

## Appendix

### Learning Activities with Competency Based Goals and Objectives

to accompany:

Criscione-Schreiber LG, Bolster MB, Jonas BL, O'Rourke KS: Competency Based Goals, Objectives, and Linked Evaluations for Rheumatology Training Programs: A Standardized Template of Learning Activities from the Carolinas Fellows Collaborative (CFC)

KEY	<u>Description</u>
[Header]	<p>For each Learning Activity, add the following and complete with the information unique to the training program:</p> <p><b>Contact:</b> (activity supervisor)</p> <p><b>Teaching site:</b></p> <p><b>Level of Supervision:</b> (i.e., ACGME levels of Direct, Indirect (with Direct 'Available' or 'Immediately Available'), or Oversight)</p>
[1) / 2) / 3) / 4]	<p>Wording that can be changed, to reflect progressive responsibility or to indicate performance milestones that should be met, are included within brackets for the Adult Continuity Clinic and Adult Inpatient Consult Service activities. Similar changes can be made to all objectives as indicated by individual programs. In each set of brackets, <b>1)</b> indicates the first training period (e.g. months 1 – 6), <b>2)</b> indicates the second training period (e.g. months 7 – 12), etc. For some objectives, the same wording can be used for more than one training period as indicated.</p>

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## Adult Outpatient Continuity Clinic

### [Header]

**Goals:** The goal of this experience will be for the fellows to gain expertise in the outpatient evaluation and management of patients with a broad spectrum of musculoskeletal and rheumatic diseases. The experience provides an opportunity to develop an understanding for the course of these conditions over an extended period of time.

### Timeline:

#### Year One

Trainees should gain competence in the ongoing outpatient management of individuals with musculoskeletal and rheumatic diseases, including assessments of disease activity.

#### Year Two

Trainees should progressively demonstrate the ability to independently and comprehensively manage the longitudinal care of patients with musculoskeletal and rheumatic diseases. Such care includes attention to multisystem involvement by the disease, the frequently multidisciplinary care required, and the psychological support systems needed by these patients.

### Objectives

#### Medical knowledge

[1] Read about / 2) Describe / 3, 4) Discussions of patients should incorporate detailed knowledge of] the epidemiology, genetics, natural history, clinical expression including clinical subtypes, pathology, and pathogenesis of the rheumatic diseases encountered in the outpatient setting.

[1] Summarize an approach to/ 2) Devise and begin implementing a plan for/ 3,4)] Independently devise and recommend a plan for] the evaluation of multi-organ inflammatory disorders

[1] Read about / 2) Describe / 3) Illustrate the similarities and differences between / 4) Teach] the biochemical mechanisms of action, conditions in which they may be useful, and list the potential side effects of the pharmacologic agents used to treat outpatient musculoskeletal and rheumatic diseases

[1]Identify / 2) Identify and plan to prevent / 3) Describe the mechanism of / 4) Describe the mechanism of and make plans to avoid] therapy-related complications when seeing outpatients with established rheumatic disease

[1] Propose / 2) Implement and describe / 3) Independently implement / 4) Teach] an approach to distinguishing non-rheumatic disorders from rheumatic diseases

[1] List and select/ 2) Explain the significance of / 3,4) Teach the significance of] diagnostic tests used in the evaluation of outpatients with suspected rheumatic and musculoskeletal diseases

[1] Identify literature/ 2) Identify and begin to critically appraise and cite literature / 3) Appropriately select and critically appraise and cite literature / 4) Teach how to critically appraise and cite literature] pertinent to the evaluation of outpatients

[1] List/ 2) Describe / 3,4) Explain how /] the structure and function of musculoskeletal tissues and joints [ -/are impacted by disease processes]

[1] Recognize the roles of / 2) Appropriately consult / 3,4) Work collaboratively with /] physical and occupational therapy in the care of ambulatory patients with rheumatic and musculoskeletal conditions

[1,2) Specify the role of / 3,4) Appropriately consult /] orthopedic surgery in the care of patients with musculoskeletal conditions

#### Patient care

Perform a comprehensive history and complete physical examination on patients with rheumatic symptoms or abnormal immunologic test results. The fellow is expected to **[1]** frequently / **2)** occasionally / **3,4)** very rarely /] miss subtle historical and physical examination findings that the attending detects based on nuanced understanding and experience.

**[1]** Appropriately select and interpret / **2)** Incorporate results of/ **3,4)** Independently assess and incorporate results of /] laboratory, imaging, and pathologic studies used in the evaluation of rheumatic disorders

**[1]** Devise and demonstrate / **2)** Demonstrate a developing ability to identify a patient's disease process based on/ **3)** Correctly and reliably identify abnormalities through / **4)** Demonstrate proficiency in] use of a standardized approach to the interpretation of plain radiographs of joints.

Perform procedures including arthrocentesis and injections, compensated polarized microscopy, and interpretation of synovial fluid analysis **[1]** with direct supervision / **2)** with direct supervision as requested for complicated or previously unperformed procedures / **3)** with indirect supervision, performing such procedures prior to discussion with the attending when indicated / **4)** with proficiency]

Independently construct a comprehensive treatment plan and assess response to therapy. Plan and assessment of response will **[1,2)** be supervised and potentially modified by the attending physician / **3)** require indirect supervision and modification as necessary by the attending physician / **4)** require only oversight and uncommonly modification by the attending physician]

After discussion with supervising physician counsel patients concerning their diagnosis, planned diagnostic testing and recommended therapies. **[1)** Several such discussions should be supervised by the attending physician / **2,3,4)** Plan and assessment of response will be supervised and occasionally modified by the attending physician].

**[1)** Tabulate / **2)** Use / **3)** Incorporate into practice / **4)** Teach to use] the varied validated instruments in the assessment of pain, function, and quality of life over time to monitor and adjust therapy.

Respond to phone calls and/or messages in a clear and compassionate manner.

**[1)** Demonstrate a developing ability to provide / **2,3,4)** Provide/] longitudinal care to patients with rheumatic diseases, recognizing how to diagnose and manage disease flares, infections and other comorbid illnesses and the side effects of medications

#### Practice-based learning and improvement

Effectively use technology to manage information, support patient care decisions, and enhance both patient and physician education.

Integrate and apply knowledge obtained from multiple sources (textbooks, journal articles) to the care of outpatients

**[1)** Identify / **2, 3, 4)** Critically appraise /] appropriate literature applicable to the care of rheumatology patients in the outpatient setting

Set and assess individualized learning goals. Specific goals may be discussed with the supervising attending at the beginning of the clinic session

Analyze clinical experience and employ a systematic methodology for improvement – throughout the 6 month time period, identify learning goals and a plan to meet them

Develop and maintain a willingness to learn from errors, and use errors to improve the system or processes of care

### Systems-based practice

[1,2) Discuss / 3,4) Explain] how the health care system affects the management of outpatients with rheumatic diseases.

[1) Identify with guidance / 2,3,4) Identify] problems in delivery of optimal patient care and propose corrective actions.

[1) Demonstrate an advancing ability to assume / 2,3,4) Assume] the role of a consultant to a diverse group of referring providers to assure comprehensive patient care and optimum patient safety

[1) Demonstrate progressive ability to effectively / 2,3,4) Effectively] collaborate with other health care providers, including physical and occupational therapists and orthopedic surgeons, in the care of patients with rheumatic diseases

[1) Examine the charges/ 2) Differentiate the charges and / 3,4) Practice cost-effective medicine based on knowledge of the charges and] the cost-effectiveness of alternative proposed interventions.

[1) Recognize / 2,3,4) Incorporate an understanding of] best practices in rheumatology to design cost effective plans

[1) Demonstrate awareness of / 2,3,4) Describe] the impact of diagnostic and therapeutic recommendations on the health care system, cost of procedures, insurance coverage, and resources utilized

[1) Examine how documentation guidelines and medical complexity determine visit level and coding of procedures /2) In collaboration with the attending physician, select coding level based on documentation guidelines and medical complexity / 3) Propose coding level based on documentation guidelines and medical complexity / 4) Show ability to independently code outpatient visits based on documentation guidelines and medical decision making]

### Interpersonal skills and communication

Approach patients with an empathetic and understandable manner

Demonstrate effective skills of listening and speaking with patients, families and other members of the health care team

Reliably and accurately communicate the patient's and his/her family's views and concerns to the attending

Compose clear and timely consultation reports and interval notes/letters, including a precise diagnosis whenever possible, differential diagnosis when appropriate and recommend follow up or additional studies

Counsel patients, families and colleagues regarding side effects and appropriate use of specific medications, providing written documentation when appropriate

### Professionalism

Be prompt and prepared for clinic

Recognize the importance of patient primacy, patient privacy, patient autonomy, informed consent, and equitable respect and care to all.

Respect patients and their families, staff and colleagues.

Respond to queries from nursing staff and participate as a team member by providing follow up information to the nursing team when requested

Model ethical behavior by reporting back to the attending and referring providers key clinical findings, following through on clinical questions, laboratory testing and other patient care issues, and recognizing potential conflicts of interest.

Demonstrate integrity, honesty and openness in discussion of therapeutic options with patients and respect for patient's preferences and multicultural differences

Respond to phone calls, pages and/or messages in a timely manner

## Adult Inpatient Consult Service

### [Header]

#### Goals:

The educational purpose of inpatient consultation is to develop and refine the knowledge base and skills essential for the clinical evaluation and management of hospitalized patients with suspected or proven rheumatic diseases.

Trainees will demonstrate progressive independence in completion of the following objectives such that they demonstrate the ability to be nearly completely independent in the inpatient setting by the end of the first year. By the end of the second year, fellows should demonstrate the ability to perform inpatient rheumatology consultations completely independently.

#### Objectives:

##### Medical knowledge

[1) Read about / 2) Describe / 3) Incorporate into patient care and differential diagnoses advanced knowledge of / 4) Teach] the epidemiology, genetics, natural history, clinical expression including clinical subtypes, pathology, and pathogenesis of the rheumatic diseases encountered in the inpatient setting. Discussions with the supervising attending should reflect reading about the patients.

[1) Describe / 2) Devise and begin implementing / 3) Recommend / 4) Independently devise and recommend] a plan to evaluate each patient for the presence of multi-organ inflammatory disorders.

[1) Read about / 2) Describe / 3) Illustrate the similarities and differences between / 4) Teach] the biochemical mechanisms of action, conditions in which they may be useful, and list the potential side effects of the pharmacologic agents recommended to treat inpatient musculoskeletal and rheumatic diseases

[1) Identify / 2) Identify and plan to prevent / 3) Describe the mechanism of / 4) Describe the mechanism and propose plans to avoid] therapy-related complications when seeing inpatients with established rheumatic disease

[1) Propose / 2) Implement and describe / 3) Demonstrate / 4) Teach] an approach to distinguishing non-rheumatic disorders from rheumatic diseases in inpatients

[1) List and select / 2) Explain the significance of / 3,4) Teach the significance of] the diagnostic tests used in the evaluation of hospitalized patients with suspected rheumatic and musculoskeletal diseases

[1) Identify literature / 2) Identify and begin to critically appraise and cite literature / 3) Appropriately select and critically appraise and cite literature / 4) Teach how to critically appraise and cite literature] pertinent to the evaluation of hospitalized patients

##### Patient care

Perform a comprehensive history and complete physical examination on patients with rheumatic symptoms or abnormal immunologic test results. The fellow is expected to [1) frequently / 2) occasionally / 3) rarely / 4) very rarely] miss subtle historical and physical examination findings that the attending detects based on nuanced understanding and experience.

[1) Appropriately identify and interpret / 2) Incorporate into the plan the results of / 3,4) Independently assess and incorporate results of] laboratory, imaging, and pathologic studies performed in the inpatient consultation setting

Perform procedures including arthrocentesis and injections, compensated polarized microscopy, and interpretation of synovial fluid analysis procedures successfully [1) under direct supervision / 2) with direct supervision as requested for complicated or previously unperformed procedures / 3) with indirect

supervision, performing such procedures prior to discussion with the attending when indicated/ **4**) with proficiency]

Independently construct a comprehensive treatment plan and assess response to therapy. Plan and assessment of response will be supervised and [**1**) frequently / **2**) occasionally / **3**) rarely / **4**) very rarely] modified by the attending physician.

After discussion with supervising physician, counsel patients concerning their diagnosis, planned diagnostic testing and recommended therapies. The attending physician should supervise several such discussions

#### Practice-based learning and improvement

Effectively use technology to manage information for patient care

Integrate and apply knowledge obtained from multiple sources (textbooks, journal articles) to the care of hospitalized patients

[**1**) Identify / **2,3,4**) Critically appraise] appropriate literature applicable to the care of patients on the consultation service

Set and assess individualized learning goals. Specific goals should be discussed with the supervising attending at the beginning of the rotation

Analyze clinical experience and employ a systematic methodology for improvement – throughout the rotation, identify learning goals and a plan to meet them

#### Systems-based practice

[**1**) Discuss / **2,3**) Illustrate / **4**) Teach] how the inpatient health care system affects the management of patients with rheumatic diseases and coordinate effective transitions of care

[**1**) Demonstrate an advancing ability to assume / **2,3,4**) Assume] the role of a consultant to a great many different services in the hospital to assure comprehensive patient care and optimum patient safety

Identify problems in the delivery of optimal patient care and propose corrective actions.

[**1**) Examine / **2,3,4**) Practice cost-effective medicine based on knowledge of] the charges of proposed interventions.

[**1**) Recognize / **2,3,4**) Incorporate understanding of] best practices in rheumatology to design cost effective plans

[**1**) Demonstrate awareness of / **2,3,4**) Describe] how consultation impacts the health care system, mainly through understanding costs, insurance coverage, and resources utilized

#### Interpersonal skills and communication

Approach patients with an empathetic and understandable manner

Demonstrate effective skills of listening and speaking with patients, families and other members of the health care team

Reliably and accurately communicate the patient's and his/her family's views and concerns to the attending.

Reliably and accurately communicate recommendations for further evaluation and management to the primary team and other subspecialty consultants

Compose clear and timely consultation reports including a precise diagnosis whenever possible, differential diagnosis when appropriate and recommend follow up or additional studies



Counsel patients, families and colleagues regarding side effects and appropriate use of specific medications, providing written documentation when appropriate

When relevant and with input from the attending, supervise medical students' and residents' communications with families, patients and members of the health care team

#### Professionalism

Be prompt and prepared for rounds

Recognize the importance of patient primacy, patient privacy, patient autonomy, informed consent, and equitable respect and care to all.

Respect patients and their families, staff and colleagues.

Model ethical behavior by reporting key clinical findings back to the attending, following through on clinical questions, laboratory testing and other patient care issues, and recognizing potential conflicts of interest.

Demonstrate integrity, honesty and openness in discussion of therapeutic options with patients and respect for patient's preferences and multicultural differences

## Adult VA Outpatient Continuity Clinic

### [Header]

**Goals:** The goal of this experience will be for the fellows to gain expertise in the outpatient evaluation and management of rheumatic problems more commonly seen in a U.S. veteran and predominantly male population. The experience provides an opportunity to develop an understanding for the course of these conditions over an extended period of time.

### Timeline:

Year 1. Trainees should have acquired extensive knowledge of the pathophysiology and clinical features of the rheumatic diseases, the methods used to diagnose rheumatic diseases and evaluate disease activity, the medical therapies and their side effects. Trainees will also have first-hand knowledge of the impact of these chronic illnesses on patients and their families, the obstacles to providing optimal health care for this population and the systems available to help overcome these issues. These skills will have employed all of the general competencies.

Year 2. Trainees should be able to independently and comprehensively manage the longitudinal care of veterans with rheumatic diseases. Such care includes attention to multisystem involvement by rheumatic diseases, the frequently multidisciplinary care required, and the psychological support systems needed by these patients.

### Objectives

#### Medical knowledge

Describe the epidemiology, genetics, natural history, clinical expression including clinical subtypes, pathology, and pathogenesis of the rheumatic diseases encountered in the outpatient setting.

Summarize an approach to the evaluation of multi-organ inflammatory disorders

Discuss the biochemical mechanisms of action, conditions in which they may be useful, and list the potential side effects of the pharmacologic agents used to treat outpatient musculoskeletal and rheumatic diseases

Identify therapy-related complications

Recognize the chronic medical sequelae of military service and their impact on disease expression, evaluation and management of rheumatic and musculoskeletal conditions.

Distinguish non-rheumatic disorders from rheumatic diseases

Interpret diagnostic tests used in the evaluation of outpatients with suspected rheumatic and musculoskeletal diseases

Demonstrate the ability to critically appraise and cite literature pertinent to the evaluation of outpatients

Describe structure and function of musculoskeletal tissues and joints

Discuss the roles of physical and occupational therapy in the care of ambulatory patients with rheumatic and musculoskeletal conditions

Specify the role of orthopedic surgery in the care of patients with musculoskeletal conditions

#### Patient care

Effectively perform a comprehensive history and complete physical examination in patients with rheumatic symptoms or abnormal immunologic tests

Appropriately select and interpret laboratory, imaging, and pathologic studies used in the evaluation of rheumatic disorders

Demonstrate proficiency in interpretation of plain radiographs of joints.

Demonstrate proficiency in procedures including arthrocentesis and injections, compensated polarized microscopy, and interpretation of synovial fluid analysis

Construct a comprehensive treatment plan and assess response to therapy.

Counsel patients concerning their diagnosis, planned diagnostic testing and recommended therapies.

Utilize validated instruments in the assessment of pain, function, and quality of life over time to monitor and adjust therapy.

Respond to phone calls and/or messages in a clear and compassionate manner.

Provide longitudinal care to patients with rheumatic diseases, recognizing how to diagnose and manage disease flares, infections and other comorbid illnesses and the side effects of medications

Recognize the impact of post-traumatic stress disorder (PTSD) on the expression of musculoskeletal and rheumatic diseases and appropriately incorporate measures to address this comorbid condition.

#### Practice-based learning and improvement

Effectively use technology to manage information, support patient care decisions, and enhance both patient and physician education.

Integrate and apply knowledge obtained from multiple sources to the care of outpatients

Demonstrate ability to critically assess the scientific literature

Set and assess individualized learning goals

Analyze clinical experience and employ a systematic methodology for improvement

Develop and maintain a willingness to learn from errors, and use errors to improve the system or processes of care

#### Systems-based practice

Discuss how the VA health care system affects the management of outpatients with rheumatic diseases.

Identify problems in delivery of optimal VA outpatient care and propose corrective actions.

Operate as a consultant to a diverse group of referring providers to assure comprehensive patient care and optimum patient safety

Demonstrate effective collaboration with other health care providers and institutions, including physical and occupational therapists and orthopedic surgeons, and providers of other fee-based services in the care of patients with rheumatic diseases

Determine cost-effectiveness of alternative proposed interventions.

Design cost-effective plans based on knowledge of best practices

Demonstrate awareness of the impact of diagnostic and therapeutic recommendations on the health care system, cost of the procedure, insurance coverage, and resources utilized

#### Interpersonal skills and communication

Approach patients with an empathetic and understanding manner

Demonstrate effective skills of listening and speaking with patients, families and other members of the health care team

Reliably and accurately communicate the patient's and his/her family's views and concerns to the attending.

Compose clear and timely consultation reports and interval notes/letters, including a precise diagnosis whenever possible, differential diagnosis when appropriate and recommend follow up or additional studies

Counsel patients, families and colleagues regarding side effects and appropriate use of specific medications, providing written documentation when appropriate

Supervise medical students' and residents' communications with families, patients and members of the health care team

#### Professionalism

Be prompt and prepared for clinic

Recognize the importance of patient primacy, patient privacy, patient autonomy, informed consent, and equitable respect and care to all.

Respect patients and their families, staff and colleagues.

Model ethical behavior by reporting back to the attending and referring provider's key clinical findings, following through on clinical questions, laboratory testing and other patient care issues, and recognizing potential conflicts of interest.

Demonstrate integrity, honesty and openness in discussion of therapeutic options with patients and respect for patient's preferences and multicultural differences

Respond to phone calls, pages and/or messages in a timely manner

## **Pediatric Rheumatology Outpatient Clinic**

### **[Header]**

**Goals:** The goal of this experience is for the fellows to gain expertise in the outpatient evaluation and management of pediatric rheumatic problems. The experience provides an opportunity to develop an understanding of the course of these conditions over an extended period of time.

### **Timeline:**

#### Year One

Trainees should gain experience in the ongoing outpatient evaluation and management of children with musculoskeletal and rheumatic diseases, including assessments of disease activity. Such care should recognize the critical role of the family dynamic in the presentation and ongoing care of the child.

#### Year Two.

Trainees should demonstrate progressive independence in the evaluation and management of children with musculoskeletal and rheumatic diseases. Such care includes attention to multisystem involvement by the disease, the frequently multidisciplinary care required, and the psychological support systems needed by these patients and their families.

### **Objectives**

#### Medical knowledge

Describe the epidemiology, genetics, and natural history, clinical expression including clinical subtypes, pathology, and pathogenesis of the rheumatic diseases commonly encountered in the pediatric outpatient setting.

Summarize an approach to the evaluation of multi-organ inflammatory disorders in children

Discuss the biochemical mechanisms of action, conditions in which they may be useful, and list the potential side effects and weight-based dose adjustments of the pharmacologic agents used to treat pediatric outpatient musculoskeletal and rheumatic diseases

Identify therapy-related complications

Distinguish non-rheumatic disorders from rheumatic diseases

Interpret diagnostic tests used in the evaluation of pediatric outpatients with suspected rheumatic and musculoskeletal diseases

Demonstrate ability to critically appraise and cite literature pertinent to the evaluation of pediatric outpatients

Describe structure and function of developing musculoskeletal tissues and joints

Explain the critical roles of physical and occupational therapy in the care of ambulatory pediatric patients with rheumatic and musculoskeletal conditions

Specify the role of orthopedic surgery in the care of pediatric patients with musculoskeletal conditions

#### Patient care

Effectively perform a comprehensive history and complete age-appropriate physical examination in children with rheumatic symptoms or abnormal immunologic tests

Appropriately select and interpret laboratory, imaging, and pathologic studies used in the evaluation of pediatric rheumatic disorders

Demonstrate proficiency in interpretation of plain radiographs of developing joints.

State the indications for arthrocentesis and injection procedures in children, and demonstrate proficiency in the interpretation of synovial fluid analysis

Discuss the development of a comprehensive treatment plan and how response to therapy will be assessed.

Counsel patients and their families concerning their diagnosis, planned diagnostic testing and recommended therapies.

Prescribe, based on weight and/or body surface area, pharmacotherapies for use in children with rheumatic diseases

Utilize validated instruments in the assessment of pain, function, and quality of life over time to monitor and adjust therapy.

Respond to phone calls and/or messages in a clear and compassionate manner.

Compose strategies to prevent those disease-related and treatment-related complications that lead to long-term morbidity such as growth retardation and delayed puberty.

Participate in the longitudinal care of patients with pediatric rheumatic diseases, recognizing how to diagnose and manage disease flares, infections and other comorbid illnesses and the side effects of medications

#### Practice-based learning and improvement

Effectively use technology to manage information, support patient care decisions, and enhance both patient and physician education.

Integrate and apply knowledge obtained from multiple sources to the care of pediatric outpatients

Demonstrate ability to critically assess the scientific literature as it applies to children with rheumatic and musculoskeletal symptoms

Set and assess individualized learning goals

Analyze clinical experience and employ a systematic methodology for improvement (e.g., Quality Improvement project)

Develop and maintain a willingness to learn from errors, and use errors to improve the system or processes of care

#### Systems-based practice

Discuss how the health care system affects the management of pediatric outpatients with rheumatic diseases.

Identify problems in delivery of optimal patient care to children and their families and propose corrective actions.

Operate as a consultant to a diverse group of referring providers to assure comprehensive patient care and optimum patient safety

Demonstrate effective collaboration with other health care providers, including physical and occupational therapists and orthopedic surgeons, in the care of children with rheumatic diseases

Design cost-effective plans based on knowledge of best practices

Demonstrate awareness of the impact of diagnostic and therapeutic recommendations on the health care system, cost of the procedure, insurance coverage, and resources utilized

### Interpersonal skills and communication

Show sensitivity to the particular needs of parents and children when sharing difficult news

Adopt effective strategies to gain the trust of pediatric patients and their families.

Employ effective skills of listening and speaking with patients, families and other members of the health care team

Reliably and accurately communicate the patient's and his/her family's views and concerns to the attending.

Compose clear and timely consultation reports including a precise diagnosis whenever possible, differential diagnosis when appropriate and recommend follow up or additional studies

Counsel patients, families and colleagues regarding side effects and appropriate use of specific medications, and obtain parental consent and patient assent for treatment, providing written documentation when appropriate

Supervise medical students' and residents' communications with families, patients and members of the health care team

### Professionalism

Be prompt and prepared for clinic

Recognize the importance of patient primacy, patient privacy, patient autonomy, informed consent, and equitable respect and care to all.

Respect patients and their families, staff and colleagues.

Model ethical behavior by reporting back to the attending key clinical findings, following through on clinical questions, laboratory testing and other patient care issues, and recognizing potential conflicts of interest.

Demonstrate integrity, honesty and openness in discussion of therapeutic options with patients and respect for patient's preferences and multicultural differences

Demonstrate sensitivity to patients' age-specific needs.

Respond to phone calls, pages and/or messages in a timely manner

## Allergy-Immunology Elective

### [Header]

**Goals:** Gain knowledge in immunologic theories, principles, and techniques and apply them to the investigation, diagnosis, and treatment of the allergic and immunologic diseases commonly seen by the rheumatologist.

### Objectives

#### Medical knowledge

Describe the ontogeny of the immune system, and alterations that allow the development of autoantibodies, immune-mediated diseases and immunodeficiency states.

Define the clinical presentation, evaluation and management of the allergic and immunologic diseases commonly encountered in rheumatology practice, e.g., asthma, atopic dermatitis, urticaria and angioedema, drug allergy, anaphylaxis, and allergic rhinitis

Discuss clinical presentations and the indications and specific tests to evaluate for suspected immunodeficiency

Demonstrate an understanding of the indications for the following commonly performed procedures, including immunotherapy, skin testing, drug desensitization, IVIG treatment, pulmonary function testing, physical urticaria testing

Identify the mechanism of action, dosing, and required monitoring, and therapy-related complications of medications commonly used to manage immune-mediated diseases and immunodeficiency states

Demonstrate ability to critically appraise and cite literature pertinent to the evaluation and management of patients with immune-mediated diseases and immunodeficiency states

#### Patient care

Effectively perform a comprehensive history and complete physical examination in patients with symptoms of allergic and immune-mediated diseases and/or abnormal immunologic tests

Appropriately select and interpret laboratory, imaging, and pathologic studies used in the evaluation of these patients

Construct a comprehensive treatment plan and assess response to therapy

Counsel patients and families concerning their diagnosis, planned diagnostic testing and recommended therapies

#### Practice-based learning and improvement

Effectively use the knowledge gained from the evaluation and management of allergy-immunology clinic patients to guide patient care decisions in their own continuity clinic

Demonstrate ability to critically assess the scientific literature regarding allergic diseases and disorders of immune regulation

Set and assess individualized learning goals

Analyze clinical experience and employ a systematic methodology for improvement



Develop and maintain a willingness to learn from errors, and use errors to improve the system or processes of care

#### Systems-based practice

Address disease-based and external systems that affect the health care of patients with allergic diseases and disorders of immune regulation

Discuss how chronic immune-mediated disorders and immunodeficiency states impact medical disability and maintenance of health care insurance coverage.

Demonstrate effective collaboration with allergy-immunology clinicians, and formulate a strategy for subspecialty consultation including appropriate evaluation prior to referral

Educate allergy-immunology clinicians in the systemic manifestations and evaluation of patients with rheumatic diseases seen in the allergy-immunology patient care setting

#### Interpersonal skills and communication

Demonstrate the ability to discuss diagnostic testing with patients and convey management recommendations clearly and with an empathetic and understanding manner

Reliably and accurately communicate the patient's and his/her family's views and concerns to the attending.

Counsel patients, families and colleagues regarding side effects and appropriate use of specific therapies, providing written documentation when appropriate

#### Professionalism

Be prompt and prepared for clinic

Recognize the importance of patient primacy, patient privacy, patient autonomy, informed consent, and equitable respect and care to all.

Respect patients and their families, staff and colleagues.

Model ethical behavior by reporting back to the attending key clinical findings, following through on clinical questions, laboratory testing and other patient care issues, and recognizing potential conflicts of interest.

Demonstrate integrity, honesty and openness in discussion of therapeutic options with patients and respect for patient's preferences and multicultural differences

## **Dermatology Elective**

### **[Header]**

**Goals:** Gain knowledge in immunologic theories, principles, and techniques and apply them to the investigation, diagnosis, and treatment of immune-mediated skin diseases commonly seen by the rheumatologist.

### **Objectives**

#### Medical knowledge

Describe the immunologic milieu of the skin, and the immunopathogenesis of the immune-mediated skin diseases commonly seen by rheumatologists (e.g., psoriasis, acute and chronic cutaneous lupus, dermatomyositis, scleroderma, morphea, cutaneous expression of the vasculitides, panniculitis)

Provide a differential diagnosis for the pathologic findings of interface dermatitis

Link immunologic abnormalities to the current and proposed biologic agents used to treat immune-mediated skin disease

Discuss the differences in potency of topical corticosteroids, and provide examples of steroid strength in each category

List the indications, dosing regimens, potential side effects, and follow-up monitoring strategies for the dermatologic agents used to treat the cutaneous manifestations of SLE and dermatomyositis (e.g., anti-malarials, thalidomide)

Demonstrate ability to critically appraise and cite literature pertinent to the evaluation and management of patients with immune-mediated skin diseases

#### Patient care

Effectively perform a comprehensive history and complete skin examination in patients with complaints referable to the integument

Appropriately select and interpret laboratory and pathologic studies used in the evaluation of these patients

Construct a comprehensive treatment plan and assess response to therapy.

Counsel patients and families concerning their diagnosis, planned diagnostic testing and recommended therapies

Describe the indications and technique for (and perform, if interested) diagnostic skin biopsy, and the indications for deeper cutaneous biopsies (e.g., eosinophilic fasciitis)

Properly prescribe topical corticosteroids and oral systemic agents used in the management of immune-mediated skin diseases

Outline the management strategy for wound care of skin affected by digital ischemia and/or cutaneous infarction (i.e., from vasculopathy)

Recognize and develop strategies to manage the psychological impact of immune-mediated skin diseases

### Practice-based learning and improvement

Effectively use the knowledge gained from the evaluation and management of dermatology clinic patients to guide patient care decisions in their own continuity clinic

Demonstrate ability to critically assess the scientific literature regarding immune-mediated skin diseases

Set and assess individualized learning goals

Analyze clinical experience and employ a systematic methodology for improvement

Develop and maintain a willingness to learn from errors, and use errors to improve the system or processes of care

### Systems-based practice

Address disease-based and external systems that affect the health care of patients with immune-mediated skin diseases

Discuss how chronic immune-mediated skin disorders impact medical disability and maintenance of health care insurance coverage.

Demonstrate effective collaboration with dermatology clinicians, and formulate a strategy for subspecialty consultation including appropriate evaluation prior to referral

Educate dermatology clinicians in the systemic manifestations and evaluation of patients with rheumatic diseases seen in the dermatology patient care setting.

### Interpersonal skills and communication

Demonstrate the ability to discuss diagnostic testing with patients and convey management recommendations clearly and with an empathetic and understanding manner

Reliably and accurately communicate the patient's and his/her family's views and concerns to the attending.

Counsel patients, families and colleagues regarding side effects and appropriate use of specific therapies, providing written documentation when appropriate

### Professionalism

Be prompt and prepared for clinic

Recognize the importance of patient primacy, patient privacy, patient autonomy, informed consent, and equitable respect and care to all.

Respect patients and their families, staff and colleagues.

Model ethical behavior by reporting back to the attending key clinical findings, following through on clinical questions, laboratory testing and other patient care issues, and recognizing potential conflicts of interest.

Demonstrate integrity, honesty and openness in discussion of therapeutic options with patients and respect for patient's preferences and multicultural differences

## **Lupus Clinic Elective**

### **[Header]**

**Goals:** The goal of this experience will be for the fellows to gain expertise in the outpatient evaluation and management of patients with systemic lupus erythematosus (SLE) and related disorders. The experience provides an opportunity to develop an understanding for the course of these conditions over an extended period of time.

### **Timeline:**

#### Year One

Gain competence in the ongoing outpatient management of individuals with SLE and related disorders, including assessments of disease activity.

#### Year Two.

Trainees should be able to independently and comprehensively manage the longitudinal care of patients with SLE. Such care includes attention to multisystem involvement by the disease, the frequently multidisciplinary care required, and the psychological support systems needed by these patients.

### **Objectives**

#### Medical knowledge

Describe the epidemiology, genetics, natural history, clinical expression including clinical subtypes, pathology, and pathogenesis of SLE and related disorders

Describe alterations in the immune system that allow the development of autoantibodies.

Explain how autoantibodies contribute to the pathogenesis of SLE in different organ systems.

Demonstrate knowledge of the clinical features and pathologic findings associated with SLE in different organs.

Identify the mechanism of action, dosing, and required monitoring, and therapy-related complications of medications commonly used to manage SLE

Identify non-rheumatic diseases that mimic SLE

Interpret diagnostic tests used in the evaluation of SLE

Demonstrate ability to critically appraise and cite literature pertinent to the evaluation and management of patients with SLE

Discuss the roles of physical and occupational therapy in the care of ambulatory patients with SLE

Specify the role of orthopedic surgery in the care of patients with SLE and musculoskeletal complaints (e.g., avascular necrosis)

#### Patient care

Effectively perform a comprehensive history and complete physical examination in patients with symptoms of SLE and/or abnormal immunologic tests

Appropriately select and interpret laboratory, imaging, and pathologic studies used in the evaluation of SLE and related rheumatic disorders

Utilize validated instruments in the assessment of pain, function, and quality of life over time to monitor and adjust therapy.

Demonstrate ability to screen for and manage disease-related and treatment-related complications that lead to long term morbidity such as avascular necrosis, osteoporosis, and cardiovascular disease

Construct a comprehensive treatment plan and assess response to therapy

Counsel patients and families concerning their diagnosis, planned diagnostic testing and recommended therapies

Respond to phone calls and/or messages in a clear and compassionate manner

Provide longitudinal care to patients with SLE and related disorders, recognizing how to diagnose and manage disease flares, infections and other comorbid illnesses, and side effects of medications

Address multisystem involvement by the disease, the frequently multidisciplinary care required, and the psychological support systems needed by these patients

#### Practice-based learning and improvement

Effectively use technology to manage information, support patient care decisions, and enhance both patient and physician education.

Integrate and apply knowledge obtained from multiple sources to the care of outpatients with SLE

Discuss how SLE clinical trials are carried out in a disease-specific clinic.

Report how registries are used in clinical care and research on SLE.

Demonstrate ability to critically assess the scientific literature in the evaluation and management of patients with SLE and related disorders

Set and assess individualized learning goals

Analyze clinical experience and employ a systematic methodology for improvement (e.g., Quality Improvement project)

Develop and maintain a willingness to learn from errors, and use errors to improve the system or processes of care

#### Systems-based practice

Discuss how the health care system, disease-based and external systems contribute to the betterment or detriment of the health care of SLE patients

Demonstrate effective collaboration with other health care providers, including generalists, other medicine subspecialists, physical and occupational therapists and orthopedic surgeons, in the care of patients with SLE.

Design cost-effective evaluation and management plans based on knowledge of best practices, insurance coverage, and available resources

Identify and recommend appropriate ancillary support systems for patients with SLE.

Identify site-specific health care system changes that would improve services for patients with SLE

#### Interpersonal skills and communication

Approach patients with SLE with an empathetic and understanding manner

Demonstrate effective skills of listening and speaking with patients, families and other members of the health care team

Reliably and accurately communicate the patient's and his/her family's views and concerns to the attending.

Compose clear and timely consultation reports and interval notes/letters, including a precise diagnosis whenever possible, differential diagnosis when appropriate and recommend follow up or additional studies

Counsel patients, families and colleagues regarding side effects and appropriate use of specific medications, providing written documentation when appropriate

Supervise medical students' and residents' communications with families, patients and members of the health care team

### Professionalism

Be prompt and prepared for clinic

Recognize the importance of patient primacy, patient privacy, patient autonomy, informed consent, and equitable respect and care to all.

Respect patients and their families, staff and colleagues.

Model ethical behavior by reporting back to the attending and referring provider's key clinical findings, following through on clinical questions, laboratory testing and other patient care issues, and recognizing potential conflicts of interest.

Demonstrate integrity, honesty and openness in discussion of therapeutic options with patients and respect for patient's preferences and multicultural differences

Demonstrate sensitivity to patients' diversity and particular cultural and economic factors that may influence therapeutic compliance.

Discuss, obtain, and document consent for chemotherapy treatment, or participation in a clinical trial or disease registry.

Respond to phone calls, pages and/or messages in a timely manner

## Neurology/EMG Elective

### [Header]

**Goals:** Gain knowledge in neuromuscular anatomy, neurologic testing and therapeutics, and apply this knowledge to the investigation, diagnosis, and treatment of neuromuscular diseases or neurologic manifestations of rheumatic diseases commonly seen by the rheumatologist.

### Objectives

#### Medical knowledge

Explain the anatomy and physiology of neuromuscular diseases seen by the rheumatologist

Describe the conduct of tests used to diagnose neuromuscular diseases seen by the rheumatologist.

List the mechanism of action of drugs used to treat neuromuscular diseases, including, anti-epileptic drugs, muscle relaxants, glucocorticoids, anticoagulants, intravenous gamma globulin, plasmapheresis, and agents to treat and prevent migraine

Provide a differential diagnosis for the electromyographic findings of sensory and motor neuropathies, and both inflammatory and noninflammatory myopathies

Demonstrate ability to critically appraise and cite literature pertinent to the evaluation and management of patients with neurologic diseases seen by the rheumatologist

#### Patient care

Effectively perform a comprehensive history and complete neuromuscular examination in patients with complaints referable to the neuromuscular system

Appropriately select and interpret laboratory and pathologic studies used in the evaluation of these patients

Construct a comprehensive treatment plan and assess response to therapy.

Counsel patients and families concerning their diagnosis, planned diagnostic testing and recommended therapies

Describe the indications for diagnostic nerve and muscle biopsies

Properly prescribe corticosteroids and other immunomodulatory agents used in the management of neuromuscular diseases

Recognize and develop strategies to manage the psychological impact of neuromuscular diseases

#### Practice-based learning and improvement

Effectively use the knowledge gained from the evaluation and management of neurology clinic patients to guide patient care decisions in their own continuity clinic

Demonstrate ability to critically assess the scientific literature regarding neuromuscular diseases

Set and assess individualized learning goals

Analyze clinical experience and employ a systematic methodology for improvement

Develop and maintain a willingness to learn from errors, and use errors to improve the system or processes of care

### Systems-based practice

Address disease-based and external systems that affect the health care of patients with neuromuscular diseases

Discuss how chronic neuromuscular disorders impact medical disability and maintenance of health care insurance coverage.

Demonstrate effective collaboration with neurology clinicians, and formulate a strategy for subspecialty consultation including appropriate evaluation prior to referral

Educate neurology clinicians in the systemic manifestations and evaluation of patients with rheumatic diseases seen in the neurology patient care setting.

### Interpersonal skills and communication

Demonstrate the ability to discuss diagnostic testing with patients and convey management recommendations clearly and with an empathetic and understanding manner

Reliably and accurately communicate the patient's and his/her family's views and concerns to the attending.

Counsel patients, families and colleagues regarding side effects and appropriate use of specific therapies, providing written documentation when appropriate

### Professionalism

Be prompt and prepared for clinic

Recognize the importance of patient primacy, patient privacy, patient autonomy, informed consent, and equitable respect and care to all.

Respect patients and their families, staff and colleagues.

Model ethical behavior by reporting back to the attending key clinical findings, following through on clinical questions, laboratory testing and other patient care issues, and recognizing potential conflicts of interest.

Demonstrate integrity, honesty and openness in discussion of therapeutic options with patients and respect for patient's preferences and multicultural differences



## Orthopedic Surgery Elective

### [Header]

**Goals:** The subspecialty of orthopedic surgery includes a wide array of mechanical, inflammatory, and degenerative diseases that affect the musculoskeletal system. The purpose of an orthopedic rotation within a rheumatology training program is to train fellows to be knowledgeable in the areas of orthopedic surgery including but not limited to total joint replacement, sports injuries, hand surgery, disorders of the back, shoulder, hip, knee, ankle and foot. The fellow will gain an understanding for the appropriate referral of the patient to the orthopedic surgeon.

### Objectives

#### Medical knowledge

Describe structure and function of musculoskeletal tissues and joints

Describe the epidemiology, genetics, natural history, clinical expression, pathology, and pathogenesis of the musculoskeletal diseases encountered in the orthopedic outpatient setting.

Distinguish orthopedic musculoskeletal disorders from systemic rheumatic diseases

Interpret radiologic studies used in the evaluation of outpatients with musculoskeletal conditions

Identify surgery-related complications, e.g., septic prosthetic joints

Demonstrate ability to critically appraise and cite literature pertinent to the evaluation of orthopedic outpatients

Identify the indications for orthopedic surgery (e.g., arthroscopy, total joint replacement, stabilization of the cervical spine, lumbar spine surgery)

Describe the preoperative preparation and perioperative care of rheumatic disease patients scheduled for surgery, with special emphasis on the effect of immunosuppression on wound healing, and risk for infection

Discuss the roles of physical and occupational therapy in the care of ambulatory patients with musculoskeletal conditions

#### Patient care

Effectively perform a comprehensive history and complete musculoskeletal examination

Appropriately select and interpret laboratory, radiologic and pathologic studies used in the evaluation of these patients

Construct a comprehensive treatment plan, including immobilization, splinting and casting, and assess response to therapy

Counsel patients and families concerning their diagnosis, planned diagnostic testing and recommended therapies

Recognize and develop strategies to manage the psychological impact of musculoskeletal diseases

Demonstrate proficiency in procedures including arthrocentesis and injections, compensated polarized microscopy, and interpretation of synovial fluid analysis

Utilize validated instruments in the assessment of pain, function, and quality of life over time to monitor and adjust therapy.

Apply knowledge of exercises directed at the care of specific regional musculoskeletal disorders

#### Practice-based learning and improvement

Effectively use the knowledge gained from the evaluation and management of orthopedic clinic patients to guide patient care decisions in their own continuity clinic

Demonstrate ability to critically assess the scientific literature regarding musculoskeletal conditions

Set and assess individualized learning goals

Analyze clinical experience and employ a systematic methodology for improvement

Develop and maintain a willingness to learn from errors, and use errors to improve the system or processes of care

#### Systems-based practice

Address disease-based and external systems that affect the health care of patients with musculoskeletal conditions

Discuss how chronic musculoskeletal conditions impact medical disability and maintenance of health care insurance coverage.

Demonstrate effective collaboration with orthopedic clinicians, and formulate a strategy for subspecialty consultation including appropriate evaluation prior to referral

Educate orthopedic clinicians in the systemic manifestations and evaluation of patients with rheumatic diseases seen in the orthopedic patient care setting.

#### Interpersonal skills and communication

Demonstrate the ability to discuss diagnostic testing with patients and convey management recommendations clearly and with an empathetic and understanding manner

Reliably and accurately communicate the patient's and his/her family's views and concerns to the attending.

Counsel patients, families and colleagues regarding side effects and appropriate use of specific therapies, providing written documentation when appropriate

#### Professionalism

Be prompt and prepared for clinic

Recognize the importance of patient primacy, patient privacy, patient autonomy, informed consent, and equitable respect and care to all.

Respect patients and their families, staff and colleagues.

Model ethical behavior by reporting back to the attending key clinical findings, following through on clinical questions, laboratory testing and other patient care issues, and recognizing potential conflicts of interest.

Demonstrate integrity, honesty and openness in discussion of therapeutic options with patients and respect for patient's preferences and multicultural differences

## **Osteoporosis Elective**

### **[Header]**

**Goals:** Gain knowledge in the pathophysiology of bone loss and the pharmacology of agents used to prevent and correct it, and experience in the application of this knowledge to the investigation, diagnosis, and treatment of osteoporosis.

### **Objectives**

#### Medical knowledge

Describe the anatomy and physiology of bone including bone development and structure, the cellular basis of turnover and remodeling, and its hormonal and cytokine regulation.

Discuss the cellular and cytokine crosstalk between the immune system and bone (osteoimmunology), and the potential mechanisms of bone destruction in an inflammatory arthritis

List the factors that contribute to bone quality, and the risk factors for fracture.

Discuss indications and specific tests to evaluate for bone mineral density (e.g., DXA), bone remodeling activity (e.g., serum and urinary bone metabolism markers), and fracture risk (e.g., FRAX score).

Describe the epidemiology and clinical presentation of osteoporosis and osteomalacia.

Provide both a general and gender-specific differential diagnosis for secondary osteoporosis.

Identify the mechanism of action, indications, dosing, required monitoring, and therapy-related complications of medications commonly used to prevent and treat bone loss.

Provide examples of physical activities most likely to maintain and/or increase bone density.

Demonstrate the ability to critically appraise and cite literature pertinent to the evaluation and management of patients with or at risk for osteoporosis.

#### Patient care

Effectively perform a comprehensive history and complete physical examination in patients with suspected bone loss.

Appropriately select and interpret laboratory, imaging, and pathologic studies used in the evaluation of these patients.

Construct a comprehensive treatment plan, including appropriate medications (e.g., calcium, vitamin D, bone anti-resorptive or anabolic agents), and nonpharmacologic measures (e.g., exercise activities) for the patient with low bone density and assess response to therapy.

Counsel patients and families concerning their diagnosis, planned diagnostic testing and recommended therapies.

#### Practice-based learning and improvement

Effectively use the knowledge gained from the evaluation and management of patients with bone loss to guide patient care decisions in their own continuity clinic.

Demonstrate ability to critically assess the scientific literature regarding osteoporosis and disorders affecting the maintenance of normal bone density.

Set and assess individualized learning goals.

Analyze clinical experience and employ a systematic methodology for improvement

Develop and maintain a willingness to learn from errors, and use errors to improve the system or processes of care

#### Systems-based practice

Address disease-based and external systems that affect the health care of patients with osteoporosis.

Discuss how the sequelae of osteoporosis impacts medical disability and maintenance of health care insurance coverage.

Demonstrate effective collaboration with bone health clinicians, and formulate a strategy for subspecialty consultation including appropriate evaluation prior to referral.

Educate bone health clinicians in the systemic manifestations and evaluation of patients with rheumatic diseases seen in the osteoporosis patient care setting

#### Interpersonal skills and communication

Demonstrate the ability to discuss diagnostic testing with patients and convey management recommendations clearly and with an empathetic and understanding manner

Reliably and accurately communicate the patient's and his/her family's views and concerns to the attending.

Counsel patients, families and colleagues regarding side effects and appropriate use of specific therapies, providing written documentation when appropriate.

#### Professionalism

Be prompt and prepared for clinic

Recognize the importance of patient primacy, patient privacy, patient autonomy, informed consent, and equitable respect and care to all.

Respect patients and their families, staff and colleagues.

Model ethical behavior by reporting back to the attending key clinical findings, following through on clinical questions, laboratory testing and other patient care issues, and recognizing potential conflicts of interest.

Demonstrate integrity, honesty and openness in discussion of therapeutic options with patients and respect for patient's preferences and multicultural differences

## **Pain Clinic**

### **[Header]**

**Goals:** Gain skill and judgment necessary to appropriately recommend and prescribe pain management interventions, procedures, and pharmacotherapies. Appreciate the impact of chronic pain on patients' lives. Understand that pain management is multi-disciplinary, and be able to function with other healthcare professionals as a team leader or team member.

### **Objectives**

#### Medical knowledge

Explain the anatomy and physiology of pain.

Describe the postulated mechanisms and contributors to symptoms in fibromyalgia syndrome and other chronic non-cancer painful syndromes

Describe the conduct of tests used to diagnose painful conditions.

List the mechanism of action of drugs used to treat acute and chronic pain, including NSAIDS, non-opioid analgesics, opioid analgesics, topical therapies, and anti-epileptic drugs

#### Patient care

Perform detailed pain-related medical history.

Perform an appropriate musculoskeletal and neurological examination to assess pain.

Employ a step-wise strategy to escalate analgesic medication, monitoring response to therapy and patient compliance using appropriate laboratory and effectiveness/side effect measures

List indications for diagnostic testing in acute and chronic pain.

Identify the referral indications for local injection therapies (e.g., corticosteroid injections, nerve blocks)

Detect signs and symptoms indicative of analgesic abuse

Incorporate a medication (e.g., narcotic) contract into the care plan of the patient requiring selected, scheduled medications

#### Practice-based learning and improvement

Effectively use the knowledge gained from the evaluation and management of pain clinic patients to guide patient care decisions in their own continuity clinic

Demonstrate ability to critically assess the scientific literature regarding pain

Set and assess individualized learning goals

Analyze clinical experience and employ a systematic methodology for improvement

Develop and maintain a willingness to learn from errors, and use errors to improve the system or processes of care

#### Systems-based practice

Address disease-based and external systems that affect the health care of patients with chronic pain

Consult psychologists for behavioral, cognitive, and other supportive management of chronic pain.

Prescribe physical interventions for the management of chronic pain.

Demonstrate effective collaboration with pain clinicians, and formulate a strategy for subspecialty consultation including appropriate evaluation prior to referral

Educate pain clinicians in the systemic manifestations and evaluation of patients with rheumatic diseases seen in the pain clinic.

Discuss how chronic pain impacts medical disability and maintenance of health care insurance coverage.

Identify ways to assist with the economic burden of chronic pain.

Discuss federal and state regulations for prescription of controlled substances

#### Interpersonal skills and communication

Demonstrate the ability to discuss diagnostic testing with patients in a compassionate fashion.

Convey management recommendations with compassion.

Adopt effective strategies to gain the trust of patients and their families.

#### Professionalism

Be prompt and prepared for clinic

Recognize the importance of patient primacy, patient privacy, patient autonomy, informed consent, and equitable respect and care to all.

Respect patients and their families, staff and colleagues.

Model ethical behavior by reporting back to the attending and referring provider's key clinical findings, following through on clinical questions, laboratory testing and other patient care issues, and recognizing potential conflicts of interest.

Demonstrate integrity, honesty and openness in discussion of therapeutic options with patients and respect for patient's preferences and multicultural differences

## **Pediatric Inpatient Consult Service**

### **[Header]**

**Goals:** The educational purpose of inpatient consultation is to develop and refine the knowledge base and skills essential for the clinical evaluation and management of hospitalized pediatric patients with suspected or proven rheumatic diseases.

#### Year One

Trainees should gain competence in the evaluation and management of hospitalized children with suspected or confirmed musculoskeletal and rheumatic diseases, including assessments of disease activity. Such care should recognize the critical role of the family dynamic in the presentation and ongoing care of the child.

#### Year Two.

Trainees should demonstrate progressive independence in the evaluation and management of hospitalized children with musculoskeletal and rheumatic diseases. Such care includes attention to multisystem involvement by the disease, the frequently multidisciplinary care required, and the psychological support systems needed by these patients and their families.

### **Objectives**

#### Medical knowledge

List classification and diagnostic criteria for major disorders seen in children hospitalized with rheumatic diseases.

Explain similarities and differences between adults and children with regard to various rheumatologic syndromes.

Describe the epidemiology, genetics, and natural history, clinical expression including clinical subtypes, pathology, and pathogenesis of the rheumatic diseases encountered in the pediatric inpatient setting.

Summarize an approach to the evaluation of multi-organ inflammatory disorders in children

Discuss the biochemical mechanisms of action, conditions in which they may be useful, and list the potential side effects and weight-based dose adjustments of the pharmacologic agents used to treat pediatric inpatient musculoskeletal and rheumatic diseases

Identify therapy-related complications

Distinguish non-rheumatic disorders from rheumatic diseases in children

Interpret diagnostic tests used in the evaluation of hospitalized pediatric patients with suspected rheumatic and musculoskeletal diseases

Demonstrate ability to critically appraise and cite literature pertinent to the evaluation of hospitalized pediatric patients

#### Patient care

Effectively perform a comprehensive history and complete physical examination in children with rheumatic symptoms or abnormal immunologic tests

Appropriately select and interpret laboratory, imaging, and pathologic studies for the evaluation of pediatric rheumatic disorders

State the indications for arthrocentesis and injection procedures in children

Construct a comprehensive treatment plan and assess response to therapy.

Counsel patients and their families concerning their diagnosis, planned diagnostic testing and recommended therapies.

Prescribe, based on weight and/or body surface area, pharmacotherapies for use in children hospitalized with rheumatic diseases.

Coordinate post-hospital, rheumatology follow-up care and communication with the patient's primary care and/or referring provider.

#### Practice-based learning and improvement

Effectively use technology to manage information for patient care

Integrate and apply knowledge obtained from multiple sources to the care of hospitalized children

Demonstrate ability to critically assess the scientific literature

Set and assess individualized learning goals

Analyze clinical experience and employ a systematic methodology for improvement

Identify an example of how diagnosis or management of an inpatient pediatric rheumatology patient differs from that of a hospitalized adult rheumatology patient with the same condition

#### Systems-based practice

Discuss how the inpatient health care system affects the management of patients with rheumatic diseases.

Identify problems in delivery of optimal patient care and propose corrective actions.

Operate as a consultant to a great many different services in the hospital to assure comprehensive patient care and optimum patient safety

Learn how to effectively consult rehabilitation services

Determine cost-effectiveness of alternative proposed interventions

Design cost-effective plans based on knowledge of best practices

Demonstrate awareness of the impact of consultation reports on the health care system, cost of the procedure, insurance coverage, resources utilized

Identify ancillary care appropriate for treatment of inpatient pediatric rheumatic diseases

#### Interpersonal skills and communication

Show sensitivity to the particular needs of parents and children when sharing difficult news

Adopt effective strategies to gain the trust of pediatric patients and their families.

Employ effective skills of listening and speaking with patients, families and other members of the health care team

Reliably and accurately communicate the patient's and his/her family's views and concerns to the attending.



Compose clear and timely consultation reports including a precise diagnosis whenever possible, differential diagnosis when appropriate and recommend follow up or additional studies

Communicate clearly with the primary care team (if applicable) in passing on diagnostic and treatment recommendations

Counsel patients, families and colleagues regarding side effects and appropriate use of specific medications, and obtain parental consent and patient assent for treatment, providing written documentation when appropriate

Supervise medical students' and residents' communications with families, patients and members of the health care team

### Professionalism

Be prompt and prepared for rounds

Recognize the importance of patient primacy, patient privacy, patient autonomy, informed consent, and equitable respect and care to all.

Respect patients and their families, staff and colleagues.

Model ethical behavior by reporting back to the team key clinical findings, following through on clinical questions, laboratory testing and other patient care issues, and recognizing potential conflicts of interest.

Demonstrate integrity, honesty and openness in discussion of therapeutic options with patients and respect for patient's preferences and multicultural differences

Demonstrate sensitivity to patients' age-specific needs.

## Physical and Occupational Therapy Elective

### [Header]

#### Goals:

The purpose of a Physical and Occupational Therapy (PT/OT) rotation within a rheumatology training program is to train fellows to be knowledgeable in the areas of rehabilitative care, including but not limited to exercise therapy, splinting, devices to assist gait, thermal and other modalities, and evaluation of functional capacity. The fellow will gain an understanding for the appropriate prescriptive referral of the patient to the therapist.

#### Objectives

##### Medical knowledge

Define the consequences of disease as it applies to rehabilitation, including pathophysiology, impairment, functional limitation, disability, and handicap

Discuss the roles of physical and occupational therapy in the care of ambulatory patients with musculoskeletal conditions

Describe the clinical expression of the non-traumatic musculoskeletal diseases encountered in the outpatient rehabilitation setting.

Explain the differences between isometric, isotonic and isokinetic exercise and provide examples for their indication.

Identify the indications for selected rehabilitative therapies (e.g., splinting, thermal modalities)

Demonstrate ability to critically appraise and cite literature pertinent to the evaluation and treatment of outpatients in the rehabilitation setting.

##### Patient Care

Effectively perform a musculoskeletal examination, focusing on functional assessment, on ambulatory patients in the rehabilitation setting

Outline the components of a comprehensive therapy treatment plan, and assess response to therapy

Write an exercise prescription

Interpret and apply the results of a functional capacity evaluation

##### Practice-based learning and improvement

Effectively use the knowledge gained from the evaluation and management of ambulatory rehabilitation patients to guide patient care decisions in their own continuity clinic

Demonstrate ability to critically assess the scientific literature regarding musculoskeletal conditions seen in the outpatient rehabilitative setting.

Set and assess individualized learning goals

Analyze clinical experience and employ a systematic methodology for improvement

Develop and maintain a willingness to learn from errors, and use errors to improve the system or processes of care

##### System-based practice

Address how certain diagnoses and external systems affect the health care of patients with musculoskeletal conditions requiring ambulatory rehabilitative care.

Discuss how musculoskeletal conditions requiring rehabilitation impact medical disability and maintenance of health care insurance coverage.

Demonstrate effective collaboration with rehabilitation therapists, and formulate a strategy for effective referral

Educate therapists in the systemic manifestations and evaluation of patients with rheumatic diseases seen in the ambulatory rehabilitation patient care setting.

#### Interpersonal skills and communication

Demonstrate the ability to discuss rehabilitation therapy with patients and convey management recommendations clearly and with an empathetic and understanding manner

Reliably and accurately communicate the patient's and his/her family's views and concerns to the therapist.

Counsel patients, families and colleagues regarding side effects and appropriate use of specific therapies

#### Professionalism

Be prompt and prepared for clinic

Recognize the importance of patient primacy, patient privacy, patient autonomy, informed consent, and equitable respect and care to all.

Respect patients and their families, staff and colleagues.

Model ethical behavior by reporting to the therapist key clinical findings, following through on clinical questions and other patient care issues, and recognizing potential conflicts of interest.

Demonstrate integrity, honesty and openness in discussion of therapeutic options with patients and respect for patient's preferences and multicultural differences

## **Podiatry Elective**

### **[Header]**

**Goals:** The specialty of podiatry includes a wide array of mechanical, inflammatory, and degenerative diseases that affect the ankle and foot. The purpose of a podiatry rotation within a rheumatology training program is to train fellows to be knowledgeable in the areas of podiatry including but not limited to foot and ankle deformities, orthotic options, and the manifestations and therapies of rheumatic and musculoskeletal diseases in the foot and ankle. The fellow will gain an understanding for the appropriate referral of the patient to the podiatrist.

### **Objectives**

#### Medical knowledge

Describe the structure and function of the ankle, hind foot, midfoot and forefoot.

Describe the epidemiology, natural history, clinical expression, pathology, pathogenesis and approach to management of the musculoskeletal diseases encountered in the podiatry outpatient setting, including but not limited to heel pain, Achilles tendinitis, plantar fasciitis, tarsal tunnel syndrome, Charcot arthritis of the ankle/midfoot, midfoot osteoarthritis, hallux valgus, metatarsalgia including that from rheumatoid arthritis, gout, and Morton's neuroma

Distinguish localized podiatric disorders from systemic rheumatic diseases with manifestations in the foot and/or ankle.

Interpret radiologic studies used in the evaluation of podiatry outpatients with musculoskeletal conditions

Demonstrate ability to critically appraise and cite literature pertinent to the evaluation of podiatry outpatients

Identify the indications for podiatric surgery (e.g., correction of hallux valgus, metatarsal head resection in rheumatoid arthritis)

Discuss the roles of physical therapy and orthotic appliances in the care of ambulatory patients with musculoskeletal conditions of the foot and/or ankle.

#### Patient care

Effectively perform a comprehensive history and thorough musculoskeletal examination of the foot and ankle.

Appropriately select and interpret laboratory, radiologic and pathologic studies used in the evaluation of podiatry patients

Construct a comprehensive treatment plan, including when appropriate, immobilization, splinting and orthotic appliances, and assess response to therapy

Counsel patients and families concerning their diagnosis, planned diagnostic testing and recommended therapies

Recognize and develop strategies to manage the psychological and work impact of musculoskeletal diseases affecting the foot and/or ankle.

Demonstrate proficiency in procedures including arthrocentesis and injections, compensated polarized microscopy, and interpretation of synovial fluid analysis

#### Practice-based learning and improvement

Effectively use the knowledge gained from the evaluation and management of podiatry clinic patients to guide patient care decisions in their own continuity clinic

Demonstrate ability to critically assess the scientific literature regarding musculoskeletal conditions of the foot and ankle

Set and assess individualized learning goals

Analyze clinical experience and employ a systematic methodology for improvement

Develop and maintain a willingness to learn from errors, and use errors to improve the system or processes of care

#### Systems-based practice

Address disease-based and external systems that affect the health care of patients with musculoskeletal conditions affecting the foot and ankle

Discuss how chronic musculoskeletal conditions of the foot and ankle impact medical disability and maintenance of health care insurance coverage.

Demonstrate effective collaboration with podiatrists, and formulate a strategy for subspecialty consultation including appropriate evaluation prior to referral

Educate podiatrists in the systemic manifestations and evaluation of patients with rheumatic diseases seen in the podiatry care setting.

#### Interpersonal skills and communication

Demonstrate the ability to discuss diagnostic testing with patients and convey management recommendations clearly and with an empathetic and understanding manner

Reliably and accurately communicate the patient's and his/her family's views and concerns to the attending.

Counsel patients, families and colleagues regarding side effects and appropriate use of specific therapies, providing written documentation when appropriate

#### Professionalism

Be prompt and prepared for clinic

Recognize the importance of patient primacy, patient privacy, patient autonomy, informed consent, and equitable respect and care to all.

Respect patients and their families, staff and colleagues.

Model ethical behavior by reporting back to the attending key clinical findings, following through on clinical questions, laboratory testing and other patient care issues, and recognizing potential conflicts of interest.

Demonstrate integrity, honesty and openness in discussion of therapeutic options with patients and respect for patient's preferences and multicultural differences

## Private Practice Clinic Elective

### [Header]

**Goals:** The goal of this experience will be for the fellows to gain expertise in the outpatient evaluation and management of patients with a broad spectrum of musculoskeletal and rheumatic diseases. The demographics of the patients seen in the private practice clinic offer a somewhat different and unique clinical experience for fellows as contrasted against those patients seen in their continuity clinic. Participation in this clinic affords the fellow the opportunity to broaden their clinical knowledge and skills while exposing them to the nuances associated with the administrative/business aspects of medicine.

### Objectives

#### Medical knowledge

Describe the epidemiology, genetics, natural history, clinical expression including clinical subtypes, pathology, and pathogenesis of the rheumatic diseases encountered in the outpatient setting.

Summarize an approach to the evaluation of multi-organ inflammatory disorders

Discuss the biochemical mechanisms of action, conditions in which they may be useful, and list the potential side effects of the pharmacologic agents used to treat outpatient musculoskeletal and rheumatic diseases

Identify therapy-related complications

Distinguish non-rheumatic disorders from rheumatic diseases

Interpret diagnostic tests used in the evaluation of outpatients with suspected rheumatic and musculoskeletal diseases

Demonstrate ability to critically appraise and cite literature pertinent to the evaluation of outpatients

Describe structure and function of musculoskeletal tissues and joints

Discuss the roles of physical and occupational therapy in the care of ambulatory patients with rheumatic and musculoskeletal conditions

Specify the role of orthopedic surgery in the care of patients with musculoskeletal conditions

#### Patient care

Effectively perform a comprehensive history and complete physical examination in patients with rheumatic symptoms or abnormal immunologic tests

Appropriately select and interpret laboratory, imaging, and pathologic studies used in the evaluation of rheumatic disorders

Demonstrate proficiency in interpretation of plain radiographs of joints.

Demonstrate proficiency in procedures including arthrocentesis and injections, compensated polarized microscopy, and interpretation of synovial fluid analysis

Construct a comprehensive treatment plan and assess response to therapy.

Counsel patients concerning their diagnosis, planned diagnostic testing and recommended therapies.

Utilize validated instruments in the assessment of pain, function, and quality of life over time to monitor and adjust therapy.

#### Practice-based learning and improvement

Effectively use technology to manage information, support patient care decisions, and enhance both patient and physician education.

Integrate and apply knowledge obtained from multiple sources to the care of outpatients

Demonstrate ability to critically assess the scientific literature

Set and assess individualized learning goals

Develop and maintain a willingness to learn from errors, and use errors to improve the system or processes of care

#### Systems-based practice

Discuss how the health care system in the community setting affects the management of outpatients with rheumatic diseases.

Summarize the private practice model of ambulatory health care delivery, including the fundamentals of office and personnel management, and budgeting.

Identify problems in delivery of optimal patient care and propose corrective actions.

Operate as a consultant to a diverse group of referring providers to assure comprehensive patient care and optimum patient safety

Demonstrate effective collaboration with other health care providers, including physical and occupational therapists and orthopedic surgeons, in the care of patients with rheumatic diseases

Determine cost-effectiveness of alternative proposed interventions.

Design cost-effective plans based on knowledge of best practices

Demonstrate awareness of the impact of diagnostic and therapeutic recommendations on the health care system, cost of the procedure, insurance coverage, and resources utilized

#### Interpersonal skills and communication

Approach patients with an empathetic and understandable manner

Demonstrate effective skills of listening and speaking with patients, families and other members of the health care team

Reliably and accurately communicate the patient's and his/her family's views and concerns to the attending.

Counsel patients, families and colleagues regarding side effects and appropriate use of specific medications, providing written documentation when appropriate

#### Professionalism

Be prompt and prepared for clinic

Recognize the importance of patient primacy, patient privacy, patient autonomy, informed consent, and equitable respect and care to all.

Respect patients and their families, staff and colleagues.

Model ethical behavior by reporting back to the attending and referring provider's key clinical findings, following through on clinical questions, laboratory testing and other patient care issues, and recognizing potential conflicts of interest.

Demonstrate integrity, honesty and openness in discussion of therapeutic options with patients and respect for patient's preferences and multicultural differences



## **Radiology Elective**

### **[Header]**

**Goals:** To gain knowledge in the use of radiological studies applicable to the evaluation and management of patients with musculoskeletal and rheumatic disorders

### **Objectives**

#### Medical knowledge

Define the appropriate indications for, and gain knowledge in the interpretation of plain film radiographs, musculoskeletal ultrasound, CT scan, MR scan, radionuclide scans of bone, and DXA scan

Discuss the rationale for the selection of specific views requested in ordering plain film radiographs for selected rheumatic and musculoskeletal conditions

Provide a differential diagnosis of the findings on plain film radiographs, including but not limited to inflammatory and noninflammatory arthritides, causes of soft tissue swelling, joint infections, chondrocalcinosis, avascular necrosis, bone infarcts, neuropathic joint, and bone tumors

Recognize the radiographic abnormalities seen in avascular necrosis, sacroiliitis, erosive joint disease, crystalline arthropathies, degenerative joint disease, bone and joint infections, musculoskeletal tumors, and spine disease as seen on plain film radiographs, CT scan, MR scan, and radionuclide scanning.

Discuss the indications and contraindications of the radiologic tests used for the evaluation of suspected vasculitis, including contrast angiography, CTA, MRA, and PET scanning

#### Patient care

Apply the knowledge acquired during this conference to enhance the care of patients with rheumatic and musculoskeletal diseases

#### Practice-based learning and improvement

Effectively use the knowledge gained from the interpretation of radiological studies to guide patient care decisions in their own continuity clinic

Demonstrate the ability to critically assess the scientific literature regarding the use of radiological studies

Set and assess individualized learning goals

Analyze clinical experience and employ a systematic methodology for improvement

Develop and maintain a willingness to learn from errors, and use errors to improve the system or processes of care

#### Systems-based practice

Address disease-based and external systems that affect the ability of patients to undergo radiographic testing

Demonstrate effective collaboration with radiology physicians

Educate radiology physicians in the systemic manifestations and evaluation of patients with rheumatic diseases undergoing radiological evaluation

#### Interpersonal skills and communication

Discuss diagnostic radiological testing results with patients and convey management recommendations based on these studies clearly and with an empathetic and understanding manner

Effectively communicate the interpretation of radiological studies to radiology staff and rheumatology faculty and fellows

### Professionalism

Be prompt and prepared for musculoskeletal radiology subspecialty rotation

Recognize the importance of patient primacy, patient privacy, patient autonomy, informed consent, and equitable respect and care for all

Respect patients and their families, staff and colleagues

Model ethical behavior by reporting accurately to the attending key clinical and radiographic findings

Demonstrate integrity, honesty, and openness in discussion of radiological findings with the radiology faculty and staff

## Research Elective

### [Header]

**Goals:** The goal of the research experience is for the fellow to learn sound methodology in designing and performing basic and/or clinical research studies and the correct interpretation and synthesis of research data. During this phase of training the fellow will work under close guidance of the research mentor.

### Timeline:

#### Clinical Fellows

Trainees should gain a full understanding of study design, implementation, and critical appraisal of the literature to allow participation in a mentored research project.

#### Research Fellows

For individuals who choose extended research training (e.g., with T32 or other training grant support), additional goals include gaining the requisite skills in study design, implementation, data analysis, and critical appraisal of the literature to become competitive in obtaining grant support for a career in basic or clinical research. Trainees will acquire sufficient skill to attain academic faculty appointment upon completion.

### Objectives

#### Medical knowledge

Describe the common experimental approaches used in laboratory, clinical and epidemiology research

Discuss the essential components of valid basic-science and clinical trial design

Discuss and begin to implement assessment of experimental data, including basic statistical methods

Select the most effective means to present and report on research conduct and results based on the study content

Discuss the principles of the ethical conduct of research, including the role of the IRB, protection of study subjects and obtaining informed consent

#### Patient care

Apply the knowledge acquired during this experience to enhance the care of patients with rheumatic and musculoskeletal diseases

Participate in ongoing clinical trials to hone musculoskeletal exam skills, become proficient in the use of validated measures of disease activity, and describe the process of clinical trials administration including "Good Clinical Practice"

#### Practice-based learning and improvement

Effectively use technology to manage and present information in support of the fellow's own research project

Demonstrate the ability to critically assess the scientific literature

Produce at least one written demonstration of scholarly activity from the research project, such as a peer-reviewed journal article, or an abstract submitted to a professional meeting

Write at least one invited chapter or review with a faculty member

Appraise progress in meeting interim research goals through regular meetings with the research mentor.

Devise methods for regular review of updated information presented on research methodology and practice

Set and assess individualized learning goals, and maintain a portfolio documenting practice-based learning and improvement

Develop and maintain a willingness to learn from errors, and use errors to improve the system or processes of research

#### Systems-based practice

Describe how the research project may impact the care of patients with rheumatic and musculoskeletal disorders

Recognize the importance of seeking out and integrating researchers and practitioners with shared and/or complementary expertise, both within and outside one's own institution, into the investigation of rheumatic and musculoskeletal disorders

Demonstrate the ability to design cost-effective research plans based on knowledge of best practices

#### Interpersonal skills and communication

Communicate effectively with research colleagues and members of the research team.

Demonstrate effective presentation skills including topic selection, effective use of slide presentation software, pointer, and maintenance of appropriate posture and body language

Present the results of the work at appropriate regional/national scientific meetings and/or in print by submission to peer-reviewed journals.

#### Professionalism

Maintain up-to-date certifications for the ethical conduct of research

Be respectful of colleagues and other research personnel

Protect patient confidentiality

Demonstrate academic honesty and integrity

## Scientific Writing

### [Header]

**Goals:** The goal of the scientific writing experience is for the fellow to learn how to research a topic and write a scientific review paper, chapter, or a report of original research, while simultaneously broadening clinical and basic science knowledge base. The fellow will gain experience reviewing scientific literature for validity and applicability and will hone writing skills. Fellows will also learn to use reference management software effectively and to submit a scientific paper or chapter. During this activity the fellow will work under close guidance of the scientific writing mentor.

### Objectives

#### Medical knowledge

Describe the common experimental approaches used in laboratory, clinical and epidemiology research

Assess the validity of articles' trial design and results and select appropriate articles for inclusion

Become an expert on the scientific writing topic evidenced by in-depth and current knowledge

#### Patient care

Apply the knowledge acquired during this experience to enhance the care of patients with rheumatic and musculoskeletal diseases

#### Practice-based learning and improvement

Effectively use technology and the library to identify information to be used for the scientific writing project, and the optimum vehicle (e.g., specific journal(s)) to target for manuscript submission.

Demonstrate the ability to critically assess the scientific literature

Appraise progress in meeting interim writing goals through regular meetings with the research mentor.

Develop and maintain a willingness to learn from errors or oversight, and use errors to improve the system or processes of scientific writing

#### Systems-based practice

Describe how the scientific writing product may impact the care of patients with rheumatic and musculoskeletal disorders

Recognize the importance of seeking out and integrating those with shared and/or complementary expertise, both within and outside one's own institution, into the process of identifying resources and topic content for the scientific writing project.

Demonstrate timely and thorough completion of tasks as set by the publisher/organization of the medium to which the manuscript was submitted.

#### Interpersonal skills and communication

Effectively summarize study methodology and results and clearly incorporate this information in written format

Independently organize and outline the paper to meet the goals of the scientific writing project

Understand the audience for the scientific writing product and include appropriate references and adequate descriptions to meet the audience's learning needs

Communicate effectively with the faculty mentor during editing sessions

Demonstrate responsiveness to constructive criticism

Demonstrate command of written English necessary for effective scientific writing

Professionalism

Turn in outlines, drafts on time according to deadlines set in conjunction with the writing mentor

Arrive for meetings to discuss the scientific writing project with appropriate reference materials and having reviewed materials as agreed upon prior to the meeting

Protect patient confidentiality if necessary, and demonstrate responsible use of the process of informed consent

Demonstrate academic honesty and integrity, and adherence to the principles of assigning authorship

## **Scleroderma Clinic Elective**

### **[Header]**

**Goals:** The goal of this experience will be for the fellows to gain expertise in the outpatient evaluation and management of patients with systemic sclerosis (SSc) and related disorders. The experience provides an opportunity to develop an understanding for the course of these conditions over an extended period of time.

### **Timeline:**

#### Year One

Gain competence in the ongoing outpatient management of individuals with SSc and related disorders, including assessments of disease activity.

#### Year Two.

Trainees should be able to independently and comprehensively manage the longitudinal care of patients with SSc. Such care includes attention to multisystem involvement by the disease, the frequently multidisciplinary care required, and the psychological support systems needed by these patients.

### **Objectives**

#### Medical knowledge

Describe the epidemiology, genetics, natural history, clinical expression including clinical subtypes, pathology, and pathogenesis of SSc and related disorders

Explain the association of autoantibodies with SSc

Demonstrate knowledge of the clinical features and pathologic findings associated with SSc in different organs.

Identify the mechanism of action, dosing, and required monitoring, and therapy-related complications of medications commonly used to manage SSc

Identify non-rheumatic diseases that mimic SSc and related disorders

Interpret diagnostic tests used in the evaluation of SSc and related disorders

Demonstrate ability to critically appraise and cite literature pertinent to the evaluation and management of patients with SSc and related disorders

Discuss the roles of physical and occupational therapy in the care of ambulatory patients with SSc and related disorders

Specify the role of orthopedic surgery in the care of patients with SSc and musculoskeletal complaints (e.g., hand surgery)

#### Patient care

Effectively perform a comprehensive history and complete physical examination in patients with symptoms of SSc and/or abnormal immunologic tests

Appropriately select and interpret laboratory, imaging, and pathologic studies, including nailfold capillaroscopy, used in the evaluation of SSc and related disorders

Utilize validated instruments in the assessment of skin thickness, function, and quality of life

Demonstrate ability to screen for and manage disease-related and treatment-related complications that lead to long term morbidity such as lung disease, cardiac involvement, and gastrointestinal manifestations

Construct a comprehensive treatment plan and assess response to therapy.

Counsel patients and families concerning their diagnosis, planned diagnostic testing and recommended therapies.

Respond to phone calls and/or messages in a clear and compassionate manner.

Provide longitudinal care to patients with SSc and related disorders

Address multisystem involvement by the disease, the frequently multidisciplinary care required, and the psychological support systems needed by these patients.

#### Practice-based learning and improvement

Effectively use technology to manage information, support patient care decisions, and enhance both patient and physician education.

Integrate and apply knowledge obtained from multiple sources to the care of outpatients with SSc and related disorders

Discuss how SSc clinical trials are carried out in a disease-specific clinic.

Report how registries are used in clinical care and research on SSc and related disorders.

Demonstrate ability to critically assess the scientific literature in the evaluation and management of patients with SSc and related disorders

Set and assess individualized learning goals

Analyze clinical experience and employ a systematic methodology for improvement (e.g., Quality Improvement project)

Develop and maintain a willingness to learn from errors, and use errors to improve the system or processes of care

#### Systems-based practice

Discuss how the health care system, disease-based and external systems contribute to the betterment or detriment of the health care of SSc patients

Demonstrate effective collaboration with other health care providers, including pulmonologists, nephrologists, physical and occupational therapists and orthopedic surgeons, in the care of patients with SSc

Design cost-effective evaluation and management plans based on knowledge of best practices, insurance coverage, and available resources

Identify and recommend appropriate ancillary support systems for patients with SSc.



Identify site-specific health care system changes that would improve services for patients with SSc.

Identify ways to assist with the economic burden of having SSc.

#### Interpersonal skills and communication

Approach patients with SSc and related disorders with an empathetic and understanding manner

Demonstrate effective skills of listening and speaking with patients, families and other members of the health care team

Reliably and accurately communicate the patient's and his/her family's views and concerns to the attending.

Compose clear and timely consultation reports and interval notes/letters, including a precise diagnosis whenever possible, differential diagnosis when appropriate and recommend follow up or additional studies

Counsel patients, families and colleagues regarding side effects and appropriate use of specific medications, providing written documentation when appropriate

Supervise medical students' and residents' communications with families, patients and members of the health care team

#### Professionalism

Be prompt and prepared for clinic

Recognize the importance of patient primacy, patient privacy, patient autonomy, informed consent, and equitable respect and care to all.

Respect patients and their families, staff and colleagues.

Model ethical behavior by reporting back to the attending and referring providers key clinical findings, following through on clinical questions, laboratory testing and other patient care issues, and recognizing potential conflicts of interest.

Demonstrate integrity, honesty and openness in discussion of therapeutic options with patients and respect for patient's preferences and multicultural differences

Demonstrate sensitivity to patients' diversity and particular cultural and economic factors that may influence therapeutic compliance.

Discuss, obtain, and document consent for chemotherapy treatment, or participation in a clinical trial or disease registry.

Respond to phone calls, pages and/or messages in a timely manner

## **Sports Medicine Elective**

### **[Header]**

**Goals:** The subspecialty of sports medicine includes a wide array of mechanical, non-inflammatory, and degenerative diseases that affect the musculoskeletal system. The purpose of a sports medicine rotation within a rheumatology training program is to train fellows to be knowledgeable in the areas of sports medicine including but not limited to the clinical presentations of sports and overuse injuries, rehabilitation principles applicable to sports and overuse injuries, and invasive (injection) therapies applicable in the treatment of these disorders. The fellow will gain an understanding for the appropriate referral of the patient to a sports medicine specialist.

### **Objectives**

#### Medical knowledge

Describe structure and function of musculoskeletal tissues and joints

Describe the epidemiology, natural history, and clinical expression of the musculoskeletal diseases encountered in the sports medicine setting.

Distinguish sports medicine and overuse disorders from systemic rheumatic diseases

Interpret radiologic studies used in the evaluation of outpatients with sporting and overuse conditions

Demonstrate ability to critically appraise and cite literature pertinent to the evaluation of sports medicine/overuse syndrome outpatients

Identify the indications for orthopedic surgery applicable to this patient population

Discuss the roles of physical and occupational therapy in the care of ambulatory patients with sporting and overuse conditions

#### Patient care

Effectively perform a comprehensive history and complete musculoskeletal examination

Appropriately select and interpret laboratory, radiologic and pathologic studies used in the evaluation of these patients

Construct a comprehensive treatment plan, including immobilization and splinting and other non-medicinal therapies, and assess response to therapy

Counsel patients and families concerning their diagnosis, planned diagnostic testing and recommended therapies

Recognize and develop strategies to manage the psychological impact of sports and overuse injuries

Demonstrate proficiency in procedures including arthrocentesis and injections

Apply knowledge of exercises directed at the care of specific regional musculoskeletal disorders

#### Practice-based learning and improvement

Effectively use the knowledge gained from the evaluation and management of sports medicine clinic patients to guide patient care decisions in their own continuity clinic

Demonstrate ability to critically assess the scientific literature regarding musculoskeletal conditions seen in this rotation

Set and assess individualized learning goals

Analyze clinical experience and employ a systematic methodology for improvement

Develop and maintain a willingness to learn from errors, and use errors to improve the system or processes of care

#### Systems-based practice

Address disease-based and external systems that affect the health care of patients with musculoskeletal conditions

Discuss how chronic musculoskeletal conditions impact medical disability and maintenance of health care insurance coverage.

Demonstrate effective collaboration with sports medicine clinicians, and formulate a strategy for subspecialty consultation including appropriate evaluation prior to referral

Educate sports medicine clinicians in the systemic manifestations and evaluation of patients with rheumatic diseases seen in the sports medicine patient care setting.

#### Interpersonal skills and communication

Demonstrate the ability to discuss diagnostic testing with patients and convey management recommendations clearly and with an empathetic and understanding manner

Reliably and accurately communicate the patient's and his/her family's views and concerns to the attending.

Counsel patients, families and colleagues regarding side effects and appropriate use of specific therapies, providing written documentation when appropriate

#### Professionalism

Be prompt and prepared for clinic

Recognize the importance of patient primacy, patient privacy, patient autonomy, informed consent, and equitable respect and care to all.

Respect patients and their families, staff and colleagues.

Model ethical behavior by reporting back to the attending key clinical findings, following through on clinical questions, laboratory testing and other patient care issues, and recognizing potential conflicts of interest.

Demonstrate integrity, honesty and openness in discussion of therapeutic options with patients and respect for patient's preferences and multicultural differences

## Teaching Fellow, Adult Inpatient Consult Service

### [Header]

**Goals:** There are three goals of this rotation. The first is for the fellow to take full advantage of the educational opportunities of the inpatient service by being able to focus completely on understanding the pathophysiology and evidence-based diagnosis and management of inpatients with rheumatic disease. The second is to develop teaching skills through developing short talks and patient care discussions that reflect in-depth reading of current literature. The third is for fellows who will enter academic careers to gain experience and supervised practice in acting as the attending running an inpatient consultation team.

### Objectives

#### Medical knowledge

Teach the epidemiology, genetics, natural history, clinical expression including clinical subtypes, pathology, and pathogenesis of the rheumatic diseases encountered in the inpatient setting.

Teach an approach to the evaluation of multi-organ inflammatory disorders

Teach the biochemical mechanisms of action, conditions in which they may be useful, and list the potential side effects of the pharmacologic agents used to treat inpatient musculoskeletal and rheumatic diseases

Teach how to distinguish non-rheumatic disorders from rheumatic diseases

Teach how to interpret diagnostic tests used in the evaluation of hospitalized patients with suspected rheumatic and musculoskeletal diseases

Demonstrate the ability to critically appraise and cite literature pertinent to the evaluation of hospitalized patients

#### Patient care

Demonstrate how to perform a complete physical examination of patients with rheumatic symptoms or abnormal immunologic test

Teach how to appropriately select and interpret laboratory, imaging, and pathologic studies for the evaluation of rheumatic disorders

Teach and supervise arthrocentesis and injection procedures

Participate in constructing a comprehensive treatment plan by offering evidence from critically appraised appropriate literature sources

Teach how to assess response to therapy given to inpatients

#### Practice-based learning and improvement

Demonstrate the ability to integrate and apply knowledge obtained from multiple sources to the care of hospitalized patients

Through teaching, demonstrate and describe how to critically assess the scientific literature

Set and assess individualized learning goals

Describe performance improvement measures based on analysis of current clinical experience, suggesting a systematic methodology for improvement

### Systems-based practice

Teach how the inpatient health care system affects the management of patients with rheumatic diseases  
Identify problems in delivery of optimal patient care and propose corrective actions

Research and teach cost-effectiveness of alternative proposed interventions.

Research and teach about the impact of consultation reports on the health care system, cost of the procedure, insurance coverage, resources utilized

### Interpersonal skills and communication

Approach patients with an empathetic and understanding manner

Demonstrate effective skills of listening and speaking with patients, families and other members of the health care team

Reliably and accurately communicate the patient's and his/her family's views and concerns to the attending.

Counsel patients, families and colleagues regarding side effects and appropriate use of specific medications, providing written documentation when appropriate

Supervise medical students' and residents' communications with families, patients and members of the health care team and give feedback on these communications

### Professionalism

Be prompt and prepared for rounds

Recognize the importance of patient primacy, patient privacy, patient autonomy, informed consent, and equitable respect and care to all.

Respect patients and their families, staff and colleagues.

Model ethical behavior by following through on planned discussions and by finding answers to questions raised on rounds

Teach how patient preferences and multicultural differences may impact care

## **Carolinas Fellows' Conference**

### **[Header]**

#### **Goals:**

July program: to provide a foundation for subsequent fellow education and the initiation of patient care activities, to orient new fellows to the discipline, to enrich the knowledge and skill base of senior fellows, and to strengthen the bonds between the fellows and faculty of the region.

January program: to further strengthen core knowledge and practice skills through didactic presentations and workshops, and provide for the formative evaluation of fellow knowledge through participation in the Rheumatology Objective Structured Clinical Examination (ROSCE).

#### **Objectives**

##### Medical knowledge

Review and assimilate, over the course of the biannual Conference activities, knowledge on individual topics within the categories of basic science, clinical science, diagnostic testing and research principles.

##### Patient care

For the selected topics presented, assimilate and apply the appropriate practice performance guidelines for diagnosis, treatment and rehabilitation to enhance the care of musculoskeletal and rheumatic disease patients

Demonstrate appropriate techniques of the general musculoskeletal exam

Demonstrate appropriate techniques for arthrocentesis and soft tissue injection of sites in the upper and lower extremities

Discuss characteristic findings in the identification of crystals, and synovial fluid characteristics of selected conditions

##### Practice-based learning and improvement

Given the topics presented in the didactic sessions, workshops, and the ROSCE identify personal areas of rheumatology core knowledge and practice skills requiring further study and/or experience

Demonstrate the ability to critically assess the scientific literature

Set and assess individualized learning goals, and maintain a portfolio documenting practice-based learning and improvement

Develop and maintain a willingness to learn from errors, and use errors to improve the system or processes of care

##### Systems-based practice

Describe the advantages and limitations of the Carolinas Fellows Conference format to summarize and disseminate content applicable to the care of patients with rheumatic and musculoskeletal disorders

Recognize the integral role played by health care providers, administrators, and basic scientists from varied disciplines in the care of patients with musculoskeletal and rheumatic diseases

Demonstrate the ability to design cost-effective plans based on knowledge of best practices

Learn to appropriately utilize diagnostic and therapeutic resources in the care of patients with rheumatic diseases to assure high quality patient care and optimum patient safety

### Interpersonal skills and communication

Communicate effectively with physician colleagues and members of other health care professions, including formulating effective questions and responding to audience inquiries

Demonstrate effective presentation skills including topic selection, effective use of slide presentation software, pointer utilization, and maintenance of appropriate posture and body language

### Professionalism

Be prompt and prepared for conference

Be respectful of your colleagues and the speaker

Protect patient confidentiality

Demonstrate academic honesty and integrity

## Case Conference (Patient Management / EBM Conference)

### [Header]

**Goals:** Develop clinical knowledge base through evidence-based case presentation of a focused patient problem drawn from the inpatient consult or outpatient services.

### Objectives

#### Patient care

For the selected topics presented, assimilate and apply the appropriate practice performance guidelines for diagnosis, treatment and rehabilitation to enhance the care of musculoskeletal and rheumatic disease patients

#### Medical knowledge

Apply the knowledge acquired during this conference to enhance the care of patients with rheumatic and musculoskeletal diseases

#### Practice-based learning and improvement

Based on the topics presented in the didactic sessions, identify personal areas of rheumatology core knowledge and practice skills requiring further study and/or experience

Demonstrate the ability to critically assess the scientific literature

Set and assess individualized learning goals, and maintain a portfolio documenting practice-based learning and improvement

Develop and maintain a willingness to learn from errors, and use errors to improve the system or processes of care

#### Systems-based practice

Describe the advantages and limitations of the Patient Management/EBM Conference format to summarize and disseminate content applicable to the care of patients with rheumatic and musculoskeletal disorders

Demonstrate the ability to design cost-effective plans based on knowledge of best practices

Learn to appropriately utilize diagnostic and therapeutic resources in the care of patients with rheumatic diseases to assure high quality patient care and optimum patient safety

#### Interpersonal skills and communication

Communicate effectively with physician colleagues and members of other health care professions, including formulating effective questions and responding to audience inquiries

Demonstrate effective presentation skills including topic selection, effective use of slide presentation software, pointer utilization, and maintenance of appropriate posture and body language

#### Professionalism

Be prompt and prepared for conference

Be respectful of your colleagues and the speaker

Protect patient confidentiality

Demonstrate academic honesty and integrity



## **Core Curriculum Conference**

### **[Header]**

**Goals:** Gain a broad foundation of knowledge in basic and clinical science relevant to the field of rheumatology. Overall this knowledge will enhance the fellow's ability to apply these principles in the conduct of their own research and patient care during fellowship.

### **Objectives**

#### Medical knowledge

Review and assimilate, over the course of the rheumatology fellowship training period, individual topics within the categories of basic science, clinical science, diagnostic testing and research principles.

#### Patient care

Apply the knowledge acquired during this conference to enhance the care of patients with rheumatic and musculoskeletal diseases

#### Practice-based learning and improvement

Effectively use technology to manage and present information, including in support of the fellow's own research project, and where applicable in support of patient care decisions

Demonstrate the ability to critically assess the scientific literature

Set and assess individualized learning goals, and maintain a portfolio documenting practice-based learning and improvement

Develop and maintain a willingness to learn from errors, and use errors to improve the system or processes of care

#### Systems-based practice

Describe the advantages and limitations of the Core Curriculum Conference format to summarize and disseminate content applicable to the care of patients with rheumatic and musculoskeletal disorders

Demonstrate the ability to design research plans and cost-effective clinical care plans based on knowledge of best practices attained through participation in this conference

Discuss the appropriate utilization of diagnostic and therapeutic resources in the care of patients with rheumatic diseases to assure high quality patient care and optimum patient safety

#### Interpersonal skills and communication

Communicate effectively with physician colleagues and members of other health care professions, including formulating effective questions and responding to audience questions

Demonstrate effective presentation skills including topic selection, effective use of slide presentation software, pointer utilization, and maintenance of appropriate posture and body language

#### Professionalism

Be prompt and prepared for conference

Be respectful of your colleagues and the speaker

Protect patient confidentiality

Demonstrate academic honesty and integrity

Organize the requisites to insure an effective conference presentation, including speaker invitation, room and equipment logistics, and timely expression of gratitude

## Internal Medicine Grand Rounds Conference

### [Header]

**Goals:** A broad foundation of knowledge in internal medicine is a prerequisite for the study of rheumatology. The multi-organ nature of systemic rheumatic diseases requires the rheumatologist to keep abreast of developments in general medicine. The objective of attendance at Internal Medicine Grand Rounds is to further develop and deepen clinical and basic science knowledge base through didactic, in-depth and up to date review of topics of general and subspecialty internal medicine.

### Objectives

#### Medical knowledge

Review and assimilate individual topics in the categories of basic science, clinical science, diagnostic testing and research principles within the field of internal medicine.

#### Patient care

Apply the knowledge acquired during this conference to enhance the care of patients with rheumatic and musculoskeletal diseases

#### Practice-based learning and improvement

Effectively use technology to manage and present information in support of patient care decisions, and enhance both patient and physician education.

Demonstrate ability to critically assess the scientific literature.

#### Systems-based practice

Describe the advantages and limitations of the Internal Medicine Grand Rounds format to summarize and disseminate content applicable to the care of patients with rheumatic and musculoskeletal disorders

Recognize the integral role of consultants in the care of patients with rheumatic diseases

Demonstrate ability to design cost-effective plans based on knowledge of best practices

Demonstrate the ability to appropriately utilize diagnostic and therapeutic resources available within our institution in the care of patients with rheumatic diseases to assure high quality patient care and optimum patient safety

#### Interpersonal skills and communication

Communicate effectively with physician colleagues and members of other health care professions, including formulating effective questions, based on information presented during this conference.

#### Professionalism

Be prompt and prepared for conference

Be respectful of your colleagues and the speaker

## **Pathology Conference**

### **[Header]**

**Goals:** Appreciate the gross and microscopic features of pathological samples from patients with rheumatic diseases. Gain a basic ability to interpret microscopic pathology and learn the salient pathologic features of tissues affected by autoimmune and inflammatory diseases. Gain an understanding of fluorescent and other staining methods important in the diagnosis of autoantibody-mediated diseases.

### **Objectives**

#### Medical knowledge

Describe the pathologic features characteristic of diseases seen by the rheumatologist, including the vasculitides, glomerulonephritides, inflammatory skin rashes, fibrotic skin conditions, retroperitoneal fibrosis, immune-mediated sialadenitis, inflammatory and noninflammatory myopathies, and inflammatory disease of the nerves and brain.

Describe the techniques necessary for processing and interpreting slides for diagnosing autoimmune and inflammatory diseases (e.g. processing tissue for IgA staining, techniques for immunofluorescence staining).

#### Patient care

List the indications for diagnostic biopsies in the evaluation of rheumatic diseases, including those for temporal artery biopsy, renal biopsy, lung biopsy, sural nerve biopsy, skin, minor salivary gland biopsy, and brain biopsies.

Demonstrate ability to apply information gained from interpretation of pathological specimens to enhance patient safety and care.

#### Practice-based learning and improvement

Describe how results of diagnostic tissue evaluation impacts management of patients with suspected or confirmed rheumatic diseases.

Demonstrate the ability to critically assess the scientific literature

#### Systems-based practice

Devise a system for timely review of biopsy material with the appropriate pathologist when evaluating inpatients and outpatients.

Learn how to obtain prepared slides from sources outside the institution and the procedure for having them re-read if necessary.

#### Interpersonal skills and communication

Communicate effectively with physician colleagues and members of other health care professions when discussing slide results

#### Professionalism

Be prompt and prepared for conference

Protect patient confidentiality

Demonstrate academic honesty and integrity

Organize the requisites to insure an effective interaction with the pathologist, including bringing appropriate patient information and a timely expression of gratitude.

## **Radiology Conference**

### **[Header]**

**Goals:** To gain knowledge in the use of radiological studies applicable to the evaluation and management of patients with musculoskeletal and rheumatic disorders

#### Medical knowledge

Define the appropriate indications for, and gain knowledge in the interpretation of plain film radiographs, musculoskeletal ultrasound, CT scan, MR scan, radionuclide scans of bone

Discuss the rationale for the selection of specific views requested in ordering plain film radiographs for selected rheumatic and musculoskeletal conditions

Provide a differential diagnosis of the findings on plain film radiographs, including but not limited to inflammatory and noninflammatory arthritides, causes of soft tissue swelling, joint infections, chondrocalcinosis, avascular necrosis, bone infarcts, neuropathic joint, and bone tumors

Recognize the radiographic abnormalities seen in avascular necrosis, sacroiliitis, erosive joint disease, crystalline arthropathies, degenerative joint disease, bone and joint infections, musculoskeletal tumors, and spine disease as seen on plain film radiographs, CT scan, MR scan, and radionuclide scanning.

Discuss the indications and contraindications of the radiologic tests used for the evaluation of suspected vasculitis, including contrast angiography, CTA, MRA, and PET scanning .

#### Patient care

Apply the knowledge acquired during this conference to enhance the care of patients with rheumatic and musculoskeletal diseases

#### Practice-based learning and improvement

Effectively use the knowledge gained from the interpretation of radiological studies to guide patient care decisions in their own continuity clinic

Demonstrate the ability to critically assess the scientific literature regarding the use of radiological studies

Set and assess individualized learning goals

Analyze clinical experience and employ a systematic methodology for improvement

Develop and maintain a willingness to learn from errors, and use errors to improve the system or processes of care

#### Systems-based practice

Address disease-based and external systems that affect the ability of patients to undergo radiographic testing

Demonstrate effective collaboration with radiology physicians

Educate radiology physicians in the systemic manifestations and evaluation of patients with rheumatic diseases undergoing radiological evaluation

#### Interpersonal skills and communication

Provide a concise clinical vignette to accompany the radiologic tests under discussion.

Convey management recommendations based on radiologic studies clearly and with an empathetic and understanding manner

Effectively communicate the interpretation of radiological studies to radiology staff and rheumatology faculty and fellows

### Professionalism

Be prompt and prepared for musculoskeletal radiology conference

Recognize the importance of patient primacy, patient privacy, patient autonomy, informed consent, and equitable respect and care for all

Respect patients and their families, staff and colleagues

Demonstrate integrity, honesty, and openness in discussion of radiological findings with the radiology faculty and staff

## Research Conference

### [Header]

**Goals:** Gain knowledge in basic science and clinical research methodology relevant to the field of rheumatology, while simultaneously broadening clinical and basic science knowledge base. Overall this knowledge will enhance the fellow's ability to apply these principles in the conduct of their own research during fellowship.

### Objectives

#### Medical knowledge

Exhibit familiarity with the common experimental approaches used in laboratory, clinical and epidemiology research

Discuss the essential components of clinical study design, patient assessment and data analysis

Select the most effective means to present and report on research conduct and results based on the study content

Discuss the principles of the ethical conduct of research and demonstrate the ability to apply these principles in the conduct of their own research during fellowship

Review and assimilate information on the clinical and basic science topics presented

#### Patient care

Apply the knowledge acquired during this conference to enhance the care of patients with rheumatic and musculoskeletal diseases

#### Practice-based learning and improvement

Effectively use technology to manage and present information in support of the fellow's own research project, and where applicable in support of patient care decisions

Demonstrate the ability to critically assess the scientific literature

Devise methods for regular review of information presented on research methodology and practice

Set and assess individualized learning goals, and maintain a portfolio documenting practice-based learning and improvement

Develop and maintain a willingness to learn from errors, and use errors to improve the system or processes of care

#### Systems-based practice

Describe the advantages and limitations of the Research Conference format to summarize and disseminate content applicable to the research investigation of topics relevant to patients with rheumatic and musculoskeletal disorders

Recognize the importance of seeking out and integrating researchers and practitioners with shared and/or complimentary expertise, both within and outside one's own institution, into the investigation of rheumatic and musculoskeletal disorders

Demonstrate the ability to design cost-effective research and clinical care plans based on knowledge of best practices



Learn to appropriately utilize diagnostic and therapeutic resources in the care of patients with rheumatic diseases to assure high quality patient care and optimum patient safety

#### Interpersonal skills and communication

Communicate effectively with physician colleagues and members of other health care professions, including formulating effective questions and responding to audience questions

Demonstrate effective presentation skills including topic selection, effective use of slide presentation software, pointer utilization, and maintenance of appropriate posture and body language

#### Professionalism

Be prompt and prepared for conference

Be respectful of your colleagues and the speaker

Protect patient confidentiality

Demonstrate academic honesty and integrity

Organize the requisites to insure an effective conference presentation, including speaker invitation, room and equipment logistics, and timely expression of gratitude

## **Rheumatology Grand Rounds Conference**

### **[Header]**

**Goals:** Develop clinical and basic science knowledge base through didactic, in-depth and up to date review of topics pertinent to rheumatology, and to develop skills in literature evaluation and presentation

### **Objectives**

#### Medical knowledge

Review and assimilate, over the course of the rheumatology fellowship training period, individual topics within the categories of basic science, clinical science, diagnostic testing and research principles.

#### Patient care

Apply the knowledge acquired during this conference to enhance the care of patients with rheumatic and musculoskeletal diseases

#### Practice-based learning and improvement

Effectively use technology to manage and present information, in support of patient care decisions, and enhance both patient and physician education.

Demonstrate ability to critically assess the scientific literature

Set and assess individualized learning goals, and maintain a portfolio documenting practice-based learning and improvement

Develop and maintain a willingness to learn from errors, and use errors to improve the system or processes of care

#### Systems-based practice

Describe the advantages and limitations of the Grand Rounds format to summarize and disseminate content applicable to the care of patients with rheumatic and musculoskeletal disorders

Recognize the integral role of consultants in the care of patients with rheumatic diseases

Demonstrate ability to design cost-effective plans based on knowledge of best practices

Discuss the appropriate use of diagnostic and therapeutic resources available within our institution in the care of patients with rheumatic diseases to assure high quality patient care and optimum patient safety

#### Interpersonal skills and communication

Communicate effectively with physician colleagues and members of other health care professions, including formulating effective questions and responding to audience questions

Demonstrate effective presentation skills including topic selection, effective use of slide presentation software, pointer utilization, and maintenance of appropriate posture and body language

#### Professionalism

Be prompt and prepared for conference

Be respectful of your colleagues and the speaker

Protect patient confidentiality

Demonstrate academic honesty and integrity

Organize the requisites to insure an effective conference presentation, including speaker invitation, room and equipment logistics, and timely expression of gratitude

## **Rheumatology Journal Club**

### **[Header]**

**Goals:** Develop a scientific knowledge base through didactic, in-depth and up to date review of topics pertinent to rheumatology, while developing skills in literature evaluation and presentation.

### **Objectives:**

#### Medical knowledge

Review and assimilate, over the course of the rheumatology fellowship training period, individual topics within the categories of basic science, clinical patient care, diagnostic testing, and therapeutic and management decisions, through analysis of appropriate articles from the literature.

Demonstrate the ability to assess the strengths and weaknesses of the article, including study methodology, statistical analysis, interpretation of results, and application to current practice and/or research in rheumatology

#### Patient care

Apply the knowledge acquired during this conference to enhance the care of patients with rheumatic and musculoskeletal diseases.

#### Practice-based learning and improvement

Demonstrate ability to search and interpret the scientific literature

Demonstrate ability to critically assess the scientific literature and utilize it in decision-making processes

Develop and maintain a willingness to learn from errors and use errors to improve the system or processes of care

Set and assess individualized learning goals and maintain a portfolio documenting practice-based learning and improvement

#### Systems-based practice

Describe the advantages and limitations of Journal Club format to summarize and disseminate content applicable to the care of patients with rheumatic and musculoskeletal disorders

Recognize the integral role of consultants in the care of patients with rheumatic diseases

Demonstrate ability to design cost-effective plans based on knowledge of best practices

#### Interpersonal skills and communication

Communicate effectively with physician colleagues and members of other health care professions, including formulating effective questions

Demonstrate effective presentation skills

Demonstrate teaching skills through interactions with other conference attendees

#### Professionalism

Be prompt and prepared for journal club

Be respectful of your colleagues and the speaker

Accurately present information gained from reading the medical literature

Demonstrate academic honesty and integrity

## Transitions in Care Conference

### [Header]

**Goals:** During transitions in responsibility for patient care, an effective and structured process for the transfer of patient information between providers is critical to preserve continuity of care and patient safety. These interactions can also serve as the foundation for discussion of evidenced-based patient management, as well as provide the opportunity for fellows to hone presentation skills. While transitions can occur at various times (e.g., end of fellow's assignment to a clinical service rotation) and clinical situations (e.g., at hospital discharge), a regular time for transitions occurs on Fridays, when coverage for inpatient consult service patients transfers to the weekend call team, and then again in reverse on Monday morning. Both fellows and faculty are impacted by the need for effective handoffs, and faculty must insure that fellows are competent in communicating with team members during this process. To accommodate the need to provide a structured handoff process, and to facilitate assessment by faculty of the fellow's skill during these transitions, a scheduled conference for this purpose meets regularly during care transitions (weekends, change in consult service coverage) to handoff the consult service patient information.

The overall goals of the conference are to develop clinical knowledge base, and refine presentation skills, through evidence-based case presentations of inpatients currently cared for by the rheumatology consult service

### Objectives

#### Patient care

Demonstrate the ability to effectively present the list of patients to be handed off to the coverage team, including the accurate and succinct description of each patient's presentation and interim hospital course, active clinical problems and pending diagnostic tests and/or results, therapy, and the patient's cumulative responses to treatments during the hospital stay.

For the selected topics presented, assimilate and apply the appropriate practice performance guidelines for diagnosis, treatment and rehabilitation to enhance the care of musculoskeletal and rheumatic disease patients.

#### Medical knowledge

Apply the knowledge acquired during this conference to enhance the care of patients with rheumatic and musculoskeletal diseases

#### Practice-based learning and improvement

Based on the topics presented in the case presentations, identify personal areas of rheumatology core knowledge and practice skills requiring further study and/or experience

Demonstrate the ability to critically assess the scientific literature

Set and assess individualized learning goals, and maintain a portfolio documenting practice-based learning and improvement

Develop and maintain a willingness to learn from errors, and use errors to improve the system or processes of care

#### System-based practice

Describe the advantages and limitations of the Transitions in Care Conference format to summarize and disseminate content applicable to the care of patients with rheumatic and musculoskeletal disorders

Demonstrate the ability to design cost-effective plans based on knowledge of best practices

Learn to appropriately utilize diagnostic and therapeutic resources in the care of patients with rheumatic diseases to assure high quality patient care and optimum patient safety

Interpersonal skills and communication

Communicate effectively with physician colleagues and members of other health care professions, including formulating effective questions and responding to audience inquiries

Demonstrate effective presentation skills, including (if necessary and appropriate) the effective use of slide presentation software, and maintenance of appropriate posture and body language

Professionalism

Be prompt and prepared for conference

Be respectful of your colleagues and the speaker

Protect patient confidentiality

Demonstrate academic honesty and integrity