

# **The National Residency Matching Program Results for 2005: Slight Increase in Recruitment.**

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Alan W. Grogono, M.D., F.R.C.A.,  
Department of Anesthesiology, Tulane University, New Orleans, Louisiana.

**Introduction:** The thirteenth annual report about the anesthesiology results of the National Residency Matching Program (NRMP) shows a slight increase in recruitment since last year despite a reduction in the number of positions available. This increase was principally due to the recruitment of graduating US medical school seniors. A significantly greater number of programs (83%) filled every position that they offered via the Match.

**NRMP Results (Table 1 and Figure 1):** This year a total of 1,230 were recruited via the Match, an increase in recruitment of 2.5 percent. This is the greatest total recruited into anesthesiology via the Match and exceeds the 2003 peak by 19 and the 1992 peak by 205 (20 percent). The number of graduating US allopathic seniors matching into anesthesiology has changed little in the last four years (Figure 2). This year 6.22% of the 14,719 US senior students in the Match selected anesthesiology (Table 2).

From 1996 to 2004 the number of non-US allopathic seniors matching into anesthesiology increased from 156 to 303. Continuing this trend, the number rose again this year to 314, principally attributable to 10 more IMG/non-US graduates, 5 more IMG/US graduates, and 5 more sponsored graduates, but offset by 9 fewer osteopathic graduates (Table 3).

Year	PG1 Positions			CA1 Positions			Sum of PG1 + CA1			Unfilled
	Students	All	Avail	Students	All	Avail	Students	All	Avail	
1990	251	264	321	642	693	822	937	957	1143	186
1991	247	266	329	698	751	963	937	1017	1292	275
1992	244	273	352	682	752	1020	926	1025	1372	347
1993	199	235	325	632	708	1094	832	930	1386	456
1994	163	191	297	542	634	1022	705	825	1295	470
1995	93	136	241	330	400	902	423	536	1143	607
1996	43	113	234	126	211	712	169	324	946	622
1997	80	197	317	173	300	677	253	497	994	497
1998	118	246	347	270	399	661	388	645	1008	363
1999	137	255	376	288	401	671	425	656	1047	391
2000	171	291	349	378	510	656	549	801	1005	204
2001	237	332	371	476	641	733	713	973	1104	131
2002	307	375	392	597	737	777	904	1112	1169	57
2003	321	415	431	606	796	833	927	1211	1264	53
2004	322	414	443	575	786	846	897	1200	1289	89
2005	326	439	463	590	791	820	916	1230	1283	53

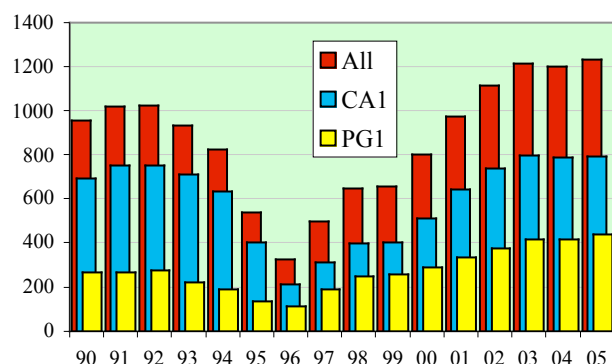
**Table 1: Match Results for Anesthesiology 1990 - 2005.**

"Students" are graduating seniors from US Allopathic Medical Schools.

"All" includes every category listed in Table 3.

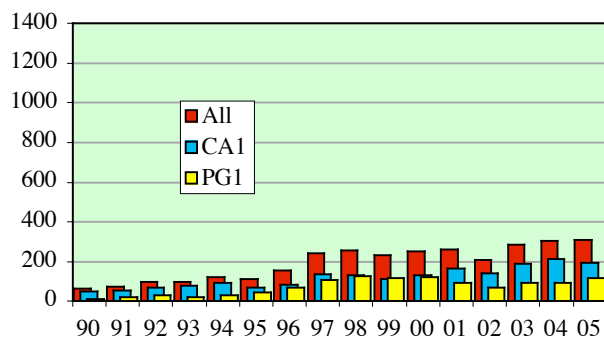
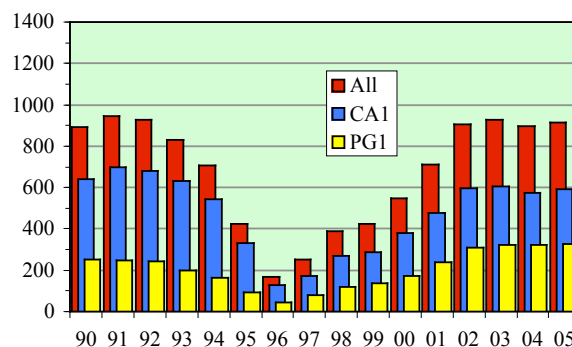
"Avail" represents the number of positions offered via the Match.

"Unfilled" represents the difference between "Available" and "All".



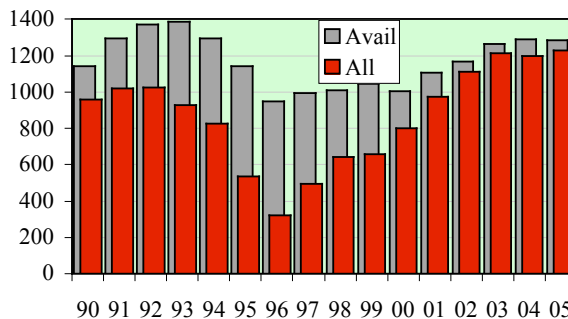
**Figure 1:** Total recruitment into anesthesiology via the NRMP during the years 1990 to 2005. The three columns represent the numbers recruited into the PG1 year, the CA1 year and the total.

**Figure 2:** Graduating US Seniors recruited into anesthesiology during the years 1990 to 2005. The three columns represent the numbers recruited into the PG1 year, the CA1 year and the total.



**Figure 3:** Recruits other than US allopathic seniors matching into anesthesiology during the years 1990 to 2005. The three columns represent the numbers recruited into the PG1 year, the CA1 year and the total.

**Figure 4:** Number of places available (Avail) vs. total number recruited (All) during 1990 to 2005



Year	Students	Total	Percent
1990	937	16286	5.75%
1991	937	13945	6.72%
1992	926	14027	6.60%
1993	832	14098	5.90%
1994	705	14209	4.96%
1995	423	14626	2.89%
1996	169	14543	1.16%
1997	253	14614	1.73%
1998	388	14616	2.65%
1999	425	14606	2.91%
2000	549	14993	3.66%
2001	713	14464	4.93%
2002	904	14336	6.31%
2003	927	14331	6.47%
2004	897	14609	6.14%
2005	916	14719	6.22%

**Table 2. The number of US Allopathic Medical Students (Students) matching into anesthesiology compared to the total number in the NRMP Match for each year.**

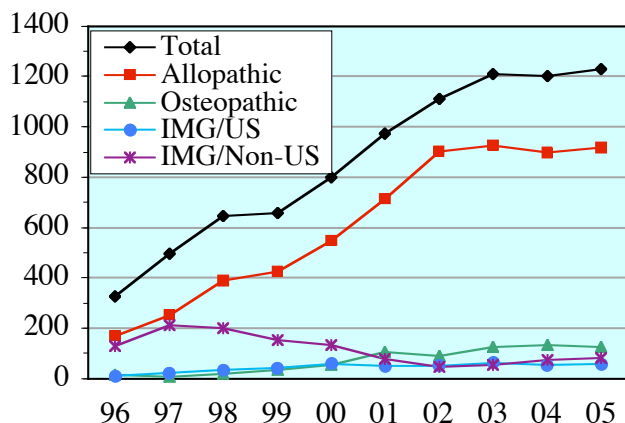
	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
US Allopathic	169	253	388	425	549	713	904	927	897	916
Osteopathic	14	7	17	35	55	107	89	126	133	124
IMG/US	10	22	34	41	59	50	51	64	53	58
IMG/Non-US	130	213	201	152	133	79	47	53	73	83
Sponsored Grad	1	2	2	2	3	15	15	36	40	45
Fifth Pathway	0	0	0	1	2	4	3	4	0	1
Canadian	1	0	2	0	0	3	3	1	4	3
US Physician	0	0	1	0	0	2	0	0	0	0
Total	325	497	645	656	801	973	1112	1211	1200	1230
Non-US Allopathic	156	244	257	231	252	260	208	284	303	314

**Table 3: Distribution via the Match 1996 to 2005.**

This table shows the distribution into anesthesiology residencies from various sources during the last nine years. This year, the most significant changes were increases in the numbers of: US allopathic students; IMG/Non-US graduates; IMG/US graduates; and sponsored graduates entering anesthesiology.

**Positions offered and unfilled:** After nine years of almost uninterrupted increases, this year the total number of positions offered via the Match fell by six to 1283 (0.5% decrease). The number of unfilled positions decreased by 68% from 89 to 53, equaling the number recorded in 2003, the fewest unfilled positions recorded since the residency was lengthened to three years.(Figure 4).

**Distribution of recruits (Table 3):** For six years in a row, behind only US allopathic graduates, the osteopathic graduates have made the greatest contribution to the anesthesiology match; this year's total of 124 is 9 fewer but close to the total for the previous two years. Amongst the other non-US allopathic groups the principal changes are: the number of IMG/Non-US has risen to 83; the number of IMG/US graduates has risen to 58; and the number of sponsored graduates continues to rise and has now reached 45 (Figure 5).



**Figure 5.** Graph of the distribution of people recruited via the Match 1996 to 2005..

This graph is based on the four largest categories in Table 2. There is a slight increase in recruitment from US allopathic students; IMG/Non-US graduates; and IMG/US graduates; and a slight fall in recruitment of osteopathic students.

**Regional Distribution (Table 4):** The NRMP data has again been compiled by state and ranked by the number recruited into each state's residencies via the Match. For seven years now, the top six positions have been occupied by the same six states (NY, CA, MA, PA, TX, and IL) and for the last three years the numbers each of these has recruited has changed little. Between them, the top two states recruited 293 (24 percent), the top five states recruited 540 (44 percent), and the top ten recruited 784 (64 percent).

This year, for the first time, the numbers recruited into each state's residency programs have been compared to the state's population based on the 2000 census (Table 5). The number matched in each state is compared to that state's population in millions.

For the states with applicants matching into anesthesiology, the average per state is 30 matched with an average population of 6.63 million (4.67 matched per million) with a correlation coefficient of 0.83. The number matched per million ranged from a high of 20.98 for DC to a low of 1.11 for West Virginia. Of the six states consistently recruiting the most residents, four recruited more than the average per million: MA 14.02; NY 9.06; PA 6.43; and IL 5.23. Two recruit fewer than the average: TX 3.79; and CA 3.57

State	M	Av
NY	172	179
CA	121	121
MA	89	94
PA	79	82
TX	79	79
IL	65	68
FL	50	50
OH	50	57
NC	40	40
MI	39	39
MO	30	36
WI	28	28
MD	26	26
WA	24	24
GA	23	23
MN	23	23
IN	22	22
CT	21	25
KY	21	22
TN	21	21
NJ	19	25
VA	18	22
AL	16	16
LA	16	17
AR	14	14
KS	13	13
AZ	12	12
DC	12	12
CO	10	10
UT	10	10
IA	9	13
NE	8	8
OK	8	8
OR	8	8
MS	7	7
NH	7	7
SC	7	7
ME	4	4
VT	4	4
NM	3	4
WV	2	3

N=41 1230 1283

**Table 4: Positions available & matched by State for 2001 to 2005.**

M = Matched

Av = Available

M/Mill	State	Population	M	Av
20.98	DC	572,059	12	12
14.02	MA	6,349,097	89	94
9.06	NY	18,976,457	172	179
6.57	VT	608,827	4	4
6.43	PA	12,281,054	79	82
6.17	CT	3,405,565	21	25
5.66	NH	1,235,786	7	7
5.36	MO	5,595,211	30	36
5.24	AR	2,673,400	14	14
5.23	IL	12,419,293	65	68
5.22	WI	5,363,675	28	28
5.20	KY	4,041,769	21	22
4.97	NC	8,049,313	40	40
4.91	MD	5,296,486	26	26
4.84	KS	2,688,418	13	13
4.68	MN	4,919,479	23	23
4.67	NE	1,711,263	8	8
4.48	UT	2,233,169	10	10
4.40	OH	11,353,140	50	57
4.07	WA	5,894,121	24	24
3.92	MI	9,938,444	39	39
3.79	TX	20,851,820	79	79
3.69	TN	5,689,283	21	21
3.62	IN	6,080,485	22	22
3.60	AL	4,447,100	16	16
3.58	LA	4,468,976	16	17
3.57	CA	33,871,648	121	121
3.14	ME	1,274,923	4	4
3.13	FL	15,982,378	50	50
3.08	IA	2,926,324	9	13
2.81	GA	8,186,453	23	23
2.54	VA	7,078,515	18	22
2.46	MS	2,844,658	7	7
2.34	AZ	5,130,632	12	12
2.34	OR	3,421,399	8	8
2.32	CO	4,301,261	10	10
2.32	OK	3,450,654	8	8
2.26	NJ	8,414,350	19	25
1.74	SC	4,012,012	7	7
1.65	NM	1,819,046	3	4
1.11	WV	1,808,344	2	3
0.00	NV	1,998,257	0	0
0.00	ID	1,293,953	0	0
0.00	HI	1,211,537	0	0
0.00	RI	1,048,319	0	0
0.00	MT	902,195	0	0
0.00	DE	783,600	0	0
0.00	SD	754,844	0	0
0.00	ND	642,200	0	0
0.00	AK	626,932	0	0
0.00	WY	493,782	0	0
4.37	Ave	281,421,906	1230	1283

**Table 5: Positions Matched per Million Population in each State**

M/Mill = Matched per million population

	1st	2nd	3r	4th
Matched	555	358	220	97
Average Matched	17.9	11.5	7.1	3.1
Available	555	368	228	132
Average Available	17.9	11.9	7.4	4.3
Unfilled	0	10	8	35
Average Unfilled	0.0%	2.7%	3.5%	26.5%

**Table 6. Match results for residency programs compiled by quartile based on numbers matched into each program**

**Unfilled Positions Compared to Number Matched.** The 124 residency programs were ranked by number matched into each program and then grouped in quartiles of 31 programs (Table 6). The programs in the 1<sup>st</sup> quartile matched all 555 available positions with none remaining unfilled. In the 2<sup>nd</sup> quartile ten out of 368 positions were unfilled (2.7%). In the 3<sup>rd</sup> quartile eight out of 228 were unfilled (3.5%). And, in the 4<sup>th</sup> 35 out of 132 were unfilled (26.5%).

**Comment:** For the last three years the number of residents recruited into anesthesiology via the Match has effectively reached a plateau with no appreciable change in the overall number recruited. Last year the number of allopathic US seniors recruited fell by 30. It has been followed this year with an increase of 19. The average for the last four years is 911 and the variation around this average is not significant.

Like any other specialty recruitment into anesthesiology will, inevitably, lack uniformity. Some programs, climates, or localities, attract more candidates than others. Previous articles have emphasized this lack of uniformity by comparing the states to each other. This year the numbers matched have also been compared to the population of each state. This comparison reveals another variation on the non-uniformity of the distribution. The District of Columbia recruits 20.98 residents per million population - nearly five times the average. However, this is put into perspective by realizing that, in reality, this striking excess represents only about nine additional residents. The next two states are larger and, therefore, more critical: Massachusetts recruited just over 14 residents per million and New York just over 9 per million. To reach the average, these two states would, between them, have to shed about 143 residents (59 for Massachusetts and 84 for New York)

By contrast, ten states offer no residency positions in anesthesiology and a significant number of the smaller programs have unfilled positions. These areas of the country have to attract residents when they graduate and persuade them to relocate after completing their training. In theory it is desirable to distribute educational programs to roughly match the population. In practice, however, such uniformity is unattainable. We should probably be grateful that the distribution is as uniform as it is and that the Match works as well as it does.

**Website:** This article, previous articles, and additional information about the numbers of students recruited into anesthesiology from each school and the numbers recruited into, and graduating from, each residency program are available at <[www.grogono.com/nrmp](http://www.grogono.com/nrmp)>.

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Dr. Grogono's past NRMP articles have appeared in August 1993, May 1994, June 1995, May 1996, May 1997, May 1998, May 1999, May 2000, May 2001, May 2002, May 2003 and May 2004.