



# Pediatric Rheumatology Online Journal

September - October

COMMENTARY

NOTES FROM THE PEANUT GALLERY OF PEDIATRIC RHEUMATOLOGY

## **Medical Student Education in Pediatric Rheumatology**

“...although the diseases that kill attract much of the public's attention, musculoskeletal or rheumatic diseases are the major cause of morbidity throughout the world, having a substantial influence on health and quality of life, and inflicting an enormous burden on health systems...rheumatic diseases include more than 150 different conditions and syndromes with the common denominator of pain and inflammation.”

World Health Organization 2003

Let us put a question to you: How important is educating medical students in pediatric rheumatology in the US and in other countries? Is it very important, of moderate importance, or of low importance? For medical students in each country, is pediatric rheumatology a subspecialty too obscure, too tertiary to be included in the student curriculum? Is it all about rare diseases like JIA and SLE and scleroderma? From our experience, some physicians think so. Do some medical student pediatric clerkship directors in the US believe that pediatric rheumatology is low priority for their medical students? Definitely. Not all, but some. You can see this not by their stated assessment of how important pediatric rheumatology is for students but more by the amount of exposure the medical students get. We've seen visiting professorships in our specialty in which the visiting professors are scheduled to spend time with residents and give lectures, but spend no special time with students. Apparently our subject matter



# Pediatric Rheumatology Online Journal

September - October

is often considered too subspecialized and not central to what a student needs to know about pediatrics.

You may indeed question whether medical school is the right place to educate physicians about musculoskeletal and rheumatic diseases in children as pediatric residency may be better. No doubt it is crucial to educate pediatric residents about our area. We need to have them spend time in our clinics and give them talks. We need to teach them about the musculoskeletal history, examination, labs and imaging, assessment and differential diagnosis, and our treatment approaches from our medical, non-surgical perspective. But even this objective is not always easy to achieve for our residents, especially if we have no opportunity to begin this education during their medical school years.

Consider the North American experience. Our opportunities to teach US pediatric residents about subspecialty knowledge and skills may be decreasing. In the last two years, the eighty hour work week regulation for US residents appears to be resulting in less subspecialty outpatient elective time, making this educational objective even harder to achieve. Despite the focus on outpatient care in the 1990's detailed in reports such as the Future of Pediatric Education II report of 1999, and the drive for generalists to provide a medical home for the complex child with chronic disease, inpatient care is often the new focus in residencies with inpatient months increasing, particularly pediatric intensive care, neonatal intensive care rotations, and non-ICU inpatient time. How do future pediatricians learn about outpatient musculoskeletal and rheumatic problems if they are spending much of their time in inpatient care and in subspecialties (NICU, PICU, inpatient pediatrics) that they are not going to have to utilize often in primary care? How does a primary care pediatrician provide an excellent



# Pediatric Rheumatology Online Journal

September - October

outpatient medical home for a complex chronically ill child when the only time he/she sees him/her in training is in a transient, episodic inpatient experience and rarely as an outpatient? They don't.

In many pediatric residency programs, we do not get time to teach the residents as those subspecialties that are more outpatient than inpatient are at a distinct educational disadvantage. Residents may never see much of those subspecialists and conclude that their subject matter is of relative less importance to surviving their residency and in their education. They may not be able to focus on the knowledge and skills they will need in primary care nor appreciate that allergy, dermatology, orthopedics, outpatient infectious disease, and rheumatology may be as important as pulmonary, cardiology, PICU, NICU, and inpatient ID. We recently asked a primary care pediatrician whose office one of us rents 3 days a month to describe how he spends his time: 10% well baby nursery, 20% development/adolescent issues, 30% school physicals, 20% outpatient infectious disease, and 20% divided between other children with many different subspecialty complaints including musculoskeletal problems (5%). No patients of their 3000 child practice in the last year were admitted to the PICU and only two were admitted as pediatric inpatients. So there seems to be a disconnect in some medical centers and training programs in the US between what they are exposed to in their residency and what they need in the real world of the generalist in the US.

Is pediatric rheumatology all about a 16 year old lupus patient with severe cutaneous vasculitis, renal disease, depression, and low quality of life? We know it's not. But that may be what a pediatric resident may conclude after taking care of our seriously ill inpatients and never going to our clinics. Also, the powers that



# Pediatric Rheumatology Online Journal

September - October

be in pediatric departments are often from the revenue-generating and procedure-focused subspecialties - PICU, NICU, cardiology, molecular biology, and others. What do they know about our world? Not much - maybe sick lupus patients, inpatient consults. Pediatric residency programs that see their mission as educating mostly general pediatricians for rural areas and in developing countries may also set a low priority for rheumatology. Again, the perception is that we take care of unusual problems only, isn't that right? So limiting our educational efforts to teaching pediatric residents has its drawbacks. Optimal teaching opportunities are often lacking.

**We would suggest to you that we have to start in medical schools.** Succeed there and with time it will make its way up to residencies. We have allies. Internist rheumatologists, physiatrists, sports medicine specialists, orthopedists, and neurologists may also see a deficiency in musculoskeletal education in medical school curricula. Together within each medical school we can work to develop a coordinated musculoskeletal curriculum. In the US it is also coming from top down as the American Association of Medical Colleges is issuing a report soon endorsing a more thorough and multidisciplinary education in musculoskeletal problems. Some medical schools have started this effort. These efforts include multidisciplinary courses, patient partner programs, and structured clinical instruction modules in musculoskeletal medicine (see references).

We are evidence-based on this issue. In various surveys, 15-30% of patient visits of patient visits to family practitioners are for a primary musculoskeletal complaint. In pediatrics, 10-15% of visits may involve a primary or secondary musculoskeletal complaint. Then why is our musculoskeletal



# Pediatric Rheumatology Online Journal

September - October

education low priority? It may be partly because our diseases are often chronic and affect quality of life more than threaten life itself. They fly beneath the radar and suffer from the Rodney Dangerfield problem: No respect. Knowledge of the lay public is lacking. Osteoarthritis dominates and overshadows (Everyone gets arthritis, right? Nothing you can do! Children don't get arthritis, only old people). Changing old beliefs and misconceptions takes time - start with medical schools, then residencies, then the public.

As part of an educational project, we have surveyed pediatric medical school clerkship directors in the US and Canada using an online questionnaire. Out of 108 medical school clerkship directors, 53 answered the survey. The results do suggest that we can greatly improve our participation in pediatric education programs for medical students.

## **RESULTS:**

- A) Does your medical school have a pediatric rheumatologist (PR)?  
RESULTS: 39/53 medical schools do (74%); 63 pediatric rheumatologists total, 10 part-time, 53 full time; mean of 1.8 pediatric rheumatologists per medical school that have at least one PR.
- B) Does a pediatric rheumatologist from another institution provide your pediatric rheumatology services? RESULT: 4/47 institutions (9%)
- C) Are there other faculty members at your institution who provide the care for your pediatric rheumatology patients? RESULT: 9/53 institutions (17%)
- D) Is other medical school faculty involved in teaching pediatric rheumatology? RESULT: 11/53 medical schools (21%)



# Pediatric Rheumatology Online Journal

## September - October

- E) Does a pediatric rheumatologist have a chance to teach at morning report, noon conferences, and Grand Rounds? RESULT: 35/53 (66%)
- F) Does a pediatric rheumatologist provide a lecture to medical students during their pediatric clerkship? RESULT: **12/53 (23%)**
- G) Do medical students routinely rotate through pediatric rheumatology clinics? RESULT: **14/52 (27%)**
- H) Can medical students at your institution take a pediatric rheumatology elective? RESULT: **28/53 (53%)**
- I) Has a visiting professor in pediatric rheumatology been at your institution? RESULT: 24/44 (55%)
- J) How would you rate the importance of teaching rheumatology to medical students during their pediatric clerkship?  
RESULT: Very high \_\_0\_\_ High \_\_11\_\_ Moderate \_\_21\_\_  
Low \_\_16\_\_ Very low \_\_0\_\_

The point of this survey is an effort to determine how much opportunity we, as pediatric rheumatologists, currently have to teach medical students. The survey suggests that we get a lecture in the student rotations only in  $\frac{1}{4}$  of the medical schools and have a student in our clinics in only  $\frac{1}{4}$  of the medical schools. We do better in Grand Rounds and core curriculum lectures, but these exposures for the entire group of medical students is probably small and most attendees are at the resident level. In the 14 medical schools without a pediatric rheumatologist, no one teaches medical students about our problems in student lectures or exposure in Grand Rounds, and resident conferences to our topics is unusual at best.



# Pediatric Rheumatology Online Journal

September - October

If we want to improve education in PR, we must improve the above data. It is obvious that we have to keep working to get a PR in every medical school. However, in addition, we would suggest that we also are not maximizing our educational opportunities in the medical schools in which we now teach.. In some medical schools with a pediatric rheumatologist, a PR does not give a student lecture. In many medical schools with PR's, students never rotate through a PR clinic. What are the students missing? Is it just exposure to unusual diseases like JIA? SLE? Yes, but that's not as important as missing the chance to learn the musculoskeletal and joint exam.

**So we believe that we must market ourselves within our medical schools as the best pediatricians to teach students the musculoskeletal and joint exam.** We are better at it than orthopedists, sports medicine doctors, physiatrists, neurologists, and general pediatricians. No one can teach these important skills and discuss the differential of musculoskeletal pain in children from the mechanical, inflammatory, infectious, and rheumatic perspective better than us. No one. We live it everyday in our clinics. So let us challenge ourselves to increase our contribution to teaching students during their pediatric rotations. We need to tell our clerkship directors of the importance of teaching students, through formal lectures and hands-on clinical experience, how to evaluate a child with musculoskeletal problems. Lobby them and convince them that this is a basic pediatric examination skill and knowledge that a student should acquire before graduation from medical school. If there is an existing multidisciplinary course on musculoskeletal problems for medical students in the medical school, we should make ourselves a part of it. Emphasize the



# Pediatric Rheumatology Online Journal

September - October

importance of having a portion of that curriculum on children's musculoskeletal problems. If there isn't one, we must lobby for one.

In summary, if we start in medical schools, we believe that gradually we can achieve success in educating pediatric residents, pediatricians and the public as well about PR and musculoskeletal problems in children. It will take time but it can be done. One day when we introduce ourselves as pediatric rheumatologists, we hope that other doctors and professionals and the lay public will know that kids get arthritis and how expert we are as pediatric rheumatologists at diagnosing and treating these problems.

Charles H. Spencer

Linda Wagner-Weiner

Chicago

## REFERENCES:

1. Freedman KB, Bernstein J. The adequacy of medical school education in musculoskeletal education. 1998 J Bone Joint Surg 80-A (10): 1421-1427
2. Smith MD, Walker JG, Schultz D, Ash J, Roberts-Thomson P, Shanahan R, Ahern MJ. Teaching clinical skills in musculoskeletal medicine: the use of structured clinical instruction modules. 2002 J Rheumatol 29(11): 2967
3. DiCaprio MR, Covey A, and Bernstein J. Current requirements for musculoskeletal medicine in American medical schools. 2003 Jour Bone Joint Surg 85-A (3): 565-567



# Pediatric Rheumatology Online Journal

## September - October

4. Olm-Shipman C, Reed V, Christian JG. Teaching children about health, part II: the effect of an academic-community partnership on medical students' communication skills. 2003 *Educ Health* 16(3):339-347
5. Saleh K, Messner R, Axtell S, Harris I, Mahowald M. Development and evaluation of an integrated musculoskeletal disease course for medical students..*Jour Bone Joint Surg* 2004 86-A (8): 1653-1657