

## Annotated Bibliography: Benefits of Pediatric v. Adult Subspecialty Care

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**Albright AL, Sposto R, Holmes E, Zeltzer PM, Finlay JL, Wisoff JH, Berger MS, Packer RJ, Pollack IF. Correlation of neurosurgical subspecialization with outcomes in children with malignant brain tumors. *Neurosurgery*. 2000;47:879-885.**

*Pediatric neurosurgeons are more likely than general neurosurgeons to extensively remove malignant pediatric brain tumors. In these tumors, extent of removal has been demonstrated to influence survival.*

**Alexander F, Magnuson D, DiFiore J, Jirousek K, Secic M. Specialty versus generalist care of children with appendicitis: an outcome comparison. *J Pediatr Surg*. 2001;36:1510-1513.**

*Lower complication rates and shorter lengths of stay for children with significantly perforated appendicitis when treated by pediatric surgeons.*

**Bowman SM, Zimmerman FJ, Christakis DA, Sharar SR, Martin DP. Hospital characteristics associated with the management of pediatric splenic injuries. *JAMA*. 2005;294:2611-2617.**

*After adjusting for patient characteristics, injury severity, and hospital characteristics, splenectomy was more likely among children treated at general hospitals than among children treated at children's hospitals. There are significantly lower rates of splenectomy at designated children's hospitals.*

**Chowdhury MM, Dagash H, Pierro A. A systematic review of the impact of volume of surgery and specialization on patient outcome. *Br J Surg*. 2007;94(2):145-161.**

*High surgeon volume and specialization are associated with improved patient outcome, while high hospital volume is of limited benefit.*

**Dharmar M, Marcin JP, Romano PS, Andrada ER, Overly F, Valente JH, Harvey DJ, Cole SL, Kuppermann N. Quality of care of children in the emergency department: association with hospital setting and physician training. *J Pediatr*. 2008;153:783-789.**

*Pediatric emergency medicine physicians provided better care than family medicine physicians and those in the "other" category. The quality of care provided to children is associated with age, hospital setting, and physician training.*

**Emil SG, Taylor MB. Appendicitis in children treated by pediatric versus general surgeons. *J Am Coll Surg*. 2007;204(1):34-39.**

*Pediatric surgeons treat younger children with more severe appendicitis. There are no specialty-dependent differences in clinical outcomes for simple or complicated appendicitis. Hospital charges are lower for simple appendicitis treated by pediatric surgeons.*

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**Hamilton JM, Kahol K, Vankipuram M, Ashby A, Notrica D, Ferrara J. Toward effective pediatric minimally invasive surgical simulation. *J Pediatr Surg.* 2011;46:138-144.**

*For all measures, pediatric surgeons demonstrated superior proficiency on exercises conducted in pediatric conditions. Pediatric surgeons possess unique skills compared with general surgeons that relate to the technical challenges they routinely face.*

**Hampers LC, Faries SG. Practice variation in the emergency management of croup. *Pediatrics.* 2002;109:505-508.**

*Compared with physicians with a pediatric background, rates of resource utilization were higher for EM-trained physicians who managed uncomplicated cases of croup. There was a reduced length of stay by 40 minutes when pediatric emergency medicine physicians treated croup. Also, pediatric emergency medicine physicians treating croup reduced direct costs by \$90 when compared to the same treatment delivered by adult emergency medicine physicians.*

**Isaacman DJ, Kaminer K, Veligeti H, Jones M, Davis P, Mason JD. Comparative practice patterns of emergency medicine physicians and pediatric emergency medicine physicians managing fever in young children. *Pediatrics.* 2001;108:354-358.**

*Shorter time spent by young children treated for fever in the pediatric emergency department.*

**Kokoska ER, Minkes RK, Silen ML, Langer JC, Tracy TF Jr, Snyder CL, Dillon PA, Weber TR. Effect of pediatric surgical practice on the treatment of children with appendicitis. *Pediatrics.* 2001;107:1298-1301.**

*Younger children with appendicitis have reduced hospital days and charges when they are treated by pediatric surgeons v. general surgeons.*

**Nwomeh BC, Rothstein D. Evidence shows children treated by pediatric surgeons have better outcomes than those treated by adult specialists. *AAP News.* 2014;35.**

*The risk of bowel resection during operative intussusception reduction is 80% less when performed at hospitals employing full-time pediatric surgeons compared to hospitals providing pediatric care by non-pediatric surgeons.*

**Rhee D, Papandria D, Yang J, Zhang Y, Ortega G, Colombani PM, Chang DC, Abdullah F. Comparison of pediatric surgical outcomes by the surgeon's degree of specialization in children. *J Pediatr Surg.* 2013;48:1657-1663.**



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*Surgeons caring preferentially for children as a proportion of their overall practice generally have improved mortality outcomes in general and cardiothoracic surgery. These data suggest a benefit associated with increased referral of children to pediatric practitioners.*

**Smith JT, Price C, Stevens PM, Masters KS, Young M. Does pediatric orthopedic subspecialization affect hospital utilization and charges? *J Pediatr Orthop*. 1999;19:553-555.**

*Shorter length of stay for closed femoral shaft fractures when treated by a pediatric orthopedic surgeon; pediatric orthopedic surgeons achieved lower hospital charges than adult orthopedic surgeons for closed femoral shaft fractures.*

**Snow BW. Does surgical subspecialty care come with a higher price? *Curr Opin Pediatr*. 2005;17(3):407-408.**

*Each study documented better pediatric patient surgical outcomes under the care of a pediatric subspecialty trained surgeon regardless of discipline. Those studies that studied costs showed more cost effective care was delivered by pediatric subspecialized surgeons.*

**Snow BW, Catwright PC, Young MD. Does surgical subspecialization in pediatrics provide high-quality, cost-effective patient care? *Pediatrics*. 1996;97:14-7.**

*Hospital charges were significantly less (\$1095) for patients under the care of a pediatric urologist compared to general urologists. Complication rates were also lower.*

Questions:

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