

e-Supplement 2: e-Tables and e-Figure Legends

Table e-1. Demographic characteristics of survey respondents and non-respondents

Demographic characteristics ¹		Respondents (n = 1,673) ⁴ Percent	Non-Respondents (n = 2,454) ⁴ Percent	Significance testing
Gender ²	Men	65.4*	69.1	$p = 0.012^5$
	Women	34.6*	30.9	
Age ²	< 40	21.8	22.0	$p = 0.100^5$
	40-49	24.9	28.3	
	50-59	25.8	24.1	
	60-69	20.4	18.4	
	70+	7.1	7.2	
Region ²	Northeast	23.4*	26.6	$p = 0.017^5$
	Midwest	23.5*	19.9	
	South	30.6	32.1	
	West	21.8	20.9	
	Other	0.8	0.5	
Work Setting ³	Solo Practice	15.0	13.9	$p < 0.004^5$
	Neurology Group	23.2	22.2	
	Multispecialty Group	14.7	13.2	
	Academic-Based	31.0	29.9	
	Hospital-Based	8.6	9.8	
	Government-Based	3.7	4.1	
	Other	3.9*	6.9	
Primary subspecialty ²	Behavioral Neurology and Neuropsychiatry	2.6	2.6	$p = 0.003^5$
	Child Neurology	9.3*	7.3	
	Clinical Neurophysiology	3.8	3.1	
	Epilepsy	9.4	10.1	
	General Neurology	33.5	32.1	
	Headache Medicine	3.0	2.5	
	Movement Disorders	7.1	5.8	
	Neurocritical Care	2.2	2.3	
	Neurohospitalist	2.3	1.6	
	Neuroimmunology and Multiple Sclerosis	2.3	2.2	
	Neuromuscular Medicine	5.6	6.4	
	Sleep Medicine	4.8	4.5	
	Vascular Neurology and Stroke	5.4*	7.4	
	Other	8.5*	12.0	

¹Demographic data sourced from the AAN membership database rather than from the survey

²No missing data

³Respondent missing = 115 and non-respondents missing = 389

⁴Two additional respondents were classified as neurologists based on the demographics from the AAN membership database (1,673) rather than from the survey (1,671)

⁵Pearson Chi-Square

*This paired comparison (z-test using Bonferroni correction) was significant at $p < .05$.

Table e-2: Subspecialty, Method of Compensation, and Workload in Men and Women Neurologists

	Men (N=1,091)	Women (N=580)	P value comparison M to W^a
Subspecialty % ^b			0.001
General Neurology	36.6	23.6 ^c	
Other	8.5	12.1 ^c	
Epilepsy	7.8	9.4	
Child Neurology	7.1	10.4 ^c	
Movement Disorders	6.3	9.4 ^c	
Vascular Neurology and Stroke	7.2	5.6	
Neuromuscular Medicine	6.1	4.6	
Headache Medicine	3.4	4.8	
Neurohospitalist	2.9	4.4	
Sleep Medicine	3.1	4.0	
Behavioral Neurology and Neuropsychiatry	3.1	2.9	
Clinical Neurophysiology	2.8	3.3	
Neuroimmunology and Multiple Sclerosis	2.9	3.1	
Neurocritical Care	2.2	2.3	
Missing, count	243	101	
Compensation method %			<0.001
Straight salary	30.7	34.4	
Salary plus bonus	37.9	43.8 ^c	
Production-based income	31.4	21.8 ^c	
Missing, count	48	25	
Hours worked per week			<0.001
Mean (SD)	56.4 (16.1)	54.2 (16.7)	
Median	55	52	
Missing, count	40	25	
% time devoted to clinical practice			0.145
Mean (SD)	76.4 (25.3)	75.5 (24.0)	
Median	85	80	
Missing, count	34	18	
% time devoted to research			0.655
Mean (SD)	7.2 (15.7)	7.6 (17.1)	
Median	0	0	
Missing, count	34	18	
% time devoted to teaching			0.171
Mean (SD)	5.7 (8.9)	6.3 (9.0)	
Median	2	5	
Missing, count	34	18	
% time devoted to administration			0.878
Mean (SD)	8.8 (12.7)	8.8 (12.4)	
Median	5	5	
Missing, count	34	18	

% time devoted to other			0.351
Mean (SD)	1.7 (8.8)	2.1 (10.7)	
Median	0	0	
Missing, count	34	18	
Nights on call/week			0.436
Mean (SD)	2.0 (2.3)	2.0 (2.3)	
Median	1	1	
Missing, count	44	39	
Outpatients in clinic per week			<0.001
Mean (SD)	44.9 (32.4)	38.5 (28.4)	
Median	40	36	
Missing, count	45	24	
Inpatients on average hospital day			0.047
Mean (SD)	6.1 (8.3)	6.7 (8.1)	
Median	3	5	
Missing, count	45	27	
Weekends rounded in hospital			0.966
Mean (SD)	10.2 (11.1)	9.5 (9.6)	
Median	8	8	
Missing, count	42	24	
Hours volunteering per month			0.191
Mean (SD)	3.4 (6.7)	3.0 (5.5)	
Median	0	0	
Missing, count	48	25	

^a Comparisons tested using Kruskal-Wallis for continuous variables and chi-square for categorical variables.

^b Subspecialties with fewer than 30 cases (including Endovascular & Interventional Neurology) were added to the Other category.

^c This paired comparison (z-test) was found to be significant at a $p < 0.05$ level.

Table e-3: Workload in Men and Women within each Age Category

	Men			Women		
	N	Mean	SD	N	Mean	SD
Hours per week by Age						
<40	156	59.9	15.8	168	52.7 ^a	13.0
40-49	219	57.8	16.2	189	55.2	17.6
50-59	289	58.6	14.1	124	54.6 ^a	17.4
60-69	269	55.2	16.3	64	53.6	21.3
70+	118	46.8	17.0	10	57.5	11.7
Total	1,051	56.4	16.1	555	54.2 ^b	16.7
Outpatients per week by Age						
<40	156	35.1	28.0	171	34.3	29.8
40-49	218	46.5	32.8	187	40.5 ^a	26.0
50-59	290	50.6	33.3	123	42.4 ^a	29.8
60-69	266	47.4	32.9	65	38.1 ^a	27.2
70+	116	35.1	29.0	10	29.7	28.0
Total	1,046	44.9	32.4	556	38.5 ^b	28.4
Inpatients per day by Age						
<40	156	7.9	7.3	169	8.2	9.6
40-49	217	7.6	9.6	186	6.5	6.8
50-59	292	6.3	9.5	123	6.4	7.8
60-69	264	4.7	6.7	65	4.8	7.4
70+	117	3.3	5.3	10	2.8	3.6
Total	1,046	6.1	8.3	553	6.7 ^b	8.1
Weekends per year by Age						
<40	154	12.5	10.6	170	9.6 ^a	7.4
40-49	217	11.7	10.5	187	10.2	10.3
50-59	292	10.2	10.9	124	8.2	8.6
60-69	270	9.5	12.0	65	9.4	12.4
70+	116	5.6	9.4	10	11.6	16.7
Total	1,049	10.2	11.1	556	9.5	9.6
Hours volunteering per month by Age						
<40	154	2.4	6.0	169	1.8	3.9
40-49	215	2.9	5.6	191	2.7	5.2
50-59	291	3.9	7.7	121	4.2	6.6
60-69	266	3.3	5.0	64	4.8 ^a	6.3
70+	117	4.5	9.2	10	3.0	6.1
Total	1,043	3.4	6.7	555	3.0	5.5

^a Gender comparison (z-test) was found to be significant at a $p < 0.05$ level.

^b Gender comparison (Kruskal-Wallis) was found to be significant at a $p < 0.05$ level.

Table e-4: Career Satisfaction in Men and Women within each Age Category

	Men	Women
Physician again by Age, % Yes		
<40	61.6	46.2 ^a
40-49	55.7	52.9
50-59	61.6	61.3
60-69	72.2	68.8
70+	77.1	70.0
Total	64.8	54.8 ^b
Total, Count	1,062	560
Neurologist again by Age, % Yes		
<40	66.7	62.2
40-49	55.4	64.2
50-59	67.5	65.3
60-69	74.0	78.8
70+	81.5	70.0
Total	68.0	65.7
Total, Count	1,066	565
Job satisfaction by Age, % Agree		
<40	71.3	64.5
40-49	65.9	59.4
50-59	65.2	63.7
60-69	66.9	69.2
70+	84.7	80.0
Total	68.9	63.4 ^b
Total, Count	1,057	563
Work-life balance by Age, % Satisfied		
<40	37.1	33.3
40-49	30.3	16.8 ^a
50-59	32.0	27.4
60-69	33.8	25.4
70+	57.6	50.0
Total	35.7	25.8 ^b
Total, Count	1,061	559
Autonomy by Age, % Agree		
<40	63.1	54.7
40-49	60.5	58.3
50-59	61.1	57.3
60-69	56.5	54.5
70+	73.1	80.0
Total	61.5	56.9
Total, Count	1,061	564
Meaningful work by Age, % Agree		
<40	84.1	89.0
40-49	81.4	90.7
50-59	87.4	85.5
60-69	87.4	92.4
70+	95.8	100.0
Total	86.6	89.4
Total, Count	1,059	565

Amount of DIRECT clerical tasks by Age, % Agree is reasonable		
<40	34.4	28.8
40-49	26.1	16.8 ^a
50-59	17.1	18.7
60-69	19.0	18.5
70+	32.8	30.0
Total	23.8	21.3
Total, Count	1,049	558
Amount of INDIRECT clerical tasks by Age, % Agree is reasonable		
<40	27.4	18.2 ^a
40-49	17.0	13.6
50-59	12.0	10.6
60-69	13.0	12.1
70+	21.4	30.0
Total	16.7	14.5
Total, Count	1,045	560
Amount of effective support staff by Age, % Too little		
<40	50.6	62.9 ^a
40-49	56.3	69.6 ^a
50-59	48.3	67.8 ^a
60-69	52.3	60.6
70+	46.2	70.0
Total	51.1	66.1 ^b
Total, Count	1,040	558

^a Gender comparison (z-test) was found to be significant at a $p < 0.05$ level.

^b Gender comparison (chi-square) was found to be significant at a $p < 0.05$ level.

Table e-5: Percent of Men and Women General Neurologists within each Age Category

	Count	% Men	% Women	P value comparison M to W ^a
<40	57	49.1	50.9	0.895
40-49	99	62.6	37.4	0.012
50-59	112	72.3	27.7	<0.001
60-69	122	86.9	13.1	<0.001
70+	33	100.0	0.0	NA
Total	423 ^b	73.3	26.7	<0.001

^a Comparisons tested using a chi-square for each row.

^b Of the 1,327 who provided an answer for subspecialty (1,671 respondents - 344 missing subspecialty data), 423 chose general neurology as their primary focus.

Table e-6: Final Multivariate Model Fit Separately to Males and Females

Variable	Males		Females	
	p-value	Odds Ratio	p-value	Odds Ratio
Age	0.0083	1.16 (1.04,1.30)	0.3361	1.10 (0.91,1.33)
Age Squared	0.0019	0.99 (0.99,0.99)	0.1954	0.99 (0.99,1.00)
Q9a (Autonomy in Job)	<0.0001	0.37 (0.27,0.52)	<0.0001	0.21 (0.13,0.34)
Q9b (Meaningful Work)	0.0001	0.30 (0.16,0.55)	0.0050	0.21 (0.07,0.63)
Q10a (Reasonable About of Direct Clerical Tasks)	<0.0001	0.46 (0.32,0.66)	0.0202	0.54 (0.32,0.91)
Q11 (Effect Support Staff)	0.0011	0.60 (0.44,0.81)	0.3034	0.79 (0.50,1.24)
Q12 (Hours Worked Per Week)	0.0092	1.02 (1.00,1.03)	0.0302	1.02 (1.00,1.03)
Q13_1 (Percent of Time in Clinical Practice)	0.0212	1.01 (1.00,1.02)	0.0998	1.01 (0.99,1.02)
Q14 (Nights on Call Per Week)	0.0259	1.09 (1.01,1.17)	0.3810	1.05 (0.95,1.16)
Q15 (Number of Outpatients)	0.0212	1.01 (1.00,1.01)	0.1208	1.01 (0.99,1.02)
Q17 (Weekends With Hospital Rounds)	0.2228	0.99 (0.98,1.01)	0.0542	1.03 (1.00,1.05)

Table e-7: Proportion of Commenters by Theme for Women and Men

	Women	Men	Difference
Number of Commenters	250	426	
Workload & Clerical Work	62.4%	45.8%	16.6%
Work-Life Balance & Wellness	29.6%	14.8%	14.8%
Professionalism	44.8%	30.8%	14.0%
Leadership Issues	30.4%	16.9%	13.5%
Systemic	20.0%	17.1%	2.9%
Advocacy	17.6%	15.3%	2.3%
Individual	28.8%	26.8%	2.0%
Remuneration	25.2%	23.2%	2.0%
Recertification	9.6%	8.2%	1.4%
Insurance Mandates	20.4%	20.0%	0.4%
Unique to Neurology	7.6%	7.7%	-0.1%
Engagement	17.6%	17.8%	-0.2%
EMR	22.0%	22.3%	-0.3%
Government Mandates	17.2%	20.4%	-3.2%

Figure e-1. Age distribution of male and female neurologists

Figure e-1 legend: Figure e-1 is a plot of age by gender showing that men have more physicians age>50 while women have more physicians age<50.

The graphic is a separate file named Figure_e-1.jpg

Figure e-2. Depersonalization, emotional exhaustion, and personal accomplishment by weekend responsibilities and gender

Figure e-2 legend: Figure e-2 plots burnout measures by number of weekends per year with hospital rounding responsibilities. Lowess curves, with 95% confidence intervals for the mean, were fit separately for males (blue) and females (red) to show trajectories. The black reference lines show the burnout cutoffs for each scale (>10 for depersonalization, >27 for emotional exhaustion, and <33 for personal accomplishment). Females tend to have higher emotional exhaustion levels than males when they have hospital rounding responsibilities on more than half of the weekends.

The graphic is a separate file named Figure_e-2.jpg