

**Ferrari ND.**

**Letter to the editor: Hybridization of the primary care disciplines.**

**JAMA. 1986;256:2345.**

**Pub Med ID: 3773139**

*Letter to the editor commenting on an article which proposed combined FP-IM residency as a training option. It weighs MP and FP with emphasis on more pediatric training in MP*

**Greganti MA; Schuster BL.**

**Two combined residency programs in internal medicine and pediatrics.**

**J Med Educ. 1986;61:883-92.**

**Pub Med ID: 3772964**

*The paper discusses the history of development of two of the earliest combined programs in Internal Medicine and Pediatrics. It documents the program curriculum and the career choices of the early graduates. At the time of publication, it presented the outcomes of the greatest number of resident completers of combined programs.*

**Peterson SE, Goldenberg K.**

**A combined internal medicine and pediatrics residency program.**

**J Med Educ. 1986;61:688-90.**

**Pub Med ID: 3735374**

*An article describing the initiation of a MedPeds residency at Wright State University.*

**Peterson SE, Goldenberg K.**

**Survey of combined residency programs in internal medicine and pediatrics on curricula.**

**J Med Educ. 1987;62:732-37.**

**Pub Med ID: 3625737**

*This survey of 83% of the nation's med/peds programs in 1986 reviewed differences in curricula amongst the different programs. Outpatient clinics were a majority of the curriculum, with only 26% having a combined clinic at that time. The authors felt that a separate med/peds RRC, a combined med/peds clinic, and more resident exposure to the administrative aspects of practice (billing, insurance-claims processing, etc.) would be beneficial to med/peds training.*

**Schumway JM, Ferrari ND.**

**Survey of medicine/pediatrics residency training programs.**

**J Gen Intern Med. 1987;2:377-80.**

**Pub Med ID: 3694296**

*This survey of 57 program directors of med/peds training programs found that most programs at that time had residents switch departments every 6 months, and residents were rated by the categorical program directors to be equal or above the competency level of the categorical medicine and pediatrics residents. 40 out of 45 graduates passed the medicine boards, and 48 out of 49 passed the pediatrics boards, which were written and oral at that time. Follow-up as to what some of the graduates were practicing is also reported in the article.*

**Friedman AD, Rolfe UT.**

**Letters to the editor: Medicine-pediatrics programs.**

**J Med Educ. 1987;62:1014.**

**Pub Med ID: 3681933**

*Letter to the editor summarizing a survey sent to MedPeds PD's in 1986-7 about attrition from MP programs. It had a 76% response rate. Results were that 2/3 of graduates entered primary care, 1/3 entered fellowship. There was an overall 1/3 attrition rate, with the residents opting for IM or Peds.*

**Graettinger JS.**

**Editorial. The 1988 national resident matching program.**

**Ann Intern Med. 1988;108:761-62.**

**Pub Med ID: 3358577**

*This is a review of the 1988 resident match numbers in categorical internal medicine, med-peds, primary care tracks, and preliminary positions. As a whole, the absolute number of fourth year medical students matching in internal medicine careers increased, but this increase came from only the primary care and preliminary positions. The percentage of students matching in all IM residency programs decreased overall (67.6 to 66.6%). Compared to 1987, Internal Medicine-Pediatric programs increased in number from 70 to 76 (spots from 206 to 232) with a concomitant decrease in filling by US medical students from 73% to 62%. Including all who matched that year, 69% of med-peds spots filled, down from 81% in 1987.*

**Martin TJ.**

**Attrition rates in internal medicine-pediatric residency programs.**

**J Med Educ. 1988; 63:925.**

*Survey of the 75 Med-Peds programs at the time in 1987-8. 55 responded. Documents the climb in program numbers and intern positions in the 1980's. It also documents a 20% attrition rate from the programs, 31% going to IM, 40% to Peds, and 6% to another Med-Peds program.*

**Siegel DM, Parker RM, Gillman MW, et al.**

**Demographic features and attitudes of program directors of combined internal medicine and pediatrics residencies.**

**AJDC. 1988; 142:1104-08.**

**Pub Med ID: 3177308**

*Survey of the 55 program directors at the time. Documented a primary affiliation with IM in 60% of the programs and some demographics of the program directors. 85% male, mean age 44, average time in job 2.5 years, 58% fellowship trained. Also asked why med students chose med-peds and why Med-Peds had become so popular. Main answers from the PD perspective were 1) alternative to FM, 2) In-Depth training 3) Care for patients of all ages. Also asked if they saw a need for concrete guidelines for MP curricula, 75% said yes, 25% said no.*

**Ferrari ND, Shumway JM.**

**Combined internal medicine/pediatric residency training programs.**

**Pediatrics. 1989;84:94-7.**

**Pub Med ID: 2740182**

*Mailed survey to MP PD's of the 80 programs in 1987-8. 84% response rate. Main outcomes were the anatomy, attrition, board passage rates, and curricular structure of the*

*programs. There was a wide range of structures found in this pre-ABIM/ABP guideline era survey.*

**Goldenberg K, Barnes HV, Kogut MD, et al.**

**A combined primary care residency in internal medicine and pediatrics.**

**Academic Med. 1989;64:519-24.**

**Pub Med ID: 2765063**

*This report reviews the development and evaluation of the Wright State University primary care residency program in internal medicine and pediatrics. Traditional internal medicine and pediatric programs were often used as a standard of comparison. The overall goals of the combined program including “emphasizing experiences in outpatient versus inpatient care, developing an ambulatory practice to help support resident salaries, adequately preparing residents to take the board examination in both disciplines, and providing a comprehensive primary care curriculum”. At the time of publication, the program had graduated one resident and had eight current residents enrolled.*

**Middelkamp JN.**

**Commentaries: Combined medicine/pediatrics training programs.**

**Pediatrics. 1989;84:181-2.**

**Pub Med ID: 2740172**

*Med-peds residency programs have greatly expanded since the first program in 1967. In fact they have expanded from 8 positions in 1980 to 232 positions in 1988. With the significant increase in training programs, the American Board of Pediatrics and the American Board of Internal Medicine decided it was important to establish educational guidelines to help assist the local faculty of individual programs in maintaining a well rounded residency experience. These guidelines are published in this issue of Pediatrics. The Boards of Pediatrics and Internal Medicine are now becoming interested in following the graduates from med-peds residency programs to see the ultimate careers that they choose. Some especially intriguing data to seek would include the percentage of med-peds physicians who entered private practice vs. academic medicine and the percentage entering primary care vs. subspecialties. It would also be valuable to see how many med-peds trained physicians ultimately choose to limit their scope of practice to only pediatrics or only medicine. The boards will continue to support this research and report on the data as it becomes available.*

**Schubiner H, Mullan P.**

**Medical student interest in combined internal medicine-pediatrics.**

**J Gen Intern Med. 1990;5:225-8.**

**Pub Med ID: 2341922**

*This questionnaire from 2 university-based mid-western medical schools represents the opinions of 300 medical students regarding their perception of a career in Internal Medicine/Pediatrics. When comparing internal medicine, internal medicine/pediatrics, and family medicine, these students perceived internal medicine and combined internal medicine/pediatrics to be more intellectually stimulating, more likely to incorporate research, and more likely to provide opportunities to attain a position of leadership, whereas family medicine was perceived to be more likely to provide an opportunity to serve others and work relatively free of supervision. Of the students interested in primary care, the majority ranked internal medicine, pediatrics, and family medicine as their first career choice, with internal medicine/pediatrics ranking second or third.*

**Biro FM, Gillman MW, Parker RM, et al.**  
**Surveying graduates of combined internal medicine-pediatrics residency programs.**  
**Academic Med. 1990; 65:266-71.**

**Pub Med ID: 2334509**

*Graduates of all U.S. combined internal medicine-pediatrics residency programs were surveyed in 1987 regarding a variety of demographic information about their residencies and current practices, the residency curricula they had followed for both specialties, and recommendations for modifications in training. The 71 responding graduates (from a total of 112) reported patient care as their major involvement (mean of 42.9 hours per week), with a majority (83%) seeing patients in both pediatric and adult age groups. Most were involved in primary care only (64%). The graduates reported that during both pediatrics and internal medicine training, they had had too many inpatient and intensive care rotations and too few elective and ambulatory rotations. The most important subspecialty rotations in internal medicine were considered to be cardiology, dermatology, and pulmonary medicine; and in pediatrics, infectious disease, cardiology, and adolescent medicine. The graduates recommended more outpatient subspecialty rotations, ambulatory rotations in medicine and pediatrics, and a combined medicine-pediatrics continuity clinic.*

**Sorum P.**

**Evaluating whether a combined internal medicine-pediatrics practice was successful.**  
**Academic Med. 1991; 66:353-8.**

**Pub Med ID: 2069656**

*Questionnaire of 1000 patients at a mainly private, suburban faculty-resident teaching practice north of Albany, NY. 50% return rate. Demographics of the practice were a 50/50 adult/child split, but most of the visits were kids under 2 (41%), and most of the patients were less than 2 or between 18-39 years old. The authors comment that these are the ages people are when looking for doctors.*

**Lee MW.**

**Weighing the benefits of combined residency programs.**  
**JAMA. 1991;266:1867.**

**Pub Med ID: 1890720**

*This article from the University of Illinois at Urbana-Champaign reviewed the growth of med/peds residency programs and quoted individual med/peds residents and program directors. NRMP statistics regarding proportions of med/peds positions filled in the match were reviewed and compared with other combined residencies. Board pass rates among med/peds residents were compared with those of categorical residents. Finally, attrition rates out of med/peds residency programs were discussed. In 1980, there were 4 med/peds programs, compared with 77 programs in 1990. A total of 99 combined residency programs existed in 1990 (including med/peds, medicine/PM and R, medicine/ER and pediatrics/child psychiatry). Benefits of med/peds training touted in the article included flexibility after training (the ability to practice primary care in both fields and sub specialize in both or either field), and ideal training for the "chronically undecided" student. Residents quoted in the article felt the residency was suited for more "intense" students who desire "greater depth" of training in primary care. Program directors felt there was "disenchantment with family medicine," particularly the impracticality of being trained in OB/GYN and surgery. Some program*

*directors believed that combined programs attract more qualified residents than traditional medicine or pediatrics programs.*

*NRMP and GME statistics demonstrated that 102/280 med/peds positions went unfilled in the 1990 match. First time pass rate for med/peds residents on the internal medicine boards was 90% compared with 74% for categorical medicine residents, and on the pediatric boards was 92-93% compared with 83% for categorical pediatric residents. After residency 2/3 of med/peds graduates practiced both fields. Med/peds resident attrition rate was highest during the switch between departments in the intern year with a rate of 33% in 1986-1987. Residents quoted in the article reported feeling lost between the 2 departments. At the time of the article, it was reported that there were few practicing med/peds role models.*

**Schubiner H, Schuster BL, Moncrease A, Mosca C.**

**The perspectives of current trainees in combined internal medicine-pediatrics: results of a national survey.**

**AJDC. 1993;147:885-889.**

**Pub Med ID: 8352223**

*This nationwide survey of 318 med/peds residents in 1989-1990 from 55 med/peds programs investigated stressors during residency, factors residents deem important in a program, and future plans of med/peds residents. The survey found that resident stress decreases with seniority and with more frequent switches between medicine and pediatrics rotations.*

*Factors that residents considered important in a med/peds program included ambulatory training sites, a specific med/peds coordinator, and affiliation with a university. 64% of residents planned to do primary care of adults and children, 21% planned to do a subspecialty, and 4% planned on working in an emergency room.*

**Biro FM, Siegel DM, Parker RM.**

**A comparison of self-perceived clinical competencies in primary care residency graduates.**

**Pediatric Res. 1993;34:555-9.**

**Pub Med ID: 8284089**

*One hundred seventy-eight graduates from four primary care residency training programs with common hospital sites (medicine/pediatrics, 72; family medicine, 29; pediatrics, 35; and internal medicine, 42) responded to a mailed survey questionnaire regarding distribution of professional time and self-perceived clinical competencies. Most of the internists, family physicians, and internist/pediatricians (MED/PED) were in primary care, and 57% of the pediatricians were subspecialists. Respondents rated each of 24 clinical vignettes as to their level of comfort in managing the patient problems presented. MED/PED and pediatricians responded similarly to all the infant, child, and adolescent cases. Family physicians were less comfortable in managing the complicated neonatal situations but more comfortable with adolescent health care than the MED/PED or pediatricians. MED/PED reported greater comfort than family physicians in complex internal medicine issues, but less than internists in intensive care and geriatric consultation. Significant differences in reported competency existed among these primary care practitioners despite substantially overlapping training backgrounds.*

**Reynolds PP, Giardino A, Onady GM, Siegler EL.**

**Collaboration in the preparation of the generalist physician.**

**J Gen Intern Med. 1994;9:S55-63.**

**Pub Med ID: 8014745**

*This article lists the collaborative efforts among health care professionals and institutions toward addressing potential methods to increase production of generalist physicians. The article highlights methods of collaboration, the concept of a generic generalist physician, and individual specialty approaches to the preparation of the generalist physician*

**Onady GM.**

**The med/peds physician.**

**AMSA Prim Care Quart. 1995;2:1 and 4.**

*A review of the history leading up to the establishment of Med-Peds training, parallels to the evolution of Family Practice, and the role these physicians play in the evolving medical environment. The growth of Med-Peds training programs through the mid-1990s is discussed, and how the Med-Peds trained physician is poised to meet the need of the generic primary care physician.*

**Onady GM.**

**Letters to the editor: Internal medicine and family medicine.**

**Ann Intern Med. 1996;125:525.**

**Pub Med ID: 8779491**

*This letter was a reply regarding a letter Dr. Saultz discussing the collaborative potential internists and family physicians, but neglected to discuss the Med-Peds potential. The letter points out the strengths of Med-Peds and family physicians in collaborative practice.*

**Onady GM.**

**Med/Peds - Three decades of the generic primary care physician.**

**Academic Med. 1996; 71:16-7.**

**Pub Med ID: 9217503**

*A summary update as to the growth of Med-Peds training and the collaborative role of the American Boards of Internal Medicine and American Boards of Pediatrics in creating a training curriculum. This training curriculum is described in an outline format. Career development options that have resulted from this collaborative training are summarized.*

**Onady GM. Med/peds residency training programs.**

**AMSA Prim Care Quart.**

**1996;4:1 and 4.**

*This is a continuation of an AMSA series on Medicine-Pediatrics. This article is focused toward the graduates of Med-Peds training programs and career choices made by these graduates.*

**Edwards A, Tzelepis A, Klingbeil C, Melgar T, Speece M, Schubiner H, Burack R.**  
**“Fifteen years of a videotape review program for internal medicine and medicine-pediatric residents”**

**Academic Medicine, 1996;71:744-748.**

**Pub Med ID: 9158342**

*The medical interview is the primary way in which a doctor-patient relationship is established and maintained. Videotaped clinical encounters can be used as a tool to facilitate teaching residents' communication skills. Wayne State University has been using video taped encounters for this purpose for more than 15 years. This article is a review of that process and analysis of the program over the past 15 years. How are videotaped encounters used in a med-peds and internal medicine residency and what are the primary issues being discussed. A university based med-peds and primary care internal medicine resident continuity clinic. All residents in the two programs.*

*All residents in the two programs were videotaped several times a year throughout their residency. Tapes were reviewed with the resident and logs were kept of the topics discussed. Current residents were surveyed for satisfaction with the process.*

*Themes discussed:*

<i>Visit structure and organization</i>	<i>54%</i>
<i>Communication issues</i>	<i>30%</i>
<i>Clinical data gathering</i>	<i>9%</i>
<i>Difficult situations</i>	<i>5%</i>
<i>Personal Issues</i>	<i>2%</i>

*Resident perspectives – The majority of residents found the reviews helpful in learning about patient communication, structure of visit, and general patient care issues. 54% also reported that the process was helpful in provide support for them during residency.*

*Comfort with the process increased with experience.*

*Barriers to videotaped review – Logistical problems, patient, resident and faculty issue present barriers to the process.*

### **Onady GM.**

**A community collaborative practice experience between med/peds and family practice.**

**Am J Med, 1997;102:441-8.**

**Pub Med ID: 9217640**

*A comparison is made among four primary care specialists - family physicians, pediatricians, internists and Med-Peds physicians in various practice environments. Utilization and demographic data are compared and contrasted demonstrating the Med-Peds potential to manage primary care needs in a cost-effective fashion.*

### **Kimball HR**

**The med/peds physician in contemporary medical practice.**

**Am J Med, 1997;102:513.**

**Pub Med ID: 9217663**

*This editorial from the American Board of Internal Medicine first briefly reviewed the history of the combined residency beginning in the late 1960's, and then outlined the tremendous growth in numbers of med/peds programs and positions offered. Quoting statistics from the 1996 National Residency Match Program, 99 programs offering 421 first year positions existed that year compared with 280 first year positions in 1991. In 1996, 80% of med/peds positions were filled by graduates from U.S. medical schools compared with 59% of categorical internal medicine positions, 76% of categorical pediatrics positions, and 72% of family medicine positions. Med/peds residents accounted for 8% of all internal medicine residents and 12% of pediatric residents.*

*A survey of 900 board certified med/peds graduates was cited demonstrating that most graduates (71%) spent more than 70% of their time in direct patient care, and 88% practiced in a group setting. Less than one-third of graduates sub-specialized after training.*

*Onady's report of a collaborative physician group containing 13 med/ peds and family medicine physicians was also discussed.*

### **Schubiner H, Lannon C, Manford L.**

**Current positions of graduates of internal medicine-pediatrics training programs.**

**AJDC.1997;151:576-9.**

**Pub Med ID: 9193242**

*This survey of 708 graduates of Internal Medicine/Pediatrics programs from 1987-1993 found that 480 (68%) were practicing primary care. Of this 480, 416 (85%) were practicing internal medicine and pediatrics and 390 (81%) were in private practice settings. From the original 708 graduates surveyed, 12% had chosen to practice either pediatrics or internal medicine and 21% had entered subspecialty training. At the time of publication in 1997, this was one of the largest surveys of med/peds graduates and found that the percentage of physicians in med/peds practicing primary care was higher than that of internal medicine (35-45%), equal to that of pediatrics (67%), and lower than that of family medicine (95%).*

**Schuster B, Clasen M, Onady G.**

**Caring for Adults: A comparison of three residency options.**

**Am J Med. 1998;104:109-113.**

**Pub Med ID: 9528727**

*This article compares the three training options for primary care physicians that provide care to adults. The training curricula for internal medicine, family medicine and internal medicine-pediatrics are compared and contrasted. Comparisons between behavioral and ambulatory training is highlighted in this article.*

**Shah JK, Kahn MJ, Steinmann WC.**

**Eliminating redundancies in med-peds training.**

**Academic Med. 1998;73:1218.**

**Pub Med ID: 9883191**

*Shah et. al question whether the med/peds residency program needs to be 4 years in duration. They suggest that there is a great deal of overlap between the two fields (by comparing the content of Nelson's and Cecil's textbooks), and that a 3 year program may be sufficient to provide the necessary knowledge to practice both internal medicine and pediatrics. They also believe that more people would be likely to choose a 3 year program than a 4 year one.*

**Ciccarelli M.**

**The clinical philosophy of medicine-pediatrics.**

**Am J Med. 1998;104:327-9.**

**Pub Med ID: 9576404**

*Two page essay giving an overview of the philosophy of MedPeds as a combination of Internal Medicine and Pediatrics, pointing out certain niches of MedPeds in transitional care. Interestingly, it is published alongside two other overviews, one of Internal Medicine, and one of Family Medicine.*

**Doucet H, Shah MK, Cummings TL.**

**Comparison of internal medicine, pediatric, and medicine/pediatrics applicants and factors influencing career choices.**

**South Med J. 1999;92:296-9.**

**Pub Med ID: 10094270**

*Survey of 1996-7 applicants to Tulane's MP, Med, and Peds residencies given out when they interviewed at Tulane. Asked about when and how they decided on their residency choice. Response rate 67%. MP applicants tended to decide later on their choice, have fewer role models, were as likely to have a residency program at their medical school they were entering, and more likely to entertain academic medicine as a career choice.*

**Sidwell AB, Kamat DM.**

**The combined medicine/pediatrics residency. U of M graduates fill a growing need.**

**Minn Med. 1999;82:22-28.**

**Pub Med ID: 10073065**

*Sidwell and Kamat describe how Med-Peds has thrived in Minnesota, like many other places in the country. The program at the University of Minnesota has noted an increase in both applicants and available positions over its ten-year history, and it is now one of the largest in the country. Because of continuity clinic experiences, inpatient and outpatient subspecialty training, and rotations through various intensive care units, Med-Peds residents are uniquely trained to care for patients ranging from infancy to old age. Graduates from the Minnesota program have had pass rates on board certification exams comparable to those of their categorical internal medicine and pediatric colleagues. The proportion (slightly over two-thirds) of Minnesota graduates entering primary care is similar to that of Med-Peds graduates nationwide. Communities throughout the state are increasingly seeking to employ Med-Peds physicians, because they are felt to be an asset for providing both routine and complex primary care.*

**Irigoyen MM, Kurth RJ, Schmidt HJ.**

**Learning primary care in medical school: Does specialty or geographic location of the teaching site make a difference?**

**Am J Med. 1999;106:561-4.**

**Pub Med ID: 10335729**

*The LCMS mandates a core curriculum in primary care. Some schools and states have interpreted primary care to mean Family Medicine. There is no evidence that specialty or geographic location impact the quality of the student's primary care experience. Does the specialty or geographic location of the clinic site affect the student's experience during the mandatory third year primary care clerkship?*

*Third year medical students at Columbia University College of Physicians and Surgeons.*

*The paper is not clear on inclusion or exclusion criteria. It is implied that the clerkship is required of all students for graduation and that all students completing the rotation also receive a grade, take the standardized exam and are given the survey. Students were divided up among family medicine, internal medicine, med-peds, and pediatric sites in urban, suburban and rural settings.*

*Measurements of interest:*

*Number of patients seen*

*Standardized exam grade*

*Clerkship grade*

*Survey Items*

*Overall experience*

*Faculty attitude*

*Supervision*

*Diversity of patients*

*Rural location of teaching sites was associated with greater student satisfaction on all of the survey items. There were no differences with respect to specialty on the grades, exam scores, overall experience, faculty attitude, and supervision. Students reported less patient diversity in pediatrics.*

**Lannon C, Oliver TK, Guerin RO, Day SC, Tunnessen WW.**  
**Internal medicine-pediatrics combined residency graduates.**  
**Arch Pediatric Adol Med. 1999;153:823-8.**

**Pub Med ID: 10437754**

*The objective of this study from UNC was to determine career outcomes of graduates of med/peds residency programs. Background information provided revealed that in 1998 there were 106 med/peds programs offering 456 first year positions. Most programs (80%) were located east of the Mississippi River. That year, 92.1% of positions were filled, and graduates of American medical schools filled 82%.*

*Study methods included examination of computer databases from the American Board of Pediatrics and the American Board of Internal Medicine to determine graduates of combined med/peds residency programs that applied to either or both boards for certification between 1986 and 1995. A 12-question survey was mailed to graduates. Questions on the survey gathered information regarding graduates' professional activities. The authors noted that prior studies of this nature surveyed program directors, not graduates. Response rate for the survey was 67.8% (1005 graduates). Demographics of graduates were provided: 66% were male, 34% were female, 88% were graduates of American medical schools, and 12% were international medical graduates.*

*Of the graduates, 87% were ABIM certified, 91% were ABP certified and 82% were dual certified. The majority (70%) of graduates spent the majority of their time in direct patient care. Half of the graduates also held medical school appointments. Most graduates (85%) managed hospitalized patients but spent less than 20% of their time doing so. More than half practiced in a community-based site, mostly in a group practice, and most graduates cared for patients of all ages. Of graduates surveyed, 4% trained in fellowships. Over half of the graduates practiced east of the Mississippi, which mirrored pediatric graduate practices.*

**Onady GM.**

**The medicine-pediatrics physician: Past present, and future.**  
**Contemporary Pediatrics. 1999;16:129-47.**

*The professional development of Med-Peds physicians is detailed and compared to the primary care roles that have been adapted by family physicians, internists and pediatricians over the 1990s. The article highlights the collaborative role the Med-Peds physician can serve in multiple practice environments.*

**Melgar T, Schubiner H, Burack R, Aranha A, Musial J**  
**A time-motion study of the activities of attending physicians in an internal medicine and internal medicine-pediatrics resident continuity clinic.**  
**Academic Medicine 2000;75:1138-1143**

**Pub Med ID: 11078677**

*Med-Peds and Internal Medicine attending physicians have to attend to multiple tasks while supervising clinics. The degree to which this interferes with medical education and contact with residents is not known. What are the responsibilities of the attending physician while supervising residents in their internal medicine or med-peds continuity clinics? What portion of their time is spent in teaching and contact with residents? Six attending physicians (three med-peds, three internal medicine) in a university based internal medicine and med-peds resident continuity clinic. All attending physicians supervising in the clinic were included. Attending physicians were shadowed and activities were recorded by stopwatch. The majority of the attending physicians time was spent on activities other than contact with residents. Clinic operational activities occupied the majority of time not in*

*contact with residents. Personal and professional activities apparently filled the void when educational and clinic operational activities were completed. A ratio of 10-14 patients per attending resulted in the maximal contact with residents. Resident to attending ratios and patient to resident ratios did not affect the attending physicians contact with residents.*

**Outlaw, DT et. al.**

**Description of a combined internal medicine-pediatrics continuity clinic for combined program residents.**

**Southern Medical Journal. 2001 Dec;94(12):1173-6.**

**Pub Med ID: 11811855**

*Description of the demographics of a Med Peds residency clinic noting 63/37 adult: child ratio and 3.5 patients seen per resident per clinic session regardless of level. Residents were satisfied with their experience, and DM and HTN were the most common diagnoses.*

**Duke, MB et. al.**

**A clinical performance exercise for medicine--pediatrics residents emphasizing complex psychosocial skills.”**

**Academic Medicine 2001 Nov;76(11):1153-7**

**Pub Med ID: 11704520**

*Report of a clinical performance exercise for Med-Peds residents. Performance correlated with year of residency.*

**Garibaldi RA, Subhiyah R, Moore ME, Waxman H. “**

**The In-Training Examination in Internal Medicine: An Analysis of Performance Over Time**

**Ann Internal Med. 2002;137:505-510**

**Pub Med ID: 12230352**

*An examination of the trends in the medicine ITE from 1988 to 2000 among IM and MedPeds residents. It showed that IMGs consistently outscore USMGs and that scores get better over residency. At the end of the R4 year, MedPeds residents score slightly below IM R3s after catching up from lagging behind IM R2's during the MP R2 and R3 year.*

**Campos-Outcalt D , Lundy M, and Senf, J.**

**Outcomes of Combined Internal Medicine-Pediatrics Residency Programs.**

**Academic Medicine 2002;77:247-256.**

**Pub Med ID: 11891165**

*A review of the current research literature in regards to outcomes of Med-Peds residencies. The review found a paucity of literature since 1993. It documented a 20-30% attrition rate from MP residencies, an 80% dual board certification rate of MP graduates, and an 80% rate of providing care to both adults and children.*

**Senf JH, Kutob R, Campos-Outcalt D.**

**Which Primary Care Specialty: Factors that relate to a choice of Family Medicine, Internal Medicine, Combined Internal Medicine-Pediatrics or Pediatrics.**

**Family Medicine. 36;2004:123-130.**

**Pub Med ID: 14872360**

*Survey of FM, IM, Peds, and MP practitioners asking why they went into that field. All respondents put as their second reason wanting to be like practitioners in that field. Their*

*first choices were: FM – patient relationships, Peds – wanting to work with children, IM – wanting to work with adults, MP – wanting to work with children.*

**Frohna, John, Melgar, Tom, Mueller, Caroline, and Borden, Sam.**  
**Internal Medicine-Pediatrics Residency Training: Current Trends and Outcomes**  
**Academic Medicine. 2004;79:591–596.**

**Pub Med ID: 15165981**

*Survey of Med-Peds program directors asking them to give the initial career paths of their graduates of 1998 – 2002. It showed a 9% attrition rate during residency, 82% see both adults and children, 22% subspecialized, 21% saw rural and underserved patients, and 79% board certified in both Medicine and Pediatrics.*

**Robbins, BW, Ostrovsky, D, and Melgar, T.**  
**Factors in Medical Students' Selection and Ranking of Combined Medicine-Pediatrics Programs**

**Academic Medicine. Vol 80, No. 2, February, 2005, p. 199.**

**Pub Med ID: 15671329**

*A survey of 4<sup>th</sup> year medical students applying to at least one MedPeds program revealing that students select Med-Peds to see both adults and children, keep open the possibility of sub-specializing, and getting more intensive training in Pediatrics than Family Medicine. The issues most important to them in creating their rank lists were location for self and spouse, and subjective feelings of fitting in and a good match for them.*

**Ken Terry.**

**Where do Med-Peds Fit?**

**Medical Economics. April 8, 2005**

**Pub Med ID: 15929350**

*Short editorial discussing the differences between Med-Peds and Family Medicine*

**Melgar, T; Brands, C and Sharma, N.**

**Health Care Transition**

**Pediatrics 2005;115:1449 -1450.**

**Pub Med ID: 15867079**

*Letter to the editor commenting that a prior study on transition of children to adult providers did not mention Med-Peds physicians, commenting that MedPeds physicians are a natural and necessary part of the process.*

**Freed GL, Fant KE, Nahra TA, Wheeler JR.**

**Internal medicine-pediatrics physicians: their care of children versus care of adults**

**Academic Medicine**

**2005;80:858-64.**

**Pub Med ID: 16123468**

*Random sample survey of 1300 generalist and 500 subspecialist MedPeds physicians in 2003 asking about their practice patterns. While over 85% provided care to all age groups, most of the care they provided was to adults, a difference more pronounced among subspecialists. In addition 50% received at least one referral from a FM doctor per year while 16% received over 10 per year.*

**Freed GL.**

**Comparing perceptions of training for medicine-pediatrics and categorically trained physicians**

**Pediatrics 2006;118:1104-8.**

**Pub Med ID: 16951004**

*Survey of randomly selected "older" IM and Peds graduates (graduated 1980-1997) and randomly selected "recent" graduates (1998-2003) asking their comfort in caring for the varying age populations. The author compared these responses to a separate survey of Med-Peds graduates. More general Pediatrics graduates felt "very well prepared" to care for infants than MedPeds graduates, but less "very well prepared" to care for adolescents. MedPeds graduates were more likely to feel "very well prepared" to care for adults and elderly than IM graduates.*

**Melgar, T; Chamberlain, J. K.; Cull, W. L.; Kaelber, D. C.; Kan, B. D.**

**Training Experiences of Combined Internal Medicine-Pediatric Residents**

**Academic Medicine 2006;81:440-446.**

**Pub Med ID: 16639198**

*First report of the graduating resident survey conducted annually by the AAP. 89% would choose MedPeds again and 93% planned on caring for both adults and children. On average, they desired more training in outpatient procedures, office management, and career planning, and less time in the NICU. They felt particularly well prepared in EBM, children with special health care needs, and information technology. They felt equally prepared to care for adults and children.*

**Robbins, B, Aronica, M, Melgar, T, and Friedland, A.**

**Benchmarks for support among Internal Medicine-Pediatrics Residency Programs.**

**The American Journal of Medicine. 120(5), May 2007, pp. 462-465.**

**Pub Med ID: 17466661**

*Survey of Med-Peds programs showing Med-Peds trained physicians ran 88% of the Med-Peds residencies (most often the residency program they attended personally), had a mean salary of \$134,000 (lower for academic institutions), were in their jobs for an average of 5 years, have an average age of 39, and are mainly male (63%). Higher board pass rates for Med-Peds programs were associated with filling in the match, having more Med-Peds faculty, and NOT taking money from pharmaceutical companies.*

**Chamberlain, John; Cull W; Melgar T; Kaelber D; Kan B.**

**The effect of dual training in internal medicine and pediatrics on the career path and job search experience of pediatric graduates**

**J Pediatrics. 2007, 151:419-24.**

**Pub Med ID 17889081**

*Survey of graduating med-peds and peds residents in 2003 and 2004. Both groups would choose the same specialty again in >90%. Primary care was the most popular choice for both groups (55% vs. 51%), but Med-Peds graduates more often chose hospitalist posts (17% vs. 8%), less likely subspecialty (18% vs. 31%), had as many job offers (3 vs. 2) with fewer applications (8 vs. 15), and made more money than their pediatric counterparts. Top med-peds fellowships in this survey were for med-peds (infectious disease, allergy, critical care and endocrinology) and for peds (neonatology, emergency medicine, heme/onc and infectious disease).*

**Frohna, JG**

**The Role of the Med-Peds Physician in a Changing Medical World**

**J of Pediatrics. 2007;151:338-339.**

**Pub Med ID: 17889064**

*Commentary on the Chamberlain article in the same edition of JPeds, pointing out that 70% of MedPeds interns plan a career in primary care, but only 55% actually do so on graduation.*

**Melgar, T; Frohna, JG.**

**Choosing a Career in Combined Internal Medicine and Pediatrics: Insights from Interns**

**Family Medicine. 2007;39:326-330.**

**Pub Med ID 17476605**

*Survey of MedPeds interns showing that only 18% would have chosen FM as an alternate career if Med-Peds did not exist, 32% would have chosen Pediatrics and 41% would have chosen Internal-Medicine. Of the approximately 50% that considered either medicine or pediatrics alone, only about 1 of 4 ranked a medicine or pediatrics program. Of the approximately 33% that considered family medicine, only about 1 of 12 ranked a family medicine program.*

**Sharma N, Melgar T, Brands C.**

**Survivors of childhood cancer**

**New England Journal of Medicine 2007 Jan 11; 356(2):191-47.**

**Pub Med ID: 17225289**

*Letter to the editor commenting on a previous article about survivors of childhood cancer, pointing out that Med-Peds physicians are well trained to care for this, and other, transitional populations.*

**Tofil NM, Lee White M, Manzella B, McGill D, Zinkan L.**

**Initiation of a pediatric mock code program at a children's hospital.**

**Med Teach 2009 Jun;31(6):e241-7.**

**Pub Med ID: 19811155**

*Med/peds residents were significantly more confident in their skills than pediatric residents both pre- ( $p = 0.041$ ) and post-intervention ( $p = 0.016$ ). The two skills overall with the lowest score post-intervention were the ability to place an interosseous line and the ability to manage cardiac dysrhythmias.*

**Fortuna RJ, Ting DY, Kaelber DC, and Simon SR**

**Characteristics of medicine-pediatrics practices: results from the national ambulatory medical care survey.**

**Academic Medicine 2009 Mar;84(3):396-401.**

**Pub Med ID: 19240455**

*Forty-three percent of visits to med-peds physicians were from children as compared to 15.5% for family medicine in this database. Med-peds physicians, like family physicians and pediatricians, most commonly treated patients for acute problems and reported high levels of continuity of care for patients-pediatric (93.6%) and adult (94.6%).*

**Wolff MS, Rhodes ET, Ludwig DS.**

**Training in childhood obesity management in the United States: a survey of pediatric, internal medicine-pediatrics and family medicine residency program directors.**

**BMC Med Educ. 2010 Feb 17:10-18.**

**Pub Med ID: 20163732**

*The majority of programs offered training in aspects of childhood obesity management including prevention (N = 240, 80.3%), diagnosis (N = 282, 94.3%), diagnosis of complications (N = 249, 83.3%), and treatment (N = 242, 80.9%). Specifically, 35.5% of IM-Peds programs had a formal curriculum compared to only 22.6% of pediatric and 13.9% of family medicine programs ( $p < 0.01$ ).*

**Stewart R, Feldman L, Weisfeldt M.**

**Addressing the Primary Care Deficit. Building Primary Care Leaders for Tomorrow. Journal of Graduate Medical Education. 2010 June: 294-296**

*People that enter the Johns Hopkins Med-Peds program will be able to work with vulnerable, underserved patients, while working on a master's degree in order to provide physician leaders in urban health locally.*