Introduction: The supply of pediatric anesthesiology training and the demand for provision of anesthesia to children have both risen since the ACGME began accrediting pediatric anesthesiology fellowships in 1998. However, the basic factors affecting supply and demand are poorly quantified. Data on the number and location of anesthetics administered to children and the contribution of pediatric anesthesiologists to this care is lacking. Furthermore, no published census of pediatric anesthesiologists or fellows exists, and neither the American Academy of Pediatrics nor the Society for Pediatric Anesthesia tracks this data. Over the long run, providing reliable, high quality pediatric anesthesia care without training unneeded faculty will require knowledge of supply and demand. This study examines the rate at which pediatric anesthesiology fellows are trained, their subsequent career choices and the faculty workforce characteristics at institutions with pediatric anesthesiology fellowships.

Methods: Program director contact information was collected for all accredited pediatric anesthesiology fellowships from www.acgme.org/adspublic. An electronic survey was sent to all program directors (n=46) followed by a hard copy to non-responders. Results were tabulated using Microsoft Excel.

Results: Thirty-seven of forty-six programs (80.4%) responded. These programs reported that 296 fellows had graduated from their programs in the three year period from Jan 2008 to late 2010. Mean = 8, median = 5, range 0-33. As of December 2010, the ACGME lists 202 fellows occupying 204 accredited positions. Mean occupied positions per program were 4.4, median 2, range 0-23. Programs reported that graduates primarily (n=151, 51%) took positions involving greater than 90% pediatric care. Most of the rest (n=81, 27%) worked in majority pediatric care jobs with the remainder (n=57, 19%) caring primarily for adults. Forty-six percent of graduates (n=137) took positions in institutions with pediatric anesthesiology fellowship programs.

Program directors reported that 639 full-time and 106 part-time faculty worked in their institutions. Statistics for full-time faculty were mean = 24 physicians/program, median 12, range 3-50. One hundred forty-six of these faculty had been hired since January 2008, and 23 had retired in the same time frame. Among respondents, the upper quintile of programs by size (n=7) trained 52% of fellows. Among all programs, the largest quintile (n=9) hold 33% of filled positions. The ten responding programs which began training fellows after 1999 represented 6% of trainees.

Conclusions: Thirty-seven responding programs employing over 700 pediatric anesthesiology faculty graduated nearly 300 fellows in the previous three years. Retiring faculty in that time period were outnumbered over 12:1 by graduating fellows. Although economic uncertainty during that time frame may have dampened retirements, the data call into question whether the anesthesia workforce can sustainably absorb the number of fellows presently training. Further research into the pediatric anesthesia workforce in community hospitals and academic hospitals without fellowship programs would clarify future workforce needs.