

**CURRICULUM ON OCCUPATIONAL AND ENVIRONMENTAL MEDICINE
MSU INTERNAL MEDICINE RESIDENCY PROGRAM**

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Revision date: May 2010

TEC approval date: 5/19/2010

I. Educational Purpose and Goals

- a. To educate and train Internal Medicine residents in basic diagnostic and therapeutic procedures for diseases associated with occupational and environmental exposures
- b. To educate and train Internal Medicine residents in their public health and legal responsibilities in relationship to workers' compensation and other disability programs.
- c. To assure that residents will learn:
 - i. When and how to take a complete occupational and environmental history
 - ii. When and how to refer patients to an occupational health sub-specialist
 - iii. How to diagnose and treat the most common occupational diseases in particular lung, skin, musculoskeletal, solvents, carbon monoxide and heavy metal toxicity
 - iv. How to write a report and/or give a deposition for work related medical conditions

II. Principal Teaching Methods

- a. Elective rotation in Occupation and Environmental Medicine
 - i. Resident participation in occupational and environmental medicine clinics.
 - ii. Work site visits with physicians or MIOSHA inspectors.
 - iii. Literature and content reviews with occupational medicine faculty
- b. Lectures as part of usual residency conference series (Board Review, Journal Club, etc.)
- c. Care of patients with occupational and environmental diseases in the resident's own continuity clinics.

III. Educational Content

- a. Mix of diseases Approximately 1/3 of diseases are respiratory, 1/3 related to chemical exposure and 1/3 musculoskeletal.
- b. Patient characteristics Patients are 50% men and 50% women with a larger minority percent than in the general population. Referral is 1/3 from attorneys, 1/3 from other health care providers and 1/3 from employers.
- c. Learning venues: Type of clinical encounters, procedures and services.
- d. Structure of rotation (example)

	Monday	Tuesday	Wednesday	Thursday	Friday
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AM	GM Occ Health Clinic	MSU CC O.M. clinic with Dr Rosenman	Environmental site visit	Olin Occ. Clinic with Dr Rosenman	MIOSHA site visit
PM	IRMC Pulmonary Function Lab	GM clinic or research time or time to handle telephone consultations	Resident clinic (example)	Conferences	MIOSHA site visit

IV. Principal Ancillary Educational Materials

The residents will have available to them:

- a. Reading lists of books, journals, manuals, board review literature and related written material or videotapes
- b. Radiology teaching library for pneumoconiosis

V. Methods of Evaluation

a. Resident Performance

Faculty will complete web-based electronic resident evaluation forms (or a paper copy) provided by the Internal Medicine Residency office. The evaluation is competency-based, fully assessing core competency performance. The evaluation will be shared with the resident, is available for on-line review by the resident at their convenience, and is sent to the residency office for internal review. The evaluation will be part of the resident file and will be incorporated into the semiannual performance review for directed resident feedback.

b. Program and Faculty Performance

Upon completion of the rotation, the residents will be asked to complete a service evaluation form commenting on the faculty, facilities, and service experience. These evaluations will be sent to the residency office for review and the attending faculty physician will receive anonymous quarterly copies of completed evaluation forms. The Training and Evaluation Committee will review results annually.

VI. Institutional Resources: Strengths and Limitations

- a. **Strengths** – Multiple sites that present a diverse population of workers and exposures. The rotation is run by a Board Certified internist who is also board certified in occupational and environmental medicine and is interested in teaching.
- b. **Limitations** – Residents may be required to move between sites and are expected to work with a variety of preceptors.

VII. Rotation Specific Competency Objectives

a. Patient Care

i. General

- a. Screening occupational and environmental history

- b. Detailed occupational and environmental history
 - c. When and how to refer patients to an occupational health sub-specialist
- ii. Pulmonary
 - a. Interpretation of pulmonary function tests
 - b. Interpretation of chest radiographs for pneumoconiosis
 - c. Diagnosis of work-related asthma including serial peak flow readings
 - d. How to diagnose and treat the most common occupational diseases in particular lung, skin, musculoskeletal, solvents, carbon monoxide and heavy metal toxicity
- iii. Skin
 - a. Recognition of common occupational skin conditions
- iv. Musculoskeletal
 - a. Diagnosis and treatment of carpal tunnel syndrome
 - b. Diagnosis and treatment of low back strain
- v. Toxicology
 - a. Diagnosis and treatment of carbon monoxide toxicity
 - b. Diagnosis and treatment of lead toxicity
 - c. Diagnosis and treatment of solvent toxicity
- vi. Public Health/Legal
 - a. Knowledge about required public health reporting
 - b. Ability to write a letter/report for worker compensation
 - c. How to write a report and/or give a deposition for work related medical conditions

b. **Medical Knowledge**

Residents will develop analytical thinking as well as their basic and clinical science knowledge. Knowledge relating to the cause and pathogenesis of occupational and environmental disease will be emphasized as will public health knowledge that underlies the entire specialty.

c. **Interpersonal and Communication Skills**

Residents will develop knowledge and skills uniquely applicable to occupational medicine such as the exposure and work history, depositions. Also unique to the field is the relationship between doctors, patients, employers and attorneys that require special ethical considerations, communication skills, and teamwork.

d. **Professionalism**

The resident do thorough and timely consultations that include prompt communication with other care team members and recognize the special considerations of the patient-physician relationship in occupational medicine.

e. **Practice Based Learning and Improvement**

The resident will use the library resources of MSU to search the medical literature, critically appraise articles, and apply evidence to the care of patients. The residents will have opportunities to work with population studies in this rotation.

f. **Systems Based Practice**

- i. Residents will understand and use disease reporting and management protocols.
- ii. PGY 2 and 3 residents will demonstrate an understanding of cost-effective care by incorporating cost effectiveness into their diagnostic and therapeutic plans.