

Appendix: Summaries of Included Studies

Specialty	Author/ Ref #	Year	Data source	Sample Size	Perspective of Analysis	Includes Workforce Projections	Data on Non- clinical Activities	Objective Demand Measure	Subspecialty Workforce Conclusions
<i>Pediatric Medical Specialties</i>									
Developmental and Behavioral Pediatrics	Kelly et al. 29	2003	Physician survey	723	Physicians	–	Any involvement in research	–	There may be a need for additional academic developmental and behavioral subspecialists
Neonatal Medicine	Pollack et al. 33	1998	Practice survey	420	Physicians	–	Percent time spent in non-clinical activities	Total Live Births	Earlier projections and current workforce demands are discrepant
	Goodman et al. 31	2001	1) AMA Physician Masterfile; 2) Birth certificate data	246 NICRs	Market	–	Percent of neonatologists in non-clinical activities	Physicians : Live Births & Physicians: LBW infant	The distribution of neonatologists does not follow the distribution of need.
	Goodman et al. 32	2001	1) AMA Physician Masterfile; 2) Birth certificate data	246 NICRs	Market	–	–	Physicians : Live Births & Physicians: LBW infant	The distribution of neonatologists does not follow the distribution of need.
	Goodman et al. 33	2002	1) AMA Physician Masterfile; 2) Birth certificate data	246 NICRs	Market	–	–	Physicians : Live Births & Physicians: LBW infant	The distribution of neonatologists does not follow the distribution of need.
Pediatric Cardiology	Williams, et al. 34	1994	Physician survey	570	Physicians	–	Percent time spent in non-clinical activities	–	Current supply is probably adequate but relatively lower income and other factors threaten the continued attractiveness of the field.
	Moodie et al. 37	1994	Task force report using data from various sources	594 geographic units	Market	–	–	Physicians to Population Ratio	Assumed workforce need increasing due to prenatal diagnosis, long term follow-up etc.
	Ritchie et al. 35	1994	Task force report using data from various sources	594 geographic units	Market	–	–	GMENAC Projections	Recommend against reductions in pediatric cardiology workforce.
	Chang et al. 36	1997	AMA Physician Masterfile	50 States	Market	–	–	Physicians to Population Ratio	None

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Pediatric Critical Care Medicine (PCCM)	Anderson et al. 38	2003	FOPE II Survey of PCCM Physicians	805	Physicians	–	Percent time spent in non-clinical activities	–	Practicing PCCM physicians report too many are being trained
Pediatric Emergency Medicine	Losek, JD 40	1994	Survey of PEM Department with Fellowship Programs	37	Departments	–	–	Open positions	None
	Wiley et al. 39	2002	FOPE II Survey of pediatric and general emergency medicine physicians	934	Physicians	–	–	–	May be the pediatric subspecialty at greatest risk for inadequate supply of all subspecialties
Pediatric Endocrinology	The Lewin Group, Inc. 41	2001	Work force report using data from various sources, including Physician Masterfile, NAMCS, ACGME, etc.	N/A	Market	+	–	Models vary pediatric population growth and disease incidence	Estimates that the current demand for pediatric endocrinologists exceeds supply slightly. Future projections vary across models.
Pediatric GI	Colleti, et al. 42	1998	Survey of pediatric GI	766	Market	+	Percent time spent in non-clinical activities	Physicians to Population Ratio	Reduce number of trainees
Pediatric Genetics	Pletcher, et al. 43	2002	FOPE II Survey	506	Physicians	–	Percent time spent in non-clinical activities	–	May be too few geneticists, due to primary care physicians referring more complex cases and more involvement in treatment of adults
Pediatric Infectious Disease	Feigin, RD 44	1995	1) Survey of pediatric ID programs 2) Employment opportunities	143	Departments	–	–	Open positions	Exercise care in number of fellows trained

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Pediatric Nephrology	Abt Associates 45	1997	1) AMA Masterfile 2) US Renal Data System 3) Survey of internist and pediatric nephrologists and population and disease incidence data	450	Market	+	Non-clinical time accounted for in projections	Incidence of pediatric ESRD; growth in population	Projects 7-11 pediatric nephrology fellows needed per year.
Pediatric Pulmonology	Redding, et al. 48	2000	FOPE II survey	535	Physicians	–	Percent time spent in non-clinical activities	–	No increased need for pediatric pulmonologists in areas where they currently work; need for these physicians may be present in other regions.
Pediatric Rheumatology	Cassidy & Athreya 49	1997	American Board of Pediatrics	178	Medical Schools	–	–	Number of medical schools	Increase number of pediatric rheumatologist
	Giannini et al. 50	1997	Survey of internist and pediatric rheumatologists	474	Physician	–	–	–	Non-pediatric rheumatologists play a prominent role in the care of pediatric rheumatic diseases
<i>Pediatric Surgical Specialties</i>									
Pediatric Cardiac Surgery	Shemin et al. 51	2002	Survey of pediatric and adult cardiac and general thoracic surgeons	2515	Physicians	–	–	–	Workforce appears to be adequate for the next decade
Pediatric Neurosurgery	Friedlich et al. 52	1999	Advertising data from neurosurgery journals	8 time periods	Market	–	–	Open positions	Demand for neurosurgeons and pediatric neurosurgeons appears to be increasing.

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Pediatric Otolaryngology	Zalzal, et al. 53	1996	Survey of all pediatric otolaryngology fellowship programs, and other hospital data	21	Market	+	-	Number of projected hospital positions	Pediatric otolaryngology programs should take care to curtail the number of pediatric otolaryngologists trained.
	Smith 54	2000	Survey of otolaryngology residency chairman	59	Departments	-	Relative importance as a professional priority	Open positions	Growth anticipated in the next 5 years
	Tunkel, et al. 55	2002	FOPE II Survey of general and pediatric otolaryngologists	283	Physicians	-	-	-	Apparent increase in demand
Pediatric Surgery	O'Neill, et al. 56	1995	Survey of pediatric surgeons	80	Market	+	-	Physicians to population ratio	Care should be taken to control production.
	Parkerton, et al. 58	1999	Survey of recent pediatric surgery fellowship graduates	138	Market	-	Percent with teaching responsibilities	Position type	No evidence of decreasing demand, but demand appears to be decreasing at children's hospitals
	O'Neill, et al. 57	2000	Survey of pediatric surgeons	100	Market	+	-	Population	Efforts to control production should continue.
Pediatric Urology	Shapiro 59	1993	Survey of general and pediatric urologists	244	Market	+	Unclear	Physicians to population ratio	10-12 fellows trained each year may be more than anticipated need
	Retik 60	1995	Survey of general and pediatric urologists	244	Physicians	-	-	-	There is general concensus among pediatric urologists that too many are being trained.
Plastic Surgery	Brotherton, et al. 61	1999	FOPE II Survey	350	Physicians	-	Percent time in non-clinical activities	-	The supply for pediatric plastic surgery may exceed demand.

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<i>Other Pediatric Specialties</i>									
Child Neurology	Bradley et al. 62	2000	Task Force Report	?	Market	+	?	?	Projected supply falls short of demand.
Child and Adolescent Psychiatry	Thomas et al. 63	1999	Area Resource File Current Population Survey	50 states and 3141 counties	Market	-	-	Physicians to Population Ratio	Child psychiatrists are maldistributed, especially for non-metropolitan and poor
Pediatric Physiatry	Sneed, et al. 64	2000	1) Survey of PRSIG members 2) Survey of physical medicine and rehabilitation programs	166 82	Physicians	-	Involvement in research activities	-	Efforts to enhance the pediatric components of PM&R training and support PRM should intensify.
Pediatric Radiology	Forman, et al. 65	2001	1) Survey 2) Advertising data from radiology journals	411	Market	-	-	Open positions	Field appears to be experiencing an increase in demand.
<i>Multiple Specialty Studies</i>									
	Feigin	1998	Survey of Pediatric departments	144	Provider	-	-	Open positions	Workforce needs are specialty-specific
	Stoddard, et al.	2000	FOPE II Survey	10010	Provider	-	Percent time spent in non-clinical activities	-	In areas where pediatric subspecialists curently work, more may not be needed.
	Oliver, et al	1997	Survey of candidates taking on of the 12 specialty certification exam offered by the ABP.	not given	Provider	-	-	-	Lack of data on need for subspecialists is "troublesome."

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	Brotherton, et al.	1994	AAP Committee on Careers and Opportunities Survey	2880	Provider	–	–	–	Supply projections should include more than information on certification and training; pediatric subspecialists are diverse
	Thompson et al.	1998	Survey of children's hospitals	17	Children's Hospitals	–	–	Intent to hire	Demand for pediatric subspeicalists expected to decrease