

THE INTEGRATIVE DISCIPLINES

THIRD TIER

Settings and Practices that Exemplify the Integrative Disciplines

- **Home Care**
- **Nursing Home Care**
- **Occupational and Environmental Medicine**
- **Physical Medicine and Rehabilitation**
- **Management of Medical Practice**
- **Medical Informatics**

Home Care

A consequence of the success of modern medicine is a proliferation of chronic disease and disability. Most people now face years of living with some progressive dependency and disability. Nursing-home beds already outnumber hospital beds, and for every person in a nursing home three more with similarly severe disabilities receive their care at home. Families alone, under their physician's guidance, provide 80% percent of the care for these homebound, frail patients. Younger patients, particularly those who are functioning well, also make increasing use of home services for infusion of medication, short-term recovery from injury, and other reversible situations.

To be effective in providing and supervising care for patients in their homes, a physician must build upon a mastery of traditional internal medicine by acquiring the following skills: 1) comprehensive advance planning; 2) assessment of the environment and the support system; 3) care oversight, team leadership, and standard setting; 4) compliance and confrontation with regulation; 5) financing of care over time; and 6) organization of services and continuous quality improvement. Also, the home setting is a particularly good setting in which to learn nutritional assessment, prevention and rehabilitation services, coordination of ancillary services, physical diagnosis, skin care of a bedridden patient, and care of the dying.

See also: Geriatrics, Nursing Home, Legal Medicine, and Management of Medical Quality.

Competencies for Home Care

Competency	Learn in a seminar or conference (specify)	Learn as part of a clinical rotation (specify)
Negotiate a plan of care that accounts for the wishes and preferences of the patient and family members		
When managing a patient at home, rely on basic clinical skills and avoid, as much as possible, unnecessary testing and hospitalization		
Be an effective supervisor of family caregivers and other health care providers		
Access physical, psychological, and social function in the home		
Know the principles that guide successful implementation of multiple-drug regimens in the home setting, where many factors can interfere with compliance		
Distinguish between and know how to use the services provided by in-home therapies, respite services, day hospital or day care, visiting nurses, hospices, hospitals, consultant care providers, home health aides, and equipment suppliers		
Know the regulations and financing protocols that shape home care practice (Medicare, Medicaid, MediGap, and federal and state quality assurance and elder abuse regulations)		
Know the process for certifying that services are medically necessary		
Know the symptoms and signs that indicate that the patient is near death and know about strategies to alleviate suffering		
Know the administrative and legal arrangements when a patient dies outside of the hospital (pronouncing and certifying, communicating with the medical examiner and funeral director, and managing the dead body)		

Illustrative Clinical Settings: These competencies are best acquired in the management of patients in home settings as part of a block experience in home care. However, valuable experience in management of homebound patients also can be obtained during continuity practice experiences, inpatient medicine, nursing home and geriatric rotations.

Nursing Home Care

Many adults face a long period of decline in the grip of chronic illness, such as Alzheimer's disease, or in the aftermath of an acute illness, such as a stroke. Many of these individuals will live out their days in a nursing home. Others will spend a short period in a nursing home as part of a successful convalescence after hospitalization. Physicians must be effective in the nursing home setting.

See also: Geriatrics, Home Care, Humanism, Medical Ethics, Legal Medicine, Nutrition, and several clinical disciplines.

Competencies for Nursing Home Care

Competency	Learn in a seminar or conference (specify)	Learn as part of a clinical rotation (specify)
Know the special characteristics of history taking and physical examination in frail, disabled, elderly people.		
Know the standardized instruments for assessing physical function, cognition, affect, and gait.		
Be able to manage clinical conditions that are prevalent in nursing home patients, including infections, dementia, depression, urinary incontinence, falls, immobility, movement disorders, pressure sores and polypharmacy.		
Know regulations that apply to nursing home care (for example, use of physical restraints and psychotropic medications).		
Know the principles of rehabilitation in the nursing home and the concept of excess disability.		
Know the levels of care that are considered appropriate for various types of facilities.		
Know the role of the nursing home director.		
Be able to describe the financing of long-term care.		
Know how to function as part of an interdisciplinary nursing home team.		
Be practiced in the telephone management of patient-care problems in the nursing home.		
Be able to coordinate care across settings (acute care hospital, nursing home, home).		

Illustrative Clinical Settings: Nursing home and skilled-care facility rotations.

Occupational and Environmental Medicine

Occupational and environmental medicine is concerned with the diagnosis, treatment, and prevention of disease caused by agents in the environment. It focuses on preventing and treating occupational diseases and injuries; controlling or assessing health hazards in both the workplace and living environments; and fostering employee and public health through clinical care, education, and counseling programs. The specialty of occupational medicine requires a general health care orientation; the ability to provide clinical management in the work environment; the ability to work with both labor and management; and specific training in industrial hygiene, toxicology, biostatistics, and epidemiology. The general internist needs to know about health hazards in the home or workplace, how to do a preliminary evaluation, when to refer to an occupational medicine specialist, and how to assist in long term management of work related illness and disability.

See Also: Legal Medicine, Clinical Epidemiology, Physical Medicine and Rehabilitation, Preventive Medicine Interviewing, and several clinical disciplines, including Pulmonary, Dermatology, and Musculoskeletal Medicine.

Competencies for Occupational and Environmental Medicine

Competency	Learn in a seminar or conference (specify)	Learn as part of a clinical rotation (specify)
Know how to take both a systematic occupational and environmental screening history and how to take an in-depth history when the patient's complaints or physical findings suggest an occupational or environmental health hazard		
Know the principles that help the physician decide whether an illness is caused by health hazards in the living and working environments		
Know how to apply epidemiologic principles to the evaluation of individual patients and, once a risk is identified, to coworkers and the community at large		
Be able to describe the basic principles of disease prevention and how to apply them to occupational and environmental effects on health		
Be able to counsel patients and others at risk, about potential hazards in the community and workplace		
Know how to assess impairment and disability		
Be able to describe the physician's role in disability programs, including worker's compensation and Social Security		
Know how to evaluate complaints that could be environment-related and know when to refer to a specialist in occupational medicine		
Know the ethical, legal, and regulatory concerns specific to occupational and environmental medicine		

Illustrative Clinical Settings: Continuity practice, community-based practice, occupational health rotations.

Physical Medicine and Rehabilitation

The general internist will be responsible for care of many patients who may have suffered neuro-musculoskeletal system impairments that have resulted in residual disability. As a primary care provider, the general internist will need to be aware of the effects of such disabilities on other body systems and on the patient's ability to perform the routine activities of daily living and to fulfill various societal roles. The general internist will have the crucial role of ensuring continuity of care when the patient with multiple medical problems requires intervention from many health care professionals.

See Also: Occupational Medicine, Musculoskeletal Medicine, Legal Medicine, Neurology, Geriatrics, and Nursing Home.

Competencies for Physical Medicine and Rehabilitation

Competency	Learn in a seminar or conference (specify)	Learn as part of a clinical rotation (specify)
Know the difference among impairment, disability, and handicap		
Know how to diagnose and manage the common musculoskeletal disorders, including fibromyalgia, myofascial pain, repetitive motion disorders, and overuse syndromes		
Know how to recognize the complications of prolonged bed rest (contractures, pressure sores, deep venous thrombosis, osteoporosis, muscular deconditioning, and others)		
Be able to describe various physical medicine treatment modalities, including diathermy, ultrasound, electrical stimulation, and others		
Know the physiologic effects of aerobic exercise		
Know the various types of therapeutic exercises		
Be able to describe the health care team for rehabilitative medicine and the roles of allied health professionals (for example, physical therapist, occupational therapist, psychologist, speech and language pathologist, prosthetist, orthotist, and others)		
Know when to use the various assistive devices that may reduce disability, including wheelchairs, prosthetics, orthotics, and others		
Know the principles of evaluation and management of chronic pain		
Know the methods for minimizing long-term disability from acute illnesses (for example, prophylaxis against venous thrombosis, bed sores, contractures)		
Be able to assess the effects of impairment on a patient's daily function		

Illustrative Clinical Settings: Nursing home, geriatric unit, rehabilitation center, neurology rotation, rheumatology rotation, cardiopulmonary rehabilitation unit.

The Management of Medical Practice

The principle focus of medical residency training is the prevention, diagnosis, and management of disease. A medical curriculum that focuses on these topics will prepare a resident to care for patients, but it will not fully prepare him or her to practice medicine. Medical practice occurs in a context that includes payment for medical services, an office and its staff, and systems to ensure that medical care in the practice never wavers from a high standard. All practicing physicians must understand this context in order to obtain the medical outcomes that they are capable of achieving.

Physicians need to understand the economic context of medical practice. Their needs will depend partly on the circumstances of practice. Physicians who work in small groups may negotiate directly over contracts with payers. Physicians in large groups that provide the administrative support for contracting will have different needs. The residency training program should provide an understanding of the economics of medical care sufficient to prepare for the varied circumstances of practice.

See also: Legal Medicine, Management of Quality

Competencies for the Management of Medical Practice

Competency	Learn in a seminar or conference (specify)	Learn as part of a clinical rotation (specify)
Know the basic systems of payment for health care (indemnity plans, managed indemnity plans, capitation)		
Know how the forms of medical practice differ from one another (solo practice, group practice, preferred provider organizations, independent practice associations, vertical integration, networks, staff or group HMO)		
Know the principal types of payers for health care (Medicare; Medicaid; Blue Cross–Blue Shield; insurance companies, both for profit and nonprofit; and the Department of Veterans Affairs)		
Understand the basic concepts of managing health care systems (utilization management, practice profiling, risk management, continuous quality improvement, managed care, measurement of outcomes, meeting national standards, federal laws affecting the organization of medical practice)		
Be prepared to negotiate effectively when deciding to take a job opportunity (salary and benefits, practice style, job description)		
Have a basic knowledge of basic business skills (accounting, personnel management, insurance billing, accounts receivable, collections, writing a job description, procedure and service coding, evaluating health plans, evaluating contracts)		

Illustrative Clinical Settings: Continuity practice sites, particularly if they expose residents to community practices, and inpatient rotations.

Medical Informatics

To provide efficient, effective patient care, internists must be highly proficient information managers. The volume and complexity of medical knowledge and data have outstripped the internist's ability to function optimally without support from information management tools. To make optimal use of the computer-based information resources that are available today requires an understanding of their strengths and limitations and of the issues involved in implementing them in clinical practice. Internal medicine residents should understand how to use current technologies and be able to adapt as new tools become available.

See also: Lifelong Learning, The Clinical Method, Continuity of Care, and Clinical Epidemiology.

Competencies for Medical Informatics

Competency	Learn in a seminar or conference (specify)	Learn as part of a clinical rotation (specify)
Know enough basic computer concepts and terminology to be well-informed in purchasing and using computers and peripheral devices, computer communication hardware, operating systems, general-purpose software, and important patient care-related clinical software		
Know essential aspects of file organization, hard- and floppy-disk information storage, protection from data loss, and basic issues related to computers and copyright law		
Be able to use basic word processing, spreadsheet, database, desktop publishing, and desktop presentation technology; know how to adapt these programs to medical uses		
Be able to identify, evaluate, select, and appropriately use electronic sources of medical knowledge, e.g., CD-ROMs, the Internet, decision support, and continuing medical education software, and literature searching programs		
Be able to identify, evaluate, select, and appropriately use computer systems for managing patient and practice information		
Be able to identify, evaluate, select, and appropriately use computer systems for educating patients		
Be able to identify, evaluate, select, and appropriately use portable computing devices to facilitate the mobile management of patient and practices data and medical knowledge		

Illustrative Clinical Settings: Anywhere that provides residents with the necessary equipment, instruction, and encouragement to apply these tools to actual clinical situations and needs.