Health care has undergone tremendous changes in recent years, with increasing market expansion by managed care organizations. Currently, greater numbers of medical school graduates are choosing “generalist” fields, specifically primary care training, rather than specialty areas. It is imperative that medical students have access to clear, factual, and concise information about the specialty of physical medicine and rehabilitation to assist them in their career choices. Answers to students’ questions about the practice of physical medicine and rehabilitation, residency training, and its future are provided.

**Practice of Physiatry**

You Do? Physical medicine and rehabilitation (PM&R) was developed in the 1930s to address neurologic and musculoskeletal problems, with an emphasis on the use of physical agents, such as heat and cold, for treatment. Its growth and recognition were accelerated after World War II, primarily as a result of the treatment of disabled veterans. In 1947, the American Board of Medical Specialties recognized PM&R as a specialty.

Physiatrists (pronounced fizz-ee-at-trists) treat patients of all ages. These patients may have a variety of acquired or congenital neuromuscular/musculoskeletal illnesses or injuries. The goal of treatment is to prevent, minimize, and/or alleviate deficits in function, regardless of the underlying etiology. Typical neurologic problems include traumatic brain injury, cerebrovascular accidents, spinal cord injury, multiple sclerosis, and cerebral palsy. Primary muscle disorders requiring rehabilitation include, but are not limited to, muscular dystrophy, polymyositis, and limb girdle dystrophies. In addition, physiatrists are trained in the diagnosis and treatment of neuromusculoskeletal disorders such as peripheral neuropathies, radiculopathies, limb amputations, tendon strains and tears, sports injuries, and work-related injuries. Physiatrists often evaluate patients within hours of a major illness or injury; they have the satisfaction of coordinating not only their patients’ acute rehabilitative care, but also, over time, their community reintegration and return to work.

Using a patient’s medical history and physical examination findings, physiatrists determine the extent of the physical and/or cognitive deficits and also assess the functional implications of a patient’s impairment. Radiographic imaging, laboratory studies, and/or electrodiagnostic evaluations may be used to evaluate the extent of the patient’s dysfunction. Physiatrists often function as members of an interdisciplinary team of allied health professionals to tailor a comprehensive rehabilitation program to a patient’s specific needs. These team members include physical therapists, occupational therapists, speech-language pathologists, social workers, rehabilitation nurses, dietitians, and psychologists. Therapeutic recreation specialists, rehabilitation engineers, orthotists, prosthetists, and case coordinators are also important team members. Practitioners in this field are trained in the evaluation and prescription of prosthetic limbs and orthoses (braces), as well as in the prescription of physical agents such as superficial and deep heat, ice application, and massage. They are also extensively trained to manage medical complications resulting from disability such as spasticity, neurogenic bladder, and autonomic hyperreflexia. Physiatrists perform intramuscular and intra-articular injections and motor point and peripheral nerve blockade in addition to nerve conduction studies and electromyography.

2. Is Physiatry a Satisfying Career Choice? Do You Like Being a Physiatrist? Why Did You Go Into This Field? Is There Time for a Personal and Family Life? Physiatry is a rewarding area of practice for several reasons. There are a wide variety of clinical problems to be addressed. As practitioners in this field, it is possible to develop long-term relationships with patients and their families, facilitating a more holistic approach to their care. Because of the breadth of diagnostic categories, it is possible to focus on specific areas at varying times in their career. This flexibility makes the field a continuous intellectual challenge. Because of the increasing emphasis on ambulatory care and the relative medical stability of hospitalized rehabilitation patients, most practice settings allow for the pursuit of a satisfying family life. In a recent survey,1 career satisfaction among physiatrists was rated according to time demands, practice characteristics, and organizational support, among other factors. Physiatrists expressed high satisfaction related to autonomy in their practice and unique skills for patient management.

3. What Career Options Do I Have After Training? Do All Physiatrists Work in Hospitals? Where Is There the Most Need for Physiatrists? PM&R continues to offer a wide diversity of practice settings. Future demand and supply for the specialty were studied by a comprehensive task force in 19962 and conclusions updated in 1999.3 It seems that the demand for physiatric services will roughly approximate the number of practicing specialists from 1996 to 2017. The study found that the number of physiatrists will actually double over that period; however, demand is expected to match this growth, which is attributable to slower than anticipated managed care market expansion and physiatry's continued success in raising awareness of our unique contributions to patient care.

A 1988 survey4 revealed that 35.8% were exclusively hospital based and that 17.1% were exclusively office based. Since then, it seems that office-based patient care has grown dramatically and that hospital based care is declining.3

Significant administrative opportunities remain. In addition to private practice, academic and research positions are available. Since PM&R remains primarily a referral specialty, practice sites tend to be associated with population bases of at least 100,000.

4. Where Do Physiatrists Live and Work? What Is Their Geographic Distribution? Physiatrists are represented in every state in the nation. There has been an average increase of 43% in the “physiatrist to population” ratio between 1985 and 1994.2 According to one comprehensive

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Post residency training fellowships are offered in traumatic brain injury, geriatrics, electrodiagnostic medicine, pain management, sports medicine, and spinal cord injury. The American Board of Physical Medicine and Rehabilitation was given permission by the American Board of Medical Specialties to issue a subspecialty certificate in Spinal Cord Injury Medicine on March 16, 1995. The first certificates were issued on December 1, 1998. The Accreditation Council for Graduate Medical Education (ACGME) approved the special training requirements on February 12, 1996; the first training programs were approved in July 1997. In addition, subspecialty board certification is also available in Pain Management and Pediatric Rehabilitation Medicine.

5. What Is the Average Income of a Physiatrist? How Does This Compare with That of Other Specialties? Starting salaries for specialists in this field range from $80,000 to approximately $175,000. This range of starting salaries compares well with the median income for all physicians which is $164,000. Variations in physiatrists' income reflect geographic norms and types of practice. In general, salaries on either coast tend to be higher; academic practices represent the lower end of the wage scale.

6. Is the Cost of Malpractice Insurance a Major Concern for This Specialty? PM&R malpractice costs are lower than the average nonsurgical specialty. One analysis of almost 200,000 claims found that the number of claims brought to court and resulting dollar losses were significantly lower than predicted by the size of the specialty. Physiatry losses are similar to “very low-risk” fields such as pathology or psychiatry. However, individual practitioners' premiums will be determined by the characteristics of their own practice.

7. What Areas of Subspecialization Are Available in PM&R? Can I Practice Sports Medicine? The practice of PM&R covers a diverse patient population of all ages. Individual physiatrists frequently choose specific areas in which to focus their practices. Some residency training programs offer eligibility for double board certifications in PM&R and pediatrics, neurology, or internal medicine. General physiatric training provides opportunities for the development of excellent skills in nonoperative management of sports-related injuries. Post residency training fellowships provide more information about the field. The handbook, Physical Medicine and Rehabilitation: The Spectrum of a Specialty, published by the American Board of Physical Medicine and Rehabilitation, provides an excellent overview of the specialty. Information can also be obtained from the American Academy of Physical Medicine and Rehabilitation, and the American Board of Physical Medicine and Rehabilitation. In addition, practicing physiatrists, residents, and residency training program directors can provide valuable information.

Residency Training

1. How Is the PM&R Residency Structured? What Kinds of Rotations Are Offered? How Much Medical Care Is Expected of the Resident? The structure of a physiatric residency is determined by the Residency Review Committee, the accrediting agency for postgraduate medical training programs. Rehabilitation specialty training requires 1 yr (postgraduate year (PGY1)) of basic medical skills training in an ACGME-approved program, in addition to 3 yr of PM&R specialty training. This commonly takes the form of a first year of Internal Medicine or a “transitional” internship. Applicants are responsible for obtaining a PGY1 position. Some physiatry residencies offer a combined PGY1 in addition to the 3-yr rehabilitation program. Successful completion of the PGY1 is a requirement for acceptance into 3-yr residency training programs.

PM&R residents are expected to gain experiences in the management of hospitalized patients such as those with spinal cord injuries, cerebrovascular accidents, amputations, burns, traumatic brain injury, and joint replacement. They are also expected to learn to manage ambulatory patients such as those with acute musculoskeletal injuries or who require cardiac rehabilitation. Residents are trained in a number of diagnostic skills such as electromyography and nerve conduction studies. There are specific Residency Review Committee requirements regarding the amount

of inpatient and outpatient exposure that residents must have. Each program varies in the manner in which it meets Residency Review Committee requirements.

PM&R residents are not typically responsible for acute medical care. However, it is expected that residents will be able to diagnose and manage common medical problems, as well as initiate treatment of acute complications such as deep-venous thrombosis, pulmonary embolism, and infections. Specific programs may emphasize primary care for more complex rehabilitation problems such as traumatic brain injury and spinal cord injury.

2. How Difficult Is It to Get Into a Good Training Program? Are Physical Medicine and Rehabilitation Residents Very Competitive? Will My USMLE Scores Be Considered in My Application? Will My Medical School Grades Be Considered in My Application? Despite the trend for medical school graduates to enter primary care fields, acceptance into the best PM&R residency programs remains competitive and match rates are high. See Table 1 for residency position statistics and rehabilitation resident demographics. Although overall academic achievements (in-
excluding United States Medical Licensing Examination scores and medical school class rank) are considered, residency programs also look for candidates with a high level of interest and aptitude in the field. One study that surveyed selection criteria for resident applicants found that grades in PM&R clerkships, PM&R faculty letters of recommendation, and the Dean’s letters were among the more heavily weighted factors. A 1996 study confirmed the relationship between medical school achievement and performance during residency, as well as on written specialty board examinations.


Each program has its specific strengths and weaknesses. Students should consider their own learning style when choosing the environment that will best foster their development as physiatrists. Speaking with former and current PM&R residents in various programs can provide invaluable insight. An elective rotation gives students information regarding the field in general and that residency program in particular. Other measures of program quality include resident success on Board examinations and the Self-Assessment Examination. Residency Programs are licensed by the ACGME for a maximum of 5 yr. Programs are reviewed periodically by an independent, external Residency Review Committee which obtains information during a site visit. These data are submitted to the ACGME for accreditation rulings. The accreditation status of the residency is critical to assure that the residents are board eligible at the completion of their training.

Rehabilitation residency programs can be defined as “academic” vs. “nonacademic.” Although all accredited programs must conform to Residency Review Committee guidelines, an academic program that emphasizes research skills, training, and experience may be advantageous for residents with an interest in an academic career. Residencies that offer primarily private practice experiences may better serve residents with such aspirations.

Residency Program Directors and their addresses are listed in the AAMC Residency Handbook (the green book). These programs can be contacted by phone or mail for application packets. The Electronic Residency Application Service is being increasingly used by PM&R training programs. This system uses the Internet for transmission of the application form, letters of recommendation, and transcripts. Applicants will be charged a fee, depending on the number of programs to which they apply. It is anticipated that this will significantly simplify the application process for medical students and residency programs because of its unified format.

Potential applicants are encouraged to contact residency program directors as well as current and former residents of programs in which they are interested.

4. To How Many Programs Should I Apply? The number of programs a student chooses for application will probably be limited by individual time and budgetary constraints. It is best to determine the critical characteristics of desired programs initially. For instance, geographic location, Board pass rates, research support, ambulatory patient exposure, and resident/faculty ratio may be important preferences. Once these elements are clarified, medical students are generally advised to choose no more than seven to ten programs. It is more important to obtain an accurate, in-depth portrait of each site than superficial impressions of several programs.

5. Do All Residency Programs Participate in the National Residency Matching Program? Should I Accept a Program Outside of the Match or Wait and Go Through the National Residency Matching Program? At present, more than 95% of programs are in the match. This includes both the 4-yr combined and the 3-yr programs. Three-year programs in the match require that the student accept a position outside the match at a separate PGY1 year. Accepting a position outside the match precludes application within the match. Conversely, if a student is awarded a position within the match, he or she is legally bound to that program and cannot choose to accept a position outside of the match. Because the vast majority of programs participate in the National Residency Matching Program, it is generally best to stay within the system.

6. When Should I Take an Elective in PM&R? Where Should I Take an Elective? An elective is a valuable means of gaining practical experience about the considered field and the student’s aptitude for it. It is best to take an elective early in the fourth year, before the residency application process is well underway.

In a survey of PM&R residency program directors, good performance on an elective was considered favorably when hiring resident applicants. It is advisable to take the elective in an area of PM&R that is of the
most interest to the student. Taking an elective in a program that the stu-
dent is considering can yield valuable
information not always obtainable
during the typical application pro-
cess. Such an experience also gives
the faculty at that program an oppor-
tunity to become more knowledge-
able about the applicant.

7. What Curriculum Choices or Elec-
tives Will Better Prepare Me for a
PM&R Residency? The medical stu-
dent’s primary obligation is to en-
hance and broaden his or her own
clinical experience. However, elec-
tives in related fields will provide an
understanding and appreciation of
problems commonly found in reha-
bilitation patients. Electives in neu-
rology, neurosurgery, rheumatology,
urology, orthopedics, and geriatrics
are very helpful.

8. What Is the Need for “Double Cer-
tifications” in Pediatrics, Internal
Medicine, or Neurology? Should
These Residencies Be Completed Be-
fore PM&R? The American Board of
Physical Medicine and Rehabilitation
has agreements with the Boards of
Pediatrics, Internal Medicine, Neu-
rology, and Psychiatry, in which a
5-yr combined training program
leads to dual certifications in PM&R
and one of the affiliated specialties.
Not all training programs offer this
option. If the medical student
chooses to pursue separate residen-
cies, the PM&R residency is usually
second. Candidates should be aware
that changes in reimbursement from
the federal government to hospitals
for residency training is making ap-
plicants for multiple residencies
more costly to hospitals and their
training programs. This is caused by
salary increases over additional years
of residency training. Therefore, such
candidates may actually be less at-
tractive to training programs.

Double board certifications in
PM&R and a primary care field such
as pediatrics or internal medicine
may make a candidate more desirable
in a private practice setting as a re-
sult of the current emphasis toward
primary care. Fellowship training is
probably more valuable for an ac-
ademic career than dual board certifi-
cations, depending on the research
skills obtained during the fellowship
program. A possible exception is do-
uble board certifications in pediatrics
and PM&R. This is considered by
many authorities to be a necessity for
an academic career in pediatric
rehabilitation.

Future of Physiatry

1. How Much Demand Is There or
Will There Be for Physiatrists? To
better predict the future of physiatry,
a comprehensive study of the field was
commissioned by the American Acad-
emy of Physical Medicine and Rehabil-
tation, American Board of Physical
Medicine and Rehabilitation, Associa-
tion of Academic Physiatrists, and
American Physiatric Education Coun-
cil. 2, 3 Lewin-VHI, a healthcare re-
search and consulting firm, was re-
tained to examine the anticipated
number of and demand for physiatrists
in the next century. The study, pub-
hished in 1995 and updated in 1998,
contains predictions based on certain
assumptions about the numbers of res-
idents in training, managed care mar-
ket expansion, and the level of aware-
ness in the healthcare market of the
physiatrist’s role and their value in pa-

tient care. The study postulated that
should the numbers of residents in
training remain at or below 1994–1995
levels, should managed care achieve
“moderate” market level expansion,
and should the profession be successful
in educating the healthcare market of
their value, a significant excess is un-
likely to emerge for another 20 yr from
the date of study publication.

2. Will I Have Difficulty Finding a
Job? Some areas of the country are
more densely populated by physia-
trists, particularly the northeast and

Great Lake states. Because PM&R re-
 mains largely a referral specialty,
large population bases are better able
to support this practice.

Since 1995, the numbers of ap-
plicants for specialty fields have de-
clined. It seems likely that the num-
bers of residents in training will be
lower than previously anticipated. In
the meantime, the numbers of people
with disabilities continue to increase
secondary to the aging American
population and the increased survival
rates from previously fatal accidental
injuries and illnesses.

Key among the Lewin-VHI study
recommendations was the challenge
to educate third-party payors, case
managers, and referring physicians
about the value and cost-effectiveness
of the role of the physiatrist in pa-

tient care. One way to raise the pro-

cfile of the specialty, an activity essen-
tial for the continued demand for
rehabilitation expertise, is to attract
excellent resident candidates who
will enhance the future of the field
through their practice of PM&R.

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