

Fellowship Training Program Curriculum

***Division of Rheumatology
University of Iowa***

Mission:

The mission of our rheumatology fellowship training program is to produce academic and practicing physicians that 1) possess excellent clinical competence in the field of rheumatology, 2) are capable of working in a variety of settings, 3) possess habits of life-long learning to build upon their knowledge, skills and professionalism and 4) are adept at the critical evaluation of research results and have the foundation for investigation consistent with their career goals.

Specific Goals:

The specific goals of our training program are derived from the Mission Statement: 1) clinical competence, 2) capable of working in a variety of settings, 3) a life-long learner, 4) scholarly activities/research competence. These specific goals are further amplified as follows:

- 1. Clinical competence is essential for all physicians and for a rheumatologist is defined as:***
 - a. A basic core of knowledge of clinical manifestations, clinical presentations, pathophysiology and management of rheumatologic diseases or systemic diseases with rheumatic manifestations. This knowledge base should include an appropriate content of anatomy, genetics, biochemistry, immunology, physiology, pharmacology, epidemiology, statistics, ethics, and human behavior relative to the practice of rheumatology.***
 - b. The clinical skill of data collection including history-taking, physical examination and the appropriate request of laboratory and imaging studies.***
 - c. The ability to formulate appropriate differential diagnoses and therapeutic plans based on an ability to critically analyze the clinical data, and integrate this analysis with the basic fund of medical knowledge.***
 - d. The ability to perform as a consultant or a health-care team leader when summoned.***

- e. *The knowledge to treat the common and uncommon diseases found in the practice of rheumatology. To develop the understanding of the principles, indications, contra-indications, risk, cost and expected outcome of the various treatments. To recognize the need for appropriate consultation and the reasonable expectations from a consultant.*
 - f. *The performance and/or interpretation of diagnostic and therapeutic procedures common in the practice of rheumatology. This skill should include the understanding of the principles, indications, contraindications, risk, cost and expected outcome of these procedures.*
 - g. *The further development of appropriate communication skills with patients, peer and paramedical personnel.*
 - h. *The further development of qualities of professionalism and humanistic skills including integrity, compassion, and respect for patients, peers and paramedical personnel.*
 - i. *Clinically competent rheumatologists must possess a level of skill and expertise in research. All fellows must be capable of demonstrating competence in the understanding of the design, implementation and interpretation of research studies; specifically including research methodology, critical interpretation of data, critical interpretation of published research, and the responsible use of informed consent.*
2. **The ability to work in a variety of settings** is essential for a clinically complete rheumatologist. The fellows will be able to demonstrate clinical competence in the following settings:
- a. *As the primary health care provider in the acute inpatient setting, the ambulatory clinic, the emergency department, and the intensive care setting.*
 - b. *As the consultant to other internists or non-internists in the acute inpatient setting, the ambulatory clinic, the emergency department, and the intensive care setting.*
 - c. *As the leader of a multidisciplinary health care team, i.e. rehabilitation facilities, home health care, etc.*
3. **Life-long learning** is an essential component for clinically competent physicians and required for the acquisition, critical analysis, synthesis and reassessment of knowledge, skills and professionalism. All fellows will be capable of demonstrating their ability to be life-long learners by their:
- a. *Independent study habits in the acquisition of clinical and research knowledge and skills.*
 - b. *Attendance, presentation and participation in the organization of continuing medical educational conferences.*

- c. *Attendance and presentation at regional and national professional scientific conferences.*
4. **Scholarly activity/Research Training:** *understanding research methodology in order to critically evaluate the primary literature is necessary for practicing up-to-date rheumatology.*
- a. *Fellows planning a career as physician-scientists, intensive, supervised laboratory research is a major activity in years 2 and 3.*
 - b. *Fellows planning a career in patient-related research (physician-scientists), it is possible to earn an MSc degree in epidemiology. Participation in clinical research will be major activities in years 2 and 3.*
 - c. *Fellows planning a career as clinician-educators will continue to work on clinical excellence. The opportunity to participate in clinical or educational research will be available. The development and delivery of lectures as well as other educational venues will be expected.*

Specific Objectives: At the completion of the rheumatology fellowship training, the fellow should have mastered the following **Specific Objectives** as they pertain to each of the specific goals of the curriculum:

1. **Clinical competence in a Variety of clinical settings:**
 - a. All fellows should have mastered those *specific clinical objectives* for the majority of diseases seen in the practice of rheumatology, including the uncommon and complicated diseases.
 - b. Demonstrate proficiency as a consultant and/or leader of a multidisciplinary health care team.
 - c. Possess communication skills that will allow the fellow to perform as the health care team leader with peers and professionals.
 - d. Qualities of professionalism and humanistic skills will be demonstrated at a level which serves as a model for trainees at a junior level.
 - e. The clinical proficiency of the fellow will be mastered at a level where they not only demonstrate their proficiency, but are capable of teaching these skills to trainees at junior levels.
2. See Above
3. **Life-long learning:**
 - a. Fellows will demonstrate proficiency at attending and participating in conferences, and coordinating conferences, conference topics, and conference schedules.
 - b. Fellows will demonstrate mastery of teaching skills in their interaction with trainees in junior levels of training. This may include supervised teaching interactions with trainees such as junior-level fellows, residents, and medical students.

4. **Scholarly Activity/ Research Training:** All fellows should have mastered those specific scholarly activity/research objectives outlined for the fellowship program.
 - a. Those planning careers as physician-scientists, will have produced sufficient research work to enable them to submit their work for peer reviewed presentation, scientific meetings, manuscript submissions, or grant applications for research funding. Normally, a career as an independent investigator will require one or two additional years of research training.
 - b. Those planning careers as a clinician-educator will have produced a teaching portfolio. There should be sufficient work to demonstrate effective teaching. Normally, a career as a clinician-educator will require an additional year of experience.

Methodology for Teaching Rheumatology

In order to achieve the goals and objectives for the fellowship program the following experiences have been established for the purpose of teaching Rheumatology fellows. These include: A) the inpatient rheumatology experience, B) the ambulatory rheumatology experience, C) ambulatory rotations with other clinical subspecialties, D) didactic conferences, E) continuing medical education and society participation, F) *a research experience, and G) development of teaching skills.*

- A) The inpatient rheumatology experience.

The fellows assigned to this rotation we will be responsible for organizing the activities of this service. This primarily includes the supervised evaluation of inpatient consultations and patients admitted to the rheumatology service as well as the continued follow up of these patients during their hospitalization. Essential in this role is the development and refinement of clinical evaluation skills of patients with rheumatic diseases. These skills include the development of appropriate differential diagnosis, assessing the need for hospitalization, diagnostic evaluation strategies and treatment plans. Essential in this rotation will be developing skills in providing consultation services, to include communicating with the referring physicians and ensuring support for continuing care of the patients' rheumatic condition. A fellow will be called upon to perform literature research on topics appropriate to the case at hand. They will participate actively in the teaching activities of the consultation team (which normally includes a resident and/or a medical student). Through this experience the fellow will also develop a comprehensive understanding of the indications, contraindications, techniques, complications of arthrocentesis as well as the interpretation of results from this procedure. The fellow will also acquire the knowledge of and skill in educating patients about the procedure and in obtaining informed consent. While assigned to the inpatient service, the fellow is also responsible for urgent consultations from the Emergency Treatment Center at UIHC, the

Urgent Care Clinic at the VAMC, other ambulatory clinics and from outside physicians. All patients seen by fellows will be staffed by a faculty physician.

B) The ambulatory rheumatology experience.

All fellows will be required to maintain the equivalent of a full day clinic for the first 12 months and a half day clinic for the second 12 months for patients with rheumatic diseases. This experience will continue with progressive responsibility through the fellowship and will be appropriately supervised by dedicated attending faculty members. The goal of this experience will be for the fellows to gain expertise in the outpatient evaluation and management of rheumatic problems. The experience provides an opportunity to develop an understanding for the natural history of these conditions over an extended period of time.

C) Interdisciplinary interactions.

The fellow will be provided an experience with other disciplines whose expertise is required in the care of patients with rheumatic diseases: this includes: 1) orthopedic medicine, 2) rehabilitative medicine (physical and occupational therapy), 3) pediatric rheumatology, 4) musculoskeletal radiology, 5) dermatology and 6) ophthalmology. The goal of these experiences is for the fellow to appreciate the approach to the specific conditions that relate to rheumatic disorders within these subspecialties. This interdisciplinary interaction can occur in the form of a clinical rotation, multidisciplinary conference, etc. Clinical experiences should be under the direction of attending physicians in the respective subspecialty who participate fully in the educational goals of the rotation.

D) Didactic conferences.

Conferences will be held on a regularly scheduled basis with attendance required of all fellows and divisional faculty. There will be one clinical conference every week (case management conference). In addition, there will be one literature review conference (journal club), a clinical conference, and two research conferences (where basic science research is reviewed) each month. Fellows will be required to attend these conferences.

E) Continuing medical education and society memberships.

In addition to participating in the organized didactic conferences established within the fellowship program it is also strongly encouraged that all fellows become members of the *American College of Rheumatology*. The division will pay for trainee membership in the American College of Rheumatology. The division wants to encourage attendance at the national meeting of the American College of Rheumatology. The division will pay for each second year rheumatology fellow to attend the meeting and the review course. The division will also pay for any other fellow (i.e. first or third year fellow) who will be presenting original research (i.e. poster, podium presentation) at the meeting.

- F) Scholarly Activity/Research experience.
- 1) For fellows planning a career as a physician-scientist, a meaningful, supervised research experience will be provided with appropriate protected time for each fellow. Exposure to divisional research programs will be initiated early in the fellowship to allow the fellow adequate insight into the areas of research in preparation for the ultimate selection of a faculty member to serve as a specific research mentor for the remainder of the fellowship training program. During this phase of training the fellow will work under close guidance of the research mentor.
 - 2) All fellows will learn sound methodology in designing and performing research studies and the correct interpretation and synthesis of research data.
 - 3) For fellows planning careers as Clinician-Educators, experience in developing teaching skills will be emphasized. The program will provide an environment for the fellow which fosters and highly regards the activities of teaching. This includes the education of not only medical students, physicians, and other allied health personnel but also the education of the patients. Development of these skills requires the fellow to receive instruction and feedback in counseling and communication techniques. Teaching opportunities include presentation at regular division conferences, resident/student scheduled conferences, as well as clinical teaching as part of the rheumatology consult team and as an attending on general medicine at the VAMC.

The Methods of Evaluation:

In order for the training program to assess its ability to meet its goals and objectives, it is essential that the program have an evaluation process, including formative and summative evaluations of the fellows, and an evaluation process of the program and the faculty.

Formative Evaluation of the Fellows

Informal *formative evaluations* should occur at the completion of any substantive interaction with a specific faculty member or specific rotation. All faculty review their impressions directly with the fellow.

For each clinical rotation outside of the division, an evaluation form will be completed by the supervising faculty member. The evaluation form utilized is one distributed and recommended by the *American Board of Internal Medicine*. All completed evaluation forms are returned to the Program Director for review and placed in the fellow's permanent file.

During the research phase of training, an evaluation form will be completed by the fellow's research faculty mentor. These evaluations forms are completed every 6 months, reviewed with the fellow by the faculty research mentor, and submitted to the Program Director for placement in the fellow's permanent file.

Completed evaluation forms submitted to the Program Director are immediately reviewed upon their receipt. Any forms that contain a rating less than satisfactory in any category will require an immediate conference between the fellow and the Program Director to identify causes for the poor performance and identify means for improving the deficiency.

All fellows will be required to keep a *patient and procedures log*, identifying the patient's name and identification number, diagnosis, procedure, date, and the anatomic location of the procedure. A copy of this log will be provided to the Program Director quarterly during the first year and semi-annually in the second and third year for placement in the fellow's permanent file.

Quarterly in the first year and semi-annually thereafter, all fellows will confer individually with the Program Director to review all of their evaluations. This meeting is to provide feedback to the fellow on their performance and to identify areas for professional enhancement. A *written summary* of this session is placed in the fellow's permanent file.

Summative Evaluation of the Fellows

When fellows meet individually with the Program Director at least semi-annually, feedback on their performance in both a formative and summative fashion will be given. A *written summary* of the fellows' evaluations in the semi-annual conference is placed in the fellow's permanent file. The overall performance of each fellow is reviewed at least annually by the local *Clinical Evaluations Committee*. This committee is asked to monitor the performance of the fellows and assess the level of competence for each fellow. The committee's assessment is written and recorded in the program files for future reference purposes. Any adverse judgments or evaluations regarding the fellow's level of performance or competence should first be directed to the Program Director. If the fellow feels that this is not to their satisfaction, then the *grievance* can be addressed by established institutional policy.

Evaluation of the Faculty and Program

Quarterly in the first year and semi-annually thereafter, all fellows are required to complete and return an evaluation form on the faculty and the program. Evaluations are collected in a fashion to assure the anonymity of the fellow. Fellows are encouraged to maintain a high level of communication with the Program Director and faculty. Periodically, meetings will be established for a formal conference with the fellows and Program Director. These meetings can be used to disseminate information, receive timely feedback, etc. The feedback received during informal meeting, formal meetings, and the semi-annual evaluation form will be used to make programmatic changes.

Fellowship Curriculum

Division of Rheumatology

University of Iowa

Outline Format

Year 1

Outpatient clinic (18 weeks)

6 half days/every other week

Monday PM – Continuity clinic with Dr. Lawry

(Tuesday AM – Pediatrics)

Tuesday PM – Outpatient clinic with Dr. Cowdery

Thursday AM – General VA clinic

Thursday PM – Continuity clinic with Dr. Vogelgesang

Friday AM – VA fellows continuity clinic

Consults (inpatient and outpatient)

First call - 10 weeks

Call with resident – 9 weeks

Fellows will still participate in VA fellow's continuity clinic during the consult rotation

Fellows will still participate in the General VA clinic if there are < 5 other trainees

Basic immunology course – 9, 90 minute lectures given at the dental school

Radiology*^ – 4 weeks

Orthopedics/ PT/OT*^ – 4 weeks

During these rotations, fellows **will not participate in consults, general VA clinic or pediatrics clinic. Fellows **will** participate in VA Fellow's continuity clinic.*

^ During these rotations, fellows will attend all of the required conferences that do not interfere with the rotation.

Possible General Medicine attending at VA ^ – 4 weeks

Vacation – 3 weeks (15 working days)

Personal or sick leave – 1 week (5 working days)

Conferences

Case conference – weekly

Research conference/Journal Club/ Fellows conference – weekly

Rheumatology Symposium (1 day/year)

Rheumatology Textbook chapter review monthly

Board Question review monthly/ mentor meeting

Planning for second and third year

Evaluations Quarterly

Years 2 (and 3)

Physician-Scientist Track

Outpatient clinic

1-2 half-days/week continuity clinic

General Medicine attending at VA – 4 weeks

Research (including courses: basic science, immunology, molecular biology, etc)

Patient-related research *may* involve MS in epidemiology and other courses; this is negotiable with the program director

Vacation – 3 weeks (15 working days)

Conferences

Case conference – weekly

Research conference/Journal Club/ Fellows conference – weekly

ACR conference (1 week in second year)

Rheumatology Symposium (1 day/year)

Rheumatology Textbook Chapter Review – monthly

Board Question Review – monthly

Evaluations semi-annually

Clinician-Educator Track (optional 3rd year – appointed as associate)

Outpatient Clinic

4 half-day/week clinic

Monday AM – Continuity clinic with Staff (to be arranged)

Thursday AM – VA clinic

Thursday PM – Continuity clinic with Staff (to be arranged)

Friday AM – VA Continuity clinic

Consults (inpatient and outpatient) – 4 weeks

General Medicine attending at the VA – 4 weeks

Teaching/Scholarly Activity

Develop Teaching portfolio

Teach 2 AM lectures/month

Teach 1 resident conference/year

Develop 1 (one-hour) lecture per year

Other rheumatology lectures as available

Attend 2 OCRME teaching-related conferences/ year

Participation in ongoing clinical or educational research or development of new teaching modalities

Conferences

Case conference – weekly
Research conference/Journal Club/ Fellows conference – weekly
ACR conference (1 week) – if research is presented
Rheumatology Symposium (1 day/year)
Rheumatology Textbook Chapter Review – monthly
Board Question Review – monthly

Evaluation semi-annually

I have read and received a copy of this curriculum.

Signature

Date

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