

1) Patient Care – Hip Fracture

1	2	3	4	5
<p>Obtains cursory history and physical exam, but lacks key elements</p> <p>Surgery:</p> <ul style="list-style-type: none"> • Dons gown/gloves • Scrubs-in correctly • Puts on Personal Protective Equipment (lead, eye-protection) without prompting 	<p>Performs thorough history and Physical</p> <ul style="list-style-type: none"> • Ambulatory status • Long term goals of care • Osteoporosis • Exam includes whole body looking for other injury <p>Surgery:</p> <ul style="list-style-type: none"> • Maintains sterility • Observes attentively 	<p>Presents patient accurately, but requires some assistance</p> <p>Offers acceptable pre-operative work-up</p> <ul style="list-style-type: none"> • medical clearance • cbc, bmp, etc <p>Surgery:</p> <ul style="list-style-type: none"> • Holds position of retractors • Keeps light in the wound • Can identify appropriate surgical anatomy (sciatic nerve, etc) 	<p>Presents patient accurately with minimal assistance</p> <p>Thorough pre-operative plan</p> <ul style="list-style-type: none"> • Medical team contacted • Timing of surgery • Osteoporosis plan (Vit D, calcium, etc) <p>Surgery:</p> <ul style="list-style-type: none"> • Facilitates room set-up and patient positioning • Closes skin • Asks thoughtful questions 	<p>Offers a reasonable treatment plan</p> <p>Manages safe post-operative protocol (weight bearing status, DVT prophylaxis, antibiotic prophylaxis, etc)</p> <p>Osteoporosis management plan</p> <p>Surgery:</p> <ul style="list-style-type: none"> • Able 1st assist • Sub-cutaneous / skin closure

Medical Knowledge – Hip Fracture

1	2	3	4	5
<p>Demonstrates knowledge of pathophysiology (i.e. mechanism of injury, osteoporosis)</p>	<p>Understands the natural history of non-operative vs operative care</p> <p>Understands comorbidities and impact on fracture treatment</p>	<p>Correlates anatomic knowledge with imaging</p> <p>Provides a basic interpretation of the radiographs</p> <ul style="list-style-type: none"> • Identifies side • Approximate location of fracture • Displacement in AP plane 	<p>Can explain the surgical approach</p> <p>Knowledge of surrounding anatomy (medial circumflex artery, sciatic nerve, etc)</p> <p>Classifies fracture (Garden, Pauwels, stable/unstable intertroch, etc)</p>	<p>Aware of controversies within the field (hemi vs total, short vs long cephalo-medullary nail)</p>

2) Patient Care – Tibia / Femur Fracture

1	2	3	4	5
<p>Obtains history and performs basic physical exam</p> <p>Appropriately recommends basic imaging studies</p> <p>Surgery:</p> <ul style="list-style-type: none"> • Don gown /gloves • Scrubs-in correctly • Puts on Personal Protective Equipment (lead, eye-protection) without prompting 	<p>Obtains focused history and performs focused exam</p> <p>Assesses for limb perfusion and compartment syndrome</p> <p>Lists potential complications</p> <p>Assists in splinting</p> <p>Surgery:</p> <ul style="list-style-type: none"> • Maintains sterility • Observes attentively 	<p>Presents patient accurately, but requires some assistance</p> <p>Offers acceptable pre-operative work-up</p> <ul style="list-style-type: none"> • Consults, labs • Antibiotics /tetanus in open injury <p>Applies splint with supervision</p> <p>Surgery:</p> <ul style="list-style-type: none"> • Adept at retraction, suction, cutting suture • Identify surgical anatomy (sciatic nerve, etc) 	<p>Presents patient accurately with minimal assistance</p> <p>Assesses patient resuscitation</p> <p>Thorough pre-operative plan</p> <ul style="list-style-type: none"> • Timing of surgery • Implant choices • CT scan, as needed <p>Surgery:</p> <ul style="list-style-type: none"> • Facilitates room set-up • Closes skin • Thoughtful questions 	<p>Offers a reasonable treatment plan</p> <p>Manages safe post-operative protocol (weight bearing status, DVT prophylaxis, antibiotic prophylaxis, etc)</p> <p>Monitors and assess wounds for complications</p> <ul style="list-style-type: none"> • Infection • Compartment syndrome • Neuropraxia <p>Surgery:</p> <ul style="list-style-type: none"> • Able 1st assist • Sub-cutaneous / skin closure

Medical Knowledge – Tibia / Femur Fracture

1	2	3	4	5
<p>Demonstrates knowledge of pathophysiology (i.e. mechanism of injury, high energy vs low-energy)</p>	<p>Understands the natural history of non-operative vs operative care</p> <p>Understands comorbidities and impact on fracture treatment</p>	<p>Correlates anatomic knowledge with imaging</p> <p>Provides a basic interpretation of the radiographs</p> <ul style="list-style-type: none"> • Identifies side • Describes location and displacement / angulation of fracture • Identifies fracture pattern (spiral, oblique) 	<p>Can explain the surgical approach</p> <p>Knowledge of surrounding anatomy (peroneal nerve, muscles in each compartment)</p> <p>Identifies associated injuries (femoral neck fracture, posterior malleolar fracture)</p>	<p>Aware of controversies within the field (antegrade vs retrograde, supra-patellar, measuring compartment pressures)</p> <p>Biomechanics of intra-medullary rods (reaming, dynamization, etc)</p>

3) Patient Care --- Carpal Tunnel

1	2	3	4	5
<p>Obtains history and performs basic physical exam</p> <p>Appropriately recommends basic work-up (EMG/NCV, injection, etc)</p> <p>Surgery:</p> <ul style="list-style-type: none"> • Don gown /gloves • Scrubs-in correctly 	<p>Obtains focused history, including identifying night pain, paresthesia</p> <p>Performs median nerve motor/ sensory evaluation (e.g., median nerve numbness, thumb abduction)</p> <p>Performs provocative maneuvers (Tinel, Phalen, compression test)</p> <p>Surgery:</p> <ul style="list-style-type: none"> • Maintains sterility • Observes attentively 	<p>Presents patient accurately with minimal assistance</p> <p>Evaluates other sites of compression (e.g., pronator syndrome, cervical radiculopathy)</p> <p>Surgery:</p> <ul style="list-style-type: none"> • Adept at retraction, suction, cutting suture • Identify surgical anatomy (Median Nerve, Transverse Carpal Ligament) • Thoughtful questions 	<p>Offers appropriate plan treatment plan (e.g., night splints, steroid injection, surgery when appropriate)</p> <p>Appropriately requests further testing (EMG/NCV, labs, etc)</p> <p>Surgery:</p> <ul style="list-style-type: none"> • Facilitates room set-up • Closes skin • In-depth anatomy (palmer/ recurrent branches, palmar arch, etc) 	<p>Presents all pertinent positive and negative findings in history and physical exam findings.</p> <p>Offers a work-up and treatment plan that does NOT require any correction.</p> <p>Surgery:</p> <ul style="list-style-type: none"> • Able 1st assist (asks for retractors, adjusts light, etc) • Sub-cutaneous / skin closure

Medical Knowledge – Carpal Tunnel

1	2	3	4	5
<p>Basic understanding of the median nerve anatomy</p> <p>Basic understanding of median nerve sensory / motor distribution</p>	<p>Demonstrates in-depth knowledge of median nerve motor/ sensory distribution</p> <ul style="list-style-type: none"> • AIN, recurrent, and palmar cutaneous branches, etc • Identifies structures in carpal tunnel 	<p>Creates differential diagnosis (pronator syndrome, cubital tunnel, thoracic outlet, cervical radiculopathy, etc)</p> <p>Understands risk factors associated with Carpal Tunnel Syndrome (CTS) (e.g., diabetes, inflammatory arthritis,)</p>	<p>Thorough understanding of hand anatomy, innervation patterns of the major nerves, branch points of the major nerves</p> <p>Aware of major points of compression along median nerve</p>	<p>Knows controversies (open vs endoscopic; Electro-diagnostic; Ultrasound; etc)</p>

4) Knee / Hip Osteoarthritis --- Patient Care

1	2	3	4	5
<p>Obtains history and performs basic physical exam</p> <p>Appropriately recommends basic work-up</p> <p>Surgery:</p> <ul style="list-style-type: none"> • Don gown /gloves • Scrubs-in correctly 	<p>Obtains focused history and physical Exam (Distance walked, ROM, Gait pattern, etc)</p> <p>Appropriately orders basic imaging studies (weight bearing films, etc)</p> <p>Offers various treatment options</p> <p>Surgery:</p> <ul style="list-style-type: none"> • Maintains sterility • Observes attentively 	<p>Presents patient accurately with minimal assistance</p> <p>Basic interpretation of imaging</p> <p>Recommends non-operative treatments (e.g., NSAIDs, physical therapy, assistive devices)</p> <p>Surgery:</p> <ul style="list-style-type: none"> • Adept at retraction, suction, cutting suture • Identify basic surgical anatomy (ACL/PCL, popliteus, sciatic nerve, etc) • Thoughtful questions 	<p>Thorough presentation of patient</p> <p>Advanced interpretation of imaging</p> <p>Can appropriately recommend surgery when indicated</p> <p>Follows patient post-operatively, and with direction, able to facilitate care.</p> <p>Surgery:</p> <ul style="list-style-type: none"> • Facilitates room set-up • Closes skin • In-depth anatomy 	<p>Flawless presentation</p> <p>Understands post-operative management</p> <p>Follows patient post-operatively and can reliably facilitate rounds (change dressings, assess wound for complications, SCDS on, DVT, etc)</p> <p>Surgery:</p> <ul style="list-style-type: none"> • Able 1st assist (asks for retractors, adjusts light, etc) • Sub-cutaneous / skin closure

Medical Knowledge – Osteoarthritis

1	2	3	4	5
<p>Demonstrates knowledge of pathophysiology related to hip and knee arthritis</p> <p>Demonstrates some knowledge of natural history of hip and knee arthritis</p>	<p>Correlates anatomic knowledge to imaging findings on imaging studies</p> <p>Understands the effects of intervention on natural history of hip and knee arthritis</p>	<p>Understands the importance of comorbidities, thromboembolic prophylaxis, infection, etc</p>	<p>Recognize implications of disease processes (OA, Femoroacetabular impingement [FAI], inflammatory arthritis, osteonecrosis)</p>	<p>Demonstrates knowledge of hip or knee arthritis anatomy and basic surgical approaches</p> <p>Understands basic implant choices (e.g., cement and uncemented fixation, levels of constraint)</p>

Degenerative Spinal Conditions – Patient Care

1	2	3	4	5
<p>Obtains history and performs basic physical exam</p> <p>Appropriately orders basic imaging studies</p> <p>Surgery:</p> <ul style="list-style-type: none"> • Don gown /gloves • Scrubs-in correctly 	<p>Obtains focused history and performs focused exam; basic interpretation of a neurological exam</p> <p>Recommends non-operative treatments: NSAIDs, rehabilitation, etc</p> <p>Surgery:</p> <ul style="list-style-type: none"> • Maintains sterility • Observes attentively 	<p>Presents patient accurately with minimal assistance</p> <p>Thorough neurologic exam</p> <p>Recognizes the ("Red Flags" -- progressive deficit, cauda equina syndrome, etc)</p> <p>Recommends advanced imaging when appropriate</p> <p>Surgery:</p> <ul style="list-style-type: none"> • Adept at retraction, suction, cutting suture • Identify basic surgical anatomy • Thoughtful questions 	<p>Thorough presentation of patient</p> <p>Basic Interpretation of radiographs</p> <p>Advanced interpretation of neurologic exam</p> <p>Can appropriately recommend surgery when indicated</p> <p>Exam for non-spinal differential diagnosis (vascular claudication, hip arthritis, etc.)</p> <p>Surgery:</p> <ul style="list-style-type: none"> • Facilitates room set-up • Advanced anatomy 	<p>Flawless presentation</p> <p>Appropriately orders and interprets advanced imaging studies (magnetic resonance imaging [MRI], myelogram, CT); correlates clinical and imaging findings to form clinical diagnosis</p> <p>Surgery:</p> <ul style="list-style-type: none"> • Able 1st assist (asks for retractors, adjusts light, etc) • Sub-cutaneous / skin closure

Degenerative Spinal Conditions – Medical Knowledge

1	2	3	4	5
<p>Demonstrates knowledge of pathophysiology related to lumbar and cervical degenerative conditions</p> <p>Demonstrates knowledge of physical exam of cervical and lumbar spine and related neurologic and provocative signs</p>	<p>Correlates anatomic knowledge to imaging findings on basic imaging studies (e.g., cervical or lumbar radiographs)</p>	<p>Describes specific clinical syndromes of lumbar and cervical degenerative conditions (e.g., radiculopathy from HNP vs. stenosis vs. spondylolisthesis, back pain, cervical radiculopathy, or myelopathy)</p> <p>Demonstrates knowledge of natural history of lumbar and cervical degenerative conditions</p>	<p>Correlates anatomic knowledge to imaging findings on advanced imaging studies (e.g., MRI, Myelogram/CT)</p>	<p>Demonstrates knowledge of biological theories of pain generation</p> <p>Demonstrates knowledge of the surgical approaches, complications, and alternatives</p>

Rotator Cuff – Patient Care

1	2	3	4	5
<p>Obtains basic history and performs cursory physical examination (e.g., age, gender, smoker, trauma, night pain, weakness, etc)</p> <p>Surgery:</p> <ul style="list-style-type: none"> • Don gown /gloves • Scrubs-in correctly 	<p>Obtains focused history and performs basic physical examination (e.g., provocative tests, Neer/Hawkins, empty can test, lift-off, belly press, etc)</p> <p>Recommends non-operative treatment</p> <p>Surgery:</p> <ul style="list-style-type: none"> • Maintains sterility • Observes attentively 	<p>Presents patient accurately with minimal assistance</p> <p>Thorough physical exam (AC joint palpation, O’Briens, test, pseudoparalysis, etc)</p> <p>Basic radiographic interpretation</p> <p>Surgery:</p> <ul style="list-style-type: none"> • Identify basic surgical anatomy • Thoughtful questions 	<p>Thorough presentation of patient</p> <p>Exam for non-shoulder differential diagnosis (Thoracic outlet syndrome, Spurling’s sign)</p> <p>In-depth radiographic interpretation</p> <p>Recommends advanced imaging when appropriate</p> <p>Surgery:</p> <ul style="list-style-type: none"> • Facilitates room set-up • Advanced anatomy 	<p>Flawless presentation</p> <p>In-depth MRI interpretation</p> <p>Appropriately recommends surgical treatment</p> <p>Surgery:</p> <ul style="list-style-type: none"> • Able 1st assist • Holds camera steady

Rotator Cuff – Medical Knowledge

1	2	3	4	5
<p>Demonstrates knowledge of basic imaging studies: radiographs (e.g., true AP, axillary, supraspinatus outlet)</p> <p>Basic understanding of surgical anatomy (e.g., rotator cuff muscles/tendons)</p>	<p>Creates basic differential diagnosis of shoulder pathology</p>	<p>Creates advanced differential diagnosis of shoulder pathology</p> <p>Advanced understanding of shoulder anatomy and biomechanics (spaces/intervals, biceps tendon, axillary nerve, etc)</p>	<p>Demonstrates knowledge of surgical indications (e.g., non-operative management, therapy, injections, rotator cuff repair, subacromial decompression)</p>	<p>Demonstrates knowledge of the surgical approaches, complications, and alternatives</p> <p>Demonstrates knowledge on complications of massive cuff tears</p>

Acute Traumatic Knee Pain – Patient Care

1	2	3	4	5
<p>Obtains history and performs cursory physical exam (e.g., age, gender, history of present illness [HPI], past medical history [PMHx], social history)</p> <p>Surgery:</p> <ul style="list-style-type: none"> • Don gown /gloves • Scrubs-in correctly 	<p>Obtains focused history and performs basic exam (e.g., anterior drawer, effusion, tenderness to palpation, McMurray)</p> <p>Recommends non-operative treatments (e.g., range of motion [ROM], weight-bearing (WB) status, brace)</p> <p>Surgery:</p> <ul style="list-style-type: none"> • Maintains sterility • Observes attentively 	<p>Presents patient accurately with minimal assistance</p> <p>Thorough physical exam (range of motion, Lachmans, Pivot-Shift, Varus/valgus stability, etc)</p> <p>Appropriately orders advanced imaging studies</p> <p>Surgery:</p> <ul style="list-style-type: none"> • Identify basic surgical anatomy • Thoughtful questions 	<p>Thorough presentation of patient</p> <p>Appropriately interprets basic imaging studies (e.g., alignment, joint space, patella alignment)</p> <p>Examines injury under anesthesia (e.g., complete ligament examination)</p> <p>Surgery:</p> <ul style="list-style-type: none"> • Facilitates room set-up • Advanced anatomy 	<p>Flawless presentation</p> <p>In-depth MRI interpretation (identifies ACL/PCL, meniscal tears)</p> <p>Appropriately recommends surgical treatment</p> <p>Surgery:</p> <ul style="list-style-type: none"> • Able 1st assist • Holds camera steady

Acute Traumatic Knee Pain – Patient Care

1	2	3	4	5
<p>Demonstrates some knowledge of natural history of meniscal tear</p> <p>Has knowledge of natural history of ACL injury</p> <p>Demonstrates knowledge of pathophysiology related to ACL injury (e.g., mechanisms of injury)</p>	<p>Creates basic differential diagnosis of acute knee pain</p> <p>Correlates anatomic knowledge to imaging findings on basic imaging studies</p>	<p>Creates advanced differential diagnosis of acute traumatic knee pain</p> <p>Basic knowledge of treatment options.</p>	<p>Demonstrates knowledge of surgical indications (e.g., non-operative management, therapy, bracing,)</p> <p>Understands the effects of intervention on natural history of ACL or meniscal injury</p>	<p>Demonstrates knowledge of the surgical approaches & complications</p> <p>Demonstrates knowledge on complications of graft types for ACL</p>