

## Resident Numbers and Graduation Rates From Residencies

Alan W. Grogono, M.D.

**Editor's Note:** Due to a change in American Board of Anesthesiology policy, residents-in-training and graduates are no longer reported by country of medical school graduation. The editor is personally grateful to Dr. Grogono for his efforts in reporting the changes in anesthesiology residency.

— D.R.B.

The major change this year is a significant increase in the number of residents in the CA-1 year. Other changes are less remarkable and show no unanticipated changes from last year. Accordingly, fewer tables and graphs accompany this year's report.

**Data Reporting:** As in last year's article, a resident's postgraduate year (PGY) status is based on the number of months of training credited by the American Board of Anesthesiology (ABA). The more familiar terminology, however, is employed so that, for example, clinical anesthesiology year one (CA-1) is used instead of PGY-2.

**Anesthesiology Residents in Training [Table 1]:** This year the number of residents in the critical CA-1 year increased by 9.2 percent, from 1,439 to 1,572 making it the largest CA-1 group since 1994. The total remains smaller, however, than the peak of 1,904 recorded in 1992.

The size of the PGY-1 year (514), although of lesser significance than the CA-1 year, represents a comparable increase. This increase, however, merely returned the size of the PGY-1 year to the 2003 level and also to the average for the last 10 years.



Alan W. Grogono, M.D., now retired, is former Chair and Meryl and Sam Israel Professor, Department of Anesthesiology, Tulane University School of Medicine, New Orleans, Louisiana.

**Table 1 ▼**

	PGY-1	CA-1	CA-2	CA-3	Grad
Year	Total	Total	Total	Total	Total
1985	472	1,514	1,450	495	1,201
1986	367	1,484	1,496	651	1,243
1987	404	1,418	1,454	824	1,198
1988	322	1,511	1,449	1,281	824
1989	293	1,592	1,541	1,450	1,273
1990	479	1,656	1,593	1,518	1,433
1991	387	1,801	1,753	1,565	1,469
1992	360	1,904	1,781	1,720	1,552
1993	380	1,853	1,864	1,675	1,692
1994	281	1,873	1,843	1,871	1,743
1995	207	1,436	1,607	1,701	1,814
1996	580	1,073	1,259	1,454	1,775
1997	507	1,132	972	1,107	1,487
1998	507	1,225	1,001	939	1,173
1999	463	1,387	1,194	919	947
2000	446	1,453	1,339	1,105	934
2001	543	1,466	1,374	1,253	1,133
2002	638	1,471	1,420	1,357	1,286
2003	510	1,496	1,473	1,399	1,333
2004	431	1,439	1,608	1,511	1,393
2005	514	1,572	1,557	1,513	1,390

The numbers graduating and in each year of anesthesiology residencies, 1985-05.

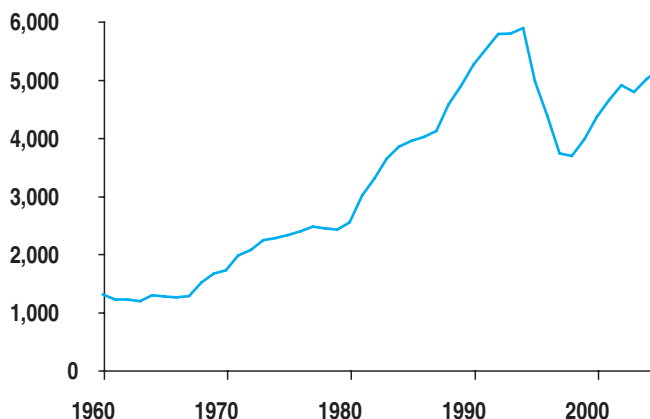
**Anesthesiology Residents Graduating and Resident Annual Totals [Table 1 and 2 and Figure 1]:** Almost exactly the same number graduated this year (1,390) as did last year (1,393). This is close to the average for the last 17 years (1,402) but below the peak of 1,814 graduating in 1995. The number of residents potentially available to graduate in the next three years, without attrition, are 1,513, 1,557 and 1,572.

**Attrition From Residencies [Table 1 and Figure 2]:** The size of the CA-1 group in a given year, e.g., 2002, is compared to the value for the same cohort in 2005, i.e., the graduating group. In addition to attrition, however, the actual composition of this group also is affected by other factors, e.g., ill health, childbirth, relocation and being held back for additional training. For these reasons, the actual numerical values must be interpreted with caution.

**Table 2 ▼**

Year	Total	Year	Total
1960	1,285	1983	3,627
1961	1,202	1984	3,834
1962	1,199	1985	3,931
1963	1,171	1986	3,998
1964	1,270	1987	4,100
1965	1,248	1988	4,563
1966	1,234	1989	4,876
1967	1,260	1990	5,246
1968	1,493	1991	5,506
1969	1,643	1992	5,765
1970	1,704	1993	5,772
1971	1,953	1994	5,868
1972	2,053	1995	4,951
1973	2,217	1996	4,366
1974	2,258	1997	3,718
1975	2,307	1998	3,672
1976	2,374	1999	3,963
1977	2,450	2000	4,343
1978	2,421	2001	4,636
1979	2,403	2002	4,886
1980	2,522	2003	4,773
1981	2,996	2004	4,989
1982	3,289	2005	5,156

The number of medical graduates in anesthesiology residency programs, 1960-05.

**Figure 1 ▼**

Graph showing the total number of medical graduates in anesthesiology residencies, 1960-05.

**Gender [Table 3]:** ABA has now collected data about the gender distribution in anesthesiology residencies for five consecutive years. For the first four years, the percentage of women being trained hovered around 27 percent with no evident trend. This year, however, the percentage of women in the PGY-1 year has risen to 33 percent and in the CA-1 year to 32 percent.

**Discussion:** This year the number of residency positions filled via the National Resident Matching Program rose to 1,230, the largest number ever recorded. This occurred despite a reduction in the number of places offered via the Match. This growth via the Match in March has now been followed by an additional growth in the size of the CA-1 year. For the five years, 2000 to 2004, the size of the CA-1 group changed relatively slightly and averaged 1,465. This year there were 1,572 residents in the CA-1 year, a jump of 133 and 107 (7.3 percent) above the average. The number of women entering the specialty (32 percent of the CA-1 year) appears to be rising, although it is still below the percentage of women entering medicine.

Attrition during the residency has changed little from last year and remains around 5 percent for the duration of the residency. This is only slightly above the low levels enjoyed 15 years ago.

**Conclusion:** The increase in the size of the CA-1 year is in contrast to recent years and would appear to be significant. It will be several years, however, before this increase

Continued on page 22

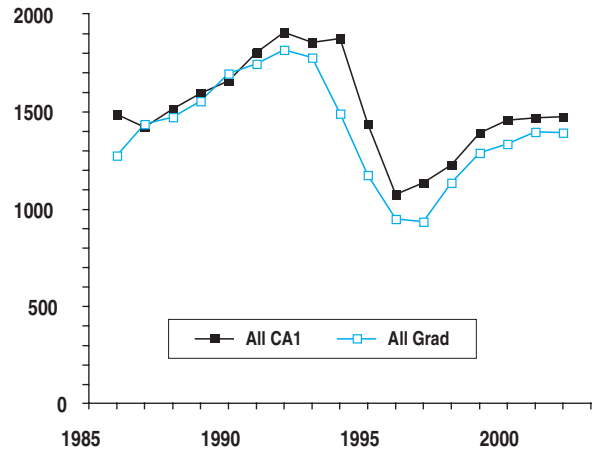
The data are presented here to show trends and comparisons between years.

For a given year, e.g., 1995, one point shows the size of the CA-1 group for that year and another, just below it, shows the size of that cohort graduating, e.g., in 1998. In the early years, the number graduating three years later was close to the number in the CA-1 group. In the mid 1990s, the graphs diverged as fewer residents graduated than had started the training. This change occurred during a period of anxiety about employment opportunities; residents were leaving anesthesiology, and the attrition was largely voluntary. This loss was followed by a decline in the number of applicants, and this in turn was followed by a period of vigorous recruitment. The loss of residents continued, however, and appears to have been caused by compulsory attrition. Today the rate of attrition has declined but not yet to the levels of the late 1980s cohorts.

**Table 3** ▼

Year	PGY-1	CA-1	CA-2	CA-3
2000	24%	28%	29%	27%
2001	26%	27%	28%	28%
2002	27%	25%	26%	28%
2003	29%	27%	25%	27%
2004	33%	32%	27%	25%
2005	33%	32%	31%	27%

The percentage of women in anesthesiology residency programs by year, 2000-05.

**Figure 2** ▼

Attrition from residencies. Each year plots the number starting in the CA-1 cohort for that year (CA-1) and the size of the same cohort three years later (Grad).

can appreciably affect the size of the workforce. With a growing population and the continuing shortage of anesthesiologists, this is a welcome trend, as is the increase in the number of women selecting anesthesiology.

**Nurse Anesthetist Data:** From 2001 to 2004, this report included data about the number of nurse anesthetists graduating, being certified and working. This year the data have not been made available because they are derived from survey data, and the data are regarded as proprietary by the American Association of Nurse Anesthetists.

**Acknowledgment:** As usual it is a pleasure to thank Francis P. Hughes, Ph.D., of the American Board of Anesthesiology. His efficient help makes it possible to produce this report promptly.

**Web Site:** To see previous articles, additional data about the workforce and the results of the National Resident Matching Program, readers are invited to visit <[www.grogon.com/nrmp](http://www.grogon.com/nrmp)>.