

Inadequacies in Musculoskeletal Medicine in Medical School Education

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December 2003

There is a problem with musculoskeletal medicine in the United States. Currently musculoskeletal conditions cost our society an estimated \$300 billion every year (\$254 billion in the year 2000, \$215 billion in the year 1999).¹ One out of every three Americans reports a musculoskeletal impairment. Over 28 million Americans incur a musculoskeletal injury every year. More than half of all injuries are to the musculoskeletal system. Almost 70 million Americans have some form of arthritis. Each year, musculoskeletal conditions/injuries account for over 100 million visits to physicians offices, over 10 million hospital out-patient visits, 25 million emergency department visits, 3 million hospitalizations, and 7.5 million hospital procedures.² This does not include visits to chiropractors, massage therapists and non-traditional healthcare practitioners. Many patients have been disenchanted with their care by traditional physicians and feel that practitioners who offer alternative treatments such as chiropractors can more effectively deal with their musculoskeletal disabilities.^{1,3} Musculoskeletal medicine is not taught adequately in American medical schools and the predictable consequences are seen. There is a lack of mastery of musculoskeletal medicine and a lack of confidence by field practitioners in this area.¹⁻⁶

As far back as 1967, allopathic medicine had recognized that there was shortfall in education relative to musculoskeletal care. John Wilson, Jr., M.D. in the Chairman's Address before the American Medical Association stated that, "The teaching in our medical schools of the etiology, natural history, and treatment of low back pain is inconsistent and less than minimal. The student may or may not have heard a lecture on this subject. . ." Dr. Wilson further states, "A survey of orthopedic residents graduating from an approved program in a large urban area disclosed several alarming deficiencies in their training. They know very little about the natural history of degenerative disk disease. . ."⁴ Within the past five years there have been more studies to substantiate this dilemma. In a investigation performed at the University of Pennsylvania School of Medicine, ". . . 82% of medical school graduates failed a valid musculoskeletal competency examination. We therefore believe that medical school preparation in musculoskeletal medicine is inadequate." In this study orthopedic chairpersons set the criterion. The medical school graduates came from 37 different medical schools. It was found that the duration of the residents' preparation in musculoskeletal education was inadequate. For the study population the duration of instruction in orthopedics was only 2.1 weeks. And 33% of the medical school graduates had no rotations in orthopedic surgery. Some of the residents tested had graduated from some of the country's best medical schools and still did poorly on a basic competency examination in musculoskeletal medicine. Orthopedic surgeons believe they are the custodians of musculoskeletal knowledge but they render only a small proportion of musculoskeletal health care probably as a result of managed care.⁵

In another study three medical doctors found some alarming answers to questions posed to physicians who are entering their residencies. The object was to learn what the

physicians thought of their preparation for diagnosing and treating musculoskeletal problems and to assess how adequate they felt in handling musculoskeletal problems compared with handling conditions of other body systems. Many allopathic physicians felt poorly or very poorly prepared in their training to conduct a musculoskeletal examination. It was determined that “. . .medical students entering their residencies are ill prepared to deal with the more common musculoskeletal conditions.”¹

In 2002 it became commonplace in medicine to say that musculoskeletal competence in general medical practitioners is a common deficiency. At the School of Medicine in Adelaide, Australia it has been again stated, “Musculoskeletal knowledge among recent medical graduates has again been found wanting. The need for further musculoskeletal education has been established. Implementing strategies to correct the deficiency has yet to be addressed.” In this study a test was given and scored by orthopedic surgeons. The study found that the Australian interns and general practitioners were just as deficient as their American counterparts.³

The most recent study performed in 2002 again at the University of Pennsylvania School of Medicine, another basic competency examination in musculoskeletal medicine was performed. “78% of medical school graduates failed to demonstrate basic competency on the examination according to the criterion set by internal medicine program directors. It is therefore reasonable to conclude that medical school preparation in musculoskeletal medicine is inadequate.” The difference in this test and one of the past studies is that this test was set up by internal medicine program directors compared to orthopedic program directors. Essentially the results were the same. It was also determined that, “One or two weeks, representing less than two percent of the entire typical curriculum is probably insufficient. . .” One of the conclusions in the study was that, “Students must master the topic of musculoskeletal medicine. The results of these studies suggest that they have not.”⁶

The American Medical Association during their in 2003 created a resolution relative to musculoskeletal care in graduate medical education. In their resolution they stated, “Whereas, according to a recent study 82% of medical school graduates examined failed to demonstrate basic competency in musculoskeletal medicine; and whereas, a follow up study reported that according to the standards suggested by the program directors of internal medicine residency departments, a large majority of the examinees once again failed to demonstrate basic competency in musculoskeletal medicine; and whereas, it is therefore reasonable to conclude that medical school preparation in musculoskeletal medicine is inadequate; therefore be it resolved that the American Medical Association strongly urge our medical schools to formerly re-evaluate the musculoskeletal curriculum. . .to urge our medical schools to make changes that ensure medical school students have the appropriate education and training in musculoskeletal care. . .”⁷ The perplexity is obvious the solution is not.

Is there a solution to this predicament? One of the leaders on curricular reform in musculoskeletal medicine is Dr. Joseph Bernstein, M.D. of the University of Pennsylvania. He was involved in two of the aforementioned studies. According to Dr.

Bernstein, “It would be impractical and wrong for a single group to mandate a universal solution. Indeed, a broad based coalition representing all interactive disciplines and departments will be necessary.” Unfortunately, the intention is only for allopaths and osteopaths to be involved in the broad based coalition. Other practitioners such as chiropractors, physical therapists and massage therapists do most of the patient work of all the healthcare practitioners in musculoskeletal medicine. There are a lot of items standing in the way of curricular reform such as the amount of time that medical students have in their current curriculum, more funding for teachers and instructional materials, the politics of medical school power structures, and the lack of enthusiasm on behalf of those who don’t care to give up field practice to teach academics. Also, orthopedic surgeons don’t want to give up their high salaries as surgeons to teach in a classroom. Those interested in reforming curriculum have to define the topics and create the teaching materials. There would have to be an integration of musculoskeletal topics into the existing curriculum as well as adding musculoskeletal medicine to the current curriculum.⁸ At least one study has shown that teaching primary care doctors in limited manual therapy is not useful.¹¹ It is probably a daunting task given the competition between various groups like internists, osteopaths and surgeons. It is a time of necessity for improved healthcare and with the everlasting and consistent failures in musculoskeletal medicine, more patients will exhibit common sense and seek alternative care for relief.

Multiple studies done by David Eisenberg, M.D. et al have consistently shown that more visits are made to providers of non-medical therapy than to all U.S. primary care physicians and a majority of the conditions for the patients were musculoskeletal. Furthermore, more money is spent out-of-pocket on unconventional therapies than is spent out-of-pocket annually for all hospitalizations in the United States. The same study show that of the top alternative therapies, musculoskeletal healthcare practitioners, specifically chiropractors, acupuncturists, and massage therapists collectively were visited most frequently.^{9, 10} Of all alternative therapists studied, only chiropractic is licensed in all 50 states in this country. With a continued increase in the number of visits to alternative healthcare practitioners versus visits to all primary care physicians, perhaps terms like “mainstream, unconventional, and alternative” should be redefined. Patients in the United States with both their presence and payments are finding relief from musculoskeletal problems in the offices of Doctors of Chiropractic.

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