Integration of Physical Medicine and Rehabilitation into the Undergraduate Medical Curriculum

The incorporation of Physical medicine and Rehabilitation (PM&R) concepts into the medical student curriculum has significant benefits for medical students, patients, and the field itself. Expected benefits and possible methods for integrating medical student education into the activities of the academic Physical Medicine and Rehabilitation Medicine Department are the focus of this discussion.

BENEFITS TO THE MEDICAL SCHOOL AND MEDICAL STUDENT

Students benefit from early exposure to PM&R in several ways. The most overt is the awareness of PM&R as a potential career option for specialty training. The benefits, however, have significantly broader implications.

Medical Care of the Disabled

The student will be responsible for the care of patients with disabilities regardless of what field she/he chooses to enter. As stated by the International Federation of Physical Medicine and Rehabilitation in the white book (3rd Edition), "patients treated by virtually all specialties have rehabilitation needs." As there are advances in medicine, people may survive what had formerly been a lethal malady but are now left to struggle on with impairment and disability. The student can learn from PM&R the concepts of impairment, disability, and handicap. Experience in PM&R teaches the student to include functional aspects into the history, physical examination, assessment, and management plan. Physical examination skills such as the musculoskeletal examination and neurological examination are developed during rotation. The student will come to know the particular medical complications associated with certain diagnoses, such as heterotopic ossification or neurogenic bladder dysfunction. Issues of preventive care for the physically impaired patient and full reintegration into society are also foci of care learned during PM&R rotation. These skills and knowledge can be applied to patient populations regardless of the student’s ultimate career path. This becomes increasingly important with the emphasis and family physicians will need to have both the factual knowledge base and the hands-on skills to deal with a wide range of impairments and disabilities.

The Council on Medical Education of the American Medical Association advocates that medical students have broad exposure to various areas of clinical medicine including those outside that of any projected area of specialization, in order to appreciate the unique contributions of other specialties vis-à-vis patient care.
PM&R assists the student in developing a framework in which to place the patient’s medical needs in the context of the whole person. The focus is deliberate, as in evaluating the home architecture to check for potential access barriers, consideration of self-care abilities, and development of a plan for vocational and recreational needs. A broader implication exists—incorporation of the patient’s beliefs and values in the design of treatment plans in all aspects of medicine. The student can take from the PM&R rotation that the patient’s medical needs don’t exist in a vacuum.

**Interdisciplinary Medical Treatment**

PM&R offers a unique philosophical approach to medical student training. The interdisciplinary premise is that the treatment team is an essential component in the delivery system of care. In parallel there are both formal and informal teams which exist in other branches of medicine. Through PM&R, the team concept and process can be explicitly discussed, with application for all ages from pediatrics to geriatrics. This will provide the student a framework for generalization. The underlying principles of team leadership and participation are implicit in all fields of medicine. This includes not only the well-recognized trauma surgery team, but also the rural family practitioner’s office.

**Continuum of Care**

The current practice of medicine requires an emphasis on treating the individual through multiple stages and multiple settings, from the acute inpatient unit to the home-care environment. Effective, cost-contained rehabilitation mandates this continuum of care. It is of benefit to the medical student to have exposure to rehabilitation, so that she/he will have this model upon which to base appropriate decisions for patient care.

**BENEFITS TO THE PATIENT**

The benefits of patients of increased medical student exposure to PM&R are that of having an increased pool of physicians in the community with training to deal with the range of impairments and disabilities, when the students enter practice. As the students move through their various clinical rotations, they will be able to better serve the disabled patients whom they encounter during the years of training. With improved team management skills, patient’s care may benefit as students learn that providing optimal patient care is not the task of an individual working in isolation, but many individuals aiming at a shared goal.

**BENEFITS TO THE FIELD OF PM&R**

The benefits to the field of increased medical student exposure to PM&R are multiple. Through increased awareness of the specialty and better understanding of what PM&R can offer, one can anticipate better utilization of PM&R as a resource. It is hoped that introduction to PM&R will assist the recruitment of strong medical students to the field in two ways – by more widespread dissemination of knowledge of the field in different medical schools and by more early exposure to the field so that the student can decide whether to pursue further training in the field.
BENEFITS TO THE INDIVIDUAL PM&R DEPARTMENT

The individual PM&R department can benefit from increased visibility and increased participation in the critical mission of the medical school, training medical students. Strengthening the base of support for a department enhances resident training and collaboration of departments of the medical school. An undergraduate PM&R curriculum does increase recruitment to the PM&R residency within one’s own medical school, according to one study. Increased research opportunities for faculty and residents are a possibility when they interact with faculty in other fields over issues of student education. Resident training is additionally enhanced by providing a forum for residents to act as role models and teachers for medical students.

Of necessity, there are a variety of ways ion which the education of medical students can be incorporated into the teaching mission of the individual PM&R department. Changes in emphasis in undergraduate curriculum are imminent in light of the health care reform movement. Ideally, the opportunity will continue to exist for PM&R to offer formal clerkships, with both lectures and hands on components, as part of the curriculum. More likely, there will be a need for creative means of incorporation with the specialty into the existing medical student curriculum. Lectures can be a part of a defined PM&R series or incorporated into a preexisting series. For example, a discussion of traumatic brain injury sequelae could be integrated into a neurosurgery series. Disability issues could be included in a bioethics course. A one day program, consisting of morning lectures and afternoon rotating stations, has been developed as innovative approach at one institution. Most programs in a 1980 survey did report using a combination of methods including lecture, case presentations, conferences, demonstrations and clerkships. In schools that offer program-based learning, physiatrists can be involved both as preceptors and participants in case design in order to include discussion of functional issues and the development of cases that cover PM&R topics.

SUMMARY

The incorporation of PM&R into the medical student curriculum thus provides benefits at multiple levels: to patients, to medical students, and to practitioners already in the field. The knowledge about PM&R gained by the medical student is spread to disciplines outside of PM&R through the learning of principles and specific factual data that can be applicable for practitioners caring for a variety of patients. It is the position of this organization that each academic department work to integrate education in PM&R into the medical school curriculum.

This White Paper was Developed by the Undergraduate Committee of the Association of Academic Physiatrists Workgroup: Rina M. Bloch, MD (Chairperson), Donna J. Blake, MD, and Irma G. Fiedler, PhD