The National Residency Matching Program Results for 2003: Continuing Strong Recruitment – Few Surprises.

Submitted for May 2003 ASA Newsletter

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

Introduction: The eleventh annual report about the anesthesiology results of the National Residency Matching Program (NRMP) shows some slowing in the increased recruitment experienced in the last few years. There was only a slight increase in the recruitment of graduating medical students from US allopathic schools. Most programs (81%) filled every position that they offered via the Match.

NRMP Results (Table 1): This year a total of 1,211 were recruited via the Match (Figure 1), a further 9 percent increase in recruitment (14% last year, 21% in 2001 and 22% in 2000). The total matching into anesthesiology beats the 1992 record of 1,025 by 18%. The number of graduating US allopathic seniors matching into anesthesiology only increased from 904 to 927, a 3% increase (Figure 2). This number is only 10 below the peak of 937 recruited in 1990 and 1991, and represents 6.47% of the 14,331 US senior students in the Match. Because there are now more students in the Match (Table 2) this is a little below the previous record of 6.7% which occurred in 1991.

During the years 1990 to 2001 the total number matching in all other categories (non-US allopathic seniors) increased from 156 to 260. Last year the number fell to 208 but this year rose again to 284, the highest number recorded, beating the 1998 high of 257 by 11% (Table 3).

Vaan	PG1			CA1 Positions				Sum of PG1 + CA1					
Year	Students	All	Avail	Students	All	Avail		Students	All	Avail	Unfilled		
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		

Table 1: Match Results for Anesthesiology 1990 - 2003.

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

[&]quot;All" includes every category listed in Table 3.

[&]quot;Avail" represents the number of positions offered via the Match.

[&]quot;Unfilled" represents the difference between "Available" and "All".

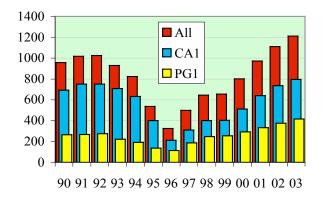
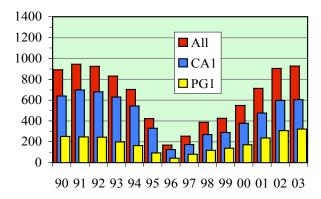


Figure 1: Total recruitment into anesthesiology via the NRMP during the years 1990 to 2003. The three columns represent the numbers recruited into the PG1 year, the CA1 year and the total.

Figure 2: Graduating US Seniors recruited into anesthesiology during the years 1990 to 2003. The three columns represent the numbers recruited into the PG1 year, the CA1 year and the total.



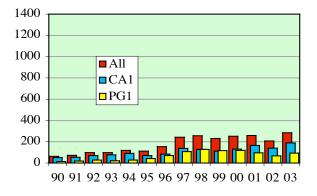
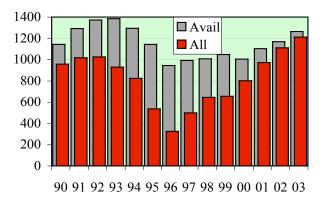


Figure 3: Recruits other than US allopathic seniors matching into anesthesiology during the years 1990 to 2003. The three columns represent the numbers recruited into the PG1 year, the CA1 year and the total.

Figure 4: Number of places available (Avail) vs. total number recruited (All) during 1990 to 2003



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%

Table 2. The number of US Allopathic Medical Students (Students) compared to the total number in the NRMP Match for each year. The actual number is now comparable to the peak in 1990 and 1991, but the total in the match is now higher.

Positions Offered and Unfilled: The total number of positions offered via the Match increased to 1,264 (8% increase this year compared to a 6% increase last year), only 9% below the all time high of 1,386 in 1993. The number of positions unfilled fell to 53, just under the 57 reported last year, the fewest unfilled for anesthesiology since the Match was introduced in its present form (Figure 4).

Distribution of Recruits (Table 3): For five consecutive (1997 – 2001) years the number of osteopathic graduates matching into anesthesiology had almost doubled every year. Then, last year, there was dip from 107 to 89 (17% decrease); this year there was a 42% increase from 89 to 126. The other non-allopathic groups (Figure 5) showed somewhat similar increases with the exception of Fifth Pathway, Canadians and US Physicians.

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

Table 3: Distribution via the Match 1996 to 2003.

This table shows the distribution into anesthesiology residencies from various sources during the last eight years. This year, as a proportion, there was a significant increase in the number of Osteopathic, IMG/US, IMG non-US, and sponsored graduates, entering anesthesiology. As a result he total for Non-US Allopathic students has risen this year.

1999		2000				2001			2	2002		2003			
State	M	Av	State	M	Av	State	M	Av		State	M	Av	State	M	Av
CA	87	103	CA	95	100	CA	106	109		NY	136	151	NY	177	182
NY	61	103	NY	69	94	NY	93	126		CA	114	115	CA	122	122
MA	54	83	TX	65	78	TX	70	80		TX	77	79	MA	80	86
TX	40	75	MA	64	76	MA	68	74		PA	76	81	TX	80	83
PA	35	71	PA	41	58	PA	65	74		MA	65	67	IL	68	68
IL	30	65	IL	39	65	IL	48	63		IL	58	58	PA	67	68
NC	27	34	NC	33	33	FL	36	38		OH	43	50	OH	52	54
MI	26	31	FL	31	31	NC	35	35		FL	42	42	FL	50	52
FL	25	39	MI	30	30	MD	32	32		NC	38	38	NC	39	39
MO	20	28	MO	26	33	MI	29	29		MD	32	32	MD	36	36
WI	20	21	MD	25	29	WI	29	29		MO	32	32	MI	34	36
VA	18	20	WI	19	19	OH	28	40		WI	28	28	WI	30	30
IN	16	20	LA	18	18	MO	26	33		MI	27	33	MO	24	33
MD	16	23	WA	18	19	GA	20	22		CT	24	24	MN	23	23
OH	16	44	OH	17	39	MN	20	20		GA	22	22	WA	23	23
WA	16	22	IN	16	20	TN	20	22		WA	21	21	CT	22	27
MN	15	16	KY	15	16	VA	19	19		IN	20	20	GA	22	22
AL	14	14	MN	15	18	IN	18	20		MN	20	21	IN	20	20
GA	13	16	AL	14	14	CT	17	24		KY	19	20	TN	18	23
LA	13	23	VA	14	20	LA	17	18		TN	19	21	KY	17	19
CO	12	12	TN	13	22	WA	17	19		VA	19	23	AL	16	16
KY	9	11	CO	12	12	KY	15	17		LA	18	18	LA	16	18
MS	7	7	IA	12	12	AL	14	14		AL	15	15	VA	16	23
SC	7	9	GA	11	17	DC	12	13		DC	15	15	AR	14	14
TN	7	22	NE	9	10	IA	12	12		CO	12 12	12	DC	14	15
AR	6	6	AZ	8	8	KS	11	12		KS AR	11	11	CO	12	14 12
AZ KS	6	15	SC AR	7 6	6	CO UT	10 10	10 10		IA	11	11	IA	12	12
OK	6	6	CT	6	13	AR	8	8		UT	10	10	KS	11	11
DC	4	19	KS	6	9	NE	8	8		AZ	9	9	UT	10	10
NJ	4	16	NM	6	6	SC	8	9		NE	8	8	AZ	9	9
NM	4	6	UT	6	6	AZ	7	7		MS	7	7	NE	8	8
IA	3	10	MS	5	7	MS	6	7		SC	7	7	MS	7	7
NH	3	6	NH	5	5	NM	6	6		NJ	6	12	PR	7	7
CT	2	19	OK	5	6	OR	6	6		NM	6	6	SC	7	7
ME	2	4	DC	4	13	NH	5	5		OK	6	6	NM	6	6
NE	2	8	PR	4	4	NJ	5	13		OR	6	6	OK	6	6
OR	2	5	ME	3	4	ME	4	4		PR	5	7	OR	6	6
UT	1	1	OR	3	6	OK	4	4		WV	5	5	NH	5	5
WV	1	4	WV	3	5	PR	4	4		ME	4	4	ME	4	4
VT	0	4	VT	2	4	VT	3	4		VT	4	4	VT	4	4
PR	-	-	NJ	1	11	WV	2	5		NH	3	6	WV	4	4
N=41	656	1047	N=42		1005	N=42	973	1104		N=42	1112	1169	N=42	1211	1264

Table 4: Positions available & matched by State for 1999 to 2003. For each year the data is ranked by number matched. This year, of the total matching into anesthesiology, 25% went to the top 2 States, 44% to the top 5, and 64% to the top 10.

Key: M = Total positions Matched Av = Total positions Available

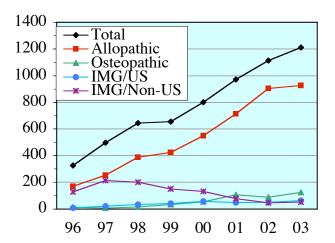


Figure 5. Graph of the distribution of people recruited via the Match 1996 to 2003.

This graph is based on the larger categories in Table 2. There is some increase in recruitment from US allopathic medical schools but a proportionately greater increase in osteopathic students and US citizen IMGs.

Regional Distribution (**Table 4**): The NRMP data for the last five years has again been compiled by state and ranked by the number recruited into each state's residencies via the Match. For four years now, New York and California have occupied the two top positions recruiting respectively 177 (41 more) and 122 (7 more). Between them these two states recruited 25% of the total this year. Of the next three states Massachusetts recruited 80 (an increase of 15), Texas 80 (an increase of 3), and Illinois 68 (an increase of 3). Between them, the top five states recruited 527 (44 percent), and the top ten recruited 771 (64 percent).

In contrast to the general trend, there was a significant decrease in the number matched for Pennsylvania (76 to 68) and Missouri (32 to 24). In Pennsylvania's case this can be attributed to the decrease in the number of positions made available as two programs are no longer listed – Allegheny General and Western Pennsylvania; in Missouri's case to a reduction in the number matched at one hospital. Once again about two thirds of the states filled every position that was offered in anesthesiology via the NRMP.

Electronic Residency Application Service (ERAS) Data: Towards the end of the application process ERAS published a summary of the trends in applications by specialty. The principle changes were increases in the numbers of US graduates seeking positions in Anesthesiology, Dermatology, Pathology, Physical Medicine & Rehabilitation, Plastic Surgery, Psychiatry, Radiation Oncology and Surgery, with decreases in Emergency Medicine, Family Practice, Med/Peds, and Ob/Gyn. Their records showed an increase in the number of US Anesthesiology applicants from 1361 to 1446 and an decrease in IMG applicants from 1459 to 1132 (ERAS data Dec 18th 2002).

Comment: The increase in recruitment has continued again this year. However, there are some interesting changes compared to last year. The striking increase in the number of US allopathic medical students may be leveling off. The rise from 904 to 927 is relatively small. The overall increase from 1112 to 1211 is mostly accounted for by increases in the number of osteopathic students (37), sponsored graduates (21), US citizen international medical graduates (13), and non-US citizen international medical graduates (6). This suggests that the increase in the number of positions offered (1169 to 1264) is now significantly greater than the number of available US allopathic candidates and that this is now providing an opportunity for greater recruitment from other categories.

The number now being recruited is now about 18% larger than the peak in 1992 when anesthesiology was one of the most popular specialties. This number, however, must be set

against changes that affect our specialty. For example the US population grew by nearly 12% between the census of 1990 and the census in 2000.

The number of positions made available via the match (1,264) is still significantly below the 1993 peak of 1,386. The major difference is that in 1993, there were 456 places unfilled. This year only 53 places went unfilled.

The growth in recruitment has also been accompanied by an increase in the range of distribution. In the last three years the largest two states have progressively recruited between them 20%, 22% and 25% of the total. Similarly in these three years the top five have recruited 41%, 42%, and 44%. It would appear that in times of growing recruitment, the strong grow stronger.

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>.

Acknowledgments: I thank Mona Signer of the NRMP whose prompt response permits the rapid production of this article and Renee Overton for permission to quote the ERAS data. This article was prepared primarily for publication in the *ASA NEWSLETTER*. I also thank the editor, Mark J. Lema, M.D., for his agreeing that it may be simultaneously made available on the website.

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 and May 2002.