

# Results of the AAP/CNS Workforce Survey: Fears, Tears, Burnout, Yet Hope

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DEDICATED TO THE HEALTH OF ALL CHILDREN™



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# Disclosures

- Catabasis (co-site PI for clinical trial)
- Pfizer (co-site PI for clinical trial)
- Sarepta Therapeutics (advisory board)
- Springer (co-editor for textbook)
- Genzyme (fellowship funding)

# The child neurology clinical workforce in 2015

Report of the AAP/CNS Joint Taskforce

*Neurology*<sup>®</sup> 2016;87:1384-1392

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# Methodology

- Joint AAP/CNS task force convened in 2014
- Target population
  - Child neurologists
  - Neurodevelopmental disabilities specialists
- Survey conducted electronically with 4 reminders in 2015
- Survey sent to members of the AAP Section on Neurology and the CNS
- SPSS 18.0 was used to generate frequency distributions for all variables

**Table 1. Demographics (N=523 for practicing physicians, N=97 for trainees)**

<i>Gender</i>	<i>Practicing physicians</i>		<i>Trainees</i>	
	<i>n/N</i>	<i>%</i>	<i>n/N</i>	<i>%</i>
Male	270/432	62.5%	32/89	36.0%
Female	162/432	37.5%	57/89	64.0%
 <i>Hispanic</i>				
Yes	26/425	6.1%	6/88	6.8%
No	399/425	93.9%	82/88	93.2%
 <i>Race*</i>				
Asian	63/427	14.8%	20/89	20.6%
Native Hawaiian/Pacific Islander	0	0.0%	0	0.0%
Black/African American	7/427	1.6%	2/89	2.2%
American Indian/Alaska native	3/427	0.7%	1/89	1.1%
White	341/427	79.9%	63/89	70.8%
Other	20/427	4.7%	7/89	7.9%

\* Seven practicing physicians and four trainees reported two races. They are included in both relevant categories above.

*Note:* Not all respondents answered all questions.

**Table 2A. Background characteristics of survey respondents (N=523)**

	<i>Mean</i>	<i>Median</i>	<i>Range</i>
Years since medical school graduation (N=433)	26.2	26.0	4-63
	n	%	
<i>Medical school location (N=431)</i>			
United States	354	82.1%	
Canada	11	2.6%	
Other	66	15.3%	
<i>Professional degree (N=518)</i>			
MD	481	92.9%	
DO	9	1.7%	
Other	28	5.4%	

**Table 2B. Background characteristics of survey respondents (N=523)**

<i>Enrolled in Maintenance of Certification (MOC) (N=523)</i>	n	%
"No, I have lifetime certification"	155	29.6%
"No, my initial certification is still current"	56	10.7%
"No, my certification has lapsed"	15	2.9%
"Yes, in my primary specialty/subspecialty"	146	27.9%
"Yes, in my second specialty/subspecialty"	213	40.7%
"Yes, in my third specialty/subspecialty"	70	13.4%
"Yes, in another specialty/subspecialty"	20	3.8%
Other	32	6.1%
 <i>Board Certifications (responses numbering less than 5 not listed)</i>		
Neurology or child neurology	461	
Pediatrics	229	
Clinical neurophysiology	77	
Epilepsy/electroencephalography	32	
Neurodevelopmental disabilities	21	
Sleep medicine	11	
Headache medicine	11	
Neuro-oncology	7	
Neuromuscular/electromyography	6	



**Table 3A. Experience with referrals for respondents who provide direct patient care (N=478)**

<i>Referral sources (N=452 who receive referrals for pediatric patients)</i>	n	%
Pediatric generalists	443	98.0%
Family physicians	410	90.7%
General internists	111	24.6%
Obstetric/Gynecologists	78	17.3%
Adult medicine subspecialists	100	22.1%
Pediatric medical subspecialists/surgical specialists	415	91.8%
Pediatric nurse practitioners	377	83.4%
Non-pediatric nurse practitioners	166	36.7%
Physician assistants	268	59.3%
Other	44	9.7%

<i>Change in volume or complexity of pediatric referrals in last 12 months (of 452 who receive referrals, 180 report change in volume and/or complexity)</i>		
Increased volume	159	88.3%
Decreased volume	7	3.9%
No change in volume	14	7.8%
Increased complexity	123	68.3%
Decreased complexity	12	6.7%
No change in complexity	40	22.2%

**Table 3B. Experience with referrals for respondents who provide direct patient care (N=478)**

*Perceived causes of changes in last 12 months (N=180 who reported change)*

	Increased		Decreased		No change	
	n	%	n	%	n	%
General pediatricians and other generalists treat LESS complex subspecialty patients	71	39.4%	39	21.7%	63	35.0%
General pediatricians and other generalists treat MORE complex subspecialty patients	12	6.7%	121	67.2%	42	23.3%
Amount of competition with other pediatric subspecialists	19	10.6%	33	18.3%	119	66.1%
Amount of referrals from adult subspecialists	26	14.4%	3	1.7%	142	78.9%
Number of inappropriate or questionable referrals	76	42.2%	10	5.6%	86	47.8%
Incidence or severity of illnesses/conditions in my community that I treat	79	43.9%	1	0.6%	92	51.1%

**Table 4A. Experience with competition for survey respondents (N=523)**

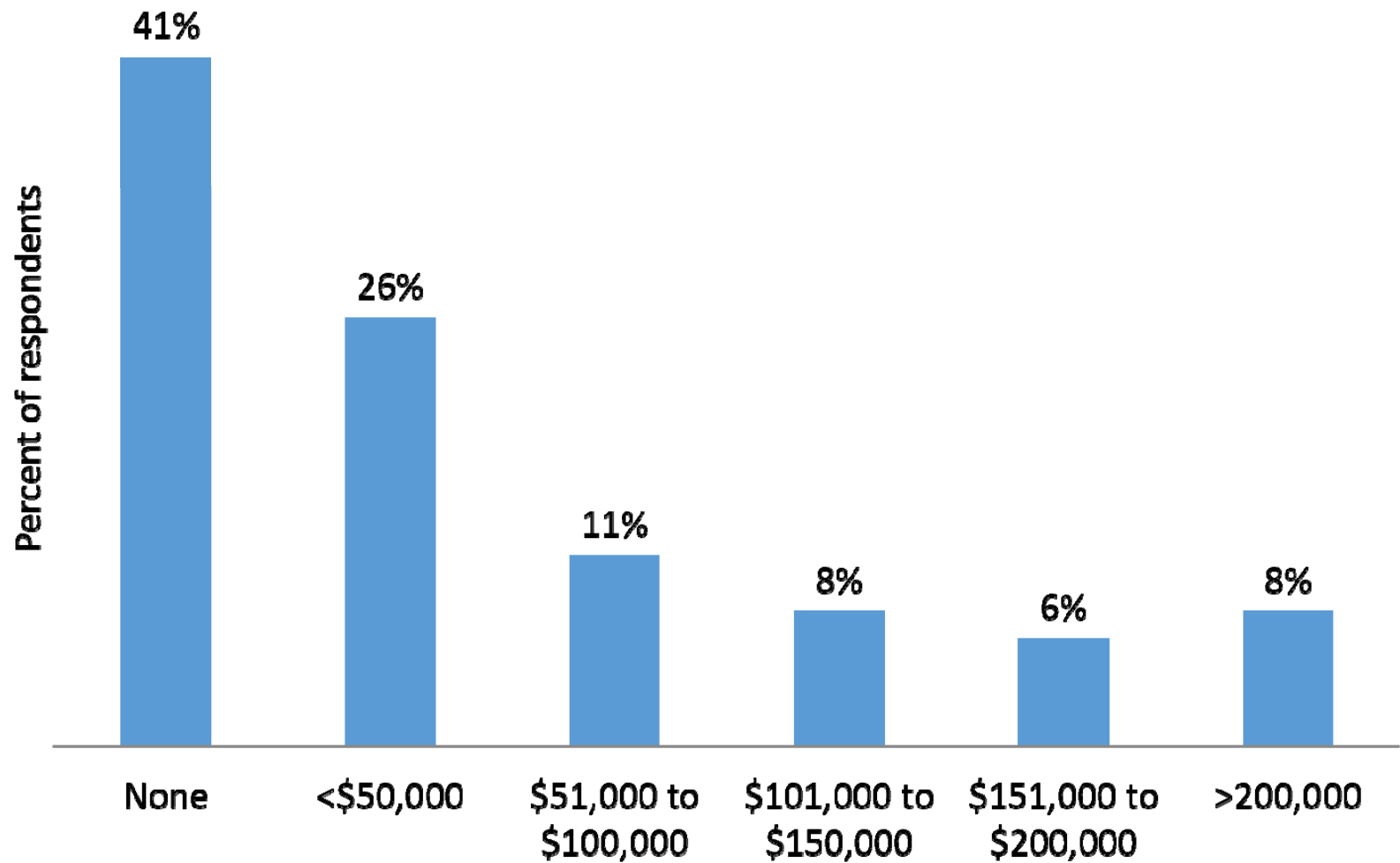
<i>Face competition in geographic area</i> (N=477)	n	%
Yes	267	56.0%
No	210	44.0%
 <i>Sources of competition (N=267 who face competition)</i>		
General pediatricians	8	3.0%
Family physicians	2	0.7%
Other pediatric medical subspecialists/surgical specialists	252	94.4%
Physicians trained in adult medicine in subspecialty	32	12.0%
Non-physician medical personnel	10	3.7%
Related health personnel	4	1.5%
Urgent care center	2	0.7%
Retail based clinic(s)	2	0.7%
Others	12	4.5%
 <i>Modified practice as a result of competition</i>		
Yes	67	25.1%
No	200	74.9%

**Table 4B. Experience with competition for survey respondents (N=523)**

*Practice modifications due to competition (N=67 who reported modifying practice)*

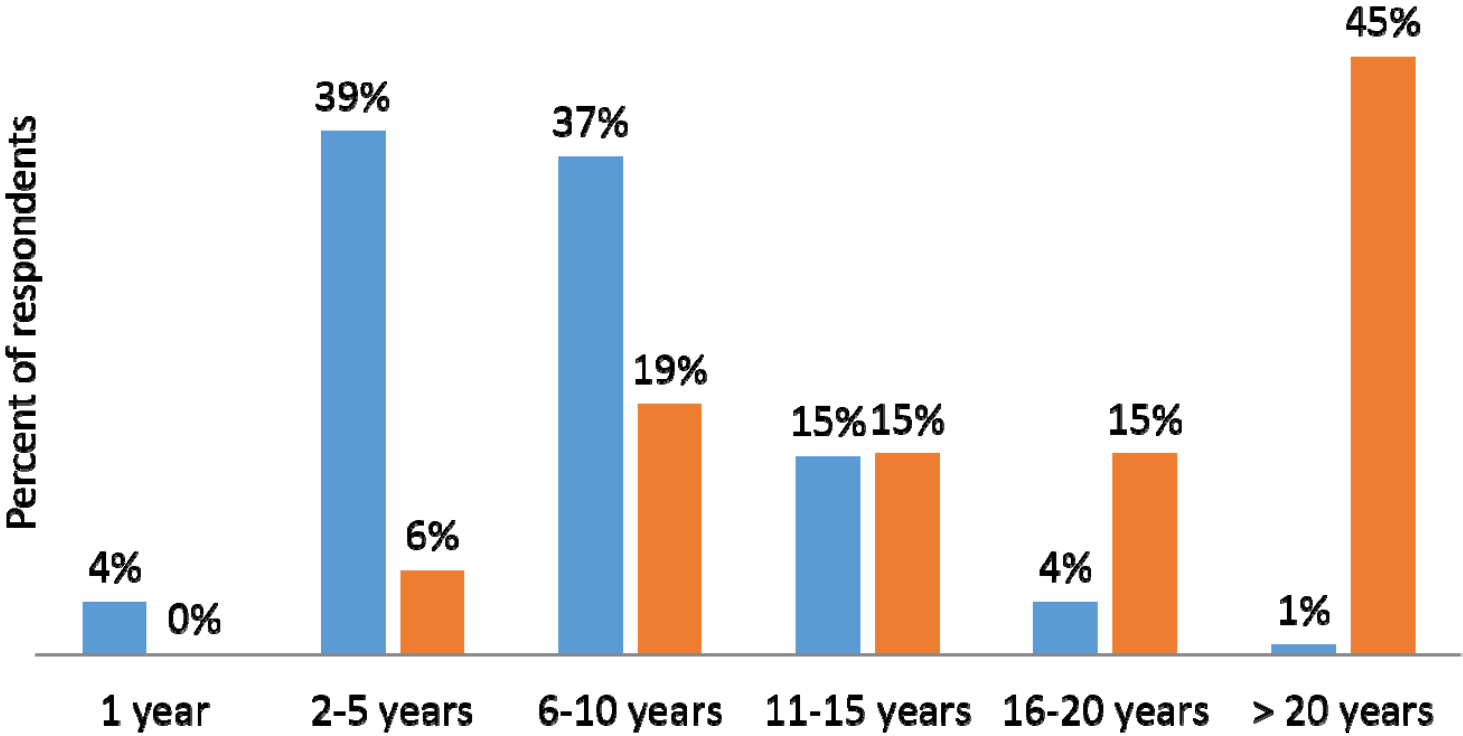
	Increased		Decreased		No change	
	n	%	n	%	n	%
Office hours	30	44.8%	0	0.0%	33	49.3%
Fees	4	6.0%	2	3.0%	56	83.6%
Support staff & their responsibilities	29	43.3%	8	11.9%	28	41.8%
Advanced practice nurses employed	18	26.9%	4	6.0%	41	61.2%
Physician assistants employed	3	4.5%	4	6.0%	54	80.6%
Number physicians for practice	32	47.8%	6	9.0%	23	34.3%
Research/administrative activities	11	16.4%	12	17.9%	39	58.2%

## Total Dollar Amount Borrowed for Medical School, N=423

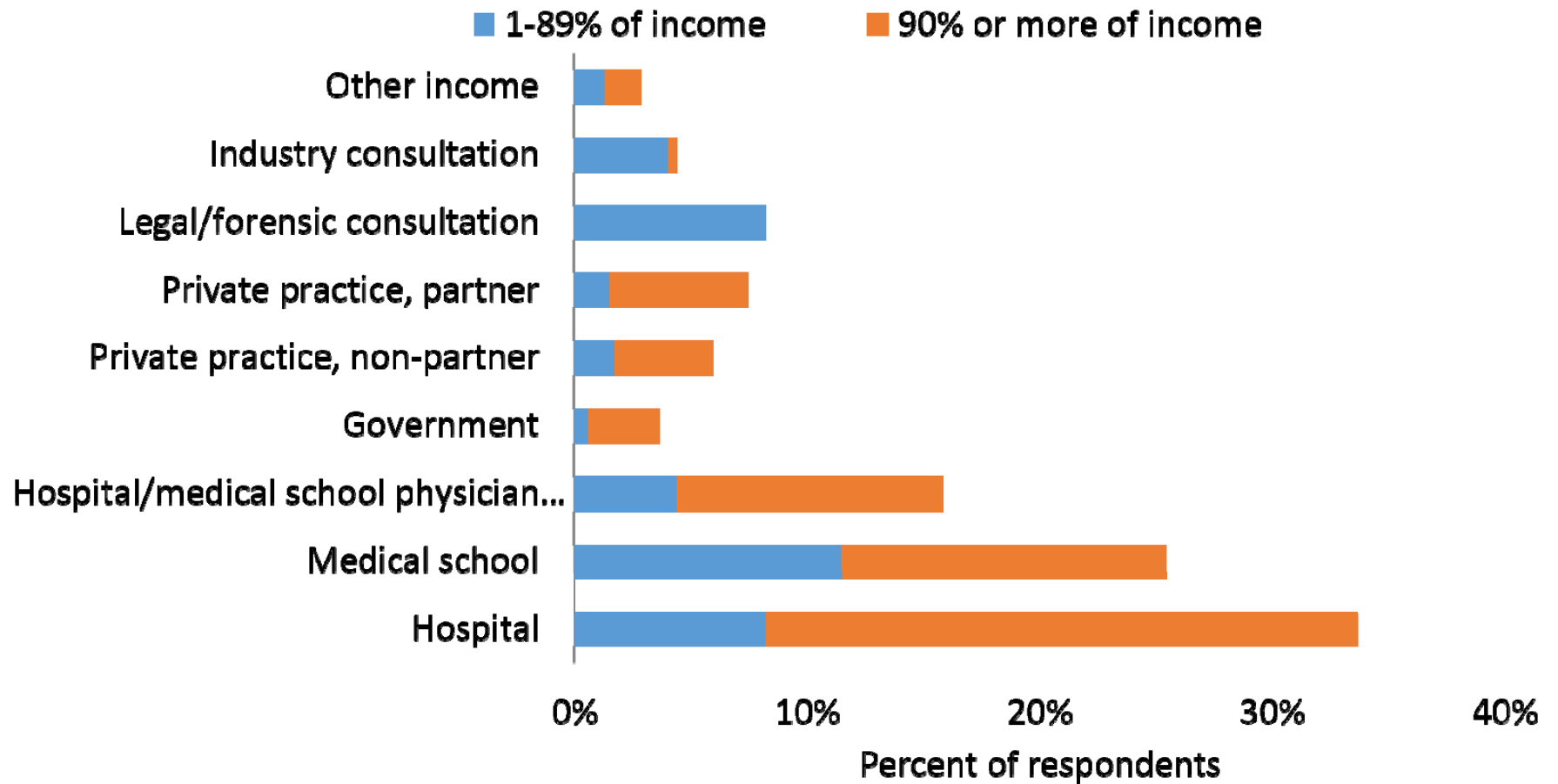


# Time to pay off medical school debt

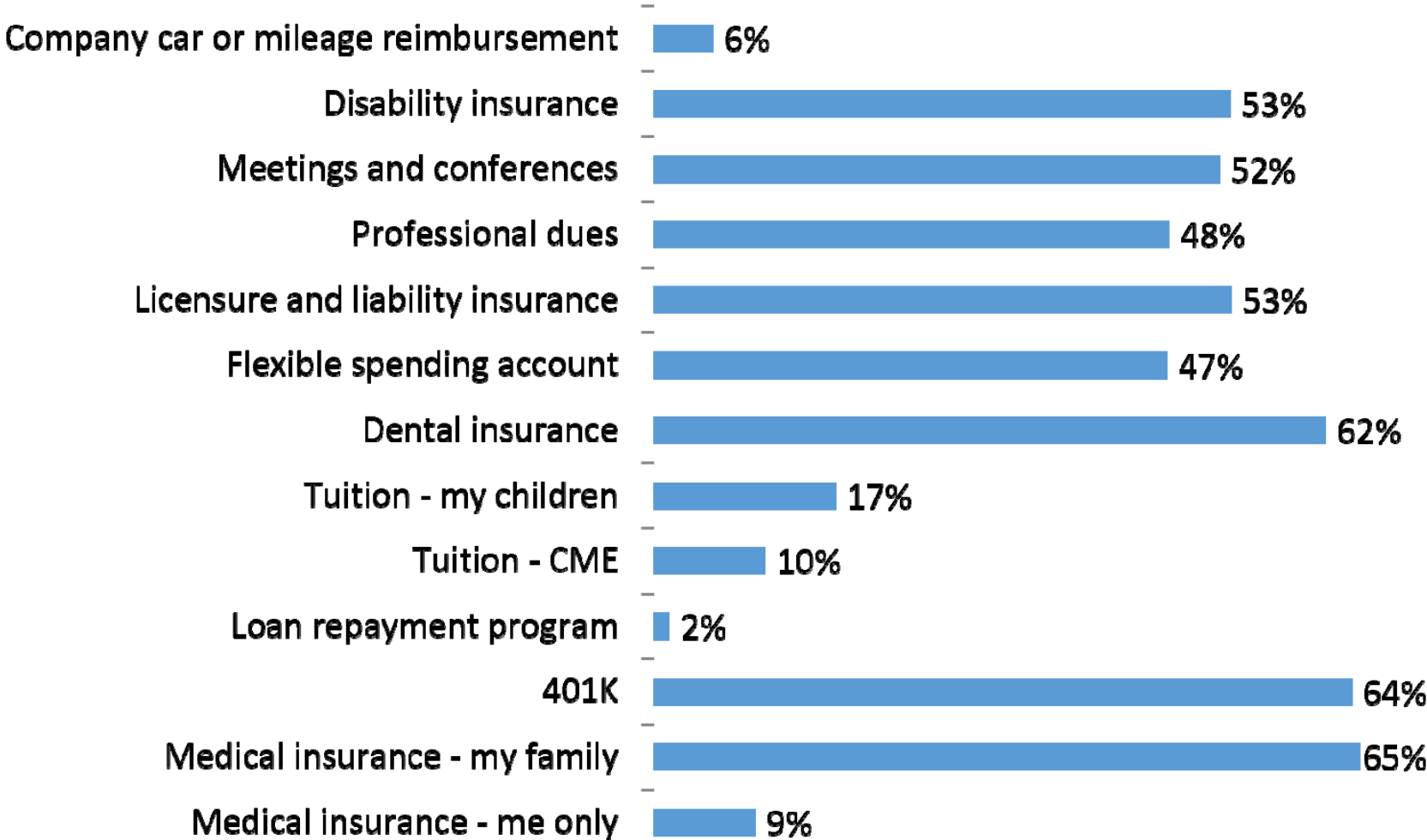
■ Already paid off, n=155 ■ Not paid off, n=80



## Income sources among neurology respondents, N=523



**Proportion of respondents reporting each benefit as part of compensation package, N=523**





# What does the future hold in store?

- Gloom and doom
  - 51% in private practice expect decreased compensation in the future
  - 37% in academia expect decreased compensation in the future
  - $P = 0.006$
- Hope
  - 70.7% of respondents would definitely or probably select their field again
  - 8.2% of respondents would definitely or probably not select their field again
  - A number of free text responses indicated some respondents would not select medicine again at all

# How can we work to improve the future?

- Academic child neurologists and neurodevelopmental disabilities specialists can work to recruit more medical students into their fields
  - One possible strategy is to gain more exposure to medical students early in their education, preferably in the first or second year
- Professional organizations can help child neurologists and neurodevelopmental disabilities specialists draw attention to the total value that they bring to health care systems
- Foster academic interests among current trainees
- Consider grant mechanisms to promote early career academic physicians