professional manner: participation in EITHER the educational conference OR the patient care activities at their hospital if needed….It is the expectation of this program that residents will demonstrate their professionalism and their commitment life-long learning by participation in the educational conferences. Registration deadlines will be communicated to all residents. Timely notification for RSVP is expected with attendance of the full conference if registered.

3 ALL Residents (including all PGY-1 residents) are released from rotations from Friday before the OITE @ 6PM until the Saturday of the OITE @ 3:30PM.

4 PGY-4 travel to the AAOS annual meeting is paid for by the department out of a separate account.
summarize their learnings from the course. All hours are to be recorded as department sponsored “off-site conference” and will count towards duty/work hours.

Notification of any other special events that residents may be excused from will come from the program director.

**Fellowship Interviews**
The first five (5) days for fellowship interviews will be department sponsored time away. Hours are to be logged as “Vacation” (Time Away-Does NOT Extend Short Term) in New-Innovations. Remaining days off for fellowship interviews will be PTO. Days partially worked are not counted as PTO. Exceptions to this policy are to be directed to the Program Director. All days off must be tracked for ABOS compliance⁵.

All residents applying for fellowships will be assigned a mentor by the Program Director to more effectively advise in managing fellowship interviews.

The program will not reimburse fellowship travel through the resident book and education fund.

**Holidays**
Residents are released from their rotation on holidays depending on the holiday schedule at specific rotation sites. Residents may be released for holiday time at the discretion of the site or rotation director.

**Insurance**
Please refer to the [https://www.med.umn.edu/residents-fellows/current-residents-fellows/employment-related-information](https://www.med.umn.edu/residents-fellows/current-residents-fellows/employment-related-information) for insurance availability. Insurance benefits available are

- Health and Dental
- Disability, both short- and long-term
- Life, basic, voluntary and additional

The Office of Student Health Benefits is at [https://shb.umn.edu/health-plans/rfi](https://shb.umn.edu/health-plans/rfi). This website provides information on coordination of benefits, enrollment, and what to do when there is a change in family or work status.

**Insurance - Professional Liability**
Proof of Professional Liability coverage for residents can be obtained at [http://www.finsys.umn.edu/riskmgmt/certins.html](http://www.finsys.umn.edu/riskmgmt/certins.html) or contact

Pam Ubel  
Office of Risk Management  
612-624-5884  
ORM@umn.edu

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For general insurance information and claims history to health plans or hospitals who are credentialing current or former residents, please contact

Tara Atkisson
Office of the General Counsel
612-625-9995
tara.atkisson@ogc.umn.edu

Lab Coats and Laundry Service
Scrub suits are appropriate for designated areas, e.g. Operating Room, postoperative care. In all other areas, a white coat must be worn. Lab coats must be kept clean in all clinical settings.

Residents will be provided with three white lab coats at the beginning of the program. Residents are expected to have their coats laundered through the department on a regular basis. Lab coats are to be exchanged in R-228 in the department office. Any problems with lab coats or laundry service should be brought to the attention of Betsy Wehrwein.

Leave
Please see The Institution Manual (http://z.umn.edu/gmeim) for various leave policies and Personal Time Off further in this program manual. Department policy requires written application for leave by the resident and signed approval from the site/rotation director(s) and program director. Any leave exceeding 15 days must also have the approval of the department chair. All documentation must be kept in resident’s file. No more than six weeks total of time away from duties is allowed during any academic year. Greater than six weeks total away per year from duties will require repeating of the academic year.6

Bereavement Leave
The program follows the Institutional Policy for Bereavement Leave. A resident shall be granted, upon request to the program director, up to 5 days off to attend the funeral of an immediate family member. PTO time must be used. Immediate family shall include spouse, cohabiters, registered same sex domestic partners, children, stepchildren, parents, parents of spouse, and the stepparents, grandparents, guardian, grandchildren, brothers, sisters, or wards of the trainee.

Family Medical Leave Act (FMLA)
The program follows the Institutional Policy for the FMLA. Where the need for leave is foreseeable, such as for an expected birth or adoption or foster care placement or planned medical treatment, 30 days’ notice is to be provided to the site director(s) and program director before the leave is to begin. If 30 days’ notice is not feasible, then notice must be given as soon as practicable. The resident advises the program as soon as practicable if the dates of a scheduled leave change, are extended, or become known. FMLA laws allows one up to 12 weeks of job

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protected leave per fiscal year; however greater than six weeks away from duties during the academic year will require repeating of the academic year to meet board requirements.  

Holidays
Residents are released from their rotation on holidays depending on the holiday schedule at specific rotation sites. Residents may be released for holiday time at the discretion of the site or rotation director. Holidays that occur during a leave of absence run concurrent with the leave and are not in addition to the leave.

Jury Duty / Witness Duty
The program follows the Institutional Policy for Jury Duty/Witness Duty. Upon written request to the program director, leave is provided to a resident who is called to serve on a jury or subpoenaed to testify before a court concerning the resident’s involvement in the program.

Medical Leave
The program follows the Institutional Policy for Medical Leave. The resident must give notice, in writing, of intent to use medical leave to their program director at least four (4) weeks in advance, except under unusual circumstances. A trainee shall be granted, upon request to the program director, a leave of absence for their serious illness/injury that requires an absence of greater than 14 days. The program will do whatever it can to support the resident in taking the necessary time. No more than six weeks total of time away from duties is allowed during any academic year. Greater than six weeks total per year away from duties will require repeating of the academic year.  

Military Leave
The program follows the Institutional Policy for Military Leave. The resident must notify the program as soon as they are called to active military duty. It is incumbent upon the Program Director to notify both the individual RRC and the Board of this change in status. Leave is also available for Immediate Family Members of Military Personnel Injured or Killed in Active Service, and to Attend Military Ceremonies.

Parental (Maternity, Paternity) Leave
The program follows the Institutional Policy for Parental Leave for birth mother, birth father, registered same sex domestic partner of someone giving birth, or for adoption. The resident as defined above must give notice, in writing, of intent to use parental leave and other leaves used in conjunction with parental leave to their program director at least four (4) weeks in advance, except under unusual circumstances. The resident shall be granted upon request, up to six weeks maternity leave for birth (two paid), or two weeks paid leave for either paternity leave or adoption. The program allows up to two weeks of Paternity leave to be taken consecutively without interruption, or may be allocated in a way that best serves the resident; this choice is at the resident’s discretion; time away requests for this purpose beyond the immediate date of birth/adoption must be made in advance as required by the site affected. After using paid leave

and personal time off (PTO), any additional leave will be without pay. Short term disability may be available.

**Personal Leave**
The program follows the Institutional Policy for Personal Leave.

**Professional and Academic Leave**
Department policy allows for residents to attend department-sponsored educational activities that are of benefit to both the resident and department. This time away is not considered leave *per se*, and is not deducted from personal time off (PTO) allocation. Residents are expected to count this time as part of their regular ACGME work hours, using the “off-site conference” assignment. A *Time Away Form* must be submitted and approved. Such activities can include the following.

- Travel to present resident research, contingent on manuscript submission, a resident is allowed up to three days away for presenting at a conference. Either poster or podium presentations are eligible under this policy, but only one trip is department-sponsored per manuscript.
- Serving as a resident representative for the program or department, upon approval of the Program Director. This includes, but is not limited to the AOA Resident Leadership Forum, AAOS Resident Representative, serving on an ACGME committee.
- Attending a pre-approved educational conference, such as the AOTrauma Course-Basic Principles of Fracture Management or two days for a PGY-5 educational course.

PGY-4 residents are allocated up to five days away for fellowship interviews. These hours are counted as time away, but do not count against the 15 personal days allocated per year. A resident may also take PTO for non-department-sponsored academic travel. See *Time Away Form* and *Personal Time Off* for further details.

**Vacation/Sick Leave**
The program follows the Institutional Policy for Vacation and Sick Leave. Vacation and sick leave is allocated through Personal Time Off (PTO). Fifteen personal days are allocated per academic year for each resident. These are full days when a resident is not working from Midnight to Midnight, as defined by the ACGME. For instance, if a resident takes some time off during the day to attend a medical, dental or behavioral/mental health appointment, but works part of the day, this is not considered one of the personal days. If a resident attends a meeting, but rounds in the morning and/or evening, this also does not count toward the 15 personal days. Appointments or meetings where the resident needs to attend to during regularly scheduled hours should be reported to staff as soon as possible to allow for as little disturbance as necessary. See *Personal Time Off*. 


Effect of Leave Policy for Satisfying Completion of Program
According to ABOS policy for requirements for Board certification, “one year of credit must include at least 46 weeks of full-time orthopaedic education. Vacation or leave time may not be accumulated to reduce the five-year requirement.”

Meal Tickets/Food Services
Residents on duty must have access to adequate and appropriate food services 24 hours a day at all institutions.

Gillette
Each resident is provided $100.00 per month for meals. A bar code sticker is added to the ID badge/parking card for use in obtaining meals. The bar code sticker is obtained from the Education Coordinator/Orthopaedic Department at the time of orientation. Funds are automatically added monthly to the bar code.

Hennepin County Medical Center
The HCMC picture ID badge serves as the meal ticket. Badges can be obtained from the hospital Safety & Security Department, Lower Level, Red Building, Monday - Friday, 7:30 am to 3:30 pm. Resident must present a valid driver's license to obtain an ID badge. An ID badge deposit is $12.00. The resident is to return the ID badge at end of each rotation. HCMC provides $75.00 per month for meals.

Regions Hospital
A meal allotment amount has been determined based on department’s (Residency Program) annual budget and anticipated “on call” coverage for the service they are covering. The amount is to be used for “on call meals only” its purpose is not to eat three meals per day. The resident is responsible for the use of the allocated funds. The department that is receiving the resident is not responsible for providing meal funds. The allocation is provided by the residents (primary residency) program.

This amount is expected to last the entire academic calendar year ending June 30. In the event, the amount is exhausted, “no additional funds will be provided”.

TRIA Orthopaedic Center
TRIA requires no in-house call. caféTRIA has breakfast and lunch available for purchase Monday – Friday, 7:30 AM - 2:30 PM. The TRIA reStore also has food, snack items and beverages for sale as well. The reStore is open from 8:00 AM – 4:30 PM Monday - Friday. Cost of food/snacks is the responsibility of the resident.

University of Minnesota Medical Center
Residents may receive complimentary meals, up to a designated dollar amount, when special scheduling requires their presence beyond the normal duty hours. Residents will be issued

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swipe cards at the beginning of their rotation to use as meal cards. The swipe card will be valid for the length of the rotation and is subject to audit. Complimentary meals are available in the hospital cafeterias only. Residents will be billed for meals eaten in the Doctors Lounge at Riverside.

Veterans Affairs Medical Center
Food is readily available for residents at a cafeteria and coffee shop. Cost of food/snacks is the responsibility of the resident.

Parking
Gillette
Residents have parking available on Level E or above of the West Ramp. Parking card/ID badge will be obtained from the Education Coordinator at time of orientation; this badge will provide access to the West Ramp.

Hennepin County Medical Center
Residents on rotation are to park in the Parkside Professional Center ramp, entering on 8th Street at Chicago Avenue. A parking card can be obtained from the hospital Safety & Security Department, Lower Level, Red Building, between 7:30 am and 3:30 pm, with a $50 deposit. Parking cards are to be returned at end of each rotation.

Regions Hospital
Regions Hospital provides parking to residents at no charge. The resident lot is card-controlled and located in the East Ramp.

TRIA Orthopaedic Center
Parking is free of charge at TRIA and is permitted in any space that is not labeled "PATIENT PARKING" on the ground in within the parking space. The best place to look for a spot to park is on the second and third floor of the parking ramp.

University of Minnesota Medical Center
Parking access is provided for each resident assigned to the East Bank (University) and Riverside (University West) campuses.

PGY-1 and PGY-5 residents will have parking cards available that are rotation-specific. PGY-4 residents will have cards assigned to them throughout the academic year. These are issued through the Department of Orthopaedic Surgery for use on the East and West Banks as needed.

PGY-1 and PGY-5 residents completing their rotations are responsible for passing their Fairview parking card on to the next resident on that rotation. Parking on the Riverside campus is available 24/7 in the PURPLE ramp. PGY-1 Anesthesia and SICU parking cards are programmed to work in the Patient/Visitor Ramp on the University Campus 24/7. Other parking cards are programmed to work on the University Campus (East Bank) in the Patient/Visitor Ramp located on Delaware and Harvard Streets after hours, on weekends and holidays. After hours is between 4:30 pm and 5:30 am. Weekends and holidays are 8:00 am to 8:00 am. Free
parking validation tickets are available for other times in the Fairview Patient/Visitor Ramp and are available from Betsy Wehrwein.

A monitored number of free parking validation tickets are distributed to all other residents as needed for Grand Rounds/Core Curriculum dates and for other administrative or research purposes while at the University site.

Veterans Affairs Medical Center
There is free parking at the VAMC. However, they must park in the employee parking lots. These include #1,5,8, 9,10, 11 and 49. Do not park in the handicap parking or other patient parking. Other information is available through New-Innovations Home page..

Paychecks
Residents are encouraged to use the direct-deposit system, as paychecks have the potential of being lost or delayed in the mail. Paychecks are either mailed or credited to bank accounts through the direct-deposit system. Direct-deposit information, along with information on pay dates can be accessed at http://hrss.umn.edu. Questions regarding payroll can be directed to Kirk Skogen in SAC at (612) 625-3954 or k-skog@umn.edu.

Personal Time Off
Please see LINKS for Time Away forms. The following number of personal days has been allocated.

<table>
<thead>
<tr>
<th>Days/year</th>
<th>PGY-1</th>
<th>PGY-2</th>
<th>PGY-3</th>
<th>PGY-4</th>
<th>PGY-5</th>
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<tr>
<td>PGY-1 Year Time Away</td>
<td>15</td>
<td>15</td>
<td>15</td>
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</tr>
</tbody>
</table>

PGY-1 Year Time Away
(Personal Vacation time must be in one week blocks Monday-Sunday on non-ortho rotations; any holiday occurring during the week runs concurrent with the week and is not considered to extend the week. Time away requests on Orthopaedic rotations may be spaced out. A total of three weeks are allowed, one in each Educational Content Area as established by the ABOS requirements for PGY-1 year training. One week blocks must be taken for rotations in Structured Education in Surgery (Plastics, TACS, SICU) and Structured Education in Emergency Medicine, Neurological Surgery, Anesthesiology. All requests should use the program’s Time Away Form for G1 year and submitted electronically to orthoed@umn.edu and Betsy Wehrwein at wehrw005@umn.edu. Detail instructions are found on the form.

PGY-2 through PGY-5 Time Away
Personal time off includes vacation, job and fellowship interviews (see below), and non-department sponsored courses (e.g. review courses). It is based on a five-day work week, with call coverage on adjacent weekends to be arranged by the resident. Unused personal time off cannot be rolled over into next academic year.
A Time Away MUST be sent electronically to both orthoed@umn.edu and the site coordinator. Gillette - Deb Berny: dberny@gilletechildrens.com Regions - Michelle Stepka: michelle.m.stepka@healthpartners.com University - Betsy Wehrwein: wehrw005@umn.edu HCMC - Claudia Miller: claudia.miller@hcmed.org TRIA - Ali Hemphill: alicia.hemphill@tria.com University - Betsy Wehrwein: wehrw005@umn.edu VA - Roarke Engelhardt: roarke.engelhardt@va.gov

Time Away forms must be signed by the affected site/rotation with the copy emailed to orthoed@umn.edu or faxed to (612) 273-8099.

No service or rotation can deny a request provided that no more than one resident is away from the site and patient care responsibility and call coverage are properly arranged. Any exception to this will require written approval by the program director.

No more than one week of personal time off may be taken at a time, except under extreme circumstances and must be pre-authorized by the program director.

Personal time off requests will be accommodated on a first-come, first-served basis.

Personal time off may not be taken when the resident’s absence would require another resident to take call more than every third night in a hospital.

Department-sponsored time away for the first five days a resident is away from the rotation will be granted due to fellowship interviews. Subsequent days taken will be resident personal time off.

No time off is granted during the last week of the academic year.

The department program is responsible for monitoring all time off, regardless of site or rotation. Sites may have their own particular requirements as well. Permission granted from a particular site or rotation must be directed to the program education coordinator via orthoed@umn.edu to monitor compliance. Any days that exceed the requirements will be reported immediately.

Gillette
Personal Time Away forms are signed by Deborah Quanbeck, MD

Hennepin County Medical Center
1. Orthopaedic Surgery rotation forms are signed by Thomas Varecka, MD. No resident is released the first week or the last week of a rotation.
2. Emergency Medicine rotation forms are signed by Marc Martel, MD.

Regions Hospital
1. Orthopaedic Surgery rotation forms are submitted to Michelle Stepka for approval. Once approved, time away is put on the calendar and paperwork is sent to the University of Minnesota for compliance purposes. Time away requests need to be submitted six weeks in advance of when a resident wants to be gone.
2. Plastic Surgery rotation forms are approved through Valery Rousseau. Requests should be submitted three months beforehand.
3. TACS rotation forms are signed through the University of Minnesota Surgery Department.
4. Neurosurgery rotation forms are signed through Joanne Niemi.
University of Minnesota Medical Center / TRIA Orthopaedic Center

1. For Orthopaedic Surgery rotations, a Time Away form is submitted to the program education coordinator. All faculty affected by absence must be notified. All requests must be made at least 6 weeks in advance of dates to be gone. Fellowship interviews are the only exception and it is the resident’s responsibility to notify both attendings and the site coordinator as soon as possible regarding interview dates.

2. Anesthesia rotation time away forms are signed by Mojca Konia, MD.

3. SICU rotation time away forms are signed through the University of Minnesota Department of Surgery.

Veterans Affairs Medical Center

Orthopaedic Surgery rotation Time Away forms are signed by either Patrick Yoon, MD or V Franklin Sechriest II, MD. No resident is released the first week or the last week of a rotation.

Stipends

Resident stipends are determined each year. Please see http://www.med.umn.edu/residents-fellows/current-residents-fellows/stipends-benefits

<table>
<thead>
<tr>
<th>Level:</th>
<th>Step 1</th>
<th>Step 2</th>
<th>Step 3</th>
<th>Step 4</th>
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<td>$2,197.96</td>
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Travel

Fellowship Interview Travel

Travel for Fellowship interviews is not reimbursable through the Resident Book and Education Fund. Please see Time Away form for details concerning time allocated for fellowship interviews.

International Travel

While enrolled as a resident, international travel is encouraged, but must be taken as Personal Time Away. Planning for international travel must include registering through the University of Minnesota’s Student International Travel Registry. Please contact Erik Solberg for further information.

PGY-4 Year Travel to AAOS

Residents in their PGY-4 year are provided a department-sponsored allotment to travel to the annual AAOS meeting. This amount is set annually by the Program Director. Any amount that exceeds the allotment may be reimbursed through the resident’s individual book and education account.
Research Travel
Contingent on manuscript submission, a resident is allowed up to three (3) days of department sponsored time away for presenting at a conference. Either poster or podium presentations are eligible under this policy, but only one trip is department-sponsored per manuscript. Time at the conference will be reported as department sponsored “off-site conference” and will count towards duty hours. A *Time Away* form must be used and signed by the Program Director. Other resident research travel may be taken, but a resident must take Personal Time Off.

**Worker’s Compensation**
Please refer to The Institution Manual ([http://z.umn.edu/gmeim](http://z.umn.edu/gmeim)). There are no program specific worker’s compensation policies and procedures.

**Needle Stick/Blood Borne Pathogen Exposure**
Please refer to the Needle Sticks and Blood Borne Pathogen Exposure Management Process at The Institution Manual ([http://z.umn.edu/gmeim](http://z.umn.edu/gmeim)).
SECTION 3 – INSTITUTION RESPONSIBILITIES
Please see The Institution Manual (http://z.umn.edu/gmeim).

SECTION 4 – DISCIPLINARY AND GRIEVANCE PROCEDURES
The department follows The Institution Manual (http://z.umn.edu/gmeim).
Trainees can be disciplined for both academic and non-academic reasons. Forms of discipline include, but are not limited to: warning, required compliance, remedial work, probation, suspension, contract non-renewal and dismissal. There are separate grounds and procedures for each type of discipline. Detailed information can be found at http://z.umn.edu/gmeimdiscipline.

SECTION 5 – GENERAL POLICIES AND PROCEDURES
Please refer to The Institution Manual (http://z.umn.edu/gmeim).

Program Curriculum
The program includes education and research in collaboration with six main institutions, with a faculty of over 60 regionally and nationally known orthopaedic surgeons. Rotation sites include

- **University of Minnesota Health (UMH), includes**
  - Riverside Campus (West Bank)
  - University Campus (East Bank)
  - Fairview Maple Grove Medical Center
- **Gillette Children’s Specialty Healthcare (GCSH) and Children’s Hospitals of Minnesota**
- **Hennepin County Medical Center (HCMC)**
- **Regions Hospital (RGHP)**
- **TRIA Orthopaedic Center (TRIA)**
- **Veterans Affairs Medical Center (VAMC)**

The PGY-1 year comprises of structured education in multisystem trauma, plastic surgery, surgical intensive care, emergency medicine, neurological surgery, anesthesiology and orthopaedics. Rotations during the PGY-2 and PGY-3 years provide a comprehensive background working with faculty to provide a solid base in general orthopaedics, adult reconstruction, pediatric orthopaedics and traumatology, along with an introduction to sports. During the PGY-4 year, specialty rotations in foot and ankle, hand, musculoskeletal tumor, joint restoration, pediatrics and spine are the focus of the curriculum. The PGY-5 year completes the program and is spent with chief rotations at the Veterans Affairs Medical Center, Hennepin County Medical Center and Regions Hospital, as well as additional experience in sports and career development.
<table>
<thead>
<tr>
<th>PGY-1</th>
<th>PGY-2</th>
<th>PGY-3</th>
<th>PGY-4</th>
<th>PGY-5</th>
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<tr>
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<td>Trauma-HCMC</td>
<td>Foot &amp; Ankle-TRIA/HCMC/UMH</td>
<td>Adult-Mpls VA Chief</td>
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<tr>
<td>Ortho-Regions Hospital</td>
<td>Pediatric Orthopaedic-Gillette</td>
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<td>Hand-GOLD-TRIA/UMH</td>
<td>Adult-Mpls VA Asst Chief</td>
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<tr>
<td>Ortho-UMH Sports</td>
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<td></td>
<td>Hand-MAROON-UMH/TRIA</td>
<td>Gen/Trauma-Regions</td>
</tr>
<tr>
<td>Ortho-UMH Spine</td>
<td>Trauma/General-Regions</td>
<td>Adult-Mpls VA</td>
<td>Pediatric Orthopaedic-Gillette/Children’s</td>
<td>Sports-TRIA</td>
</tr>
<tr>
<td>Emergency Medicine-HCMC</td>
<td></td>
<td></td>
<td>Spine-UMH</td>
<td>Sports-UMH</td>
</tr>
<tr>
<td>Multi-Level Trauma-Regions</td>
<td>Pediatric Orthopaedic-Gillette</td>
<td>Trauma-HCMC</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Plastic Surgery-Regions</td>
<td></td>
<td></td>
<td>Sports -UMH</td>
<td>Career/Sports-UMH</td>
</tr>
<tr>
<td>Neurological Surgery-Regions</td>
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<td></td>
<td>Tumor-UMH</td>
<td>Trauma-HCMC Purple</td>
</tr>
<tr>
<td>SICU-UMH</td>
<td>Trauma/General-Regions</td>
<td>Adult-Mpls VA</td>
<td>Tumor/Joint-UMH</td>
<td>Trauma-HCMC White</td>
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<tr>
<td>Anesthesia-UMH</td>
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<td></td>
<td>Tumor/Joint-UMH</td>
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</tr>
<tr>
<td>3 Weeks Vacation</td>
<td>3 Weeks Vacation</td>
<td>3 Weeks Vacation</td>
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</table>

3 Weeks Vacation
**Residency Program Goals and Objectives**

It is the objective of the graduate program in orthopaedic surgery to provide a comprehensive educational experience in the management of diseases and injuries of the musculoskeletal system for the physician seeking accreditation as an orthopaedic surgeon. It is the goal of this program to provide educational and research opportunities for those candidates with an interest in an academic career in orthopaedic surgery and provide the candidate interested in the practice of orthopaedic surgery a balanced educational experience.

The following are goals and objectives pertaining to specific rotations for the program.

**PGY-1 Anesthesiology Rotation**
Rotation Director: Erik Sogaard, MD  
Contact Info: soga0005@umn.edu, Cell 612.246.8970  
(reviewed, updated 9/12/17)

**Introduction:** PGY-1 residents learn to help provide anesthesia in a variety of general operating room cases including: general, orthopedic, ENT, urologic, and gynecologic surgery.

**GOALS**
The goals of this rotation are:
1. To be competent at evaluating and providing anesthesia care for patients undergoing general operating room procedures such as general, orthopedic, gynecologic, and urologic surgery.
2. To obtain a level of skill providing care for these basic operations to help the resident adequately perform when they are assigned to other subspecialty surgical rotations.

**OBJECTIVES**
Following completion of the rotation, the resident should be able to competently perform the following patient care activities:
- Perform and record a preoperative assessment.
- Formulate and discuss an anesthetic management plan for a general surgical patient.
- Check-out and trouble-shoot the anesthesia delivery system.
- Understand the rationale for selecting drugs used during a surgical anesthetic. Understand the general doses and anesthetic agents needed to anesthetize a general surgical patient.
- Be able to skillfully place a peripheral intravenous catheter.
- Effectively mask ventilate a standard adult patient.
- Be able to safely perform standard tracheal intubation in an average adult patient.
- Properly manage the maintenance of general anesthesia during surgery in an average adult patient.
- Properly manage the emergence and recovery of an adult patient undergoing general anesthesia, including postoperative pain management.
- Describe the techniques of regional anesthesia, surgical anesthesia and postoperative pain management.

**Medical Knowledge**
The resident will be expected to describe basic anesthesia knowledge at a textbook level and basic concepts of anesthesia for cases they have managed. In addition, residents are expected to do the following to increase his or her medical knowledge during their general operating room rotation:
- Read and demonstrate understanding of Basics of Anesthesia (Stoelting and Miller).
- Participate in the general anesthesia rotation orientation and lecture series.
- Read and discuss the literature for issues involving individual patients they care for.
- Participate in the difficult airway and other department sponsored workshops.
• Read other texts as recommended in the “Residents Reading List”.

**Practice-based Learning and Improvement**
The resident will be expected to demonstrate life-long practice based learning and improvement with the following activities:
• Rapidly review the literature, including the use of electronic media, for anticipated difficult cases to which they are assigned to provide anesthesia for.

**Interpersonal and Communication Skills**
The resident will be expected to do the following to further their interpersonal and communication skills.
• Competently and compassionately discuss the anesthetic plan and risks with patients and their families.
• Interact with nursing and surgical personnel to facilitate safe and efficient care in the operating room.
• Learn to communicate with and calm patients undergoing surgery under local or regional anesthesia.
• Competently discuss and present cases to the faculty and other residents.

**Professionalism**
The resident will be expected to act responsibly and with integrity to patients, nurses, fellow residents, and health care providers throughout the rotation. In addition the resident is expected to:
• Show sensitivity and responsiveness to patients’ culture, age, gender, and disabilities.
• Have a commitment to ethical principles including the confidentiality of patient information and informed consent.

**Systems-based Practice**
The resident should demonstrate an awareness of and responsiveness to the needs of the large health care system as it relates to patient care. The resident should:
• Interact and participate in hospital initiatives to improve quality and efficiency in the operating room.
• Discuss systems-based problems as they pertain to patient care at the weekly morbidity and mortality conference.

Suggested Textbooks:
*Basics of Anesthesia, Miller & Stoelting, 5th Ed.*
*Miller, 6th Edition or Clinical Anesthesia, Barash & Cullen*
*Anesthesia and Co-existing Disease, 5th Ed.*
*Anesthesia Uptake and Action by Ed Eger II*
*Pharmacology & Physiology in Anesthetic Practice, Stoelting*

**PGY-1 Emergency Medicine Rotation**
Rotation Director: Stephen Dunlop, MD

**Goals:**
• Develop familiarity with common general orthopedic disorders.
• Develop relevant history and physical exam skills.
• Develop procedural skills relevant to orthopedics, including but not limited to splinting, casting, fracture and dislocation reduction and compartment pressure measurement.
• Learn indications for consultation and surgical intervention in patients with orthopedic injuries.

**Objectives:**

**Patient Care**
• Demonstrate appropriate history taking skills for all patients presenting to the Orthopedic Emergency Department.
• Demonstrate the ability, based on the history acquired, to do an immediate assessment and initial stabilization, followed by a complete directed examination.
• Combine the knowledge defined in the objectives below with the history and physical examination, to develop an appropriate differential diagnosis for all presentations.

**Practice-Based Learning and Improvement**
• To develop a personal program of learning related to the requirements of the emergency medicine residency.
• To develop methods of analyzing the resident’s own practice to improve quality of health care provided.
• To develop skills in the use of evidence from scientific studies to alter the resident’s practice of medicine, with the goal of improving the health care provided.

**Interpersonal and Communication Skills**
• To develop a physician-patient relationship model that creates a therapeutic relationship with patients.
• To develop listening skills that will facilitate communication with patients, their families, and other members of the health care.
• To further develop skills a working within a health care team with the goal of providing excellent patient care.

**Professionalism**
• To develop a physician-patient relationship model that creates a therapeutic relationship with patients.
• To develop listening skills that will facilitate communication with patients, their families, and other members of the health care.
• To further develop skills a working within a health care team with the goal of providing excellent patient care.

**Systems-Based Practice**
• To develop an understanding of the interaction of the practice of emergency medicine with that of the larger health care system as a whole.
• To develop knowledge of the practice and delivery of health care in different systems and environments
• To develop cost-effective strategies in the practice of emergency medicine.
• To develop an attitude of being an advocate for the patient within the health care system.
• To develop a willingness to become involved in a partnership to improve health care and system performance within the emergency department and hospital health care system.

**Medical Knowledge**
• Develop ability to correctly perform a history and physical in patients with musculoskeletal disorders.
• Demonstrate ability to correctly order and interpret radiographs in patients with orthopedic injuries.
• Demonstrate understanding of the anatomy, mechanism of injury, presentations, complications, and management and prognosis of common musculoskeletal injuries.
• Demonstrate knowledge of standard orthopedic nomenclature.
• Demonstrate knowledge of appropriate aftercare and rehabilitation of orthopedic injuries.
• Demonstrate knowledge of the differences in pediatric and adult skeletal anatomy and indicate how those differences are manifest in clinical and radiographic presentations.
• Demonstrate ability to apply orthopedic devices, including compressive dressings, splints, and immobilizers.
• Demonstrate skill in performance of the following procedures: fracture/dislocation immobilization and reduction, arthrocentesis, and extensor tendon repair.
• Demonstrate ability to prioritize and manage the treatment of orthopedic injuries in multiple trauma patients.
• Describe the presentation of patients with inflammatory and infectious disorders and demonstrate ability to diagnose and treat them.
• Demonstrate ability to diagnose and treat soft tissue foreign bodies.
• Describe the presentations, complications, diagnosis, management, and prognosis of patients with human and animal bites.
• Describe the presentations, complications, diagnosis, and management of compartment syndromes.
• Demonstrate ability to provide regional anesthesia, including hematoma blocks, Bier blocks, and radial,
ulnar, median, axillary, posterior tibial, and sural nerve blocks.

- Discuss the dosages, indications, contraindications, and side effects of standard analgesic and sedative agents used to treat patients with acute orthopedic trauma, and demonstrate skills in their use.
- Discuss the dosages, indications, contraindications, side effects, and relative potency of standard oral analgesics used in treatment of patients with musculoskeletal disorders.
- Discuss the differential diagnosis, historical features, and physical and examination findings of patients with low back pain.
- Demonstrate ability to recognize and treat soft tissue infections involving muscle, fascia, and tendons.
- Describe diagnosis and treatment of over-use syndrome.
- Describe how to evaluate and preserve amputated limb parts.
- Demonstrate knowledge of joint injuries, evaluation, and grading of joint injuries, treatment of joint injuries, and prognosis.
- Discuss evaluation and treatment of soft tissue injuries, such as strains, penetrating soft tissue injuries, crush injuries, and high pressure injection injuries.

**Description of Clinical Experience:**
- Residents will be assigned 8 to 12-hour shifts in the emergency department orthopedics treatment area.
- Residents will be primary care givers to non-critical patients presenting with primary orthopedic problems.
- resident will perform the initial history and physical examination, obtain ancillary tests, such as radiographs, and formulate treatment plans with the aid of the senior resident and faculty physician.
- Residents will also provide orthopedic assistance to critical patients in the stabilization room as needed.

**Evaluation Process:**
An evaluation form will be distributed to all emergency medicine faculty for each resident at the completion of the rotation. These forms will be collated and summarized by the rotation director, John McGill, MD. Specific areas such as patient care, clinical judgment, physical examination, medical knowledge, practice-based learning and improvement, interpersonal and communication skills, case presentations, record keeping, professionalism, systems-based practice, and overall clinical competence will be numerically assessed and recorded.

**Feedback:**
- Written evaluations will be placed into a permanent resident file located in the residency coordinator/program director office. The file will be locked and confidential. Residents are able to view their individual file anytime they desire. Residents are encouraged to view their rotation evaluations as soon as possible.
- Residents will have formal feedback by the residency or assistant residency director at least 2x/year. The written evaluation from this rotation will be specifically reviewed.
- All written evaluations will be entered into a computer database for summary analysis and reports, and longitudinal tracking of progress.
- More frequent evaluation and feedback will be individualized as needed.

**PGY-1 Neurosurgery Rotation**
Rotation Director: Fotis Souslian, MD

**Medical Knowledge and Patient Care**
By the end of the PGY-1 rotation the following levels of knowledge and technical competency are expected.

The resident should have a three dimensional concept of the spine and spinal cord anatomy and should be adequate in the assessment of the spine and spinal cord disorders. This would include knowledge of the pathophysiology and presentation of cervical and lumbar disc herniation, cervical and lumbar stenosis, cervical spine fractures, and a basic knowledge of the radicular, plexus and peripheral nerve injuries, disorders, and entrapment syndromes. The resident should have working knowledge of a median and ulnar nerve neurolysis, and the ability to expose and remove a lumbar disc and decompress the lumbar spine.
The resident should participate in the preoperative diagnosis and nonsurgical management and postoperative care of acute subarachnoid hemorrhage, transient ischemic attacks, and stroke. The resident should have a basic angiographic anatomy of the cervical and intracranial circulation.

With regard to cranial base neurosurgery the resident should possess a basic knowledge of the anatomy of the VII, VIII, and lower cranial nerves and be able to clinically evaluate a patient with an acoustic neuroma.

With regard to pediatric Neurosurgery, the resident should have a basic knowledge of normal and abnormal embryology of the brain and spinal cord including spina bifida and hydrocephalus with increased intracranial pressure. The resident should understand cerebrospinal fluid dynamics and physiology and have familiarity with shunt complications. The resident should understand the pathophysiology of intraventricular hemorrhages in the neonate and a working knowledge of the pathophysiology and diagnosis and recognition of skull fractures, hematomas, and late complications of trauma, spinal cord injuries, and peripheral nerve injuries, particularly to the brachial plexus. The resident should also be comfortable with pediatric, as well as adult, critical care and intensive care management. The resident should be comfortable assisting in the placing a ventriculostomy or intracranial pressure monitor and performing a straightforward ventriculoperitoneal shunt with attending supervision. The resident should have working knowledge of a stereotactic brain biopsy and placing burr holes for evacuation of subdural hematomas and hygromas.

**Practice-Based Learning**
The ability to continuously learn from and improve one’s practice is an important part of maintaining competence and sustaining continuing intellectual interest and growth as a surgeon. Many of the daily activities of residency are, in fact, informal exercises in practice-based learning. During the course of this rotation, the resident is expected to

- locate, appraise and assimilate evidence from scientific studies related to patients’ health issues;
- obtain and use information about the patient population and the larger population from which patients are drawn;
- apply knowledge of study designs and statistical methods to the appraisal of clinical studies;
- use information technology to manage information, access on-line medical information and support the resident’s own education;
- critically evaluate literature

**Interpersonal and Communication Skills**
The resident is expected to

- be able to create and sustain a therapeutic and ethically sound relationship with patients and their families;
- be able to effectively use listening skills;
- be able to effectively provide information via various methods;
- be able to work effectively with others as a member or leader of a health care team;
- provide necessary reporting to more senior residents, fellows and attending staff to ensure good patient care;
- respond to patient phone calls and communication from allied health professionals.

**Professionalism**
The resident is expected to

- maintain the strictest confidence in any and all interactions dealing with all patients
- demonstrates compassion and empathy for those being evaluated
- demonstrates respect, compassion and integrity in response to the needs of patients and their families
- demonstrates ethical principles pertaining to patient confidentiality issues
- demonstrates sensitivity to the culture, age, gender and disabilities of patients
- promptly recognizes and acknowledges complications that arise
- maintain adequate documentation and timely completion of medical records
- complete teaching and rotation evaluations
For PGY1 Residents, the VA rotation serves as an introduction to the treatment of former
military service men and women with a broad array of acute and chronic musculoskeletal
conditions of the extremities and spine. This rotation also serves as an introduction to largest
integrated healthcare system in the country, The Veterans Health Administration. PGY1
residents function as integral member of a surgical care team, participating in patient evaluations
and examinations, assisting with surgical procedures, and consulting with more senior team
members and faculty during decision-making for treatment and follow-up care planning. PGY1’s
are also responsible for daily rounds on inpatients and communication of patient care
information to senior residents and faculty.

Medical Knowledge
Residents must demonstrate knowledge about established and evolving biomedical, clinical, and cognate (e.g.
epidemiological and social-behavioral) sciences and the application of this knowledge to patient care. Residents are
expected to:
- Demonstrate an investigatory and analytic thinking approach to clinical situations.
- Know and apply the basic and clinically supportive sciences which are appropriate to their discipline.

Specific PGY 1 rotation goals related to this competency
- Expand knowledge of orthopaedic conditions and principles of care.
- Demonstrate basic preoperative and postoperative patient evaluation and assessment skills
- Gain knowledge of appropriate laboratory and imaging studies to recommend for the common clinical
  conditions encountered
- Gain understanding of necessity of consultation with other specialties
- Gain knowledge of the effect of comorbidities on treatment decisions
- Demonstrate understanding of the pharmacology of medications prescribed
- Provide a Grand Rounds presentation rotation on a topic chosen by staff, demonstrating use of current
  literature and explaining current concepts or technology.

Patient Care
Residents must be able to provide patient care that is compassionate, appropriate, and effective for the treatment of
health problems and the promotion of health. Residents are expected to:
- Communicate effectively and demonstrate caring and respectful behaviors when interacting with patients
  and their families.
- Gather essential and accurate information about their patients.
- Make informed decisions about diagnostic and therapeutic interventions based on patient information and
  preferences, up-to-date scientific evidence, and clinical judgment.
- Develop and carry out patient management plans.
- Counsel and educate patients and their families.
- Use information technology to support patient care decisions and patient education.
- Work with health care professionals, including those from other disciplines, to provide patient-focused
  care.

Specific PGY 1 rotation goals related to this competency
- Patient evaluation in outpatient clinic and urgent care settings
- Recognition of impact of medical comorbidities on treatment decisions
- Effective inpatient management of common postoperative orthopaedic and medical issues following
  general orthopaedic procedures (e.g. THA, TKA, ORIF of hip fractures; Lumbar spine surgery, shoulder
  surgery, and foot/ankle surgery
• Ability to diagnose common postoperative complications on the basis of history, examination, imaging, and laboratory findings/results
• Interpretation of routine radiographic views
• Casting and splinting techniques. Appropriate selection and application of orthoses (braces, casts, immobilizers)
• Closed reduction of fractures
• Injection/aspiration of large (i.e. knee, shoulder, elbow) and small (i.e. CMC) joints
• Appropriate traction choice and implementation
• 1st or 2nd assist in general ortho cases (e.g. ORIF of simple fracture patterns, hip/knee arthroplasty, hardware removal, irrigation and debridement of open wounds, suturing & stapling techniques
• Postoperative management of ambulatory surgical patients as well as surgical inpatients

Practice-Based Learning and Improvement
Residents must be able to investigate and evaluate their patient care practices, appraise and assimilate scientific evidence, and improve their patient care practices. Residents are expected to:
• Analyze practice experience and perform practice-based improvement activities using a systematic methodology.
• Locate, appraise, and assimilate evidence from scientific studies related to their patients’ health problems.
• Obtain and use information about their own population of patients and the larger population from which their patients are drawn.
• Use information technology to manage information, access on-line medical information; and support their own education.
• Facilitate the learning of students and other health care professionals.

Specific PGY 1 rotation goals related to this competency
• Participate actively in weekly Journal Club, demonstrating the ability to critically evaluate orthopaedic studies.
• Demonstrate understanding of differing level of evidence, different outcome measurement tools, and use of statistical methods.
• Participate actively in weekly case-based presentations at Grand Rounds

System-Based Practice
Residents must demonstrate an awareness of and responsiveness to the larger context and system of health care and the ability to effectively call on system resources to provide care that is of optimal value. Residents are expected to:
• Understand how their patient care and other professional practices affect other health care professionals, the health care organization, and the larger society and how these elements of the system affect their own practice.
• Know how types of medical practice and delivery systems differ from one another, including methods of controlling health care costs and allocating resources.
• Practice cost-effective health care and resource allocation that does not compromise quality of care.
• Advocate for quality patient care and assist patients in dealing with system complexities.
• Maintain strict confidence in all interactions dealing with patients

Specific PGY 1 rotation goals related to this competency
• Assess, coordinate and improve the care of patients following joint arthroplasty with PT, OT, and Social Services
• Interact with other services in a professional and timely manner when performing inpatient consultation

Professionalism
Residents must demonstrate a commitment to carrying out professional responsibilities, adherence to ethical principles, and sensitivity to a diverse patient population. Residents are expected to:
• Demonstrate respect, compassion, and integrity; a responsiveness to the needs of patients and society that supersedes self-interest; accountability to patients, society, and the profession; and a commitment to excellence and on-going professional development.
• Demonstrate a commitment to ethical principles pertaining to provision or withholding of clinical care, confidentiality of patient information, informed consent, and business practices.
• Demonstrate sensitivity and responsiveness to patients’ culture, age, gender, and disabilities.

Specific PGY 1 rotation goals related to this competency

• Maintain excellent documentation and timely completion of medical records
• Demonstrate compassion and empathy for the elderly and cognitively challenged
• Maintain patient confidentiality
• Ask for help when needed. Seek and accept feedback

Interpersonal and Communication Skills

Residents must be able to demonstrate interpersonal and communication skills that result in effective information exchange and teaming with patients, their patients families, and professional associates. Residents are expected to:

• Create and sustain a therapeutic and ethically sound relationship with patients.
• Use effective listening skills and elicit and provide information using effective nonverbal, explanatory, questioning, and writing skills.
• Work effectively with others as a member or leader of a health care team or other professional group.

Specific PGY 1 rotation goals related to this competency

• Show and explain multiple ways to improve communication with patients.
• Demonstrate ability to work well with a team; provide necessary reporting to more senior residents and staff
• Provide timely, legible, thorough, succinct medical record documentation
• Interface with peers and co-workers in a professional and respectful manner

PGY-1 Orthopaedic Surgery Rotation - Regions/UMH

Rotation Directors: Sarah Anderson, MD (Regions), Christian Ogilvie, MD (UMH)

Medical Knowledge

Residents must demonstrate knowledge about established and evolving biomedical, clinical, and cognate (e.g. epidemiological and social-behavioral) sciences and the application of this knowledge to patient care. Residents are expected to:

• Demonstrate an investigatory and analytic thinking approach to clinical situations.
• Know and apply the basic and clinically supportive sciences which are appropriate to their discipline.

Specific rotation goals related to this competency

• Present a Grand Rounds or morning conference presentation every rotation on a topic chosen by staff, demonstrating use of current literature and explaining current concepts or technology.
• Demonstrate basic preoperative and postoperative patient evaluation and assessment skills
• Possess a basic understanding of the anatomy underlying common surgical approaches
• Possess knowledge of appropriate imaging studies to recommend for the common clinical conditions encountered

Patient Care

Residents must be able to provide patient care that is compassionate, appropriate, and effective for the treatment of health problems and the promotion of health. Residents are expected to:

• Communicate effectively and demonstrate caring and respectful behaviors when interacting with patients and their families.
• Gather essential and accurate information about their patients.
• Make informed decisions about diagnostic and therapeutic interventions based on patient information and preferences, up-to-date scientific evidence, and clinical judgment.
• Develop and carry out patient management plans.
• Counsel and educate patients and their families.
• Use information technology to support patient care decisions and patient education.
• Work with health care professionals, including those from other disciplines, to provide patient-focused care.

Specific rotation goals related to this competency
• Be able to manage the common postoperative orthopaedic and medical issues following THA, TKA, hip fracture, spine surgery, shoulder surgery, and foot and ankle surgery
• Be able to diagnose common postoperative complications on the basis of history, examination, and laboratory findings

Practice-Based Learning and Improvement
Residents must be able to investigate and evaluate their patient care practices, appraise and assimilate scientific evidence, and improve their patient care practices. Residents are expected to:
• Analyze practice experience and perform practice-based improvement activities using a systematic methodology.
• Locate, appraise, and assimilate evidence from scientific studies related to their patients’ health problems.
• Obtain and use information about their own population of patients and the larger population from which their patients are drawn.
• Use information technology to manage information, access on-line medical information; and support their own education.
• Facilitate the learning of students and other health care professionals.

Specific rotation goals related to this competency
• Participate actively in weekly Journal Club, demonstrating the ability to critically evaluate orthopaedic studies
• Participate actively in weekly case-based presentations at Grand Rounds and morning conference

System-Based Practice
Residents must demonstrate an awareness of and responsiveness to the larger context and system of health care and the ability to effectively call on system resources to provide care that is of optimal value. Residents are expected to:
• Understand how their patient care and other professional practices affect other health care professionals, the health care organization, and the larger society and how these elements of the system affect their own practice.
• Know how types of medical practice and delivery systems differ from one another, including methods of controlling health care costs and allocating resources.
• Practice cost-effective health care and resource allocation that does not compromise quality of care.
• Advocate for quality patient care and assist patients in dealing with system complexities.
• Maintain strict confidence in all interactions dealing with patients

Specific rotation goals related to this competency
• Assess, coordinate and improve the care of patients following spine, joint arthroplasty with PT, OT, and Social Services
• Interact with other services in a professional and timely manner when performing inpatient consultation

Professionalism
Residents must demonstrate a commitment to carrying out professional responsibilities, adherence to ethical principles, and sensitivity to a diverse patient population. Residents are expected to:
• Demonstrate respect, compassion, and integrity; a responsiveness to the needs of patients and society that supersedes self-interest; accountability to patients, society, and the profession; and a commitment to excellence and on-going professional development.
• Demonstrate a commitment to ethical principles pertaining to provision or withholding of clinical care, confidentiality of patient information, informed consent, and business practices.
• Demonstrate sensitivity and responsiveness to patients’ culture, age, gender, and disabilities.

Specific rotation goals related to this competency
• Maintain excellent documentation and timely completion of medical records
- Demonstrate compassion and empathy for the elderly and cognitively challenged

**Interpersonal and Communication Skills**
Residents must be able to demonstrate interpersonal and communication skills that result in effective information exchange and teaming with patients, their patients families, and professional associates. Residents are expected to:
- Create and sustain a therapeutic and ethically sound relationship with patients.
- Use effective listening skills and elicit and provide information using effective nonverbal, explanatory, questioning, and writing skills.
- Work effectively with others as a member or leader of a health care team or other professional group.

**Specific rotation goals related to this competency**
- Show and explain four ways to communicate better with patients.
- Demonstrate ability to work well with a team; provide necessary reporting to more senior residents and staff

**PGY-1 Plastic Surgery Rotation**
Rotation Director: Ashish Mahajan, MD

**Patient Care**
**Manual Dexterity & Care Plans**
Be able to manage
- Wound care and debridement
- Advanced suture technique
- Ability to evaluate complex wounds
- Basic examination of the hand
- Apply splints or casts for common hand injuries

Perform operative procedures
Wound repair:
- Intermediate and complex
- Split-thickness skin graft
- Full-thickness skin graft
- Excision of skin tumors
- Drainage of hand infections
- Repair of fingertip injuries
Closed and open reduction of hand fractures

**Medical Knowledge**
Understand the principles of wound healing and wound care
Understand the principles of grafts and flaps
Understand the “reconstructive ladder”
Recognize common skin lesions
Understand the basic embryology underlying common congenital anomalies
Understand aesthetic surgery principles

**Practice-Based Learning and Improvement**
Analyze personal strengths and weakness.
Accept constructive criticism.
Utilize scientific literature in patient management questions.
Apply principles of biostatistics, study design, and epidemiology to surgical problems.
Apply the concepts of “best practice” and “evidence-based medicine.”
Utilize technology and medical informatics in patient management.

**Interpersonal Communication Skills**
Create ethical and appropriate patient relationships.
Develop effective listening skills, including observing nonverbal cues and using explanatory questioning. Develop effective, complete, and legible note writing skills. Learn to give effective medical presentations to other providers, on rounds, at institutional conferences, and at local/national meetings.

**Professionalism**
Demonstrate respect, compassion, integrity and honesty. Demonstrate patient care that supercedes personal self interest. Demonstrate personal responsibility for patient problems. Understand and utilize privacy policies, informed consent, business and medical ethics. Understand and follow institutional behavior policies (i.e. Sexual harassment, duty hours, dress code, etc.).

**System-Based Practice**
Understand how patient care affects other health care providers. Learn role of consultant. Understand the continuity between clinic and hospital based care. Understand the role the community hospital and private practice in the healthcare system. Practice cost-effective and appropriate preoperative evaluation and postoperative follow up. Understand resource allocation issues.

**PGY-1 Surgical Intensive Care Rotation**
Rotation Director: Jeffrey Chipman, MD

**Medical Knowledge**
By the end of the rotation residents should know:
- The clinical appearance of shock
- Examples of distributive, cardiogenic, neurogenic, obstructive, and hypovolemic shock
- How to determine oxygen delivery (DO2)
- What an intensivist does
- The clinical and laboratory indicators of acute respiratory failure
- Basic ventilator modes (CMV, SIMV, PC, PS)
- The distinction between the systemic inflammatory response syndrome SIRS), bacteremia, and sepsis.
- SIRS criteria
- The physiologic response that defines sepsis
- Risks and benefits of blood transfusion
- Current opinions of “transfusion triggers"
- Biochemical indicators of renal failure
- The meaning of DNR/DNI and comfort care
- Indications for tracheostomy
- Risks and benefits of tracheostomy

**Patient Care**
By the end of the rotation PGY-1 residents should be able to perform:
- A history and physical exam to identify the shock state
- Write and initiate orders to treat the shock state and achieve resuscitative end-points including: intravenous fluid rates and boluses, DVT & ulcer prophylaxis, blood transfusions
- Recognize the need for antibiotics
- Recognize the need for vasoactive Agents
- Order basic ventilator settings (tidal volume, respiratory rate, mode, and PEEP)
- Interpret blood gases and recognize acute and compensated, respiratory and metabolic acid base disorders
- Recognize SIRS and when it becomes sepsis
- Resuscitate from sepsis (see objectives for Shock)
- Order proper blood products
- Recognize the signs and symptoms of pain, anxiety or other discomfort at end-of-life
Recognize the landmarks both bronchoscopically and externally for a tracheostomy location

**Practice-Based Learning and Improvement**
By the end of the rotation residents should be able to:
- Recognize his/her limitations
- Utilize available resources to answer questions regarding critical illness and patient care issues

**Interpersonal Communication Skills**
By the end of the rotation residents should:
- Have witnessed an end-of-life exam
- Have communicated a status update to family
- Present effectively and organized on daily rounds
- Use SBAR to communicate

**Professionalism**
By the end of the rotation residents should be able to perform:
- Resolve conflict with nursing
- Be prepared for rounds
- Take ownership of all patients on service, not just the ones “you are covering.”

**System-Based Practice**
By the end of the rotation residents should:
- Recognize the need for timely order writing and SICU discharge
- Communicate ongoing care needs to services providing care after SICU discharge, including to other facilities

**PGY-1 Trauma and Acute Care Surgery (TACS) Rotation**
**Rotation Director:** Michael D. McGonigal, MD

**Medical Knowledge**
Trauma Mechanism and Physiology
- Understand normal and abnormal responses to shock
- Describe classes of hemorrhage and physiologic responses
- List basic mechanisms of injury
- Describe common injury patterns based on mechanism
- Understand basic concepts of ballistics and firearm injury
- Review management of DVT and PE in trauma patients
- Describe the concepts of damage control surgery

Resuscitation
- Describe classes of hemorrhage and their physical manifestations
- All Understand the differences between commonly used resuscitation fluids
- All List uses for commonly administered blood products
- All Describe causes and treatment of coagulopathy due to trauma

Head and Neck Trauma
- Review the anatomic types of brain injury
- All Understand manifestations of concussion and post-concussive syndrome
- All Describe airway management principles in trauma
- All Review findings in and management of cervical spine and cord injury

Chest Trauma
- Describe the 12 major chest injuries and their management
- Understand the implications and management of cardiac contusion

Abdominal Trauma
- Describe the principles of solid organ injury management
- Recognize signs and symptoms of hollow viscus injury and detail their management
Specialty Surgery
- Describe management of injuries to kidney, ureter, bladder and urethra
- Review diagnosis and management of pelvic fractures
- Review diagnosis and management of spine fractures and spinal cord injury
- List signs and symptoms of extremity compartment syndrome and detail management

Patient Care
Participate in Trauma Team Activations as MD1
Insert chest tube
Implement solid organ injury protocol when appropriate

Practice-Based Learning and Improvement
Identify own learning needs or goals at the onset of the rotation.
Following a trauma activation, debrief what went well, and what could have been improved.
Following a surgical procedure, debrief what went well, and what could have been improved.
Diagnose personal learning needs associated with any medical errors, complications, or “near misses” that occurred during your watch.
Use feedback gained from others, and the experience gained on this rotation, to formulate future learning goals and steps.

Interpersonal Skills and Communication
Communicate patient information clearly to other health providers in written notes and oral presentations.
Work constructively with all members of the trauma care team, including nurse clinicians, floor nurses, social workers and therapists.
Apply appropriate communication skills with patients and families (i.e. effective listening, awareness of nonverbal cues, and use of open-ended questions).
Counsel and educate patients and families on their treatment options, their surgical outcomes and prognosis, and home care needs.

Professionalism
Adhere to patient privacy and informed consent policies at all times.
Adhere to Regions Hospital behavior policies (e.g., sexual harassment, duty hours, dress code) at all times.
Demonstrate respect, compassion, integrity, and honesty in all interactions with patients, families, and other health care providers.
Demonstrate personal responsibility for patient welfare.
Articulate ethical issues underlying clinical decisions made for at least once complex case seen during this rotation.

System-Based Practice
Know when to call for help from attending physicians.
Understand when, how, and why to request a consult from medical and surgical specialists, and how to use the information gained as a result.
Provide timely and pertinent consultation when asked by Emergency Medicine physicians.
Use the talents and skills of other health providers in the OR and ward.
Diagnose any “systems issues” associated with medical errors, complications, and “near misses” that occurred during this rotation.

PGY-2 Gillette Rotation
Rotation Director: Deborah Quanbeck, MD

Medical Knowledge
Residents must demonstrate knowledge about established and evolving biomedical, clinical, and cognate (e.g. epidemiological and social-behavioral) sciences and the application of this knowledge to patient care. Residents are expected to:
- Demonstrate an investigatory and analytic thinking approach to clinical situations.
Know and apply the basic and clinically supportive sciences which are appropriate to their discipline.

Specific rotation goals related to this competency
- Describe the basic anatomy, development, and function of the child’s musculoskeletal system.
- Develop an understanding of and describe conditions affecting the child’s musculoskeletal system. Outline treatment plans. For example: describe primary conditions of the spine and upper and lower extremities and describe musculoskeletal effects of conditions such as cerebral palsy, spina bifida, muscular dystrophy, infection, trauma, etc.

Patient Care
Residents must be able to provide patient care that is compassionate, appropriate, and effective for the treatment of health problems and the promotion of health. Residents are expected to:
- Communicate effectively and demonstrate caring and respectful behaviors when interacting with patients and their families.
- Gather essential and accurate information about their patients.
- Make informed decisions about diagnostic and therapeutic interventions based on patient information and preferences, up-to-date scientific evidence, and clinical judgment.
- Develop and carry out patient management plans.
- Counsel and educate patients and their families.
- Use information technology to support patient care decisions and patient education.
- Perform competently all medical and invasive procedures considered essential for the area of practice.
- Work with health care professionals, including those from other disciplines, to provide patient-focused care.

Specific rotation goals related to this competency
- Complete thorough but concise histories and physical examinations of children.
- Perform competent perioperative care of children, including fluid and electrolyte management, drug usage, resuscitation, pain management and rehabilitative plans.

Practice-Based Learning and Improvement
Residents must be able to investigate and evaluate their patient care practices, appraise and assimilate scientific evidence, and improve their patient care practices. Residents are expected to:
- Analyze practice experience and perform practice-based improvement activities using a systematic methodology.
- Locate, appraise, and assimilate evidence from scientific studies related to their patients’ health problems.
- Obtain and use information about their own population of patients and the larger population from which their patients are drawn.
- Apply knowledge of study designs and statistical methods to the appraisal of clinical studies and other information on diagnostic and therapeutic effectiveness.
- Use information technology to manage information, access on-line medical information; and support their own education.
- Facilitate the learning of students and other health care professionals.

Specific rotation goals related to this competency
- Demonstrate the ability to obtain and master scientific knowledge (e.g. textbooks and scientific journals) specifically addressing the patient’s condition and treatment.
- Review evaluations regarding care practices (e.g. dictations, technical abilities, presentation skills, etc.) and incorporate findings to improve abilities.

System-Based Practice
Residents must demonstrate an awareness of and responsiveness to the larger context and system of health care and the ability to effectively call on system resources to provide care that is of optimal value. Residents are expected to:
- Understand how their patient care and other professional practices affect other health care professionals, the health care organization, and the larger society and how these elements of the system affect their own practice.
• Know how types of medical practice and delivery systems differ from one another, including methods of controlling health care costs and allocating resources.
• Practice cost-effective health care and resource allocation that does not compromise quality of care.
• Advocate for quality patient care and assist patients in dealing with system complexities.
• Know how to partner with health care managers and health care providers to assess, coordinate, and improve health care and know how these activities can affect system performance.

Specific rotation goals related to this competency
• Demonstrate an ability to interact with professionals outside the immediate care system to arrange and achieve timely care for children with urgent problems; e.g., be able to discuss and arrange evaluation and care for a child with hip dysplasia, fractures, limps, etc.
• Demonstrate knowledge of and participate in professional organizations and activities to foster the development of other professionals’ understanding of musculoskeletal problems in children.

Professionalism
Residents must demonstrate a commitment to carrying out professional responsibilities, adherence to ethical principles, and sensitivity to a diverse patient population. Residents are expected to:
• Demonstrate respect, compassion, and integrity; a responsiveness to the needs of patients and society that supercedes self-interest; accountability to patients, society, and the profession; and a commitment to excellence and on-going professional development.
• Demonstrate a commitment to ethical principles pertaining to provision or withholding of clinical care, confidentiality of patient information, informed consent, and business practices.
• Demonstrate sensitivity and responsiveness to patients’ culture, age, gender, and disabilities.

Specific rotation goals related to this competency
• Attend and actively participate in a breadth of learning opportunities (conferences, lectures, seminars, case presentations) to demonstrate commitment to professionalism.
• Participate in the care of children with diverse backgrounds (e.g. care for patients with physical disabilities, cognitive delays, financial difficulties, language or other communication barriers).

Interpersonal and Communication Skills
Residents must be able to demonstrate interpersonal and communication skills that result in effective information exchange and teaming with patients, their patients families, and professional associates. Residents are expected to:
• Create and sustain a therapeutic and ethically sound relationship with patients.
• Use effective listening skills and elicit and provide information using effective nonverbal, explanatory, questioning, and writing skills.
• Work effectively with others as a member or leader of a health care team or other professional group.

Specific rotation goals related to this competency
• Consistently display ability to relate to and work collaboratively with professional staff, including co-residents, nurses, attending physicians, and with patients and their parents to achieve optimal outcomes for all.
• Demonstrate the ability to interact effectively through a variety of methods, such as verbal, online and written communications to achieve efficient, appropriate care.
### Trauma Medical Knowledge
Residents must demonstrate knowledge about established and evolving biomedical, clinical, and cognate (e.g., epidemiological and social-behavioral) sciences and the application of this knowledge to patient care. Residents are expected to:

- Demonstrate an investigatory and analytic thinking approach to clinical situations.
- Know and apply the basic and clinically supportive sciences which are appropriate to their discipline.

**Specific rotation goals related to this competency**

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|---|---|
| Understand indications and timing of emergent orthopaedic intervention: role of the physical examination (plain radiographs, CT scans, occult soft tissue injury and MRI); trauma scoring systems. | Understand the treatment options for the arthritic knee: arthroscopy, unicompartmental knee replacement, high tibial osteotomy, and total knee arthroplasty; |
| Understand the limb at risk, in particular vascular assessment: “hard” signs; “soft” signs; assessment tools: (physical examination, Arterial Pressure Index, angiogram, ultrasound) | Understand indications/contraindications for minimally invasive surgery |
| Understand the meaning of compartment syndrome: pathophysiology of compartment syndrome; clinical presentation of compartment syndrome; pressure monitoring; treatment and outcomes; surgical technique for fasciotomies. | Understand the treatment options for the arthritic hip: osteoarthritis, avascular neocrosis, other; total hip arthroplasty, hemiarthroplasty, femoral osteotomy, core decompressions |
| Understand the basic principles of fracture management for: long bone fractures (humerus, femur, tibia); pelvis and hip fractures; periarticular fractures (elbow, knee, ankle). | Understand indications/contraindications for minimally invasive surgery |
| Understand indications for closed reduction of various fractures: evaluation for instability; anesthesia; methods of reduction; fluoroscopy; casting; position of immobilization; follow-up. | 

### Joint Reconstruction

| | 
|---|---|
| Understand the basics of bone metabolism / osteoporosis: prevention and treatment of osteoporosis; basic clinical workup. | 
| Understand the different types of nonunions: pathophysiology and evaluation; treatment options (reamed nailing/rhBMP-7/OP-1/bone growth stimulator). |  
| Patient Care | 
Residents must be able to provide patient care that is compassionate, appropriate, and effective for the treatment of health problems and the promotion of health. Residents are expected to:

- Communicate effectively and demonstrate caring and respectful behaviors when interacting with patients and their families.
- Gather essential and accurate information about their patients.
- Make informed decisions about diagnostic and therapeutic interventions based on patient information and preferences, up-to-date scientific evidence, and clinical judgment.
- Develop and carry out patient management plans.
- Counsel and educate patients and their families.
- Use information technology to support patient care decisions and patient education.
- Perform competently all medical and invasive procedures considered essential for the area of practice.
- Provide health care services aimed at preventing health problems or maintaining health.
• Work with health care professionals, including those from other disciplines, to provide patient-focused care.

Specific rotation goals related to this competency

**Trauma**
- Understand the specific needs of the polytrauma patient: staged protocols with use of external fixation; timing of definitive fixation
- Understand the specific needs of the geriatric patient: treatment options appropriate for this patient population; specialized discharge planning
- Understand the specific needs for postoperative management of the following fractures: long bone fractures (humerus, femur, tibia); pelvis and hip fractures; periarticular fractures (elbow, knee, ankle).

**Joint Reconstruction**
- Understand the specific needs for postoperative management of the following: total hip arthroplasty; hemiarthroplasty; total knee replacement; unicompartental knee replacement

**Practice-Based Learning and Improvement**
Residents must be able to investigate and evaluate their patient care practices, appraise and assimilate scientific evidence, and improve their patient care practices. Residents are expected to:
- Analyze practice experience and perform practice-based improvement activities using a systematic methodology.
- Locate, appraise, and assimilate evidence from scientific studies related to their patients’ health problems.
- Obtain and use information about their own population of patients and the larger population from which their patients are drawn.
- Apply knowledge of study designs and statistical methods to the appraisal of clinical studies and other information on diagnostic and therapeutic effectiveness.
- Use information technology to manage information, access on-line medical information; and support their own education.
- Facilitate the learning of students and other health care professionals.

Specific rotation goals related to this competency

**Trauma**
- Ability to assess appropriateness and timing for management of the following: the limb at risk; compartment syndrome; polytrauma patient
- Ability to interpret and critique intraoperative and postoperative radiographs for: long bone fractures (humerus, femur, tibia); pelvis and hip fractures; periarticular fractures (elbow, knee, ankle)
- Ability to interpret clinical outcomes of the following: long bone fractures (humerus, femur, tibia); pelvis and hip fractures; periarticular fractures (elbow, knee ankle)

**Joint Reconstruction**
- Ability to interpret and critique postoperative radiographs for the following: total hip arthroplasty; hemiarthroplasty; total knee replacement; unicompartental knee replacement
- Ability to assess clinical and functional outcomes for the following: total hip arthroplasty; hemiarthroplasty; total knee replacement; unicompartental knee replacement

**System-Based Practice**
Residents must demonstrate an awareness of and responsiveness to the larger context and system of health care and the ability to effectively call on system resources to provide care that is of optimal value. Residents are expected to:
- Understand how their patient care and other professional practices affect other health care professionals, the health care organization, and the larger society and how these elements of the system affect their own practice.
- Know how types of medical practice and delivery systems differ from one another, including methods of controlling health care costs and allocating resources.
- Practice cost-effective health care and resource allocation that does not compromise quality of care.
- Advocate for quality patient care and assist patients in dealing with system complexities.
• Know how to partner with health care managers and health care providers to assess, coordinate, and improve health care and know how these activities can affect system performance.

**Specific rotation goals related to this competency**

• Ability to respond in a timely fashion to emergent needs from the Emergency Department
• Ability to develop a working relationship with the Emergency Department staff, residents, and paramedical personnel
• Ability to recognize the indications for the following consultations: Internal Medicine; Infectious Disease; TACS Service
• Ability to develop a working relationship with ER resident
• Ability to develop a working relationship with the physicians’ assistants
• Ability to develop a working relationship and mentoring role with the medical students
• Ability to respond to outside referrals for transfers and emergent needs in a timely fashion
• Ability to develop a working relationship with the Medicine service and nursing home staff

**Professionalism**

Residents must demonstrate a commitment to carrying out professional responsibilities, adherence to ethical principles, and sensitivity to a diverse patient population. Residents are expected to:

• Demonstrate respect, compassion, and integrity; a responsiveness to the needs of patients and society that supercedes self-interest; accountability to patients, society, and the profession; and a commitment to excellence and ongoing professional development.
• Demonstrate a commitment to ethical principles pertaining to provision or withholding of clinical care, confidentiality of patient information, informed consent, and business practices.
• Demonstrate sensitivity and responsiveness to patients’ culture, age, gender, and disabilities.

**Specific rotation goals related to this competency**

• Demonstrate Professionalism in the context of Regions Hospital rotation.

**Interpersonal and Communication Skills**

Residents must be able to demonstrate interpersonal and communication skills that result in effective information exchange and团队 with patients, their families, and professional associates. Residents are expected to:

• Create and sustain a therapeutic and ethically sound relationship with patients.
• Use effective listening skills and elicit and provide information using effective nonverbal, explanatory, questioning, and writing skills.
• Work effectively with others as a member or leader of a health care team or other professional group.

**Specific rotation goals related to this competency**

• Demonstrate effective interpersonal and communication skills in the context of Regions Hospital rotation.

**PGY-2 Sports Rotation**

**Rotation Director: Bradley Nelson, MD**

**Medical Knowledge**

Residents must demonstrate knowledge about established and evolving biomedical, clinical, and cognate (e.g. epidemiological and social-behavioral) sciences and the application of this knowledge to patient care. Residents are expected to:

• Demonstrate an investigatory and analytic thinking approach to clinical situations.
• Know and apply the basic and clinically supportive sciences which are appropriate to their discipline.

**Specific rotation goals related to this competency**

• Understanding of clinical pathologies as they relate to shoulder and knee injuries and conditions.
• Interest in ongoing knowledge acquisition

Methods to demonstrate this include

• Pre-operative and post-operative discussions with faculty
• Consistent preparation for cases pre-operatively and ability to demonstrate understanding of pathologies, anatomy, and techniques in the operating room
• Intra-operative discussions of the pathology
• Excellence in required presentations demonstrating advanced level of understanding of Sports Medicine cases and their evaluation and management
• Active and vibrant participation in journal club discussions
• Extra-curricular written work on certain pertinent pathologic conditions
• Participation in chapter writing, clinical research, or case presentation generation
• Ability to perform surgical procedures such as diagnostic arthroscopy either in the dry lab setting or the operating theatre
• Eagerness to work on areas of poor clinical skills in order to augment areas or personal inadequacy

Patient Care
Residents must be able to provide patient care that is compassionate, appropriate, and effective for the treatment of health problems and the promotion of health. Residents are expected to:

• Communicate effectively and demonstrate caring and respectful behaviors when interacting with patients and their families.
• Gather essential and accurate information about their patients.
• Make informed decisions about diagnostic and therapeutic interventions based on patient information and preferences, up-to-date scientific evidence, and clinical judgment.
• Develop and carry out patient management plans.
• Counsel and educate patients and their families.
• Use information technology to support patient care decisions and patient education.
• Perform competently all medical and invasive procedures considered essential for the area of practice.
• Provide health care services aimed at preventing health problems or maintaining health.
• Work with health care professionals, including those from other disciplines, to provide patient-focused care.

Specific rotation goals related to this competency

• Ability to perform the clinical examination of the shoulder and knee as it relates to the athletic and degenerative pathologies.
• Ability to engage patients in the outpatient, operative, and inpatient settings in compassionate and thorough evaluation and management.

Methods to demonstrate this include

• Rapport establishment with patients in clinic
• Discussions with Faculty regarding best treatment options
• Conscientiousness in patient care and handling in the clinic and the Emergency Department/On Call hours
• Demonstration of clinical skills which are likely to provide therapeutic treatment of a given patient’s problem.

Practice-Based Learning and Improvement
Residents must be able to investigate and evaluate their patient care practices, appraise and assimilate scientific evidence, and improve their patient care practices. Residents are expected to:

• Analyze practice experience and perform practice-based improvement activities using a systematic methodology.
• Locate, appraise, and assimilate evidence from scientific studies related to their patients’ health problems.
• Obtain and use information about their own population of patients and the larger population from which their patients are drawn.
• Apply knowledge of study designs and statistical methods to the appraisal of clinical studies and other information on diagnostic and therapeutic effectiveness.
• Use information technology to manage information, access on-line medical information; and support their own education.
• Facilitate the learning of students and other health care professionals.

Specific rotation goals related to this competency
• Understanding that there are costs associated with the practice of Sports Medicine and that choices made in the care of a patient have consequences for the patient and should be driven by data whenever possible.

Methods to demonstrate this include
• Discussions with faculty regarding indications and alternatives
• Eagerness to learn in a self-directed fashion when gaps in his/her knowledge base are exposed
• Self-initiated projects regarding areas of weakness in clinical evaluation and understanding including reviews of the literature
• Chapter writing or case presentation on areas of personal interest or inadequate knowledge
• Active participation in journal club revealing an ability to synthesize and apply the knowledge from a given article or set of articles
• Self-initiated work on an arthroscopic model
• Attendance at and active participation in directed arthroscopy or surgical labs

System-Based Practice
Residents must demonstrate an awareness of and responsiveness to the larger context and system of health care and the ability to effectively call on system resources to provide care that is of optimal value. Residents are expected to:
• Understand how their patient care and other professional practices affect other health care professionals, the health care organization, and the larger society and how these elements of the system affect their own practice.
• Know how types of medical practice and delivery systems differ from one another, including methods of controlling health care costs and allocating resources.
• Practice cost-effective health care and resource allocation that does not compromise quality of care.
• Advocate for quality patient care and assist patients in dealing with system complexities.
• Know how to partner with health care managers and health care providers to assess, coordinate, and improve health care and know how these activities can affect system performance.

Specific rotation goals related to this competency
• Awareness that the practice of Sports Medicine has consequences not only to other patients with sports injuries, but to the whole medical system as a whole.

Methods to demonstrate this include
• Discussions with Faculty regarding the cost-effectiveness of certain alternatives to care
• Review of the literature for cost-utility analyses or related studies and incorporation of these into the decision making process
• Conscientiousness regarding the cost of implants, braces, therapy, and surgical interventions as discussions of risks and benefits are had between faculty and residents

Professionalism
Residents must demonstrate a commitment to carrying out professional responsibilities, adherence to ethical principles, and sensitivity to a diverse patient population. Residents are expected to:
• Demonstrate respect, compassion, and integrity; a responsiveness to the needs of patients and society that supercedes self-interest; accountability to patients, society, and the profession; and a commitment to excellence and on-going professional development.
• Demonstrate a commitment to ethical principles pertaining to provision or withholding of clinical care, confidentiality of patient information, informed consent, and business practices.
• Demonstrate sensitivity and responsiveness to patients’ culture, age, gender, and disabilities.

Specific rotation goals related to this competency
• Diligence in regards to the responsibilities of patient care as manifest by the daily care of patients in the clinic, on the hospital floor, and in the operating room for the Faculty of the Sports Medicine rotation.

Methods to demonstrate this include
• Timely and thorough completion of all documentation including clinic notes, discharge summaries, and emergency room consultations/On-Call work
• Ability to interact with patients from diverse cultural backgrounds in the clinic, ER, Floor, and operating room
• Appropriate conduct in the Operating Room, on the hospital Floor, and Clinic
• Professional and appropriate attire which is acceptable for the setting
Interpersonal and Communication Skills
Residents must be able to demonstrate interpersonal and communication skills that result in effective information exchange and teaming with patients, their patients families, and professional associates. Residents are expected to:

- Create and sustain a therapeutic and ethically sound relationship with patients.
- Use effective listening skills and elicit and provide information using effective nonverbal, explanatory, questioning, and writing skills.
- Work effectively with others as a member or leader of a health care team or other professional group.

Specific rotation goals related to this competency
- Ability to clearly communicate between patient and provider, provider and ancillary staff, and provider to provider.

Methods to demonstrate this include
- Well-written and thorough Discharge Summaries which facilitate post-discharge patient care
- Organized, complete, and thoughtful clinic notes which adequately reflect the visit and demonstrate the ability to understand the pathology, formulate a plan of treatment, and record the findings of the examination, studies, and history
- Oral presentations which show an understanding of the pathology presented and enable peer-to-peer education
- Active participation in journal club revealing an ability to synthesize and apply the knowledge from a given article or set of articles
- Thorough patient workups which include discussions with patients and their families about the potential treatment options and yield comprehension on the patient’s behalf

PGY-3 Hennepin County Medical Center Rotation
Rotation Director: Thomas Varecka, MD

Medical Knowledge
Residents must demonstrate knowledge about established and evolving biomedical, clinical, and cognate (e.g. epidemiological and social-behavioral) sciences and the application of this knowledge to patient care. Residents are expected to:

- Demonstrate an investigatory and analytic thinking approach to clinical situations.
- Know and apply the basic and clinically supportive sciences which are appropriate to their discipline.

Specific rotation goals related to this competency
- Present complex current literature regarding fracture treatment, rehabilitation and outcomes.
- Be able to discuss classic literature with respect to modern fracture treatment concepts, comparing and contrasting relevant points.
Patient Care
Residents must be able to provide patient care that is compassionate, appropriate, and effective for the treatment of health problems and the promotion of health. Residents are expected to:

- Communicate effectively and demonstrate caring and respectful behaviors when interacting with patients and their families.
- Gather essential and accurate information about their patients.
- Make informed decisions about diagnostic and therapeutic interventions based on patient information and preferences, up-to-date scientific evidence, and clinical judgment.
- Develop and carry out patient management plans.
- Counsel and educate patients and their families.
- Use information technology to support patient care decisions and patient education.
- Perform competently all medical and invasive procedures considered essential for the area of practice.
- Provide health care services aimed at preventing health problems or maintaining health.
- Work with health care professionals, including those from other disciplines, to provide patient-focused care.

Specific rotation goals related to this competency
- Demonstrate the ability to establish rapport with patients of various ethnic and socio-economic background.
- Demonstrate the ability to do exposures for common, routine fracture surgery, i.e., hip, forearm, hand, foot.

Practice-Based Learning and Improvement
Residents must be able to investigate and evaluate their patient care practices, appraise and assimilate scientific evidence, and improve their patient care practices. Residents are expected to:

- Analyze practice experience and perform practice-based improvement activities using a systematic methodology.
- Locate, appraise, and assimilate evidence from scientific studies related to their patients’ health problems.
- Obtain and use information about their own population of patients and the larger population from which their patients are drawn.
- Apply knowledge of study designs and statistical methods to the appraisal of clinical studies and other information on diagnostic and therapeutic effectiveness.
- Use information technology to manage information, access on-line medical information; and support their own education.
- Facilitate the learning of students and other health care professionals.

Specific rotation goals related to this competency
- Supervise and mentor medical students and PGY-1 trainees.
- Demonstrate ability to organize, create and present patient case studies in electronic format.
- Recognize and report complications and untoward events and discuss relevant teaching points.

System-Based Practice
Residents must demonstrate an awareness of and responsiveness to the larger context and system of health care and the ability to effectively call on system resources to provide care that is of optimal value. Residents are expected to:

- Understand how their patient care and other professional practices affect other health care professionals, the health care organization, and the larger society and how these elements of the system affect their own practice.
- Know how types of medical practice and delivery systems differ from one another, including methods of controlling health care costs and allocating resources.
- Practice cost-effective health care and resource allocation that does not compromise quality of care.
- Advocate for quality patient care and assist patients in dealing with system complexities.
- Know how to partner with health care managers and health care providers to assess, coordinate, and improve health care and know how these activities can affect system performance.

Specific rotation goals related to this competency
- Demonstrate use of social service and home health personnel and agencies and facilitate efficient patient care.
- Understand and discuss various treatment options for a stated fracture and support choice based on cost, efficiency, social and other relevant conditions.
Professionalism
Residents must demonstrate a commitment to carrying out professional responsibilities, adherence to ethical principles, and sensitivity to a diverse patient population. Residents are expected to:

- Demonstrate respect, compassion, and integrity; a responsiveness to the needs of patients and society that supercedes self-interest; accountability to patients, society, and the profession; and a commitment to excellence and on-going professional development.
- Demonstrate a commitment to ethical principles pertaining to provision or withholding of clinical care, confidentiality of patient information, informed consent, and business practices.
- Demonstrate sensitivity and responsiveness to patients’ culture, age, gender, and disabilities.

Specific rotation goals related to this competency
- Demonstrate a respectful, concerned, non-judgmental attitude toward all patients.
- Cultivate appropriate personal traits and habits, e.g., be prompt, well groomed and courteous.

Interpersonal and Communication Skills
Residents must be able to demonstrate interpersonal and communication skills that result in effective information exchange and teaming with patients, their patients families, and professional associates. Residents are expected to:

- Create and sustain a therapeutic and ethically sound relationship with patients.
- Use effective listening skills and elicit and provide information using effective nonverbal, explanatory, questioning, and writing skills.
- Work effectively with others as a member or leader of a health care team or other professional group.

Specific rotation goals related to this competency
- Speak to patients and their families prior to and following treatments, especially surgery.
- Speak to patients frankly, on their level, without being abrupt, rushed or distracted.

PGY-3 Veterans Affairs Medical Center Rotation
Rotation Director: V Franklin Sechriest II, MD

For the PGY3 resident, the VA rotation fosters his/her beginning to function more independently and as an integral part of the care team as he/she learn to determine appropriate imaging and laboratory studies and to formulate/execute treatment plans. In addition to participating in busy General Orthopaedic and Adult Reconstruction outpatient clinics, the PGY3 resident will also participate in several specialty clinics (e.g. Hand/Upper extremity, Shoulder, Foot/Ankle, Spine) led by fellowship-trained surgeons. Operative experience is gained by serving as primary surgeon or 1st-assistant (with faculty monitoring) for a wide range of operative procedures for conditions affecting the upper/lower extremity and spine.

Medical Knowledge
- Residents must demonstrate knowledge about established and evolving biomedical, clinical, and cognate (e.g. epidemiological and social-behavioral) sciences and the application of this knowledge to patient care. Residents are expected to:
  - Demonstrate an investigatory and analytic thinking approach to clinical situations.
  - Know and apply the basic and clinically supportive sciences which are appropriate to their discipline.

Specific PGY 3 rotation goals related to this competency
- Provide a Grand Rounds presentation every six weeks on a topic chosen by staff, demonstrating use of current literature and explaining current concepts or technology.
- Demonstrate knowledge of basic approaches to the hip, knee, shoulder, ankle, hand/wrist, and spine.
- Demonstrate a basic understanding of the biology of disease processes (i.e. infection, malignancy, malnutrition), their effects on the musculoskeletal system, and familiarity with the medical treatment of such disease processes and the impact on orthopaedic conditions.
• Demonstrate a basic familiarity with various types of orthopaedic implants for the hip, knee, and shoulder, the indications/advantages of each, and the appropriate patient selection for each.
• Demonstrate ability to identify and discuss patient risk factors that predispose to perioperative morbidity and mortality.
• Consistently demonstrate medical/surgical knowledge by updating faculty on inpatient progress as well as explaining and being prepared for assigned surgical cases.

Patient Care
Residents must be able to provide patient care that is compassionate, appropriate, and effective for the treatment of health problems and the promotion of health. Residents are expected to:
• Communicate effectively and demonstrate caring and respectful behaviors when interacting with patients and their families.
• Gather essential and accurate information about their patients.
• Make informed decisions about diagnostic and therapeutic interventions based on patient information and preferences, up-to-date scientific evidence, and clinical judgment.
• Develop and carry out patient management plans.
• Counsel and educate patients and their families.
• Use information technology to support patient care decisions and patient education.
• Perform competently all medical and invasive procedures considered essential for the area of practice.
• Provide health care services aimed at preventing health problems or maintaining health.
• Work with health care professionals, including those from other disciplines, to provide patient-focused care.

Specific PGY 3 rotation goals related to this competency
• Recognize common non-operative conditions of the lumbar spine, shoulder hip, knee, ankle, and foot and demonstrate familiarity with conservative care (i.e. medications, physical therapy, injections, bracing)
• Interpretation of basic (e.g. x-ray) as well as advanced imaging studies (e.g. MRI, CT, bone scintigraphy)
• Determine indications for/timing of wide range of elective orthopaedic surgical procedures (e.g. hip/knee/shoulder arthroplasty; knee/shoulder arthroscopic procedures; lumbar spine decompression and/or fusion; treatment of foot/ankle disorders; treatment of hand/wrist disorders)
• Participate in planning and performing perioperative care patients undergoing treatment of elective conditions (i.e. knee osteoarthritis) and non-elective conditions (i.e. hip fracture) from admission to discharge
• Act as primary surgeon (with faculty monitoring) for a wide range of orthopaedic procedures including:
  o Knee arthroscopy
  o Ankle arthroscopy
  o Knee tendon & ligament repair (i.e. Quad tendon)
  o Total knee arthroplasty
  o Hip hemi arthroplasty
  o Open reduction and internal fixation of simple fracture patterns (intramedullary nailing and plate-and-screw fixation)
  o Ankle arthrodesis
  o Lower limb amputation
  o Harvest bone graft (i.e. ICBG)
  o Hardware removal
  o Carpal tunnel release; A1 pulley release
  o Irrigation and débridement of major joints (knee, shoulder, elbow) and open wounds
  o Suturing and stapling techniques
• Act as 1st-assist for more complex surgical procedures
  o THA, TSA, TAA
  o Lumbar fusion with instrumentation
  o Revision hip and knee arthroplasty
• Assume responsibility for postoperative care of patients including planning for rehabilitation
• Demonstrate timely diagnosis and management of patients with postoperative complications.
Practice-Based Learning and Improvement
Residents must be able to investigate and evaluate their patient care practices, appraise and assimilate scientific evidence, and improve their patient care practices. Residents are expected to:
  • Analyze practice experience and perform practice-based improvement activities using a systematic methodology.
  • Locate, appraise, and assimilate evidence from scientific studies related to their patients’ health problems.
  • Obtain and use information about their own population of patients and the larger population from which their patients are drawn.
  • Apply knowledge of study designs and statistical methods to the appraisal of clinical studies and other information on diagnostic and therapeutic effectiveness.
  • Use information technology to manage information, access on-line medical information; and support their own education.
  • Facilitate the learning of students and other health care professionals.

Specific PGY 3 rotation goals related to this competency
  • Participate actively in weekly Journal Club, demonstrating the ability to review, critically evaluate, synthesize, and present orthopaedic scientific literature
  • Participate actively in weekly case-based presentations at Grand Rounds and prepare/present educational cases to faculty for evidence-based discussion
  • Discuss/analyze orthopaedic procedures complicated by morbidity and/or mortality. Explain how complications could have been avoided. Explain the management options. Use scientific evidence to support the decisions.

System-Based Practice
Residents must demonstrate an awareness of and responsiveness to the larger context and system of health care and the ability to effectively call on system resources to provide care that is of optimal value. Residents are expected to:
  • Understand how their patient care and other professional practices affect other health care professionals, the health care organization, and the larger society and how these elements of the system affect their own practice.
  • Know how types of medical practice and delivery systems differ from one another, including methods of controlling health care costs and allocating resources.
  • Practice cost-effective health care and resource allocation that does not compromise quality of care.
  • Advocate for quality patient care and assist patients in dealing with system complexities.
  • Know how to partner with health care managers and health care providers to assess, coordinate, and improve health care and know how these activities can affect system performance.

Specific PGY 3 rotation goals related to this competency
  • Effectively coordinate / deliver patient care within a government-run (VHA) health care system
  • Participate in identifying system errors and implementing potential system solutions
  • Incorporate considerations of cost awareness and risk-benefit analysis whilst providing patient care.
    Explain and demonstrate cost effective care measures in a variety of clinical settings such as:
    o Work-up of shoulder pain.
    o Treatment of hip/knee arthritis
    o Selection of implants for hip and knee arthroplasty

Professionalism
Residents must demonstrate a commitment to carrying out professional responsibilities, adherence to ethical principles, and sensitivity to a diverse patient population. Residents are expected to:
  • Demonstrate respect, compassion, and integrity; a responsiveness to the needs of patients and society that supersedes self-interest; accountability to patients, society, and the profession; and a commitment to excellence and on-going professional development.
  • Demonstrate a commitment to ethical principles pertaining to provision or withholding of clinical care, confidentiality of patient information, informed consent, and business practices.
  • Demonstrate sensitivity and responsiveness to patients’ culture, age, gender, and disabilities.
Specific PGY 3 rotation goals related to this competency

- Establish trust with patients and VA Staff
- Interface with referring and consulting physicians and hospital staff in a respectful manner
- Consider, explain and act in an appropriate manner with manufacturers’ representatives. Understand and articulate the ethical principles related to interacting with industry. Demonstrate understanding of the ethical concerns about industry and patient gifts.
- Demonstrate concern for educational development of students and residents.
- Volunteer for activities for the good of the department and the institution.
- Ask for help when needed and seek and accept feedback.

Interpersonal and Communication Skills
Residents must be able to demonstrate interpersonal and communication skills that result in effective information exchange and teaming with patients, their families, and professional associates. Residents are expected to:

- Create and sustain a therapeutic and ethically sound relationship with patients (and family members).
- Use effective listening skills and elicit and provide information using effective nonverbal, explanatory, questioning, and writing skills.
- Work effectively with others as a member or leader of a health care team or other professional group.

Specific PGY 3 rotation goals related to this competency

- Spend adequate time with patients, addressing their questions and concerns
- Present cases accurately and succinctly to attending physicians, fellow residents, and other health care professionals. Speak clearly when addressing patient issues and management plans with patients, families, and health care colleagues.
- Demonstrate effective communication skills with patients, families, and other health care personnel.
- Educate and counsel patients, and families using non-technical and clear language, especially during the informed consent process, addressing potential benefits/risks of surgical procedure

PGY-4 Foot & Ankle Rotation - TRIA / HCMC / UMH
Rotation Director: James Mazzuca, DPM

Medical Knowledge
Residents must demonstrate knowledge about established and evolving biomedical, clinical, and cognate (e.g. epidemiological and social-behavioral) sciences and the application of this knowledge to patient care. Residents are expected to:

- Demonstrate an investigatory and analytic thinking approach to clinical situations.
- Know and apply the basic and clinically supportive sciences which are appropriate to their discipline.

Specific rotation goals related to this competency

- To demonstrate understanding of the biomechanics of the foot and ankle.
- To know the pathophysiology, the most appropriate diagnostic tools and exams to diagnose and treat the most common degenerative pathology of the foot and ankle region.

Patient Care
Residents must be able to provide patient care that is compassionate, appropriate, and effective for the treatment of health problems and the promotion of health. Residents are expected to:

- Communicate effectively and demonstrate caring and respectful behaviors when interacting with patients and their families.
- Gather essential and accurate information about their patients.
- Make informed decisions about diagnostic and therapeutic interventions based on patient information and preferences, up-to-date scientific evidence, and clinical judgment.
- Develop and carry out patient management plans.
- Counsel and educate patients and their families.
- Use information technology to support patient care decisions and patient education.
• Perform competently all medical and invasive procedures considered essential for the area of practice.
• Provide health care services aimed at preventing health problems or maintaining health.
• Work with health care professionals, including those from other disciplines, to provide patient-focused care.

Specific rotation goals related to this competency
• To show respect and consideration for the patient in need of care and treatment.
• To integrate within the rest of the health care staff and be able to communicate to manage and accomplish definitive treatment of foot and ankle pathology.
• To perform surgical treatment of the most common fractures of the foot and ankle.
• To perform soft tissue surgery for tendinous pathology, either acute or chronic, within the foot and ankle region.
• To perform ankle and hindfoot arthrodesis as treatment of either acute or chronic conditions.
• To manage and accomplish healing of chronic ulcers within the Foot and Ankle region.

Practice-Based Learning and Improvement
• Residents must be able to investigate and evaluate their patient care practices, appraise and assimilate scientific evidence, and improve their patient care practices. Residents are expected to:
  • Analyze practice experience and perform practice-based improvement activities using a systematic methodology.
  • Locate, appraise, and assimilate evidence from scientific studies related to their patients’ health problems.
  • Obtain and use information about their own population of patients and the larger population from which their patients are drawn.
  • Apply knowledge of study designs and statistical methods to the appraisal of clinical studies and other information on diagnostic and therapeutic effectiveness.
  • Use information technology to manage information, access on-line medical information; and support their own education.
• Facilitate the learning of students and other health care professionals.

Specific rotation goals related to this competency
• To become familiar with the journal “Foot and Ankle International” as a source of scientific data to integrate into their practices.
• To assimilate and integrate into thinking process “Orthopaedic Knowledge Update, Foot and Ankle 2.”
• To establish a routine to guarantee constant learning and update to new trends and technology applied to Foot and Ankle pathology.

System-Based Practice
Residents must demonstrate an awareness of and responsiveness to the larger context and system of health care and the ability to effectively call on system resources to provide care that is of optimal value. Residents are expected to:
• Understand how their patient care and other professional practices affect other health care professionals, the health care organization, and the larger society and how these elements of the system affect their own practice.
• Know how types of medical practice and delivery systems differ from one another, including methods of controlling health care costs and allocating resources.
• Practice cost-effective health care and resource allocation that does not compromise quality of care.
• Advocate for quality patient care and assist patients in dealing with system complexities.
• Know how to partner with health care managers and health care providers to assess, coordinate, and improve health care and know how these activities can affect system performance.

Specific rotation goals related to this competency
• To understand the consequences and implications of patients being transferred or admitted to a facility for treatment of chronic conditions, i.e. non-healing ulcers.
• To establish a clear algorithm when ordering diagnostic studies to avoid unnecessary tests and therefore participate on a cost-contained style of practice.
• To be aware of the cost of implants utilized during surgical interventions performed around the foot and ankle region.
Professionalism
Residents must demonstrate a commitment to carrying out professional responsibilities, adherence to ethical principles, and sensitivity to a diverse patient population. Residents are expected to:
• Demonstrate respect, compassion, and integrity; a responsiveness to the needs of patients and society that supercedes self-interest; accountability to patients, society, and the profession; and a commitment to excellence and on-going professional development.
• Demonstrate a commitment to ethical principles pertaining to provision or withholding of clinical care, confidentiality of patient information, informed consent, and business practices.
• Demonstrate sensitivity and responsiveness to patients’ culture, age, gender, and disabilities.

Specific rotation goals related to this competency
• Demonstrate Professionalism in the context of foot and ankle surgery.

Interpersonal and Communication Skills
Residents must be able to demonstrate interpersonal and communication skills that result in effective information exchange and teaming with patients, their patients families, and professional associates. Residents are expected to:
• Create and sustain a therapeutic and ethically sound relationship with patients.
• Use effective listening skills and elicit and provide information using effective nonverbal, explanatory, questioning, and writing skills.
• Work effectively with others as a member or leader of a health care team or other professional group.

Specific rotation goals related to this competency
• Demonstrate effective interpersonal and communication skills in the context of foot and ankle surgery.

PGY-4 Hand Rotations – TRIA / UMH
Rotation Director: Ann Van Heest, MD
(reviewed, updated 9/11/17)

Medical Knowledge
Residents must demonstrate knowledge about established and evolving biomedical, clinical, and cognate (e.g. epidemiological and social-behavioral) sciences and the application of this knowledge to patient care. Residents are expected to:
• Demonstrate an investigatory and analytic thinking approach to clinical situations.
• Know and apply the basic and clinically supportive sciences which are appropriate to their discipline.

Specific rotation goals related to this competency
• Demonstrate proficient knowledge of upper extremity anatomy including all muscles (origin, insertion, nerve supply, and action), nerves, arteries, and bone anatomy.
• Perform focused and accurate physical examination of the elbow, forearm, wrist, and hand.
• Complete ortho-bullets milestones exams in hand and upper extremity
• Apply medical knowledge integration of anatomy and patho-physiology into the evaluation and care of hand patients.
• Completion of medical knowledge aspects of carpal tunnel syndrome and distal radius fracture milestones.

Patient Care
Residents must be able to provide patient care that is compassionate, appropriate, and effective for the treatment of health problems and the promotion of health. Residents are expected to:
• Communicate effectively and demonstrate caring and respectful behaviors when interacting with patients and their families.
• Gather essential and accurate information about their patients.
• Make informed decisions about diagnostic and therapeutic interventions based on patient information and preferences, up-to-date scientific evidence, and clinical judgment.
• Develop and carry out patient management plans.
• Counsel and educate patients and their families.
• Use information technology to support patient care decisions and patient education.
• Perform competently all medical and invasive procedures as guided by your faculty.
• Work with health care professionals, including those from other disciplines, to provide patient-focused care.

Specific rotation goals related to this competency
• Diagnose and formulate treatment plans for: compartment syndrome, the acutely injured hand (fracture, nerve/artery/tendon injuries), RSD, arthritis, tenosynovitis, wound management, nerve entrapments including carpal tunnel syndrome, upper extremity fracture dislocations, trigger finger, soft tissue or bone mass, medial/lateral epicondyritis, and post-injury rehabilitation.
• Perform safely and understand indications, contra-indications, and surgical technique for: upper extremity anesthesia, joint/tendon aspiration or injection, treatment of fingertip injuries, closed reduction and splinting of upper extremity fracture/dislocations, carpal tunnel release, ganglion excision, ORIF of fractures, skin grafts, Dupytren’s contracture, fasciotomy, and extensor tendon repair.
• Completion of ABOS surgical skills evaluation for distal radius fracture and carpal tunnel surgical release.

Practice-Based Learning and Improvement
Residents must be able to investigate and evaluate their patient care practices, appraise and assimilate scientific evidence, and improve their patient care practices. Residents are expected to:
• Analyze practice experience and perform practice-based improvement activities using a systematic methodology.
• Locate, appraise, and assimilate evidence from scientific studies related to their patients’ health problems.
• obtain and use information about their own population of patients and the larger population from which their patients are drawn.
• Apply knowledge of study designs and statistical methods to the appraisal of clinical studies and other information on diagnostic and therapeutic effectiveness.
• Use information technology to manage information, access on-line medical information; and support their own education.
• Facilitate the learning of students and other health care professionals.

Specific rotation goals related to this competency
• Participation in one of the quarterly hand journal clubs
• Presentation at one of the Weds morning hand conferences.

System-Based Practice
Residents must demonstrate an awareness of and responsiveness to the larger context and system of health care and the ability to effectively call on system resources to provide care that is of optimal value. Residents are expected to:
• Understand how their patient care and other professional practices affect other health care professionals, the health care organization, and the larger society and how these elements of the system affect their own practice.
• Know how types of medical practice and delivery systems differ from one another, including methods of controlling health care costs and allocating resources.
• Practice cost-effective health care and resource allocation that does not compromise quality of care.
• Advocate for quality patient care and assist patients in dealing with system complexities.
• Know how to partner with health care managers and health care providers to assess, coordinate, and improve health care and know how these activities can affect system performance.

Specific rotation goals related to this competency
• Discuss with faculty the systems issues associated with procedure room use versus operating room for basic hand surgery cases.
• Discuss with faculty system differences between TRIA and UMMC.

Professionalism
Residents must demonstrate a commitment to carrying out professional responsibilities, adherence to ethical principles, and sensitivity to a diverse patient population. Residents are expected to:
• Demonstrate respect, compassion, and integrity; a responsiveness to the needs of patients and society that supercedes self-interest; accountability to patients, society, and the profession; and a commitment to excellence and on-going professional development.
• Demonstrate a commitment to ethical principles pertaining to provision or withholding of clinical care, confidentiality of patient information, informed consent, and business practices.
• Demonstrate sensitivity and responsiveness to patients’ culture, age, gender, and disabilities.

**Specific rotation goals related to this competency**

• Demonstrate professionalism in the context of hand surgery with on time completion of charts, on time participation in clinical activities, professional demeanor and attire, and timely responsiveness to patient care needs.

**Interpersonal and Communication Skills**

Residents must be able to demonstrate interpersonal and communication skills that result in effective information exchange and teaming with patients, their patients families, and professional associates. Residents are expected to:

• Create and sustain a therapeutic and ethically sound relationship with patients.
• Use effective listening skills and elicit and provide information using effective nonverbal, explanatory, questioning, and writing skills.
• Work effectively with others as a member or leader of a health care team or other professional group.

**Specific rotation goals related to this competency**

• Demonstrate effective communication skills with faculty, co-residents, students, allied professionals, and patients in all aspects of resident physician activities.

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**PGY-4 Pediatric Rotation - Gillette Children's Specialty Healthcare / Children's Hospitals and Clinics of Minnesota**

**Rotation Director: Deborah Quanbeck, MD**

(Reviewed, edited 9/11/17)

**Medical Knowledge:**

Residents must demonstrate knowledge about established and evolving biomedical, clinical, and cognate (e.g. epidemiological and social-behavioral) sciences and the application of this knowledge to patient care. Residents are expected to:

• Demonstrate an investigatory and analytic thinking approach to clinical situations.
• Know and apply the basic and clinically supportive sciences which are appropriate to their discipline.

**Specific rotation goals related to this competency**

• Describe the basic anatomy, development, and function of the child's musculoskeletal system especially as it relates to infection and trauma
• Develop an understanding of and describe conditions affecting the child's musculoskeletal system especially as it relates to infection and trauma. Outline treatment plans. For example, describe the ways in which a child's immature musculoskeletal system results in infections or injuries different than those in an adult. Satisfy the Milestones requirements for Septic Arthritis and Supracondylar Humerus Fracture.

**Patient Care**

Residents must be able to provide patient care that is compassionate, appropriate, and effective for the treatment of health problems and the promotion of health. Residents are expected to:

• Communicate effectively and demonstrate caring and respectful behaviors when interacting with patients and their families.
• Gather essential and accurate information about their patients.
• Make informed decisions about diagnostic and therapeutic interventions based on patient information and preferences, up-to-date scientific evidence, and clinical judgment.
• Develop and carry out patient management plans.
• Counsel and educate patients and their families.
• Use information technology to support patient care decisions and patient education.
• Perform competently all medical and invasive procedures considered essential for the area of practice.
• Provide health care services aimed at preventing health problems or maintaining health.
• Work with health care professionals, including those from other disciplines, to provide patient-focused care.

Specific rotation goals related to this competency
• Complete thorough but concise histories and physical examinations of children especially in an acute care setting.
• Perform competent perioperative care of children, including fluid and electrolyte management, drug usage, resuscitation, pain management and rehabilitative plans.
• Demonstrate the ability to diagnose non-accidental injury and create treatment plan.

Practice-Based Learning and Improvement
Residents must be able to investigate and evaluate their patient care practices, appraise and assimilate scientific evidence, and improve their patient care practices. Residents are expected to:
• Analyze practice experience and perform practice-based improvement activities using a systematic methodology.
• Locate, appraise, and assimilate evidence from scientific studies related to their patients’ health problems.
• Obtain and use information about their own population of patients and the larger population from which their patients are drawn.
• Apply knowledge of study designs and statistical methods to the appraisal of clinical studies and other information on diagnostic and therapeutic effectiveness.
• Use information technology to manage information, access on-line medical information; and support their own education.
• Facilitate the learning of students and other health care professionals.

Specific rotation goals related to this competency
• Demonstrate the ability to obtain and master scientific knowledge (e.g. textbooks and scientific journals) specifically addressing the patient’s condition and treatment.
• Review evaluations regarding care practices (e.g. dictations, technical abilities, presentation skills, etc.) and incorporate findings to improve abilities.
• Assess and address completion of Milestones 15, 17 and 18-27.

Systems Based
Residents must demonstrate an awareness of and responsiveness to the larger context and system of health care and the ability to effectively call on system resources to provide care that is of optimal value. Residents are expected to:
• Understand how their patient care and other professional practices affect other health care professionals, the health care organization, and the larger society and how these elements of the system affect their own practice.
• Know how types of medical practice and delivery systems differ from one another, including methods of controlling health care costs and allocating resources.
• Practice cost-effective health care and resource allocation that does not compromise quality of care.
• Advocate for quality patient care and assist patients in dealing with system complexities.
• Know how to partner with health care managers and health care providers to assess, coordinate, and improve health care and know how these activities can affect system performance.

Specific rotation goals related to this competency
• Demonstrate an ability to interact with professionals outside the immediate care system to arrange and achieve timely care for children with urgent problems; e.g., be able to discuss and arrange evaluation and care for a child with non-accidental injury, fractures, limps, etc.
• Demonstrate knowledge of and participate in professional organizations and activities to foster the development of other professionals' understanding of musculoskeletal problems in children.
• Assist with musculoskeletal education of non-orthopedic care providers (medical students, cast technicians, physicians assistants, etc.) who are participating in the team caring for children.

Professionalism
Residents must demonstrate a commitment to carrying out professional responsibilities, adherence to ethical principles, and sensitivity to a diverse patient population. Residents are expected to:
• Demonstrate respect, compassion, and integrity; a responsiveness to the needs of patients and society that supersedes self-interest; accountability to patients, society, and the profession; and a commitment to excellence and on-going professional development.
• Demonstrate a commitment to ethical principles pertaining to provision or withholding of clinical care, confidentiality of patient information, informed consent, and business practices.
• Demonstrate sensitivity and responsiveness to patients’ culture, age, gender, and disabilities.

Specific rotation goals related to this competency
• Attend and actively participate in a breadth of learning opportunities (conferences, lectures, seminars, case presentations) to demonstrate commitment to professionalism.
• Participate in the care of children with diverse backgrounds (e.g. care for patients with physical disabilities, dysfunctional social environments, cognitive delays, financial difficulties, language or other communication barriers).

Interpersonal and Communication Skills
Residents must be able to demonstrate interpersonal and communication skills that result in effective information exchange and teaming with patients, their patients families, and professional associates.
Residents are expected to:
• Create and sustain a therapeutic and ethically sound relationship with patients.
• Use effective listening skills and elicit and provide information using effective nonverbal, explanatory, questioning, and writing skills.
• Work effectively with others as a member or leader of a health care team or other professional group.

Specific rotation goals related to this competency
• Consistently display ability to relate to and work collaboratively with professional staff, including co-residents, nurses, attending physicians, and with patients and their parents to achieve optimal outcomes for all.
• Demonstrate the ability to interact effectively through a variety of methods, such as verbal, online and written communications to achieve efficient, appropriate care.

PGY-4 Spine Rotation - UMH
Rotation Director: David Polly, Jr, MD

Medical Knowledge
Residents must demonstrate knowledge about established and evolving biomedical, clinical, and cognate (e.g. epidemiological and social-behavioral) sciences and the application of this knowledge to patient care. Residents are expected to:
• Demonstrate an investigatory and analytic thinking approach to clinical situations.
• Know and apply the basic and clinically supportive sciences which are appropriate to their discipline.

Specific rotation goals related to this competency
• Describe the effects of aging on the spine (specifically disk degeneration, osteoporosis, sagittal contour)
• Define the non-spinal sources for patients presenting with low back pain
• Describe the locations for and effects of stenosis
• Describe the pathogenesis and presentation along with treatment options for degenerative spondylolisthesis
• Define the pathogenesis of lumbar disk herniation along with the natural history, non-surgical and surgical treatment options
• Recognize and classify transitional vertebra
• Explain the pathogenesis of Bertolotti’s syndrome

Patient Care
Residents must be able to provide patient care that is compassionate, appropriate, and effective for the treatment of health problems and the promotion of health. Residents are expected to:
• Communicate effectively and demonstrate caring and respectful behaviors when interacting with patients and their families.
• Gather essential and accurate information about their patients.
• Make informed decisions about diagnostic and therapeutic interventions based on patient information and preferences, up-to-date scientific evidence, and clinical judgment.
• Develop and carry out patient management plans.
• Counsel and educate patients and their families.
• Use information technology to support patient care decisions and patient education.
• Perform competently all medical and invasive procedures considered essential for the area of practice.
• Provide health care services aimed at preventing health problems or maintaining health.
• Work with health care professionals, including those from other disciplines, to provide patient-focused care.

Specific rotation goals related to this competency
• Perform a competent history to include use of patient reported outcomes measures (Oswestry Disability Index, Visual Analog Scale), use of the pain drawing to develop a presumptive diagnosis.
• Perform a competent physical exam to include a focused neurological exam of the lower extremities, evaluation for myelopathy, assessment of the SI joint and hip joint, use of the Waddell incongruency signs.
• Counsel a patient about treatment options and outcomes for: lumbar disk herniation; spinal stenosis; degenerative spondylolisthesis; and axial predominant low back pain.

Imaging
• Define plain film views and expected pathology discernible on the specific views (including upright versus supine AP and lateral images, Ferguson view, flexion-extension, obliques).
• MRI/CT describe the findings of degenerative disk disease, stenosis, tethered cord, acute versus chronic compression fractures, metastatic disease, hemangioma.
• Injection based studies describe the difference between translaminar and transforaminal epidural steroids as well as selective nerve root blocks. Describe the uncertainty associated with discography.

Specific Surgical Skills
• Describe and perform safe patient operative positioning for: posterior approach prone on Jackson table 4 poster frame (including identifying potential positioning complications); position in lateral decubitus position for thoracoabdominal approach; and position supine for anterior approach to lower lumbar spine.
• Prepare and drape for each of the above scenarios.
• Expose the lumbar spine and confirm level of dissection.
• Safely remove dorsal elements demonstrating specific competence in the safe use of a Kerrison rongeur within the spinal canal.
• Demonstrate safe techniques for hemostasis within the spinal canal.
• Remove lumbar disk material using safe techniques to avoid injury to exiting and traversing nerve roots, avoid anterior disk perforation.
• Identify pedicle screw entry points and trajectories, interpret intra-operative imaging for adequacy of pedicle tract navigation.
• Demonstrate competency in achieving water tight fascial closure and optimal subcutaneous and cutaneous closure.

Practice-Based Learning and Improvement
Residents must be able to investigate and evaluate their patient care practices, appraise and assimilate scientific evidence, and improve their patient care practices. Residents are expected to:
• Analyze practice experience and perform practice-based improvement activities using a systematic methodology.
• Locate, appraise, and assimilate evidence from scientific studies related to their patients’ health problems.
• Obtain and use information about their own population of patients and the larger population from which their patients are drawn.
• Apply knowledge of study designs and statistical methods to the appraisal of clinical studies and other information on diagnostic and therapeutic effectiveness.
• Use information technology to manage information, access on-line medical information; and support their own education.
• Facilitate the learning of students and other health care professionals.

Specific rotation goals related to this competency
• For lumbar HNP review current literature and develop a detailed (10 minute narrative) for patient counseling about natural history, treatment options, outcome expectations along with surgery specific recovery and complication rates.
• For degenerative spondylolisthesis review current literature and develop a detailed (10 minute narrative) for patient counseling about natural history, treatment options, outcome expectations along with surgery specific recovery and complication rates.

System-Based Practice
• Residents must demonstrate an awareness of and responsiveness to the larger context and system of health care and the ability to effectively call on system resources to provide care that is of optimal value. Residents are expected to:
• Understand how their patient care and other professional practices affect other health care professionals, the health care organization, and the larger society and how these elements of the system affect their own practice.
• Know how types of medical practice and delivery systems differ from one another, including methods of controlling health care costs and allocating resources.
• Practice cost-effective health care and resource allocation that does not compromise quality of care.
• Advocate for quality patient care and assist patients in dealing with system complexities.
• Know how to partner with health care managers and health care providers to assess, coordinate, and improve health care and know how these activities can affect system performance.

Specific rotation goals related to this competency
• Review pre-op and post-op standardized orders to determine whether or not they meet national quality metric measures.
• Identify areas of attending practice variation and assess if there is a gap in evidence or what other reasons exist for this practice variation. Identify if there is an opportunity for discerning and adopting best practices.
• Review source of referral and accompanying imaging studies. Determine if the imaging studies were indicated, whether or not the studies were adequately performed, how often they establish a diagnosis or change management plans.
• Discuss costs associated with intra-operative choices.
• Review acute care hospitalization criteria versus rehabilitation facility versus nursing home.

Professionalism
Residents must demonstrate a commitment to carrying out professional responsibilities, adherence to ethical principles, and sensitivity to a diverse patient population. Residents are expected to:
• Demonstrate respect, compassion, and integrity; a responsiveness to the needs of patients and society that supercedes self-interest; accountability to patients, society, and the profession; and a commitment to excellence and on-going professional development.
• Demonstrate a commitment to ethical principles pertaining to provision or withholding of clinical care, confidentiality of patient information, informed consent, and business practices.
• Demonstrate sensitivity and responsiveness to patients’ culture, age, gender, and disabilities.

Specific rotation goals related to this competency
• Demonstrate effective professionalism within the context of spine surgery.

Interpersonal and Communication Skills
Residents must be able to demonstrate interpersonal and communication skills that result in effective information exchange and teaming with patients, their patients families, and professional associates. Residents are expected to:
• Create and sustain a therapeutic and ethically sound relationship with patients.
• Use effective listening skills and elicit and provide information using effective nonverbal, explanatory, questioning, and writing skills.
• Work effectively with others as a member or leader of a health care team or other professional group.

Specific rotation goals related to this competency
• Demonstrate effective communication skills within the context of spine surgery.

PGY-4 Sports Rotations - UMH
Rotation Director: Bradley Nelson, MD

Medical Knowledge
Residents must demonstrate knowledge about established and evolving biomedical, clinical, and cognate (e.g. epidemiological and social-behavioral) sciences and the application of this knowledge to patient care. Residents are expected to:
• Demonstrate an investigatory and analytic thinking approach to clinical situations.
• Know and apply the basic and clinically supportive sciences which are appropriate to their discipline.

Specific rotation goals related to this competency
• Understanding of clinical pathologies as they relate to shoulder and knee injuries and conditions.
• Interest in ongoing knowledge acquisition

Methods to demonstrate this include
• Pre-operative and post-operative discussions with faculty
• Consistent preparation for cases pre-operatively and ability to demonstrate understanding of pathologies, anatomy, and techniques in the operating room
• Intra-operative discussions of the pathology
• Excellence in required presentations demonstrating advanced level of understanding of Sports Medicine cases and their evaluation and management
• Active and vibrant participation in journal club discussions
• Extra-curricular written work on certain pertinent pathologic conditions
• Participation in chapter writing, clinical research, or case presentation generation
• Ability to perform surgical procedures such as diagnostic arthroscopy either in the dry lab setting or the operating theatre
• Eagerness to work on areas of poor clinical skills in order to augment areas of personal inadequacy

Patient Care
Residents must be able to provide patient care that is compassionate, appropriate, and effective for the treatment of health problems and the promotion of health. Residents are expected to:
• Communicate effectively and demonstrate caring and respectful behaviors when interacting with patients and their families.
• Gather essential and accurate information about their patients.
• Make informed decisions about diagnostic and therapeutic interventions based on patient information and preferences, up-to-date scientific evidence, and clinical judgment.
• Develop and carry out patient management plans.
• Counsel and educate patients and their families.
• Use information technology to support patient care decisions and patient education.
• Perform competently all medical and invasive procedures considered essential for the area of practice.
• Provide health care services aimed at preventing health problems or maintaining health.
• Work with health care professionals, including those from other disciplines, to provide patient-focused care.

Specific rotation goals related to this competency
• Ability to perform the clinical examination of the shoulder and knee as it relates to the athletic and degenerative pathologies.
• Ability to engage patients in the outpatient, operative, and inpatient settings in compassionate and thorough evaluation and management.

Methods to demonstrate this include
• Rapport establishment with patients in clinic
• Discussions with Faculty regarding best treatment options
• Conscientiousness in patient care and handling in the clinic and the Emergency Department/On Call hours
• Demonstration of clinical skills which are likely to provide therapeutic treatment of a given patient’s problem.

Practice-Based Learning and Improvement
Residents must be able to investigate and evaluate their patient care practices, appraise and assimilate scientific evidence, and improve their patient care practices. Residents are expected to:
• Analyze practice experience and perform practice-based improvement activities using a systematic methodology.
• Locate, appraise, and assimilate evidence from scientific studies related to their patients’ health problems.
• Obtain and use information about their own population of patients and the larger population from which their patients are drawn.
• Apply knowledge of study designs and statistical methods to the appraisal of clinical studies and other information on diagnostic and therapeutic effectiveness.
• Use information technology to manage information, access on-line medical information; and support their own education.
• Facilitate the learning of students and other health care professionals.

Specific rotation goals related to this competency
• Understanding that there are costs associated with the practice of Sports Medicine and that choices made in the care of a patient have consequences for the patient and should be driven by data whenever possible.

Methods to demonstrate this include
• Discussions with faculty regarding indications and alternatives
• Eagerness to learn in a self-directed fashion when gaps in his/her knowledge base are exposed
• Self-initiated projects regarding areas of weakness in clinical evaluation and understanding including reviews of the literature
• Chapter writing or case presentation on areas of personal interest or inadequate knowledge
• Active participation in journal club revealing an ability to synthesize and apply the knowledge from a given article or set of articles
• Self-initiated work on an arthroscopic model
• Attendance at and active participation in directed arthroscopy or surgical labs

System-Based Practice
Residents must demonstrate an awareness of and responsiveness to the larger context and system of health care and the ability to effectively call on system resources to provide care that is of optimal value. Residents are expected to:
• Understand how their patient care and other professional practices affect other health care professionals, the health care organization, and the larger society and how these elements of the system affect their own practice.
• Know how types of medical practice and delivery systems differ from one another, including methods of controlling health care costs and allocating resources.
• Practice cost-effective health care and resource allocation that does not compromise quality of care.
• Advocate for quality patient care and assist patients in dealing with system complexities.
• Know how to partner with health care managers and health care providers to assess, coordinate, and improve health care and know how these activities can affect system performance.

Specific rotation goals related to this competency
• Awareness that the practice of Sports Medicine has consequences not only to other patients with sports injuries, but to the whole medical system as a whole.

Methods to demonstrate this include
• Discussions with Faculty regarding the cost-effectiveness of certain alternatives to care
• Review of the literature for cost-utility analyses or related studies and incorporation of these into the decision making process
• Conscientiousness regarding the cost of implants, braces, therapy, and surgical interventions as discussions of risks and benefits are had between faculty and residents

**Professionalism**
Residents must demonstrate a commitment to carrying out professional responsibilities, adherence to ethical principles, and sensitivity to a diverse patient population. Residents are expected to:

- Demonstrate respect, compassion, and integrity; a responsiveness to the needs of patients and society that supercedes self-interest; accountability to patients, society, and the profession; and a commitment to excellence and on-going professional development.
- Demonstrate a commitment to ethical principles pertaining to provision or withholding of clinical care, confidentiality of patient information, informed consent, and business practices.
- Demonstrate sensitivity and responsiveness to patients’ culture, age, gender, and disabilities.

**Specific rotation goals related to this competency**

- Diligence in regards to the responsibilities of patient care as manifest by the daily care of patients in the clinic, on the hospital floor, and in the operating room for the Faculty of the Sports Medicine rotation.

**Methods to demonstrate this include**

- Timely and thorough completion of all documentation including clinic notes, discharge summaries, and emergency room consultations/On-Call work
- Ability to interact with patients from diverse cultural backgrounds in the clinic, ER, Floor, and operating room
- Appropriate conduct in the Operating Room, on the hospital Floor, and Clinic
- Professional and appropriate attire which is acceptable for the setting
- Professional treatment of Faculty, OR staff, clinical ancillary staff, and Hospital personnel

**Interpersonal and Communication Skills**
Residents must be able to demonstrate interpersonal and communication skills that result in effective information exchange and teaming with patients, their patients families, and professional associates. Residents are expected to:

- Create and sustain a therapeutic and ethically sound relationship with patients.
- Use effective listening skills and elicit and provide information using effective nonverbal, explanatory, questioning, and writing skills.
- Work effectively with others as a member or leader of a health care team or other professional group.

**Specific rotation goals related to this competency**

- Ability to clearly communicate between patient and provider, provider and ancillary staff, and provider to provider.

**Methods to demonstrate this include**

- Well-written and thorough Discharge Summaries which facilitate post-discharge patient care
- Organized, complete, and thoughtful clinic notes which adequately reflect the visit and demonstrate the ability to understand the pathology, formulate a plan of treatment, and record the findings of the examination, studies, and history
- Oral presentations which show an understanding of the pathology presented and enable peer-to-peer education
- Active participation in journal club revealing an ability to synthesize and apply the knowledge from a given article or set of articles
- Thorough patient workups which include discussions with patients and their families about the potential treatment options and yield comprehension on the patient’s behalf

PGY-4 Tumor Rotation - UMH
Rotation Director: Christian Ogilvie, MD
Medical Knowledge
Residents must demonstrate knowledge about established and evolving biomedical, clinical, and cognate (e.g., epidemiological and social-behavioral) sciences and the application of this knowledge to patient care. Residents are expected to:
- Demonstrate an investigatory and analytic thinking approach to clinical situations.
- Know and apply the basic and clinically supportive sciences which are appropriate to their discipline.

Specific rotation goals related to this competency
- Understand the principles of limb salvage and reconstruction of large bony defects.
- Identify basic histologic features of normal and diseased musculoskeletal tissue.
- Preoperative surgical planning for appropriate surgical equipment and surgical treatment plan.

Patient Care
Residents must be able to provide patient care that is compassionate, appropriate, and effective for the treatment of health problems and the promotion of health. Residents are expected to:
- Communicate effectively and demonstrate caring and respectful behaviors when interacting with patients and their families.
- Gather essential and accurate information about their patients.
- Make informed decisions about diagnostic and therapeutic interventions based on patient information and preferences, up-to-date scientific evidence, and clinical judgment.
- Develop and carry out patient management plans.
- Counsel and educate patients and their families.
- Use information technology to support patient care decisions and patient education.
- Perform competently all medical and invasive procedures considered essential for the area of practice.
- Provide health care services aimed at preventing health problems or maintaining health.
- Work with health care professionals, including those from other disciplines, to provide patient-focused care.

Specific rotation goals related to this competency
- Perform a succinct and accurate history and physical examination on patients with bone and soft tissue tumors.

Practice-Based Learning and Improvement
Residents must be able to investigate and evaluate their patient care practices, appraise and assimilate scientific evidence, and improve their patient care practices. Residents are expected to:
- Analyze practice experience and perform practice-based improvement activities using a systematic methodology.
- Locate, appraise, and assimilate evidence from scientific studies related to their patients’ health problems.
- Obtain and use information about their own population of patients and the larger population from which their patients are drawn.
- Apply knowledge of study designs and statistical methods to the appraisal of clinical studies and other information on diagnostic and therapeutic effectiveness.
- Use information technology to manage information, access on-line medical information; and support their own education.
- Facilitate the learning of students and other health care professionals.

Specific rotation goals related to this competency
- Interpret plain radiographs of bone tumors.
- Interpret MRI scans of soft tissue tumors.
- Direct the plan for diagnosing bone and soft tissue tumors.
- Preoperative surgical planning for use of intra operative imaging, patient positioning and draping, surgical incision and surgical exposure.
- Postoperative surgical care to include diagnosing and managing postoperative complications.

System-Based Practice
Residents must demonstrate an awareness of and responsiveness to the larger context and system of health care and the ability to effectively call on system resources to provide care that is of optimal value. Residents are expected to:

- Understand how their patient care and other professional practices affect other health care professionals, the health care organization, and the larger society and how these elements of the system affect their own practice.
- Know how types of medical practice and delivery systems differ from one another, including methods of controlling health care costs and allocating resources.
- Practice cost-effective health care and resource allocation that does not compromise quality of care.
- Advocate for quality patient care and assist patients in dealing with system complexities.
- Know how to partner with health care managers and health care providers to assess, coordinate, and improve health care and know how these activities can affect system performance.

**Specific rotation goals related to this competency**

- Organize and lead an interdisciplinary conference.
- Understand mechanisms for providing multidisciplinary and comprehensive patient care.
- Perform effective discharge seminars; postoperative care to include medical management of surgical patients, directing physical rehabilitation, and hospital discharge planning.

**Professionalism**

Residents must demonstrate a commitment to carrying out professional responsibilities, adherence to ethical principles, and sensitivity to a diverse patient population. Residents are expected to:

- Demonstrate respect, compassion, and integrity; a responsiveness to the needs of patients and society that supersedes self-interest; accountability to patients, society, and the profession; and a commitment to excellence and on-going professional development.
- Demonstrate a commitment to ethical principles pertaining to provision or withholding of clinical care, confidentiality of patient information, informed consent, and business practices.
- Demonstrate sensitivity and responsiveness to patients’ culture, age, gender, and disabilities.

**Specific rotation goals related to this competency**

- Organize and lead an interdisciplinary conference.
- Postoperative care to include interaction with medical consultants.

**Interpersonal and Communication Skills**

Residents must be able to demonstrate interpersonal and communication skills that result in effective information exchange and teaming with patients, their patients families, and professional associates. Residents are expected to:

- Create and sustain a therapeutic and ethically sound relationship with patients.
- Use effective listening skills and elicit and provide information using effective nonverbal, explanatory, questioning, and writing skills.
- Work effectively with others as a member or leader of a health care team or other professional group.

**Specific rotation goals related to this competency**

- Organize and lead an interdisciplinary conference.
- Make clear, concise case presentations.
- Postoperative care to include interaction with medical consultants and directing physical rehabilitation.

**PGY-4 Tumor/Joint Rotation - UMH**

Rotation Director: Edward Cheng, MD

**Medical Knowledge**

Residents must demonstrate knowledge about established and evolving biomedical, clinical, and cognate (e.g. epidemiological and social-behavioral) sciences and the application of this knowledge to patient care. Residents are expected to:

- Demonstrate an investigatory and analytic thinking approach to clinical situations.
- Know and apply the basic and clinically supportive sciences which are appropriate to their discipline.

**Specific rotation goals related to this competency**

- Residents should be able to describe the historical basis for joint replacement surgery.
Residents should be able to describe the indications, contraindications, complications, expected outcomes of adult reconstructive surgery.

Residents should be able to describe the different types of adult reconstructive surgical procedures and their basic steps in completion.

Residents should be able to delineate how basic science biomechanical engineering concepts translate into the medical and surgical practice of joint replacement.

Residents should be able to interpret radiographic imaging of common arthritic diseases (e.g., degenerative joint disease, rheumatoid arthritis, osteonecrosis, etc.) as well as implant related problems (e.g., loosening, malposition, component bearing surface wear, adverse local tissue reactions, etc.) and describe these findings.

Residents should be able to interpret radiographic imaging of bone or soft tissue lesions/masses and describe characteristics that are concerning for aggressive or malignant conditions which, warrant additional evaluation.

**Patient Care**

Residents must be able to provide patient care that is compassionate, appropriate, and effective for the treatment of health problems and the promotion of health. Residents are expected to:

- Communicate effectively and demonstrate caring and respectful behaviors when interacting with patients and their families.
- Gather essential and accurate information about their patients.
- Make informed decisions about diagnostic and therapeutic interventions based on patient information and preferences, up-to-date scientific evidence, and clinical judgment.
- Develop and carry out patient management plans.
- Counsel and educate patients and their families.
- Use information technology to support patient care decisions and patient education.
- Perform competently all medical and invasive procedures considered essential for the area of practice.
- Provide health care services aimed at preventing health problems or maintaining health.
- Work with health care professionals, including those from other disciplines, to provide patient-focused care.

**Specific rotation goals related to this competency**

- Residents should be able to perform pre-operative examinations and provide post-operative care for patients undergoing major reconstructive procedures of the lower extremity.
- Residents should be able to recite and perform the basic technical steps to performing adult reconstructive procedures of the lower extremity, such as osteotomies and joint replacement.
- Resident should be able to pre-operatively plan how to perform joint replacement procedures, understand the rationale for selection of different types of implants, and perform pre-operative templating using digital radiography and digital templating.
- Resident should be able to assess the risk of pathologic fracture of a bone lesion.
- Resident should be able to apply both the principles of pathologic fracture management and diagnostic evaluation of bone tumors to the practice of surgical decision making and planning.

**Practice-Based Learning and Improvement**

Residents must be able to investigate and evaluate their patient care practices, appraise and assimilate scientific evidence, and improve their patient care practices. Residents are expected to:

- Analyze practice experience and perform practice-based improvement activities using a systematic methodology.
- Locate, appraise, and assimilate evidence from scientific studies related to their patients’ health problems.
- Obtain and use information about their own population of patients and the larger population from which their patients are drawn.
- Apply knowledge of study designs and statistical methods to the appraisal of clinical studies and other information on diagnostic and therapeutic effectiveness.
- Use information technology to manage information, access on-line medical information; and support their own education.
- Facilitate the learning of students and other health care professionals.
Specific rotation goals related to this competency

- Residents should be able to evaluate evidence and recite the medical literature and evidence basis for the performance and outcome of adult reconstructive surgery.
- Residents should be able to use the different databases such as PubMed and OVID to identify appropriate articles related to a patient’s care.

System-Based Practice
Residents must demonstrate an awareness of and responsiveness to the larger context and system of health care and the ability to effectively call on system resources to provide care that is of optimal value. Residents are expected to:

- Understand how their patient care and other professional practices affect other health care professionals, the health care organization, and the larger society and how these elements of the system affect their own practice.
- Know how types of medical practice and delivery systems differ from one another, including methods of controlling health care costs and allocating resources.
- Practice cost-effective health care and resource allocation that does not compromise quality of care.
- Advocate for quality patient care and assist patients in dealing with system complexities.
- Know how to partner with health care managers and health care providers to assess, coordinate, and improve health care and know how these activities can affect system performance.

Specific rotation goals related to this competency

- Residents should be able to understand the economic impact of the selection of different types of joint implants and reconstructive devices.
- Residents must understand how medical decisions and performance of a surgery in both impatient, outpatient, and transitional care settings impacts the cost of medical care.

Professionalism
Residents must demonstrate a commitment to carrying out professional responsibilities, adherence to ethical principles, and sensitivity to a diverse patient population. Residents are expected to:

- Demonstrate respect, compassion, and integrity; a responsiveness to the needs of patients and society that supercedes self-interest; accountability to patients, society, and the profession; and a commitment to excellence and on-going professional development.
- Demonstrate a commitment to ethical principles pertaining to provision or withholding of clinical care, confidentiality of patient information, informed consent, and business practices.
- Demonstrate sensitivity and responsiveness to patients’ culture, age, gender, and disabilities.

Specific rotation goals related to this competency

- Residents should be able to understand the economic impact of the selection of different types of joint implants and reconstructive devices.
- Residents must understand how medical decisions and performance of a surgery in both impatient, outpatient, and transitional care settings impacts the cost of medical care.

Interpersonal and Communication Skills
Residents must be able to demonstrate interpersonal and communication skills that result in effective information exchange and teaming with patients, their patients families, and professional associates. Residents are expected to:

- Create and sustain a therapeutic and ethically sound relationship with patients.
- Use effective listening skills and elicit and provide information using effective nonverbal, explanatory, questioning, and writing skills.
- Work effectively with others as a member or leader of a health care team or other professional group.

Specific rotation goals related to this competency

- Residents should be able to communicate in a respectful manner with other healthcare team members.
- Residents should be able to resolve disputes with other healthcare personnel in an amicable manner.
- Residents should be able to demonstrate the ability to listen and understand the nature of a patient’s complaint and concerns.
This rotation will include the goals and objectives of the PGY-5 Sports Rotations with these additions.

Professionalism
• Through shadowing and mentorship the learner will better understand how to balance clinical practice and senior leadership roles while observing high level leadership in the hospital system.

Systems based practice
• Participants will meet with hospital and clinical practice administrators to further understanding of the hospital revenue cycle (e.g. billing, coding, service) and patient care pathway models.
• Participants will attend weekly orthopedic administrative meetings.

Interpersonal communication skills
• Assigned leadership and communications reading (i.e. Getting to yes, 5 Dysfunctions of a Team, Crucial Conversations).
• Learner will understand the phases of project execution including collaboration, delegation and oversight.
• Learner will understand the elements of listening, allowing independence of direct reports and encouraging all to work at the top of their skill level and capacity.

PGY-5 HCMC Rotations
Rotation Director: Thomas Varecka, MD

Medical Knowledge
Residents must demonstrate knowledge about established and evolving biomedical, clinical, and cognate (e.g. epidemiological and social-behavioral) sciences and the application of this knowledge to patient care. Residents are expected to:
• Demonstrate an investigatory and analytic thinking approach to clinical situations.
• Know and apply the basic and clinically supportive sciences which are appropriate to their discipline.

Specific rotation goals related to this competency
• Teach junior residents about more difficult and challenging orthopaedic conditions including: multiply injured patients, including the coordination of care with other services in those patients with multi-system trauma; management of more complex fractures, including periarticular fractures above the knee, hip, elbow and shoulder; choosing among various treatment options for any given orthopaedic injury and the satisfactorily execution of selected treatment technology.

Patient Care
Residents must be able to provide patient care that is compassionate, appropriate, and effective for the treatment of health problems and the promotion of health. Residents are expected to:
• Communicate effectively and demonstrate caring and respectful behaviors when interacting with patients and their families.
• Gather essential and accurate information about their patients.
• Make informed decisions about diagnostic and therapeutic interventions based on patient information and preferences, up-to-date scientific evidence, and clinical judgment.
• Develop and carry out patient management plans.
• Counsel and educate patients and their families.
• Use information technology to support patient care decisions and patient education.
• Perform competently all medical and invasive procedures considered essential for the area of practice.
• Provide health care services aimed at preventing health problems or maintaining health.
• Work with health care professionals, including those from other disciplines, to provide patient-focused care.

Specific rotation goals related to this competency
• Perform competently all medical and invasive procedures considered essential for trauma service.
• Manage coordinated care with other services in those patients with multi-system trauma.

Practice-Based Learning and Improvement
Residents must be able to investigate and evaluate their patient care practices, appraise and assimilate scientific evidence, and improve their patient care practices. Residents are expected to:
• Analyze practice experience and perform practice-based improvement activities using a systematic methodology.
• Locate, appraise, and assimilate evidence from scientific studies related to their patients’ health problems.
• Obtain and use information about their own population of patients and the larger population from which their patients are drawn.
• Apply knowledge of study designs and statistical methods to the appraisal of clinical studies and other information on diagnostic and therapeutic effectiveness.
• Use information technology to manage information, access on-line medical information; and support their own education.
• Facilitate the learning of students and other health care professionals.

Specific rotation goals related to this competency
• Organize and supervise weekly conferences.

System-Based Practice
Residents must demonstrate an awareness of and responsiveness to the larger context and system of health care and the ability to effectively call on system resources to provide care that is of optimal value. Residents are expected to:
• Understand how their patient care and other professional practices affect other health care professionals, the health care organization, and the larger society and how these elements of the system affect their own practice.
• Know how types of medical practice and delivery systems differ from one another, including methods of controlling health care costs and allocating resources.
• Practice cost-effective health care and resource allocation that does not compromise quality of care.
• Advocate for quality patient care and assist patients in dealing with system complexities.
• Know how to partner with health care managers and health care providers to assess, coordinate, and improve health care and know how these activities can affect system performance.

Specific rotation goals related to this competency
• Support and mentor junior residents on orthopaedic trauma teams.
• Arrange for appropriate specialty equipment to be brought to the hospital and see to it that other special needs for the operating room are properly identified and met.

Professionalism
Residents must demonstrate a commitment to carrying out professional responsibilities, adherence to ethical principles, and sensitivity to a diverse patient population. Residents are expected to:
• Demonstrate respect, compassion, and integrity; a responsiveness to the needs of patients and society that supercedes self-interest; accountability to patients, society, and the profession; and a commitment to excellence and on-going professional development.
• Demonstrate a commitment to ethical principles pertaining to provision or withholding of clinical care, confidentiality of patient information, informed consent, and business practices.
• Demonstrate sensitivity and responsiveness to patients’ culture, age, gender, and disabilities.

Specific rotation goals related to this competency
• Support and mentor junior residents on the orthopaedic trauma teams, including: how to be respectful, concerned, and have a non-judgmental attitude toward all patients; how to cultivate appropriate personal traits and habits, e.g., be prompt, well groomed and courteous.
• Organize, administer and manage each service team, including: organizing daily rounds; overseeing daily orthopaedic operating room schedule, including logging of patients, arranging for appropriate specialty equipment to be brought to the hospital, and seeing to it that other special needs for the operating room are properly identified and met.

Interpersonal and Communication Skills
Residents must be able to demonstrate interpersonal and communication skills that result in effective information exchange and teaming with patients, their families, and professional associates. Residents are expected to:

• Create and sustain a therapeutic and ethically sound relationship with patients.
• Use effective listening skills and elicit and provide information using effective nonverbal, explanatory, questioning, and writing skills.
• Work effectively with others as a member or leader of a health care team or other professional group.

Specific rotation goals related to this competency
• Support and mentor junior residents on how to speak to patients and their families prior to and following treatments, especially surgery.
• Support and mentor junior residents on how to speak to patients frankly, on their level, without being abrupt, rushed or distracted.

PGY-5 VAMC Rotations
Rotation Director: V Franklin Sechriest II, MD
(reviewed, edited 9/13/16)

For the PGY5 resident, the VA rotation allows him/her to function as the senior member of the team with responsibility for daily rounds of pre- and postoperative patients that includes in-depth and collaborative discussions of treatment and follow-up protocols with faculty. Along with the VA faculty, the PGY5 will assume responsibility for the supervision and instruction of junior residents and students, directing and mentoring them as appropriate with regard to further enhancing their clinical and operative experience as well as their diagnostic and surgical skills. Clinical and surgical skills are refined, and treatment plans for more complicated conditions are formulated and implemented. The PGY5 will serve as the primary surgeon (with faculty monitoring) for more complex surgical procedures, both open and arthroscopic.

Additionally, the PGY5 will assume a lead administrative roll, determining the necessity for and timing of orthopaedic operative procedures on a weekly basis (i.e. creating the operative schedule for faculty review/approval), coordinating orthopaedic treatment with other specialties, and ensuring that all residents are prepared for weekly teaching conferences with well-prepared case presentations, lectures, and/or journal article reviews.

Medical Knowledge
Residents must demonstrate knowledge about established and evolving biomedical, clinical, and cognate (e.g. epidemiological and social-behavioral) sciences and the application of this knowledge to patient care. Residents are expected to:

• Demonstrate an investigatory and analytic thinking approach to clinical situations.
• Know and apply the basic and clinically supportive sciences which are appropriate to their discipline.

Specific PGY 5 rotation goals related to this competency
• Provide a Grand Rounds presentation every six weeks on a relevant orthopaedic topic, demonstrating use of current literature and explaining current concepts or technology.
• Consistently demonstrate medical/surgical knowledge by being prepared to discuss and plan for assigned surgical cases.
• Demonstrate knowledge of basic as well as more advanced surgical approaches to the hip, knee, shoulder, hand, and spine.
• Demonstrate an advanced understanding of the biology of disease processes (i.e. infection, malignancy, malnutrition), their effects on the musculoskeletal system, and familiarity with the medical treatment of such disease processes and the impact on orthopaedic conditions.
• Demonstrate familiarity with various types of orthopaedic implants, the advantages and disadvantages of each, and the appropriate patient selection for each.
• Demonstrate ability to identify and manage patient risk factors that predispose to perioperative morbidity and mortality.

Patient Care
Residents must be able to provide patient care that is compassionate, appropriate, and effective for the treatment of health problems and the promotion of health. Residents are expected to:
• Communicate effectively and demonstrate caring and respectful behaviors when interacting with patients and their families.
• Gather essential and accurate information about their patients.
• Make informed decisions about diagnostic and therapeutic interventions based on patient information and preferences, up-to-date scientific evidence, and clinical judgment.
• Develop and carry out patient management plans.
• Counsel and educate patients and their families.
• Use information technology to support patient care decisions and patient education.
• Perform competently all medical and invasive procedures considered essential for the area of practice.
• Provide health care services aimed at preventing health problems or maintaining health.
• Work with health care professionals, including those from other disciplines, to provide patient-focused care.

Specific PGY 5 rotation goals related to this competency
• Refinement of diagnostic skills in the clinical setting, including interpretation of advanced imaging studies (e.g. MRI, CT, bone scintigraphy)
• Formulation and implementation of detailed treatment plans, operative and non-operative
• Be able to plan the surgical care from admission to discharge for patients undergoing treatment of elective conditions (i.e. knee osteoarthritis) and non-elective conditions (i.e. hip fracture)
• Act as primary surgeon (with faculty monitoring) for a wide range of orthopaedic cases including more advanced procedures such as:
  o Arthroscopically-assisted rotator cuff repair
  o Arthroscopically-assisted ACL reconstruction
  o Total shoulder arthroplasty and hemi-arthroplasty
  o Complex primary THA and TKA
  o Revision THA and TKA
  o Hip/shoulder hemi arthroplasty for
  o Treatment of peri-prosthetic fractures
  o Treatment of infected THA and TKA
  o Open reduction and internal fixation of complex fracture patterns of upper/lower extremities (i.e. intramedullary nailing and plate-and-screw fixation)
• Assume responsibility and formulate postoperative care plan for all patients including planning for rehabilitation
• Demonstrate ability timely diagnosis and management of patients with postoperative medical and surgical complications

Practice-Based Learning and Improvement
Residents must be able to investigate and evaluate their patient care practices, appraise and assimilate scientific evidence, and improve their patient care practices. Residents are expected to:
• Analyze practice experience and perform practice-based improvement activities using a systematic methodology.
• Locate, appraise, and assimilate evidence from scientific studies related to their patients’ health problems.
• Obtain and use information about their own population of patients and the larger population from which their patients are drawn.
• Apply knowledge of study designs and statistical methods to the appraisal of clinical studies and other information on diagnostic and therapeutic effectiveness.
• Use information technology to manage information, access on-line medical information; and support their own education.
• Facilitate the learning of students and other health care professionals.

Specific PGY 5 rotation goals related to this competency
• Organize and participate actively in weekly academic proceedings, ensuring that all residents are prepared for educational conferences with case presentations, lectures, and/or journal article reviews as appropriate.
• Join faculty in assuming the responsibility to prepare and lead at least one of the weekly Journal Clubs. Demonstrate ability to organize an educational activity that fosters critical evaluation and discussion of orthopaedic scientific literature.
• Lead monthly Morbidity & Mortality Conference at which outcomes and complications are presented and discussed with a view to preventing future occurrences. Discuss, analyze, and explain how complications could have been avoided. Explain the management options. Use scientific evidence to support the decisions.

System-Based Practice
Residents must demonstrate an awareness of and responsiveness to the larger context and system of health care and the ability to effectively call on system resources to provide care that is of optimal value. Residents are expected to:
• Understand how their patient care and other professional practices affect other health care professionals, the health care organization, and the larger society and how these elements of the system affect their own practice.
• Know how types of medical practice and delivery systems differ from one another, including methods of controlling health care costs and allocating resources.
• Practice cost-effective health care and resource allocation that does not compromise quality of care.
• Advocate for quality patient care and assist patients in dealing with system complexities.
• Know how to partner with health care managers and health care providers to assess, coordinate, and improve health care and know how these activities can affect system performance.

Specific PGY 5 rotation goals related to this competency
• Effectively work with ancillary team members (i.e. nurses, discharge planners, case managers, social workers) to coordinate and allocate health care resources to deliver patient care within a government-run (VHA) health care system that is high quality as well as cost-effective.
• Interact with patients, attending physicians and allied health care personnel as part of a multidisciplinary health care team.
• Participate in identifying system errors and inefficiencies. Where possible, effect process improvement.

Professionalism
Residents must demonstrate a commitment to carrying out professional responsibilities, adherence to ethical principles, and sensitivity to a diverse patient population. Residents are expected to:
• Demonstrate respect, compassion, and integrity; a responsiveness to the needs of patients and society that supersedes self-interest; accountability to patients, society, and the profession; and a commitment to excellence and on-going professional development.
• Demonstrate a commitment to ethical principles pertaining to provision or withholding of clinical care, confidentiality of patient information, informed consent, and business practices.
• Demonstrate sensitivity and responsiveness to patients’ culture, age, gender, and disabilities.

Specific PGY 5 rotation goals related to this competency
• Display leadership among peers by setting high standards for patient care, professional interactions, and academic participation throughout the rotation.
• Interface with VA faculty as well as junior residents in a respectful manner. Show regard for opinions of all members of the team.
• Demonstrate concern for and commitment to the educational development of fellows, residents and students.
• Recognize when team members are not fulfilling their duties and/or meeting their milestones and take initiative to address/correct.
• Acknowledge errors in judgement and/or action, alert patients and appropriate health care providers, and create an action plan to address. Use errors as opportunities to teach fellow residents and students.
• Act in an appropriate manner with manufacturers’ representatives. Understand and articulate the ethical principles related to interacting with industry. Demonstrate understanding of the ethical concerns about industry.

Interpersonal and Communication Skills
Residents must be able to demonstrate interpersonal and communication skills that result in effective information exchange and teaming with patients, their families, and professional associates. Residents are expected to:
• Create and sustain a therapeutic and ethically sound relationship with patients (and family members).
• Use effective listening skills and elicit and provide information using effective nonverbal, explanatory, questioning, and writing skills.
• Work effectively with others as a member or leader of a health care team or other professional group.

Specific PGY 5 rotation goals related to this competency
• Represent the orthopaedics staff during interactions with patients and their families, acting with compassion and consideration at all times. Spend adequate time with patients as well as families, addressing their questions and concerns.
• Demonstrate skill in handling all difficult patient care situations.
• Present cases accurately and succinctly to attending physicians, fellow residents, and other health care professional.
• Demonstrate effective verbal communication skills when communicating plans of care with patients, families, and other health care personnel.
• Educate and counsel patients, and families using clear and non-technical language, especially during the informed consent process, addressing potential benefits/risks of a given surgical procedure.

PGY-5 RGHP Rotation
Rotation Director: Sarah Anderson, MD

Pediatric Trauma | General Orthopaedics

Medical Knowledge
Residents must demonstrate knowledge about established and evolving biomedical, clinical, and cognate (e.g. epidemiological and social-behavioral) sciences and the application of this knowledge to patient care. Residents are expected to:
• Demonstrate an investigatory and analytic thinking approach to clinical situations.
• Know and apply the basic and clinically supportive sciences which are appropriate to their discipline.

Specific rotation goals related to this competency
• Understand indications and timing of orthopaedic intervention for pediatric fractures.
• Understand the advance principles of fracture management for: long bone fractures (humerus, femur, tibia); pelvis and hip fractures; periarticular fractures (elbow, knee, ankle)
• Understand indications for closed reduction of various fractures: evaluation for instability; anesthesia; methods of reduction; fluoroscopy; casting; position of immobilization; follow-up
• To reinforce an understanding of the normal growth, development, and function of the musculoskeletal system gained in the PGY-2 pediatric rotation.
• To reinforce an understanding of disease and disorders of childhood which secondarily affect the musculoskeletal system gained in the PGY-2 pediatric rotation.
• Understand the treatment options for the arthritic knee: arthroscopy, unicompartmental knee replacement, high tibial osteotomy, and total knee arthroplasty;
• Understand indications/contraindications for minimally invasive surgery
• Understand the treatment options for the arthritic hip: osteoarthritis, avascular necrosis, other; total hip arthroplasty, hemiarthroplasty, femoral osteotomy, core decompressions
• Understand the treatment of common orthopaedics injuries: shoulder pain, knee pain.
• To reinforce an understanding of evaluation, work-up, and surgical treatment of geriatric trauma.
• Emphasis: Typical fractures or problems that lead to consultation with a community-based orthopedist, such as child with a limp, acute joint pain, febrile illness, upper and lower extremities fractures.
• To increase an understanding of childhood fractures, including their mechanism of injury, how they differ from adult fractures, how they are managed, and their long-term outcomes.

**Patient Care**
Residents must be able to provide patient care that is compassionate, appropriate, and effective for the treatment of health problems and the promotion of health. Residents are expected to:

- Communicate effectively and demonstrate caring and respectful behaviors when interacting with patients and their families.
- Gather essential and accurate information about their patients.
- Make informed decisions about diagnostic and therapeutic interventions based on patient information and preferences, up-to-date scientific evidence, and clinical judgment.
- Develop and carry out patient management plans.
- Counsel and educate patients and their families.
- Use information technology to support patient care decisions and patient education.
- Perform competently all medical and invasive procedures considered essential for the area of practice.
- Provide health care services aimed at preventing health problems or maintaining health.
- Work with health care professionals, including those from other disciplines, to provide patient-focused care.

**Specific rotation goals related to this competency**

**Pediatric Trauma**

- Understand the specific needs of the polytrauma patient: pediatric patients.
- To reinforce an understanding of common musculoskeletal development variations gained in the PGY-2 pediatric rotation.
- Understand the specific needs for postoperative management of the following fractures: long bone fractures (humerus, femur, tibia); pelvis and hip fractures; periarticular fractures (elbow, knee, ankle).

**General Orthopaedics**

- Understand the specific needs for postoperative management of the following: total hip arthroplasty; hemiarthroplasty; total knee replacement; unicompartmental knee replacement.
- Understanding the specific needs for preoperative and postoperative management of shoulder and knee arthroscopy.
- Understand the specific needs of the geriatric patient: treatment options appropriate for this patient population; specialized discharge planning.

**Practice-Based Learning and Improvement**
Residents must be able to investigate and evaluate their patient care practices, appraise and assimilate scientific evidence, and improve their patient care practices. Residents are expected to:

- Analyze practice experience and perform practice-based improvement activities using a systematic methodology.
- Locate, appraise, and assimilate evidence from scientific studies related to their patients’ health problems.
- Obtain and use information about their own population of patients and the larger population from which their patients are drawn.
- Apply knowledge of study designs and statistical methods to the appraisal of clinical studies and other information on diagnostic and therapeutic effectiveness.
- Use information technology to manage information, access on-line medical information; and support their own education.
- Facilitate the learning of students and other health care professionals.
- Mentor the junior residents on the orthopaedic service.
- Attend conferences: daily morning x-ray rounds, Grand Rounds, morbidity and mortality, core lecture curriculum, monthly spine trauma conference.
Specific rotation goals related to this competency

Pediatric Trauma

- Ability to assess appropriateness and timing for management of the following: Pediatric fractures and injuries.
- Ability to interpret and critique intraoperative and postoperative radiographs for: long bone fractures (humerus, femur, tibia); pelvis and hip fractures; periarticular fractures (elbow, knee, ankle)
- Ability to interpret clinical outcomes of the following: long bone fractures (humerus, femur, tibia); pelvis and hip fractures; periarticular fractures (elbow, knee, ankle)

General Orthopaedics

- Ability to interpret and critique postoperative radiographs for the following: total hip arthroplasty; hemiarthroplasty; total knee replacement; unicompartmental knee replacement
- Ability to assess clinical and functional outcomes for the following: total hip arthroplasty; hemiarthroplasty; total knee replacement; unicompartmental knee replacement; shoulder arthroscopy; knee arthroscopy.

System-Based Practice

Residents must demonstrate an awareness of and responsiveness to the larger context and system of health care and the ability to effectively call on system resources to provide care that is of optimal value. Residents are expected to:

- Understand how their patient care and other professional practices affect other health care professionals, the health care organization, and the larger society and how these elements of the system affect their own practice.
- Know how types of medical practice and delivery systems differ from one another, including methods of controlling health care costs and allocating resources.
- Practice cost-effective health care and resource allocation that does not compromise quality of care.
- Advocate for quality patient care and assist patients in dealing with system complexities.
- Know how to partner with health care managers and health care providers to assess, coordinate, and improve health care and know how these activities can affect system performance.

Specific rotation goals related to this competency

- Ability to respond in a timely fashion to emergent needs from the Emergency Department
- Ability to develop a working relationship with the Emergency Department staff, residents, and paramedical personnel
- Ability to recognize the indications for the following consultations: Internal Medicine; Infectious Disease; TACS Service
- Ability to develop a working relationship with ER resident
- Ability to develop a working relationship with the physicians’ assistants
- Ability to develop a working relationship and mentoring role with the medical students
- Ability to respond to outside referrals for transfers and emergent needs in a timely fashion
- Ability to develop a working relationship with the Medicine service and nursing home staff

Professionalism

Residents must demonstrate a commitment to carrying out professional responsibilities, adherence to ethical principles, and sensitivity to a diverse patient population. Residents are expected to:

- Demonstrate respect, compassion, and integrity; a responsiveness to the needs of patients and society that supercedes self-interest; accountability to patients, society, and the profession; and a commitment to excellence and on-going professional development.
- Demonstrate a commitment to ethical principles pertaining to provision or withholding of clinical care, confidentiality of patient information, informed consent, and business practices.
- Demonstrate sensitivity and responsiveness to patients’ culture, age, gender, and disabilities.

Specific rotation goals related to this competency

- Demonstrate Professionalism in the context of Regions Hospital rotation.

Interpersonal and Communication Skills

Residents must be able to demonstrate interpersonal and communication skills that result in effective information exchange and teaming with patients, their patients families, and professional associates. Residents are expected to:

- Create and sustain a therapeutic and ethically sound relationship with patients.
• Use effective listening skills and elicit and provide information using effective nonverbal, explanatory, questioning, and writing skills.
• Work effectively with others as a member or leader of a health care team or other professional group.

Specific rotation goals related to this competency
• Demonstrate effective interpersonal and communication skills in the context of Regions Hospital rotation.

PGY-5 Sports Rotations - TRIA / UMH
Rotation Director: Bradley Nelson, MD

Medical Knowledge
Residents must demonstrate knowledge about established and evolving biomedical, clinical, and cognate (e.g. epidemiological and social-behavioral) sciences and the application of this knowledge to patient care. Residents are expected to:
• Demonstrate an investigatory and analytic thinking approach to clinical situations.
• Know and apply the basic and clinically supportive sciences which are appropriate to their discipline.

Specific rotation goals related to this competency
• Understanding of clinical pathologies as they relate to shoulder and knee injuries and conditions.
• Interest in ongoing knowledge acquisition
Methods to demonstrate this include
• Pre-operative and post-operative discussions with faculty
• Consistent preparation for cases pre-operatively and ability to demonstrate understanding of pathologies, anatomy, and techniques in the operating room
• Intra-operative discussions of the pathology
• Excellence in required presentations demonstrating advanced level of understanding of Sports Medicine cases and their evaluation and management
• Active and vibrant participation in journal club discussions
• Extra-curricular written work on certain pertinent pathologic conditions
• Participation in chapter writing, clinical research, or case presentation generation
• Ability to perform surgical procedures such as diagnostic arthroscopy either in the dry lab setting or the operating theatre
• Eagerness to work on areas of poor clinical skills in order to augment areas or personal inadequacy

Patient Care
Residents must be able to provide patient care that is compassionate, appropriate, and effective for the treatment of health problems and the promotion of health. Residents are expected to:
• Communicate effectively and demonstrate caring and respectful behaviors when interacting with patients and their families.
• Gather essential and accurate information about their patients.
• Make informed decisions about diagnostic and therapeutic interventions based on patient information and preferences, up-to-date scientific evidence, and clinical judgment.
• Develop and carry out patient management plans.
• Counsel and educate patients and their families.
• Use information technology to support patient care decisions and patient education.
• Perform competently all medical and invasive procedures considered essential for the area of practice.
• Provide health care services aimed at preventing health problems or maintaining health.
• Work with health care professionals, including those from other disciplines, to provide patient-focused care.

Specific rotation goals related to this competency
• Ability to perform the clinical examination of the shoulder and knee as it relates to the athletic and degenerative pathologies.
• Ability to engage patients in the outpatient, operative, and inpatient settings in compassionate and thorough evaluation and management.

Methods to demonstrate this include
• Rapport establishment with patients in clinic
• Discussions with Faculty regarding best treatment options
• Conscientiousness in patient care and handling in the clinic and the Emergency Department/On Call hours
• Demonstration of clinical skills which are likely to provide therapeutic treatment of a given patient’s problem.

Practice-Based Learning and Improvement
Residents must be able to investigate and evaluate their patient care practices, appraise and assimilate scientific evidence, and improve their patient care practices. Residents are expected to:
• Analyze practice experience and perform practice-based improvement activities using a systematic methodology.
• Locate, appraise, and assimilate evidence from scientific studies related to their patients’ health problems.
• Obtain and use information about their own population of patients and the larger population from which their patients are drawn.
• Apply knowledge of study designs and statistical methods to the appraisal of clinical studies and other information on diagnostic and therapeutic effectiveness.
• Use information technology to manage information, access on-line medical information; and support their own education.
• Facilitate the learning of students and other health care professionals.

Specific rotation goals related to this competency
• Understanding that there are costs associated with the practice of Sports Medicine and that choices made in the care of a patient have consequences for the patient and should be driven by data whenever possible.

Methods to demonstrate this include
• Discussions with faculty regarding indications and alternatives
• Eagerness to learn in a self-directed fashion when gaps in his/her knowledge base are exposed
• Self-initiated projects regarding areas of weakness in clinical evaluation and understanding including reviews of the literature
• Chapter writing or case presentation on areas of personal interest or inadequate knowledge
• Active participation in journal club revealing an ability to synthesize and apply the knowledge from a given article or set of articles
• Self-initiated work on an arthroscopic model
• Attendance at and active participation in directed arthroscopy or surgical labs

System-Based Practice
Residents must demonstrate an awareness of and responsiveness to the larger context and system of health care and the ability to effectively call on system resources to provide care that is of optimal value. Residents are expected to:
• Understand how their patient care and other professional practices affect other health care professionals, the health care organization, and the larger society and how these elements of the system affect their own practice.
• Know how types of medical practice and delivery systems differ from one another, including methods of controlling health care costs and allocating resources.
• Practice cost-effective health care and resource allocation that does not compromise quality of care.
• Advocate for quality patient care and assist patients in dealing with system complexities.
• Know how to partner with health care managers and health care providers to assess, coordinate, and improve health care and know how these activities can affect system performance.

Specific rotation goals related to this competency
• Awareness that the practice of Sports Medicine has consequences not only to other patients with sports injuries, but to the whole medical system as a whole.

Methods to demonstrate this include
• Discussions with Faculty regarding the cost-effectiveness of certain alternatives to care
• Review of the literature for cost-utility analyses or related studies and incorporation of these into the decision making process
• Conscientiousness regarding the cost of implants, braces, therapy, and surgical interventions as discussions of risks and benefits are had between faculty and residents

**Professionalism**
Residents must demonstrate a commitment to carrying out professional responsibilities, adherence to ethical principles, and sensitivity to a diverse patient population. Residents are expected to:
- Demonstrate respect, compassion, and integrity; a responsiveness to the needs of patients and society that supercedes self-interest; accountability to patients, society, and the profession; and a commitment to excellence and on-going professional development.
- Demonstrate a commitment to ethical principles pertaining to provision or withholding of clinical care, confidentiality of patient information, informed consent, and business practices.
- Demonstrate sensitivity and responsiveness to patients’ culture, age, gender, and disabilities.

**Specific rotation goals related to this competency**
- Diligence in regards to the responsibilities of patient care as manifest by the daily care of patients in the clinic, on the hospital floor, and in the operating room for the Faculty of the Sports Medicine rotation.

Methods to demonstrate this include
- Timely and thorough completion of all documentation including clinic notes, discharge summaries, and emergency room consultations/On-Call work
- Ability to interact with patients from diverse cultural backgrounds in the clinic, ER, Floor, and operating room
- Appropriate conduct in the Operating Room, on the hospital Floor, and Clinic
- Professional and appropriate attire which is acceptable for the setting
- Professional treatment of Faculty, OR staff, clinical ancillary staff, and Hospital personnel

**Interpersonal and Communication Skills**
Residents must be able to demonstrate interpersonal and communication skills that result in effective information exchange and teaming with patients, their patients families, and professional associates. Residents are expected to:
- Create and sustain a therapeutic and ethically sound relationship with patients.
- Use effective listening skills and elicit and provide information using effective nonverbal, explanatory, questioning, and writing skills.
- Work effectively with others as a member or leader of a health care team or other professional group.

**Specific rotation goals related to this competency**
- Ability to clearly communicate between patient and provider, provider and ancillary staff, and provider to provider

Methods to demonstrate this include
- Well-written and thorough Discharge Summaries which facilitate post-discharge patient care
- Organized, complete, and thoughtful clinic notes which adequately reflect the visit and demonstrate the ability to understand the pathology, formulate a plan of treatment, and record the findings of the examination, studies, and history
- Oral presentations which show an understanding of the pathology presented and enable peer-to-peer education
- Active participation in journal club revealing an ability to synthesize and apply the knowledge from a given article or set of articles
- Thorough patient workups which include discussions with patients and their families about the potential treatment options and yield comprehension on the patient’s behalf
Teaching Medical Students

Residents are an essential part of the teaching of medical students. It is critical that any resident who supervises or teaches medical students must be familiar with the educational objectives of the course or clerkship and be prepared for their roles in teaching and evaluation. Included in this manual are the clerkship objectives for Orthopaedic Surgery as well as the overall Educational Program Objectives.

Orthopaedic Surgery ORSU 7200/7500

Description: The orthopaedic surgery selective consists of a 2 week rotation concentrating on the areas of general orthopaedics, sports medicine, and pediatrics. Each selective will be geared toward the students’ desired orthopaedic interest and will allow for greater variability in the student's overall experience. In all rotations, the student is expected to be involved in the clinic setting, pre-operative planning, assisting in the operating room, and post-operative care of patients. Each student will be expected to learn the objectives as outlined in the course description. The student will be expected to attend conferences that are currently active in the residency curriculum. He or she may be requested to present cases as part of these conferences. The experience will be a mixture of diverse clinical exposure in addition to operating room activity. The extent of the student's involvement in the operating room will be at the discretion of the orthopaedic attending.

Course objectives: Upon completion of this course, the student should be able to do the following:

- Perform an adequate orthopaedic history
- Perform a physical examination of the musculoskeletal system, including assessment of joint motion
- Apply a grading scale to measure muscle strength of the major muscle groups of the extremities.
- Use proper terminology to describe signs, symptoms, and treatment of common injuries and disorders of the musculoskeletal system.
- Develop a differential diagnosis of common orthopaedic conditions
- Outline a treatment plan to establish the proper diagnosis of common orthopaedic conditions
- Identify imaging studies to support diagnosis
- Select appropriate laboratory tests to support diagnosis
- Apply splints for common extremity injuries
- Apply casts for common extremity injuries Identify imaging studies to support diagnosis
- Function effectively as a member of an interprofessional healthcare team across various clinical settings (operating room, outpatient clinic, training room, etc.)
- Communicate effectively with patients, families and health care providers
- Reflect on your current knowledge base, identifying strengths and areas for improvement
- Demonstrate a commitment to ethical principles appropriate to the profession of orthopaedics
• Articulate a plan for professional growth

**Medical Students on rotation are evaluated on a 4 point scale in these 15 areas:**

1. Medical Knowledge: Data Gathering & Physical Exam
2. Medical Knowledge: Application of Knowledge
3. Clinical Skills and Patient Care: Data Gathering & Physical Exam
4. Clinical Skills and Patient Care: Assessment of Problems – Diagnosis
5. Interpersonal and Communication Skills: Presenting Written and Oral Data
6. Interpersonal and Communication Skills: Relationships with Patients and Families
7. Scientific and Clinical Inquiry: Management of Problems – Treatment Plan
8. Professionalism: Independent Learning
9. Professionalism: Integrity, Dependability, Altruism, Compassion, Commitment, Confidentiality, Sensitivity to/Respect for Patients
10. Professionalism: Teamwork
11. Continuous Improvement of Care Through Reflective Practice: Self-Directed Learner
12. Systems of Health Care: Patient Advocacy
13. Systems of Health Care: Cost of Care
14. Systems of Health Care: Discharge Planning
15. Overall Clinical Competence
### Anchors and Definitions for Evaluations - University of Minnesota Medical School - Clerkship Programs

<table>
<thead>
<tr>
<th>Below Expectations</th>
<th>Meets Expectations</th>
<th>Above Expectations</th>
<th>Far Exceeds Expectations</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Medical Knowledge</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Data Gathering—History-Taking</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Insufficient or inaccurate information</td>
<td>• Complete on uncomplicated patients with past and current treatments for most problems</td>
<td>• Complete, missing less critical information</td>
<td>• Consistently complete and well-organized even on complicated patients</td>
</tr>
<tr>
<td>• Makes too many assumptions or relies on history of others</td>
<td>• Histories on complicated patients may be disorganized or redundant</td>
<td>• Trouble with most medically complicated or difficult patients</td>
<td>• Misses only detailed historical information (e.g. side effects to uncommon drugs, rare disease complications)</td>
</tr>
<tr>
<td>• Problems generally not well prioritized</td>
<td>• Identifies and prioritizes most routine problems</td>
<td>• Identifies problems and usually prioritizes</td>
<td>• Obtains pertinent information from medical record</td>
</tr>
<tr>
<td>• History often not tailored appropriately to focus on patients’ problems</td>
<td>• Usually tailored to be focused on patients’ problems</td>
<td>• Consistently tailored to be focused on patients’ problems</td>
<td>• Identified and prioritizes problems even on complex patients</td>
</tr>
<tr>
<td><strong>Applications of Knowledge</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Fund of knowledge below expected</td>
<td>• Fund of knowledge adequate</td>
<td>• Fund of knowledge more than adequate</td>
<td>• Extensive fund of knowledge</td>
</tr>
<tr>
<td>• Doesn’t recognize some common disease patterns</td>
<td>• Usually identifies all common patterns of signs and symptoms</td>
<td>• Consistently identifies all common patterns of signs and symptoms</td>
<td>• Consistently identifies all common patterns of signs and symptoms</td>
</tr>
<tr>
<td>• Unable to apply knowledge to a clinical situation</td>
<td>• Usually applies knowledge correctly</td>
<td>• Consistently applies knowledge to clinical situations correctly</td>
<td>• Constructively contributes to diagnostic and treatment plans</td>
</tr>
<tr>
<td><strong>Clinical Skills and Patient Care</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Data Gathering and Physical Exam</strong></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>• Not consistent in proper technique in core aspects of PE</td>
<td>• Consistent proper technique</td>
<td>• Consistently uses proper technique and identifies major abnormalities and pertinent normal findings</td>
<td>• Consistently uses proper technique in performing comprehensive and appropriately focused exams</td>
</tr>
<tr>
<td>• Can’t identify important aspects of PE to address patient’s illness</td>
<td>• Confident in normal exam, not in abnormal</td>
<td>• Identifies subtle or unusual findings</td>
<td>• Identifies subtle or more difficult findings</td>
</tr>
<tr>
<td>• Overlooks obvious abnormal findings</td>
<td>• Trouble focusing on pertinent parts of exam</td>
<td>• Consistently tries to link exam to history</td>
<td>• Often first to identify changes in exam</td>
</tr>
<tr>
<td>• Adopts bad habits (listening through clothes, avoids rectal exam, etc.)</td>
<td>• Occasionally misses or misinterprets findings</td>
<td>• Goes beyond simple description</td>
<td>• Findings related to problems, interpretation and synthesis of findings</td>
</tr>
<tr>
<td>Assessment of Problems - Diagnosis</td>
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<tr>
<td>---------------------------------------------------------------------------------------------------</td>
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<tr>
<td>• Difficulty developing core differential dx for common disease presentations</td>
<td></td>
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<tr>
<td>• Doesn’t identify major patient problems</td>
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<tr>
<td>• Rationale for differential dx and plans for confirmation not reasonable</td>
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<td></td>
</tr>
<tr>
<td>• Able to generate core differential dx for common medical presentations</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>• Accurately identifies patients’ problems</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Rationale and plan for confirmation of dx usually complete</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>• Integrates hx, PE and labs to generate differential dx for most presentation, may have problems on</td>
<td></td>
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<tr>
<td>complicated patients</td>
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<td></td>
</tr>
<tr>
<td>• Accurately identifies patients’ problems</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Rationale and plan complete</td>
<td></td>
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<tr>
<td>• Consistently complete, organized and thoughtful differentials in order of likelihood</td>
<td></td>
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</tr>
<tr>
<td>• Integrates PE and labs to generate differential dx on complicated pts</td>
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<tr>
<td>• Accurately identifies patients’ problems</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Rationale and plan complete</td>
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</table>

<table>
<thead>
<tr>
<th>Interpersonal and Communication Skills</th>
</tr>
</thead>
<tbody>
<tr>
<td>Presenting Written and Oral Data</td>
</tr>
<tr>
<td>• SOAP notes sometimes illegible, incomplete, or inaccurate</td>
</tr>
<tr>
<td>• Presentations disorganized</td>
</tr>
<tr>
<td>• Difficulty discerning the amount of detail needed in different types of presentations</td>
</tr>
<tr>
<td>• SOAP notes legible, accurate and miss only minor details.</td>
</tr>
<tr>
<td>• Presentations organized but hesitant and unsure of how much to present</td>
</tr>
<tr>
<td>• Rarely misses important information. May be “too complete.”</td>
</tr>
<tr>
<td>• SOAP notes can stand on their own without need for addendums</td>
</tr>
<tr>
<td>• Presentations include rationales and are organized, may miss minor points.</td>
</tr>
<tr>
<td>• Able to balance appropriate detail with conciseness on straightforward patients.</td>
</tr>
<tr>
<td>• SOAP notes complete, focused and organized</td>
</tr>
<tr>
<td>• Presentations include rationales, are smooth and well-organized</td>
</tr>
<tr>
<td>• Able to discern important details while being concise even on complicated patients</td>
</tr>
<tr>
<td>• Information consistently complete, organized and include rationales even with complex problems</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Relationships with Patients and Families</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Trouble establishing trust and rapport with patients</td>
</tr>
<tr>
<td>• Unaware of relevant cultural or psychosocial patient issues</td>
</tr>
<tr>
<td>• Not reassuring, empathetic, caring, supportive, respectful; may be arrogant</td>
</tr>
<tr>
<td>• Not facilitative or educational</td>
</tr>
<tr>
<td>• Establishes rapport but may use medical jargon</td>
</tr>
<tr>
<td>• Aware of major cultural or psychosocial issues but may miss details that can affect the patient’s care (e.g., inquiring about home resources)</td>
</tr>
<tr>
<td>• Usually reassuring, empathetic, caring, supportive respectful</td>
</tr>
<tr>
<td>• Generally facilitative and educational</td>
</tr>
<tr>
<td>• Only has rapport trouble with most difficult patients or families</td>
</tr>
<tr>
<td>• Delves beyond the superficial cultural and psychosocial issues to gain a better understanding of how they affect patients’ health</td>
</tr>
<tr>
<td>• Consistently reassuring, empathetic, caring, supportive respectful</td>
</tr>
<tr>
<td>• Consistently facilitative and educational</td>
</tr>
<tr>
<td>• Highly effective in establishing good rapport even with difficult patients</td>
</tr>
<tr>
<td>• Goes above and beyond to convey empathy, engender confidence and make sure patients’ concerns are addressed</td>
</tr>
<tr>
<td>• Consistently identifies patients’ cultural and psychosocial needs. Tires to understand how they will affect the plan of care and makes the necessary provisions</td>
</tr>
<tr>
<td>• Reassuring, empathetic, caring supportive, respectful, even with patients and families considered</td>
</tr>
</tbody>
</table>
### Scientific and Clinical Inquiry

#### Data Management of Problems – Treatment Plans

<table>
<thead>
<tr>
<th>Weaknesses</th>
<th>Strengths</th>
</tr>
</thead>
</table>
| • Rx plans inappropriate, poorly organized, incomplete, not prioritized  
  • Doesn’t recognize need for urgent treatment  
  • Irregularly monitors pt and clinical data, missing major changes  
  • Doesn’t record changes  
  • Unable to synthesize data into assessment and plan  
  • Unable to exercise clinical judgment in care of patient | • Formulates appropriate plans for most problems  
  • Formulates appropriate priorities  
  • Recognizes need for urgent treatment and initiates appropriate action  
  • Monitors pt progress and reassesses need for information or management changes  
  • Follows through appropriately  
  • Usually able to synthesize information into assessment and plan |
| • Formulates appropriate, well prioritized plans for common problems  
  • Recognizes need for urgent treatment and initiates appropriate action  
  • Recognizes need for urgent treatment and initiates appropriate action  
  • Monitors pt progress and adjusts care in response to outcomes  
  • Synthesizes information into assessment and plan | • Formulates appropriate, well prioritized longitudinal plans, including complex patients  
  • Recognizes need for urgent treatment and initiates appropriate action  
  • Continuously monitors pt. progress and reassess need for management changes  
  • Consistently follows up on tests and makes adjustments in management  
  • Prioritizes clinical problems very appropriately, even with complex pts.  
  • Able to discuss reasons for medical judgments  
  • Able to consistently integrate hx, PE and lab results into rx and plan |

### Professionalism

#### Independent Learning

<table>
<thead>
<tr>
<th>Weaknesses</th>
<th>Strengths</th>
</tr>
</thead>
</table>
| • Reading inconsistent or superficial  
  • Lacks initiative for learning  
  • Demonstrates difficulty in self-assessment  
  • Often doesn’t learn from feedback or experience | • Reads about patients’ problems and tries to apply what is learned  
  • Often takes initiative in learning  
  • Generally accurate assessment and learns from experience and feedback |
| • Consistently reads and applies it to patient care, but only occasionally shares information with others  
  • Participates in conferences and sometimes attends conferences that are not required.  
  • Sometimes seeks information from consultants | • Reads extensively and from most current sources and shares information with others in an organized fashion.  
  • Consistently takes initiative in learning  
  • Accurate self-assessment and learns from experience and feedback  
  • Participates in conferences and attends conferences that are not required.  
  • Actively seeks information from consultants |
## Independent Learning Integrity, Dependability, Altruism, Compassion, Commitment, Confidentiality, Sensitivity to/Respect for Patients

- Puts self-interest above patient’s
- Shows disinterest and lack of commitment to patient care
- Lacks accountability
- May not demonstrate honesty, integrity, respect, compassion
- Inappropriate demeanor or appearance
- Insufficient respect of roles of specialties and members of team

- Puts patient interests above self
- Recognizes limitations and asks for help
- Accepts feedback well
- Demonstrates honesty and integrity, respect and compassion
- Usually takes initiative for learning
- Respects roles of specialties and team members but may need help applying it to patient care

- Dedicated to patient care beyond expected duties
- Good self-assessment and actively seeks feedback
- Readily admits mistakes and takes responsibility
- Treats everyone with respect and courtesy
- Enthusiastic and committed to patient care and medicine
- Consistently demonstrates honesty, integrity, respect, and compassion
- Respects roles of team and applies to enhance patient care

- Goes above and beyond in care for patients
- Enthusiastic even in complex or difficult situations
- Insightful in identifying strengths and weaknesses and seeks feedback
- Demonstrates honesty, integrity, respect and compassion
- Demeanor and appearance is a role model for other team members
- Shares information with the team in organized fashion
- Actively and respectfully involved all member of health care team to enhance patient care.

### Teamwork

- Insufficiently aware of roles of members of the team
- Trouble functioning effectively with team
- Trouble establishing trust and rapport with team members

- Understands basic roles of members of team but may need help applying to patient care
- Reliable team member but may need prompting
- Communicates all medically necessary information to nursing or other members of the team

- Appreciates different roles of team members and applies to enhance patient care
- Valuable member of team with good initiative and enhances effectiveness
- Facilitates community among team members to optimize patient care

- Actively involves all members of health care team to enhance patient care
- Highly effective team member who shows consistent enthusiasm and initiative
- Communication among team members is enhanced by student’s involvement

### Continuous Improvement of Care Through Reflective Practice

### Self-Directed Learner

- Reading inconsistent or superficial
- Trouble with accurate self-assessment
- Trouble critically appraising new information or applying EBM skills

- Reads about patients’ problems and tries to apply what is learned
- Performs accurate self-assessment
- Makes reasonable efforts to critically appraise new information and apply EBM to patient care

- Consistently reads and applies it to patient care
- Reads sources more varied and in depth, uses information technology
- Exhibits curiosity, good self-assessment
- Critically appraises new information and shares it
- Routinely applies EBM to patient care

- Reads extensively and often from most current sources
- Offers research questions and shares information
- Critical appraisal and EBM skills well above average
<table>
<thead>
<tr>
<th>Systems of Healthcare</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Patient Advocacy</strong></td>
</tr>
<tr>
<td>• Not interested or involved</td>
</tr>
<tr>
<td>• Doesn’t adequately follow-up on patient needs and concerns</td>
</tr>
<tr>
<td>• Usually involved in identifying needs and resources for patients</td>
</tr>
<tr>
<td>• Attempts to follow-up</td>
</tr>
<tr>
<td>• Identifies patient needs and resources to help</td>
</tr>
<tr>
<td>• Usually follows-up to make sure resources are adequate</td>
</tr>
<tr>
<td>• Sometimes advocates for systems change that will benefit patients</td>
</tr>
<tr>
<td>• Consistently identifies resources and follow-up</td>
</tr>
<tr>
<td>• Consistently advocates for changes in systems that will benefit patients</td>
</tr>
<tr>
<td><strong>Cost of Care</strong></td>
</tr>
<tr>
<td>• Insufficiently aware of cost of care</td>
</tr>
<tr>
<td>• Has little interest in or knowledge of health care costs and resource allocation</td>
</tr>
<tr>
<td>• Orders many tests without consideration of cost.</td>
</tr>
<tr>
<td>• Understands basic requirements and limitations of major insurers and how these affect patient care</td>
</tr>
<tr>
<td>• Demonstrates awareness of cost and resource allocations</td>
</tr>
<tr>
<td>• Orders most lab tests in a thoughtful manner</td>
</tr>
<tr>
<td>• Understands and applies knowledge of insurance basics, general costs of care, and community resources.</td>
</tr>
<tr>
<td>• Demonstrates awareness of cost and resource allocation</td>
</tr>
<tr>
<td>• Consistently orders lab tests in a thoughtful manner</td>
</tr>
<tr>
<td>• Uses knowledge of insurance, medication/test costs, and resources to try to optimize patient care</td>
</tr>
<tr>
<td>• Demonstrates awareness of costs and resource allocation</td>
</tr>
<tr>
<td>• Consistently shows discernment in ordering tests, even with patients with multiple problems</td>
</tr>
<tr>
<td><strong>Discharge Planning</strong></td>
</tr>
<tr>
<td>• Does not anticipate or become involved with the healthcare team discharge and follow-up of patients.</td>
</tr>
<tr>
<td>• Assists healthcare team with discharge and follow-up of most patients.</td>
</tr>
<tr>
<td>• Has an awareness of needed community resources</td>
</tr>
<tr>
<td>• Consistently assists in healthcare team in planning for discharge and follow-up of patients</td>
</tr>
<tr>
<td>• Enhances the efficiency of the discharge process overall</td>
</tr>
<tr>
<td>• Utilizes appropriate community resources for the patient</td>
</tr>
<tr>
<td>• Actively anticipates the discharge and follow-up of patients</td>
</tr>
<tr>
<td>• Consistently involves appropriate healthcare team members in planning for effective, safe, patient-centered discharge of patients</td>
</tr>
<tr>
<td>• Utilizes appropriate community resources for the patient</td>
</tr>
</tbody>
</table>
**ABOS Rules for Residency Education**

The American Board of Orthopaedic Surgery has established rules for residency education. These requirements should not be interpreted as restricting programs to minimum standards. Throughout these rules, the term “accredited” denotes approval by the Accreditation Council for Graduate Medical Education. A copy of current rules and procedure can be found online at [https://abos.org/certification-exams/part-i/rules-and-procedures.aspx](https://abos.org/certification-exams/part-i/rules-and-procedures.aspx).

**ACGME Competencies**

In accordance with the ACGME Institutional Requirements, each program must provide effective educational experiences for the trainees that lead to measurable achievement of educational outcomes in the ACGME competencies. Please see LINKS for *ACGME Program Requirements for Graduate Medical Education in Orthopaedic Surgery*. Education competency areas consist of the following.

**Medical Knowledge**

Medical knowledge is required for the day-to-day activity of all physicians. Didactic sessions are given nearly daily at each of the institutions in order to increase the resident’s medical knowledge base. The medical knowledge base is tested through weekly case presentation at most of the institutions. Medical knowledge base is tested yearly through the Orthopaedic In-Training Exam (OITE). Faculty assessment of the resident’s medical knowledge base is documented as part of the electronic evaluation system. Further, residents report their medical knowledge milestones through Ortho Bullets exams.

**Patient care**

A doctor’s job is patient care. This is carried out on a daily basis. It is the resident’s primary responsibility under the direct supervision of the faculty. The faculty provide direct feedback regarding the resident’s patient care skills, as well as documenting through the electronic evaluation system. Residents request faculty to assess their patient care milestones through the ABOS Surgical Skills Assessment tool.

Patient care includes acquisition of surgical skills. The program includes skills labs offered on a quarterly basis. Topics include: Osteotomies of the Hip and Knee, Ankle Fractures, External Fixation, Arthroscopy of the Knee and Shoulder, Plates and Screws in Fractures and Non-unions, Shoulder and Elbow Fractures, Intramedullary Nailing, THA and TKA Alignment and Preoperative Planning.

**Practice-Based Learning and Improvement**

Practice-Based learning and improvement is well taught in this program, as the resident must acclimate to six different hospital-based systems. Each system has its own aspects of medical records, radiology records, and hospital policies and procedures. This gives the resident an excellent hands-on experience. The resident’s ability to participate in each system is evaluated as part of the electronic evaluation system and through 360° discussion at the semi-annual CCC meetings.
Interpersonal Communication Skills
Interpersonal and communication skills are a part of the patient care process. Patient interviewing skills, interactive skills with ancillary personnel, as well as physician-to-physician communication is a daily part of the resident routine and is supervised directly by the faculty. This competency is taught on a daily basis and evaluated as part of the electronic evaluation system and through 360° discussion at the semi-annual CCC meetings.

Professionalism
Professionalism is included as part of the Core Curriculum, as well as learned through the example of the faculty. Professionalism includes timely completion of medical records and duty hour reporting and attendance at conferences and skills labs. This is evaluated as part of the evaluation system and through 360° discussion at the semi-annual CCC meetings.

System-Based Practice
System-Based practice is part of the practice base learning and is offered on a very diverse basis through the six different hospital systems which are a part of the program. This is evaluated through the evaluation system and through 360° discussion at the semi-annual CCC meetings.

ACGME Milestones
The Orthopaedic Surgery Milestone Project is a joint initiative of The Accreditation Council for Graduate Medical Education and The American Board of Orthopaedic Surgery. The milestones provide a framework for the assessment of the development of the resident physician in key dimensions of the elements of physician competency in a specialty or subspecialty. They neither represent the entirety of the dimensions of the six domains of physician competency, nor are they designed to be relevant in any other context. Milestones are designed for programs to use in semi-annual review of resident performance and reporting to the ACGME. Milestones are knowledge, skills, attitudes, and other attributes for each of the ACGME competencies organized in a developmental framework from less to more advanced. They are descriptors and targets for resident performance as a resident moves from entry into residency through graduation. In the initial years of implementation, the Review Committee will examine milestone performance data for each program’s residents as one element in the Next Accreditation System (NAS) to determine whether residents overall are progressing. Milestones for Orthopaedic Surgery Residency are available online through the ACGME site at http://www.acgme.org/Portals/0/PDFs/Milestones/OrthopaedicSurgeryMilestones.pdf?ver=2015-11-06-120524-887.

Residents take initiative in the program through completion of Patient Care (PC) Milestones and Medical Knowledge (MK) Milestones through the use of two online programs. Ortho Bullets exams will assess MK scores and the ABOS Surgical Skills Assessment (effective January 1, 2017) will apply to the PC aspects of the Milestones. The other Milestone ACGME competency-content areas are assessed by the Clinical Competency Committee. Residents in the PGY-5 year will be grandfathered in to previous methods of collecting MK and PC methods.
Clinical Competency Committee

**Purpose:** The Clinical Competency Committee reviews all resident evaluations on a semi-annual basis. It assists in preparing and ensuring the reporting of Milestones evaluations of each resident to the ACGME. It advises the Program Director regarding resident progress, including promotion, remediation and dismissal, based on data and observations.

**Membership:** The Program Director must appoint the CCC. In this program, it is comprised of all education site directors, along with the Associate Program Director and a Resident Research Co-Director. The CCC should review all resident evaluations semi-annually; prepare and ensure the reporting of Milestones evaluations of each resident semi-annually to ACGME; and advise the Program Director regarding resident progress, including promotion, remediation, and dismissal.

**Staff:** The CCC is staffed by the Residency Coordinator and the Department’s Education Lead.

**Responsibility:** Each member of the CCC is responsible for overseeing the gathering and completion of resident evaluations pertinent from their respective site. The Associate Program Director is responsible for overseeing and gathering the completion of PGY-1 resident evaluations from non-orthopaedic rotations, along with developing an overall assessment of all PGY-1 residents.

**Measures of Assessment/Tools:** Evaluations and assessments to be reviewed include Milestones, New-Innovations electronic performance analysis and comments, Ortho Bullets examinations, ABOS Skills Assessments, skills lab results, in-training scores, case logs, research requirement, observations and other correspondence and notes gathered.

**Meetings:** At a minimum, the CCC meets semi-annually, once in the fall and again the in the spring. All evaluations are due to the residency coordinator two weeks after the end of the last quarter’s rotation, per ACGME requirements. At least two subsequent weeks are provided to the education staff to prepare all data for review by the CCC in both summary and detailed form.

**CCC Decision-making and Recommendations:** It is preferable for the CCC to reach consensus from its members on recommendations to the Program Director. Strong disagreements regarding resident evaluation and performance are documented clearly in the minutes of the CCC. The minutes of the CCC are confidential and are handled differently than the summary assessment data of each resident. After a review of the assessment data, the Program Director will provide the CCC review with a cover letter for each resident, notifying him/her of assessment data and status in the program.

Recommendations by the CCC regarding each resident’s status within the program can consist of the following.

**Satisfactory:**
- Continue to progress/be promoted (depending if evaluation is mid-year or year-end)

**Unsatisfactory:**
1. Follow up and support - a mentor can be identified, intermittent individual meetings scheduled, conversations documented, and/or a Performance Improvement Plan developed

2. Remediation - a formal letter sent by the Program Director, with documented plan and requirement(s)
   Options for remediation can include:
   a. intensify mentoring
   b. assign additional readings/create a structured reading plan
   c. skill lab/simulation experiences
   d. add or change rotations
   e. repeat rotations/activities
   f. extend education (you may want to add some examples of what this may look like)
   g. undergo counseling to consider another specialty/profession

3. Probation - a formal letter from the Program Director.

Dismissal

The CCC can also recommend to the Program Director to review with Human Resources and Legal regarding unsatisfactory status of a resident.

The Program Director makes all final decisions on resident status.

Program Methods used for Evaluation

The methods used for evaluation of competence in this program include:

- New Innovations Evaluations of the Six ACGME Core Competencies plus technical skills and overall competence.
- ACGME Surgery logs noting compliance with completion, minimum requirements (by graduation); national norms are about 500 cases/year, 2000 cases/residency. Logs are to be kept current by the end of every rotation.
- ACGME Milestones Evaluations:
  - Medical knowledge assessment by completion of Ortho Bullets milestones exams; 400 questions in Ortho Bullets milestones exams required of all residents.
  - Patient Care Assessment through completion of ABOS Surgical Skills Assessments.
  - Other competencies assessed through semi-annual review by the CCC.
- Medical Knowledge as reflected in OITE score. Program goal is > 40th percentile for each resident.\textsuperscript{10}
- Resident Research Project. Previous system of publishable manuscript by graduation. New system is phased in for completion using Longitudinal Resident Research Program.
- Other, such as G1 skills week, arthroscopy labs, hand skills day.

\textsuperscript{10} OITE scores are only one of the factors considered in evaluating a resident’s overall performance and progress. The use of OITE scores for deciding whether a resident should be retained in a program or promoted is inappropriate (AAOS OITE 2011 Program Directors’ Report, 1/19/12, p 3.).
Finally, and most importantly, the site directors provide a 360° assessment representing the orthopedic staff and faculty of their institution, in a discussion of the resident’s strengths and weaknesses in each of the above categories. The CCC makes a recommendation to the Program Director, and communicates their recommendations in a fall report (looking at 4th quarter of the previous year and first quarter of the present year) and a spring report (looking at 2Q and 3Q of that year).

New-Innovations Evaluations
Access to New-Innovations is through an online portal that the University of Minnesota uses and that is familiar to residents, with the beginning use of it as an onboarding tool to residency. Residents are scheduled to evaluate faculty and rotations at the end of each rotation, and to evaluate conferences on a quarterly basis.

ACGME Surgical Case Logs
Access to the ACGME Surgical Case Logs is through the ACGME website. Case Log Guidelines have been established by the ACGME Review Committee for Orthopaedic Surgery and is available here.

All residents must prospectively log cases into the ACGME Case Log System during the entirety of their residency experience. Only orthopaedic cases must be entered; cases completed on other services (e.g., neurological surgery) must not be entered.

The ACGME Review Committee has identified the procedures considered most important to use for assessing procedural competence of resident physicians who complete orthopaedic surgery education. Programs whose graduate case volumes average below the minimums listed in four of the 15 categories may be cited for non-compliance.
Orthopaedic Surgery Minimum Case Numbers
(Note: manipulations must be recorded with procedures in the Case Log System)

<table>
<thead>
<tr>
<th>Category</th>
<th>Minimum</th>
<th>Category</th>
<th>Minimum</th>
</tr>
</thead>
<tbody>
<tr>
<td>Knee arthroscopy</td>
<td>30</td>
<td>Ankle fracture fixation</td>
<td>15</td>
</tr>
<tr>
<td>Shoulder arthroscopy</td>
<td>20</td>
<td>Closed reduction forearm/wrist</td>
<td>20</td>
</tr>
<tr>
<td>ACL reconstruction</td>
<td>10</td>
<td>Ankle &amp; hind &amp; mid-foot arthro</td>
<td>5</td>
</tr>
<tr>
<td>THA</td>
<td>30</td>
<td>Supracondylar humerus perc</td>
<td>5</td>
</tr>
<tr>
<td>TKA</td>
<td>30</td>
<td>Femur and tibia intramedullary fixation</td>
<td>25</td>
</tr>
<tr>
<td>Hip fractures</td>
<td>30</td>
<td>All pediatric procedures</td>
<td>200</td>
</tr>
<tr>
<td>Carpal tunnel release</td>
<td>10</td>
<td>All oncology procedures</td>
<td>10</td>
</tr>
<tr>
<td>Spine decompression/posterior spine fusion</td>
<td>15</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

CPT Codes in Each Procedural Category

**Knee arthroscopy** (29850, 29851, 29855, 29856, 29866, 29867, 29868, 29870, 29871, 29873, 29874, 29875, 29876, 29877, 29879, 29880, 29881, 29882, 29883, 29884, 29885, 29886, 29887)

**Shoulder arthroscopy** (29805, 29806, 29807, 29819, 29820, 29821, 29822, 29823, 29824, 29825, 29826, 29827, 29828)

**ACL reconstruction** (29888)

**THA** (27130, 27132, 27134, 27137, 27138)

**TKA** (27442, 27443, 27445, 27446, 27447, 27487)

**Hip fractures** (27235, 27236, 27244, 27245)

**Carpal tunnel release** (64721)

**Spine decompression lumbar spine/posterior spine fusion thoracic or lumbar** (22612, 22630, 22800, 22802, 22804, 63005, 63012, 63017, 63030, 63042, 63047)

**Ankle fracture fixation** (27766, 27769, 27792, 27814, 27822, 27823, 27826, 27827, 27828, 27829)

**Closed reduction forearm and wrist fractures** (25505, 25520, 25535, 25565, 25605, 25624, 25690, 25680, 25675)

The Resident Case Log System for Operative Log Reporting is an internet based case log system available through the [ACGME website](https://www.acgme.org).
What is Orthobullets?

Orthobullets is an online, self-study resource and assessment platform. You have free access to the system as part of your residency education.

How is the residency program using Orthobullets?

- Preparation and study resource for the annual OITE (Orthopaedic In-Training Exam) and ABOS Board Exam
- Assessment of medical knowledge for the ACGME Milestones, through the online milestones exams
- Complement to the Friday morning core curriculum lecture series; we have arranged the core curriculum lectures around the Orthobullets core curriculum schedule

Any pearls or helpful information?

- Download the mobile app for your iPad and/or smartphone
- Make the daily emails part of your routine
- Use Orthobullets as part of your preparation for the OITE. You can create exams to review knowledge in areas where you need further skill development
- Read the high yield journal articles that accompany the daily emails
- Make sure you take the milestone exams, because these count toward your medical knowledge

How do I access Orthobullets?

Through the daily emails or directly at http://www.orthobullets.com/login

All current residents are enrolled and set up to receive the daily 365 core curriculum emails.

Who do I contact about access or general troubleshooting?

Erik Solberg, esolberg@umn.edu is your first contact

Milestones Evaluations Through ABOS Resident Skill Assessment

Overview

The American Board of Orthopaedic Surgery has developed a web-based system for the assessment of resident skills in the patient care domain. Our residency program is using this system to 1) provide residents with formative feedback on their patient care skills and 2) document patient care skills as part of the bi-annual Clinical Competency Committee Review.

All attending surgeon faculty and current residents are enrolled in the system. Residents can access the system through a web interface. Usernames and passwords are provided at the start of the academic year. Faculty do not need to log in to the system; assessment requests will appear in their email or sent as text messages.
With the exception of diabetic foot care, all procedures assessed by the ACGME Milestones for Orthopaedic Surgery can be assessed through the system.

Process
The resident:
- Notifies attending that they have identified a procedure they would like to receive feedback on
- Logs in to the ABOS system at abos.org/r
- Requests appropriate assessment within the system, viewable in the dropdown menu
- Performs the procedure in the operating room/clinic
- Receives and reviews the attending’s assessment
- Has a conversation with the attending, using the feedback received via the assessment system
- Works with the attending to set learning goals based on their conversation

The faculty:
- Receives assessment request in their email or text messages
- Completes assessment request
- Has a conversation with the resident, using the feedback received via the assessment system
- Works with the resident to set learning goals based on their conversation

Technical Notes/Support
Residents access the system using any web-enabled device at abos.org/r
Usernames and passwords for residents are distributed at the beginning of the academic year
Faculty will be enrolled in the system and can elect to receive assessment requests via either text message or email
First contact for technical support including username/password help is Erik Solberg, esolberg@umn.edu or 612-273-1313

Annual Orthopaedic In-training Examination (OITE)
The Orthopaedic In-Training Examination (OITE)™ is a comprehensive examination designed to help residents assess their knowledge in established principles and conventional procedures and treatment in orthopaedic surgery. It is given on the second Saturday in November. All residents are expected to take the exam. If a resident is away from the Twin Cities on the date of the OITE, s/he must make arrangements to take the examination at another training site.

Purpose of the Orthopaedic In-Training Examination
The purpose of the Orthopaedic In-Training Examination (OITE) is to improve orthopaedic surgery physician education. Questions are constructed to test knowledge, interpretation, and problem solving skills in orthopaedic surgery. The OITE is a formative assessment to be used as one of several instruments to measure residents’ acquired knowledge as compared to their peers among a national norm group comprised of orthopaedic surgery residents who are members of an allopathic residency training program that is accredited by the Accreditation Council for Graduate Medical Education (ACGME). Likewise, the OITE is a formative assessment to be
used among several instruments to measure the program’s teaching in the area of orthopaedic surgery as compared to a national norm group comprised of ACGME recognized orthopaedic surgery training programs. The OITE is not intended to measure intelligence, aptitude, or clinical skills.

It is inappropriate to use the OITE for the following:
- as a single criterion for promoting a resident to the next year of training;
- as a single method of determining whether a resident should be retained in a training program;
- as a single method of obtaining admission into an orthopaedic surgery residency program; or
- as a single method of obtaining a fellowship, position, or other than originally intended.

Per the OITE Administration Guidelines, each resident will have up to seven hours to complete the examination. Programs and residents should not be concerned about the seven hours. AAOS evaluations over the last three years have shown that the average resident completes their OITE in approximately five hours.

**Resident Research Project**

The goal of resident scholarly research activity is to advance residents’ knowledge of the basic principles of research, including how research is conducted, evaluated, explained to patients, and applied to patient care. Residents will participate longitudinally through program- and department-sponsored research activities as a way to develop these life-long skills. Activities include dedicated research time\(^\text{11}\) allowed through the PGY-1 through -3 years, with the minimum of one required research manuscript submission by June 1 of the PGY-5 year. Residents are encouraged to complete at least one research project by the end of their PGY-3 year to position themselves competitively for fellowship applications.

**PGY1 year**

Orientate to the research cycle of the program and participate in research curriculum during rotation at the University; 12 days of dedicated research time is allocated.

**PGY2 year**

Present research review at December grand rounds (evaluation on probability of success for this research: impact of research on the orthopaedic community) includes:
- Topic, senior investigator/mentor, additional personnel involved
- Generic problem, Specific problem to be studied, What does the literature say and how accessed
- Specific research question(s)
- Methodology
- Strengths / Weaknesses of Study
- Statistical methodology (what analysis, who will do it)

\(^{11}\) All research hours will be reported as department sponsored “research-study” time, and will count towards duty hours. Academic sites are each responsible for administering designated research time.
• Resources to Support the Study Accomplishment
• Time Line

Twelve days per academic site (Regions and Gillette) are allocated for each resident for this year.

PGY3 year
Participate in data collection and analysis and draft manuscript.
Twelve days per academic site (VA and HCMC) are allocated for each resident for this year.

PGY4/5 year
Paper written and submitted.
Presentation at conferences and specialty societies.
Final presentation at Ramón Gustilo Research Society Senior Research Competition.

OSATS / Skill Labs
Resident competency will be assessed through a variety of skill assessments throughout the program. In the PGY-1 year this includes Open Skills Testing and ABOS Surgical Skills Modules. As residents move through the program, other simulated and cadaveric curriculum is developed. This includes Gross Anatomy Dissection Sessions, Arthroscopy Skills Labs and Upper Extremity Skills Competency Testing. Other labs are also available at individual sites.

360° CCC Review
Finally, and most importantly, the site directors provide a 360 assessment representing the orthopedic staff and faculty of their institution, in a discussion of the resident’s strengths and weaknesses in each of the methods used for evaluations. They also recommend the ACGME Milestone Scores on the “soft competency’ content areas that includes System-Based Practice, Practice Base Learning and Improvement, Professionalism and Interpersonal Communication Skills.
Program Evaluation Tools

### Tools Used in Evaluation

<table>
<thead>
<tr>
<th>Competencies</th>
<th>NI online evaluations</th>
<th>operative case logs</th>
<th>Ortho Bullets</th>
<th>ABOS surgical skills assessment</th>
<th>annual oite</th>
<th>research / senior project</th>
<th>osats / skills lab</th>
<th>360° CCC semi-annual review</th>
</tr>
</thead>
<tbody>
<tr>
<td>Medical Knowledge</td>
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<td>Patient Care</td>
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<td>Practice Base Learning &amp; Improvement</td>
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<td>Interpersonal Communication Skills</td>
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<td>Professionalism</td>
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<tr>
<td>System-Based Practice</td>
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Resident Performance Review

All residents enter the program under a Residency Director Review status. If satisfactory progress is made, as reviewed and recommended by the Clinical Competency Committee (CCC), and approved by the program director, the resident is allowed to continue to progress or be promoted. If satisfactory progress is made by the fifth year of residency, graduation is achieved. Remedial action can be given if satisfactory progress is not made during the educational process. The CCC reviews each resident’s performance based on New-Innovations online evaluations, operative case logs, Ortho Bullets exams, ABOS Surgical Skills Assessment reports, research, OSATS/skills labs and the 360° assessment representing the orthopedic staff and faculty of their institution, in a discussion of the resident’s strengths and weaknesses in each of the above categories.

Graduation Status: (PGY-5 Level)

Completion of satisfactory annual reviews, completion of satisfactory senior research project (manuscript finalized for submission), review of all milestones, and completion of minimum of

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12 ACGME competencies applied according to the skills/lab assessments
surgical case procedures are criteria for graduation. The residency Program Director makes all final determinations regarding resident graduation status.

Semi-annual Review Status: (PGY-1 through PGY-5 Levels)
Satisfactory progress is being made as demonstrated by program evaluation tools. PGY-1 residents must submit proof no later than January 1 of their PGY-1 year of USMLE Step 3 passing scores or may be subject to contract non-renewal. This is a program policy and is stricter than the institutional policy.

Remediation Status
Residents on a remediation program are designated as in remediation status.

Probationary Status
Any resident making unsatisfactory or marginal progress as evidenced by faculty evaluations and other assessments, in the areas of clinical diagnosis and judgment, medical knowledge, technical abilities, interpretation of data, patient management, communication skills, interactions with patients and other healthcare professionals, professionalism, research activities, time management and/or motivation and initiative or cause considerable concern that s/he may not meet the graduation requirements can be placed on probationary status. When the resident is on probationary status, immediate dismissal may be taken. The residency program will follow the Disciplinary/Grievance Procedures: Discipline/Dismissal/Non-Renewal as outlined in the Institution Policy Manual. On credentialing forms for physician certification, the resident must indicate that they have been on probation during their residency training.

Dismissal Status
A resident failing to make improvements in their performance, after being probationary status may be dismissed. Dismissal requires consensus of the Chairman of the department, the Director of the residency program, and the recommendation of the Clinical Competency Committee.

Weekly Conferences
Weekly conferences are held at the various rotation sites.

Gillette Children’s Specialty Healthcare
Rounds and conferences include daily seminars on individual topics selected, organized and given by the staff. A monthly conference schedule is available through the Education Office at Gillette.

At its October 2011 meeting, the USMLE Step 3 Committee decided to raise the three-digit score recommended to pass Step 3 from 187 to 190. Score reports are available to resident electronically through USMLE up to 120 days after initial reporting. After that, transcripts must be purchased by residents and sent to the residency program office.
Hennepin County Medical Center
On Monday-Thursdays, from 6:30-7:00 am there is an Inpatient Fracture Care Conference. Other daily conferences are listed.

<table>
<thead>
<tr>
<th>Day</th>
<th>Time</th>
<th>Conference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Monday</td>
<td>7:00-8:00 am</td>
<td>Citywide Orthopaedics</td>
</tr>
<tr>
<td></td>
<td>8:00-8:30 am</td>
<td>Hand Conference</td>
</tr>
<tr>
<td>Tuesday</td>
<td>8:00-9:00 am</td>
<td>Fracture Conference and Prop &amp; Postop</td>
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<tr>
<td></td>
<td>12:30-1:30pm</td>
<td>Journal Club</td>
</tr>
<tr>
<td>Wednesday</td>
<td>8:00-9:00 am</td>
<td>Foot and Ankle</td>
</tr>
<tr>
<td>Thursday</td>
<td>8:00-9:00 am</td>
<td>Infectious Diseases</td>
</tr>
</tbody>
</table>

Regions Hospital
Regions Hospital has a morning triaging and X-ray conference Monday through Thursday from 6:20 am to 7:00 am. Tuesday is Orthopaedic Rounds from 7:00 am to 8:00 am. Wednesday is the Didactic Conference 7:15 am to 8:00 am. Quality Assurance Rounds from 7:00 am to 8:00 am are help periodically.

University of Minnesota Medical Center
Conferences and rounds are organized on a formal basis and scheduled on Monday through Thursday, from 7:00-8:00 a.m., with emphasis on a comprehensive education in clinical and basic science knowledge. This is protected educational time, when residents are free of clinical activities. Residents on both UMH and TRIA rotations are expected to attend.

<table>
<thead>
<tr>
<th>Conference</th>
<th>Day</th>
</tr>
</thead>
<tbody>
<tr>
<td>Foot and Ankle</td>
<td>1st Monday</td>
</tr>
<tr>
<td>Sports, Shoulder</td>
<td>2nd Monday</td>
</tr>
<tr>
<td>Sports, Knee</td>
<td>3rd Monday</td>
</tr>
<tr>
<td>Morbidity &amp; Mortality</td>
<td>4th Monday</td>
</tr>
<tr>
<td>Case Presentations (Oral Boards format)</td>
<td>1st, 3rd, 5th Tuesdays</td>
</tr>
<tr>
<td>Orthopaedic Tumor Didactic</td>
<td>2nd Tuesday</td>
</tr>
<tr>
<td>Case</td>
<td>3rd and 5th Tuesdays</td>
</tr>
<tr>
<td>Arthroplasty</td>
<td>4th Tuesday</td>
</tr>
<tr>
<td>Hand</td>
<td>1st, 3rd, 5th Wednesdays</td>
</tr>
<tr>
<td>Chiefs’ Breakfast</td>
<td>2nd, 4th Wednesdays</td>
</tr>
<tr>
<td>Athletic Medicine</td>
<td>4th Wednesday</td>
</tr>
<tr>
<td>Spine</td>
<td>2nd and 4th Thursdays</td>
</tr>
<tr>
<td>Tumor - University</td>
<td>1st, 3rd, 5th / All Thursdays</td>
</tr>
</tbody>
</table>

Veterans Affairs Medical Center
Monday and Wednesday is a preoperative planning conference. On Wednesday there is a case presentation conference. There is a monthly grand rounds conference on Wednesday as well. On Friday, there is an X-ray rounds review, staff rounds and a journal club conference. A monthly morbidity and mortality conference is also held on Friday.

Grand Rounds
Grand Rounds are held on Fridays from 7:00-8:00 am for all trainees on orthopaedic rotations. Presenters include faculty and community and special visiting lecturers. This is protected educational time for residents and attendance is mandatory.

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14 Tumor Conference is mandatory for residents on Tumor rotations for all Thursdays.
Core Curriculum Formal Lectures
Core Curriculum lectures are protected educational time and are one and one-half hour lectures held each Friday morning, following Grand Rounds. It is based on subject matter pertaining to both in-training exam and board exam preparation. Attendance by all residents is mandatory. This curriculum has been restructured to include Ortho Bullets online curriculum.

Gross Anatomy Dissection Sessions
In the spring there are eight gross anatomy dissection sessions. These are mandatory for PGY-2 residents. All residents are invited and encouraged to attend. Dates for these sessions are March–April. These sessions consist of

- Cervical Spine, anterior and posterior
- Thoracic Spine, anterior and posterior; Lumbrosacral Spine
- Elbow and Forearm; Hand and Wrist
- Scapula and Shoulder; Brachial Plexus
- Hip and Thigh
- Pelvis and Acetabulum; Lumbrosacral Plexus
- Thigh and Knee
- Leg, Foot and Ankle

Residents are assigned to specific anatomic areas and faculty members are assigned as proctors. Dissections are performed by assigned PGY-2 residents in advance, including all pertinent muscle tendon units, neurovascular structures, and ligaments for respective section as determined by the proctor. PGY-5s are responsible for reviewing surgical approaches with the PGY2 residents with input from faculty as needed.

Arthroscopy Skills Labs
A formal arthroscopy curriculum has been developed to give residents opportunities to practice in a cadaver lab. This is a mandatory exercise for PGY-2 through -5 residents. PGY-5 residents are welcome and encouraged to participate in a teaching role. There will be specific knee and shoulder tasks that each resident will be expected to perform with faculty observation; tasks are specific to PGY level. These labs will be held at TRIA from 2-5 PM throughout the year. The dates of the labs and resident assignments are in Moodle.

Resident must notify Megan Reams at TRIA megan.reams@tria.com if s/he will not be attending the assigned lab more than two weeks prior to the scheduled lab date. The following is an overview of the curriculum.
TRIA Orthopaedic Center – 2017-2018 Resident Lab Education

University of Minnesota Residency Arthroscopy Experience

Labs will be held: Fridays 2:00pm - 5:00pm

Eight total labs during the year (four knee, four shoulder).
One G2 from TRIA Sports; one G2 from Gillette
Two G3s from VA rotations
One G4 from Spine; one G4 from GOLD Hand
G5s on UM Sports and TRIA Sports are welcome to participate and teach.

One cadaver for each PGY level.

Two faculty for each lab
Faculty will include Dr Marc Tompkins and TRIA Sports Medicine Fellows

The expectation will be that each resident will attend one knee and one shoulder lab per year.

Resident must notify Megan Reams if he/she will not be attending their assigned lab more than two weeks before scheduled lab date.

Certain tasks, appropriate for PGY level, will be performed by each resident during the lab.

For each PGY level, the residents’ ability to participate in arthroscopic procedures with their attendings will be dependent upon their attendance and participation in the resident lab.

Megan Reams, MA, OTR/L will serve as coordinator for the program.  megan.reams@tria.com

Marc Tompkins, MD will serve as director for the program.  marc.tompkins@tria.com

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**Arthroscopy 101 – G2 – Knee**

**Arthroscopy Introduction**
- Introduction to Knee Arthroscopy Lecture *
- Outline important knee anatomy on cadaver
- Place medial and lateral arthroscopic portals
- Perform diagnostic arthroscopy

**Arthroscopy 201 – G3 – Knee**

**Basic Arthroscopic Procedures**
- Loose body removal
- Partial meniscectomy
- Chondral debridement
- Microfracture

**Arthroscopy 301 – G4 – Knee**

**ACL Reconstruction**
- Identify tear
- Take down of ACL
- Preparation of tunnels
- Graft passage and fixation

**Arthroscopy 101 – G3 – Shoulder**

**Arthroscopy Introduction**
- Introduction to Shoulder Arthroscopy Lecture *
- Outline important shoulder anatomy on cadaver
- Place anterior and posterior arthroscopic portals
- Perform diagnostic arthroscopy

**Arthroscopy 201 – G4 – Shoulder**

**Basic Arthroscopic Procedures**
- Loose body removal
- Debridement
- Subacromial decompression
- Distal clavicle excision

**Arthroscopy 301 – G5 – Shoulder**

**Rotator Cuff Repair**
- Identify tear
- Footprint preparation
- Anchor placement
- Suture passage and arthroscopic knot tying

* Introductory lecture will discuss arthroscopic equipment, fluid management, anatomy, anatomically based portal access to the joints, and basic arthroscopic procedures.
Upper Extremity Skills Lab Competency Testing

In the spring of the year, upper extremity motor skills assessment is performed during a Hand Skills Day and includes competency testing in carpal tunnel release (CTR) and trigger release (TR). Hand surgeons serve as proctors. Each resident is assessed using a Global Operative Skills Assessment tool, as validated by the University of Toronto, for each procedure. All residents participate, beginning in their PGY-3 year, until they pass both the CTR and TR modules.

Sports Curriculum - High School Athletic Events and Training Room Coverage

Description:
During your residency training, residents will have the opportunity to provide medical care at a variety of high school events. Typically, this experience is arranged to provide coverage for football, basketball or hockey, but it may be possible to arrange coverage for other sports, depending upon resident interest. Athletic coverage is part of the residency training curriculum and is included as part of the sports medicine rotations. You may provide care for the Maple Grove, Hopkins, Minneapolis or St. Paul public schools. It may be possible to provide patient care in the training room or on the sidelines during practice and competition, as arranged. All educational experiences will provide the opportunity to develop your skills as a team physician and build your knowledge of sports injuries in the pediatric athlete. Residents will arrange this experience with the supervising physician, Bradley Nelson, MD.

Objectives:
- Function as a team physician, providing sideline patient care
- Manage acute injuries that may occur during practice or competition
- Communicate effectively with athletes, coaching staff, and parents
- Recall the MSHSL Concussion Protocol

Duty Hours:
You must track and log your time on this educational activity. When entering your hours in New Innovations, select the “Off-site Ortho Conference” assignment.

Supervision:
Dr. Nelson is the supervisor for high school athletic event and training room coverage. At a minimum, Dr. Nelson will provide indirect supervision and will be reachable by cell phone and pager. Additionally, department faculty members David Smith, DO and David Jewison, MD may provide direct or indirect supervision of residents participating in this experience. Residents are required to follow UMP and program policies concerning notification of the supervising physician. See also Supervision in this policy and procedure manual.

Faculty: Bradley Nelson, MD • David Jewison, MD • David Smith, DO

Evaluation: Dr. Nelson will provide residents with feedback on their work with the high school teams. He may incorporate feedback from athletes, coaching staff, and athletic trainers who have
worked with the resident over the course of this experience. Each resident will meet with Dr. Nelson to determine before and after this educational experience to discuss.

**Contact Information:**
Email: nels5101@umn.edu ● Pager: 612-273-3084 ● Cell: 612-581-5496

**Duty/Work Hour Reporting**
Duty Hours are defined as all clinical and educational work related to the training program, i.e., patient care (both inpatient and outpatient), administrative duties related to patient care, the provision for transfer of patient care, time spent in-house during call activities, scheduled academic activities such as conferences and dedicated research time.

Clinical and educational work hours must be limited to no more than 80 hours per week, averaged over a four-week period, inclusive of all in-house clinical and educational activities, clinical work done from home. This program does not allow moonlighting.

Duty hour requirements are not an attempt to micromanage the process for documenting and tracking time residents spend on clinical work from home. Residents are to track the time they spend on clinical work from home and to report that time to the program. Decisions regarding whether to report infrequent phone calls of short duration are left to the individual resident. The program will need to factor in time residents are spending on clinical work at home as schedules are developed to ensure that residents are not working in excess of 80 hours per week, averaged over four weeks. There is no requirement that programs assume responsibility for documenting this time. Rather, the program’s responsibility is ensuring that residents report their time from home and that schedules are structured to ensure that residents are not working in excess of 80 hours per week, averaged over four weeks. Residents can feel free to lump time they have spent at home taking call to their standard duty hour reporting. For example, if a resident spends four hours in clinic, then another hour at home completing charts related to that activity, they should report five hours in clinic. Questions or concerns about this may be directed to the Program Director.

**Reporting of duty hours is both a professional and ethical responsibility of residents.** Residents in the Department of Orthopaedic Surgery are expected to provide accurate and timely reporting. The data from this process is used to support the ACGME requirement of duty hours monitoring; the Centers for Medicare and Medicaid Services (CMS) regulations on reporting resident/fellow training related activities for reimbursement; and invoicing affiliate hospitals for residents/fellows stipends and benefits.

**Updating and Approving Assignments and Hours**
All residents enter and approve their hours in the New Innovations Residency Management Suite.

Hours for Friday-Thursday must be reported and approved by Friday Noon by all residents. Duty hours are reviewed by the program weekly and residents are notified if there are hour discrepancies or need for justification or commenting on duty hour violations. Residents with
violations are required to submit comments to the program director, through New-Innovations. It is the responsibility of the resident to provide timely reporting and monitor his/her own hours.

Please see the Link “ACGME Program Requirements for Graduate Medical Education in Orthopaedic Surgery.”

On-Call
In-house call is defined as those duty hours beyond the normal workday when trainees are required to be immediately available in the assigned institution.

In-house call must occur no more frequently than every third night, averaged over a four-week period.

On Call Schedules
Orthopaedic Residents are no longer required to stay in-house at night. The following are the expectations of call for the program.

1. Pages will be answered within the required time as specified by sites.
2. There will be no greater than a twenty minute physical response time for emergency department consultation or inpatient concerns unless arranged in advance with the nursing unit or Emergency Department.
3. For inpatients requiring evaluation every two hours or less, the resident is expected to stay in the hospital.
4. For orthopaedic inpatients requiring evaluation for new concerns (i.e., chest pain, shortness of breath), the orthopaedic resident will be responsible for the initial evaluation and then contact the attending and/or medicine consultant as necessary.
5. If there are concerns regarding the responsiveness or availability on the part of the inpatient nursing staff, Emergency Department physicians, or physicians seeking consultation, the policy will be immediately revoked.

The following are the call requirements at various rotation sites.

Gillette Children’s Specialty Health Care
The four University residents will share in covering the call schedule. The first call schedule of each rotation is prepared by the Education Coordinator/Orthopaedic Department. Subsequent schedules for the three-month rotations are done by the residents.

Hennepin County Medical Center
The chief resident call schedule is prepared by the White Team chief resident. The PGY-3 is responsible for preparing the junior call schedules.

Regions Hospital
The four University PGY-2 residents take first call. The residents create their own call schedule with assistance from the department staff. Call is taken from home.
TRIA Orthopaedic Center
Residents do not take call regarding TRIA patients.

University of Minnesota Medical Center
All residents rotating at the University of Minnesota Medical Center share in orthopaedic call.
Upcoming monthly call schedules are due in the office by the 20th of each month. The PGY-1 residents and PAs take day call. PGY-4 residents provide back-up for day call and take call overnight. The PGY-5 residents at UMH will provide backup call for the PGY-4 resident covering UMH during the week. This backup call will principally be used to cover simultaneous emergencies such as surgeries and assessments and treatments in the Emergency Department. The on call PGY-4 and/or attending surgeon will make the decision to bring in the PGY-5. Residents are encouraged to generate their call schedule at the beginning of the academic year. Call is taken from home. Weekend call for PGY-4 resident is Friday/Sunday or Saturday, not the entire weekend.

Veterans Affairs Medical Center
The PGY-3 resident on call is the first contact. The PGY-3 has the option to contact the PGY-5 resident for assistance, who in turn contacts the staff physician. Call is taken from home.

Patient Support Services
Patient support services, such as intravenous services, phlebotomy services, and laboratory services, as well as messenger and transporter services, must be provided in a manner appropriate to and consistent with education objectives and patient care.

Laboratory, Pathology, Radiology Services
There must be appropriate laboratory, pathology, and radiology services to support timely and quality patient care in the program. This must include effective laboratory, pathology and radiologic information systems.

Medical Records
A medical records system that documents the course of each patient’s illness and care must be available at all times and must be adequate to support quality patient care, the education of residents, quality assurance activities, and provide a resource for scholarly activity. Orientation at each rotation site will cover information on how to access and use medical record systems.

Security / Safety
Appropriate security and personal safety measures must be provided to residents at all locations including but not limited to parking facilities, on-call quarters, hospital and institutional grounds, and related clinical facilities (e.g., medical office building).

Life Support Certification Policy
Please see the [http://hub.med.umn.edu/resident-fellow-administration/life-support-certification](http://hub.med.umn.edu/resident-fellow-administration/life-support-certification) for the overall policy on life support certification.

CPR certification requirements are hospital-specific.
Orthopaedic Surgery residents are responsible for obtaining ACLS training certification before the start of their training. PGY-1 residents will be trained in ATLS certification before the start of their Trauma and Acute Care Surgery (TACS) rotation at Regions; there is no resident fee for this and certification may lapse after the rotation is completed. Residents are expected at a minimum to keep BLS certificate current. Other life support certification information is available at [https://docs.google.com/a/umn.edu/document/d/1_3sslo8Doh_3nFFMZ-M_TrbGqzzk38I2_esOlyi-P7E/edit?usp=sharing](https://docs.google.com/a/umn.edu/document/d/1_3sslo8Doh_3nFFMZ-M_TrbGqzzk38I2_esOlyi-P7E/edit?usp=sharing).

**Moonlighting**

Moonlighting is *not* allowed in the Department of Orthopaedic Surgery Residency Program.

**Visa Policies**

The J-1 alien physician visa sponsored by ECFMG is the preferred visa status for foreign national trainees in all UMN graduate medical education programs; therefore, the Department of Orthopaedic Surgery Residency program sponsors only J-1 visas. The program will not sponsor H-1B visas. [More information on the J-1 visa can be found on the UMN Medical School website.](https://www.med.umn.edu/residents-fellows/current-residents-fellows/health-wellness/mental-health-resources)

**Monitoring of Resident Well-Being**

The program director is responsible for monitoring resident stress, including mental or emotional conditions inhibiting performance or learning, and drug-related or alcohol-related dysfunction. Both the program director and faculty should be sensitive to the need for timely provision of confidential counseling and psychological support services to residents. Situations that demand excessive service or that consistently produce undesirable stress on residents must be evaluated and modified. If fatigued or stressed, and especially if unable to provide safe patient care, the resident should report the situation to his or her chief resident and/or site director or residency director. Counseling for residents is available through the [Residency Assistance Program (RAP)](tel:651-430-3383), (651) 430-3383 or 1-800-632-7643. Further information is available through the GME Office at [https://www.med.umn.edu/residents-fellows/current-residents-fellows/health-wellness/mental-health-resources](https://www.med.umn.edu/residents-fellows/current-residents-fellows/health-wellness/mental-health-resources).

**Communication / Chain of Command**

Communication is an important aspect of the ACGME Competencies and good communication is essential for patient care.

Residency is a learning process and residents are encouraged to ask questions. In general terms, the chain of command at the program sites is for residents to ask staff and more senior residents for help and feedback. Every site has an Orthopaedic Education Site Director, who is responsible for the delivery of education through resident rotations and work assignments. Residents are encouraged to raise issues with senior residents and attendings or site education directors as needed. The Program Director is available for program-wide issues, or to help advocate for resident needs that otherwise are not addressed at the site level. The Department Chair is also available to address issues and concerns.
The University of Minnesota Medical School and its Graduate Medical Education Office is committed to providing an educational and work environment in which trainees may raise and resolve issues without fear of intimidation or retaliation and in a confidential and protected manner. Beyond the scope of the Orthopaedic Surgery Department, resources are available for the trainee to raise issues or concerns regarding their work and/or education environment and is accessible through the GME Office website.

**Supervision**

At each institution and on all rotations, all residents are supervised by the attending physician (faculty) on-call or in charge of the clinical activity. Each institution complies with known lines of responsibility for the care of patients from junior residents, to senior residents, to attending physicians. Residents are to be provided with reliable systems for communication and interaction with supervisory physicians and residents are responsible for contacting supervisory physicians for all areas of patient care. Residents have the opportunity to assume increasing responsibility for patient care commensurate with their level of training, under direct faculty supervision (as appropriate for a resident's ability and experience), as they progress through a program. Each institution is responsible for sufficient institutional oversight to ensure that residents are appropriately supervised. Residents are to be supervised by teaching staff in such a way that the residents assume progressively increasing responsibility according to their level of education, ability, and experience. On-call schedules for teaching staff ensure that supervision is readily available to residents on duty. The level of responsibility accorded to each resident is determined by the teaching staff. Faculty and residents are educated to recognize the signs of fatigue and will adopt and apply policies to prevent and counteract the potential negative effects.

A Call If Guide is used at each site. At a minimum, the following “Trigger Cards” are made available to every resident:

![Trigger Cards Image]
A “S.A.F.E.T.Y. – S.U.P.E.R.B. Guide” is used in the program, along with a “Call If Guide” at each site.

**S A F E T Y**

**Resident Guide for Attending Input**

**Seek attending input early**
Involving your attending early can often prevent delays in care and provide quicker results. They are also legally responsible for patients.

**Active clinical decisions**
Contact your attending if an active clinical decision is being made (surgery, invasive procedure, etc).

**Feel uncertain about clinical decisions**
It is normal to feel uncertain about clinical decisions. You should contact your attending if you feel uncertain about a specific decision.

**End of life care / legal discussions**
These complex discussions can change the course of care. Families and patients should also know that the attending is aware of the discussion.

**Transitions of care**
Transitions are risky for patients. Contact your attending if someone is being discharged, transferred to another service or ICU, or hospital.

**You need help with the system / hierarchy**
Despite your best efforts, system difficulties and the hierarchy may hinder care for patients. Attendings can help expedite care through direct attending involvement with consultants, etc.

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**S U P E R B**

**Guide for Attending Supervision**

**Set expectations for when to be notified**
I want you to contact me if a patient is being discharged, transferred to the ICU, going to surgery or other service, dies or leaves AMA.

**Uncertainty is a time to contact**
It is normal to feel uncertain about clinical decisions. Please do contact me if you feel uncertain about a specific decision.

**Planned communication**
Let’s plan on talking around 10pm on your call nights and before you leave the hospital each day. If you get busy or forget, I will contact you.

**Easily available**
I am easy to reach by page or you can use my cell phone or my home phone.

**Reassure resident not to be afraid to call**
Don’t worry about waking me up, or that calling is a sign of weakness, or that I will think your question is stupid. I would rather know what is going on.

**Balance supervision and autonomy for resident**
I want you to be able to make decisions about our patients, but I also know this is your first month as a resident so I will follow closely. (Tailor for more experienced residents to emphasize autonomy)

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**Graded Responsibility**
The program director and faculty must provide residents with direct experience in progressive responsibility for patient management.
SECTION 6 – ADMINISTRATION

Residency Program Governance

Department Chair: Denis R. Clohisy, MD  (612) 273-3082
Program Director: Ann Van Heest, MD  (612) 273-8059
Assistant Program Director: Alicia Harrison, MD  (612) 273-8058
Education Lead: Erik Solberg  (612) 273-1313
Education Coordinator: Betsy Wehrwein  (612) 273-8043

Research Administration

Department Research Director: Marc Swiontkowski, MD
Resident Research Co-Director: David W. Polly, MD
Resident Research Co-Director: Deb Bohn, MD

Rotation Site Administration

University of Minnesota Medical Center / University Minnesota Health  (612) 273-8043
Site Education Director: Christian Ogilvie, MD
Foot and Ankle Education Director: James Mazzuca, DPM
Hand Education Director: Ann E. Van Heest, MD
Spine Education Director: David W. Polly, Jr., MD
Sports Medicine Education Director: Bradley Nelson, MD
Tumor Education Director: Christian Ogilvie, MD
Tumor/Joint Education Director: Edward Cheng, MD
Education Coordinator: Betsy Wehrwein

Gillette Children’s Specialty Healthcare  (651) 229-3948
Medical Director: Steven E. Koop, MD
Education Director: Deborah S. Quanbeck, MD
Education Coordinator: Deb Berny

Hennepin County Medical Center  (612) 873-4220
Department Chair: Andrew Schmidt, MD
Education Director: Thomas Varecka, MD
Education Coordinator: Claudia Miller

Regions Hospital  (651) 254-3799
Department Chair: Peter Cole, MD
Education Director: Sarah Anderson, MD
Education Coordinator: Michelle Stepka

TRIA Orthopaedic Center  (952) 806-5731
Education Director: Bradley Nelson, MD
Manager TRIA Institute: Megan Reams
Education Coordinator: Ali Hemphill

Veterans Affairs Medical Center  (612) 467-1780
Orthopaedics Chief: V Franklin Sechriest II, MD
Associate Chief and Residency Site Director: Patrick Yoon, MD
PGY-1 Contact Information

<table>
<thead>
<tr>
<th>Rotation</th>
<th>Site Coordinator</th>
<th>Contact Information</th>
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<tbody>
<tr>
<td>Anesthesia-UMH</td>
<td>Shelley Kohler</td>
<td><a href="mailto:rskohler@umn.edu">rskohler@umn.edu</a></td>
</tr>
<tr>
<td>Emergency Medicine-HCMC</td>
<td>Nancy Newkumet</td>
<td><a href="mailto:nancy.newkumet@hemed.org">nancy.newkumet@hemed.org</a></td>
</tr>
<tr>
<td></td>
<td></td>
<td>612.873.4908</td>
</tr>
<tr>
<td>Neurosurgery-RGHP</td>
<td>JoAnn Niemi</td>
<td><a href="mailto:joann.m.niemi@healthpartners.com">joann.m.niemi@healthpartners.com</a></td>
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<td>651.254.3705</td>
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<tr>
<td>Plastic Surgery-RGHP</td>
<td>Valery Rousseau</td>
<td><a href="mailto:valery.l.rousseau@healthpartners.com">valery.l.rousseau@healthpartners.com</a></td>
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<td>651.254.0883</td>
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<tr>
<td>Surgery SICU @ UMH, TACS @ RGHP</td>
<td>Cathy Larson</td>
<td><a href="mailto:larson051@umn.edu">larson051@umn.edu</a></td>
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<td></td>
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<td>612.625.6483</td>
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<tr>
<td>Orthopaedics-RGHP</td>
<td>Michelle Stepka</td>
<td><a href="mailto:michelle.m.stepka@healthpartners.com">michelle.m.stepka@healthpartners.com</a></td>
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<td>651.254.3799</td>
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<tr>
<td>Orthopaedics-TRIA</td>
<td>Ali Hemphill</td>
<td><a href="mailto:alicia.hemphill@tria.com">alicia.hemphill@tria.com</a></td>
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<td>952.806.5731</td>
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<tr>
<td>Orthopaedics-VA</td>
<td>Roarke Engelhardt</td>
<td><a href="mailto:roarke.engelhardt@va.gov">roarke.engelhardt@va.gov</a></td>
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<td>612.467.1780</td>
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<tr>
<td>Orthopaedics-UMH</td>
<td>Betsy Wehrwein</td>
<td><a href="mailto:wehrw005@umn.edu">wehrw005@umn.edu</a></td>
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Core Curriculum Director
Core Curriculum Director: Ann Van Heest, MD

Clinical Competency Committee Membership
Members of the CCC Committee (Fall 2017)
Sarah Anderson, MD       Deb Bohn, MD
Patrick Yoon, MD         Alicia Harrison, MD
Tom Varecka, MD          Christian Ogilvie, MD
Deborah Quanbeck, MD     Brad Nelson, MD
Staff:
Erik Solberg, Betsy Wehrwein
Teaching Faculty
(Fall 2017)
Gillette Children’s Specialty Healthcare
Bruce Bartie, DO
Deb Bohn, MD
Mark Dahl, MD
Stephen P England, MD
Andrew Georgiadis, MD
Tenner Guillaume, MD
Michael Healy, MD
Steven E Koop, MD
Jennifer Laine, MD
Tom F Novacheck, MD
Benjamin Novak, MD
David Palmer, MD
Joseph Perra, MD
Deborah S Quanbeck, MD
Alison Schiffern, MD
Stephen B Sundberg, MD
Walter Truong, MD
Ann E Van Heest, MD
Kevin R Walker, MD
Elizabeth Weber, MD

Regions Hospital
Sarah A Anderson, MD
Peter A Cole, MD
Jonathan Cooper, DO
Rick Davis, MD
Brian Cunningham, MD
Erica Gauger, MD
Paul Hansen, MD
Patrick Horrigan, MD
Todd C Johnson, MD
Ryan Larson, MD
Paul M Lafferty, MD
Scott B Marston, MD
Christian Ogilvie, MD
Katharine Pico, MD
David Solfelt, MD
Julie A Switzer, MD
Randy Twito, MD
Christina M Ward, MD

Hennepin County Medical Center
Jessica Downes, MD
Jacqueline A Geissler, MD
Nancy M Luger, MD
Richard F Kyle, MD
Gudrun Mirick, MD
Andrew H Schmidt, MD
David Templeman, MD
Thomas F Varecka, MD
Emily Wagstrom, MD

TRIA Orthopaedic Center / Park Nicollet
Kirk Aadalen, MD
Elizabeth Arendt, MD
Deborah Bohn, MD
Joel Boyd, MD
Jonathan Braman, MD
Edward Craig, MD
Stephen P England, MD
Gary Fetzer, MD
David Fischer, MD
Yvonne Grierson, MD
Jeffrey Husband, MD
Patrick Horst, MD
Alan Markman, MD
James Mazzuca, DPM
Brad Nelson, MD
Ross Paskoff, MD
Fernando Peña, MD
Kathleen Peter, MD
John Steubs, MD
Marc F Swiontkowski, MD
Marc Tompkins, MD
Tom Varecka, MD
Michael Walsh, MD
Mark Wilczynski, MD
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<th>University of Minnesota Medical Center</th>
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<td>Elizabeth A Arendt, MD</td>
<td>Adam Bakker, MD</td>
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<td>Ariel Williams, MD</td>
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University of Minnesota Faculty Appointments

Professor
Elizabeth A Arendt, MD
Joan E Bechtold, PhD
Edward Y Cheng, MD
Denis R Clohisy, MD
Peter A Cole, MD
Edward V Craig, MD
James H House, MD
Richard F Kyle, MD
Jack L Lewis, PhD
John E Lonstein, MD
David W Polly, Jr, MD
Andrew H Schmidt, MD
Marc F Swiontkowski, MD
David C Templeman, MD
Roby C Thompson, Jr, MD
Ann E Van Heest, MD

Adjunct Professor
Gordon M Aamoth, MD
Boris Bershadsky, PhD
Cathy S Carlson, DVM PhD
Terry J Gioe, MD
Ramon Gustilo, MD
Robert F LaPrade, MD PhD
Matthew D Putnam, MD

Associate Professor
Jonathan P Braman, MD
Nicholas M Edwards, MD
Steven E Koop, MD
Paula M Ludewig, PhD
Bradley J Nelson, MD
Tom F Novacheck, MD
Christian M Ogilvie, MD
Michael H Schwartz, PhD
Jonathan N Sembrano, MD
Julie A Switzer, MD
Marc Tompkins, MD

Adjunct Associate Professor
David A Fischer, MD
V Franklin Sechriest II, MD

Assistant Professor
Sarah A Anderson, MD
Deborah C Bohn, MD
Brian P Cunningham, MD
Mark T Dahl, MD
Jacqueline A Geissler, MD
Andrew G Georgiadis, MD
Alicia K Harrison, MD
Michael T Healy, MD
Patrick B Horrigan, MD
Patrick K Horst, MD
Paul M Lafferty, MD
Jeffrey T P Luna, MD
Jeffrey A Macalena, MD
Scott B Marston, MD
Christopher B Martin, MD
James M Mazzuca, DPM
Amy T Moeller, MD
Patrick M Morgan, MD
Fernando A Peña, MD
Deborah S Quanbeck, MD
Joseph P Schuster, DPM
David A Soffelt, MD
Stephen B Sundberg, MD
Walter H Truong, MD
Kevin R Walker, MD
Christina M Ward, MD
Ariel A Williams, MD
Patrick Yoon, MD

Adjunct Assistant Professor
Heather L Bergeson, MD
Joel L Boyd, MD
Elizabeth Boyer, PhD
Gary B Fetzer, MD
Michael J Forseth, MD
Jeffrey B Husband, MD
David J Jewison, MD
Jennifer C Laine, MD
Cary H Mielke, MD
David I Smith, MD
John A Steubs, MD
### Resident Selection Committee (February 2017)

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<tr>
<th>Position</th>
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<tbody>
<tr>
<td>Department Chair</td>
<td>Denis Clohisy, MD</td>
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<td>Program Director</td>
<td>Ann Van Heest, MD</td>
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<td>Resident Selection Committee Chair</td>
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<td>Deborah Bohn, MD</td>
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<td>Michael Chau, MD</td>
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<td>Mikhail Klimstra, MD</td>
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<td>Sara Van Nortwick, MD</td>
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Program Evaluation Committee

The goal of the Program Evaluation Committee (PEC) is to have an open process to identify strengths, areas in need of improvement and challenges that come to the program. It is a standing committee of the residency program. The meeting is chaired by the Program Director. Members include the Assistant Program Director, Education Site Directors (or their delegate), and Resident Class Representatives (with alternates) from all PGY-levels, who have been elected by their peers. It is staffed by the Education Lead and Education Coordinator. The PEC makes recommendations that the Program Director brings to the Department Chair, who will make all final decisions. PEC updates are provided at regularly scheduled Quarterly Faculty meetings, and to the residents as a whole as needed.

SAC

Surgical Administrative Center is an administrative cluster for the Departments of Surgery, Orthopaedic Surgery, Otolaryngology and Urologic Surgery.

<table>
<thead>
<tr>
<th>Education</th>
<th>Chrissy Reding</th>
<th>(612) 624-7149</th>
</tr>
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<tbody>
<tr>
<td></td>
<td>Education Manager</td>
<td><a href="mailto:creding@umn.edu">creding@umn.edu</a></td>
</tr>
<tr>
<td>Accounting</td>
<td>Kathleen Helde</td>
<td>(612) 625-5501</td>
</tr>
<tr>
<td>Reimbursements</td>
<td>Finance Professional 2</td>
<td><a href="mailto:helde012@umn.edu">helde012@umn.edu</a></td>
</tr>
<tr>
<td>Payroll</td>
<td>Kirk Skogen</td>
<td>(612) 625-3954</td>
</tr>
<tr>
<td>University of</td>
<td>Payroll Manager</td>
<td><a href="mailto:k-skog@umn.edu">k-skog@umn.edu</a></td>
</tr>
<tr>
<td>Minnesota ID</td>
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Risk Management and Insurance
The Office of Risk Management & Insurance is part of the Controller's Office and strives to protect the assets of the University from various sources of loss or damage that could affect overall financial stability. Responsibilities include directing insurance programs and loss control activities, identifying exposures, recommending solutions, and promoting loss prevention. This office manages most of the insurance programs at the University.

Proof of Professional Liability coverage for residents can be obtained from the Office of Risk Management. A pdf is available at http://www.finsys.umn.edu/riskmgmt/CredentialingCertificateofInsurance.pdf. Follow up questions should be directed to

Pam Ubel
Office of Risk Management
612-624-5884
novic002@umn.edu

For general insurance information and claims history to health plans or hospitals who are credentialing current or former residents, please contact

Krista Ostrum
Office of the General Counsel
Academic Health Center
MMC 501 Mayo
420 Delaware Street SE
Minneapolis, MN  55455-0374
Phone:  612-625-9995
Fax:  612-626-2111
kcozine@umn.edu

For further information, please contact

Betsy Wehrwein
Program Associate, Education Coordinator
Phone: (612) 273-8043
Fax: (612) 273-8099
wehrw005@umn.edu
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CONFIRMATION OF RECEIPT OF POLICY MANUAL

Confirmation of Availability and Responsibility of your Program Policy Manual for Academic Year 2017 - 2018

By signing this document you are confirming that you are aware of the availability of your Program Policy Manual for this academic year and acknowledge your responsibility in knowing its content.

This manual is available electronically on the Department of Orthopaedic Surgery’s Medical Education webpage. This policy manual contains policies and procedures pertinent to your training program. You are responsible to knowing the content of this manual. This receipt will be kept in your personnel file.

Resident Name (Please print)

Resident Signature Date

Coordinator’s Initials Date