

Assessment of the 2020 COVID-19 Pandemic Impact on the United States Neonatologist Workforce

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BACKGROUND

- Careers in medicine have traditionally been dichotomized into academic or private practice venues, but over time, career identities have become more fluid.
- The COVID-19 pandemic has profoundly challenged the United States healthcare workforce across the domains of clinical care, academic endeavors, and quality of life.

OBJECTIVE

- We sought to describe how the COVID-19 pandemic affected professional and personal lives in a national sample of United States neonatologists.

METHODS

- The American Academy of Pediatrics conducted a voluntary anonymous survey of all board-certified and eligible United States neonatologists from July to November 2021, and received 2113 responses (30% response rate).
- The survey included questions about professional duties, the effects of COVID-19, and social factors.
- We report from a subset of 1,490 active neonatologists who responded to the questions about COVID-19.
- Statistical analysis, including t-test of means, was performed using JMP 16.1.0 by SAS (Cary, NC).

The COVID-19 pandemic disrupted neonatologists professionally and personally

- Overall:**
 - 69% of all neonatologists reported changes in their workflow/workday/income
 - 20% of all neonatologists related career impacts
 - 69% of researchers suffered delays or setbacks in their projects
- Academically appointed v. non-appointed neonatologists reported COVID contributed to:**
 - Fewer hours of working on site (48% v. 18%), but
 - Working more hours overall (24% v. 18%)
- Work-life integration:**
 - Over 50% spent more time with family, but
 - 31% reported increased stress with partner
 - 22% reported eldercare concerns
 - 18% reported childcare concerns

Table 1: Respondent Characteristics

Sample Size	1490
On Academic Track (Yes)	1008 (68%)
Gender Identity	
Male	527 (42%)
Female	712 (56%)
Prefer to self-describe	1 (0%)
Decline to respond	24 (2%)
Racial Identity	
Hispanic/Latinx	93 (7%)
Asian	203 (16%)
Native Hawaiian/Pacific Islander	3 (0%)
Black/African American	52 (4%)
Middle Eastern/North African	28 (2%)
American Indian/Alaska Native	4 (0%)
White	890 (71%)
Other	33 (3%)
Declined	73 (5%)
Sexual Identity	
Lesbian or gay	31 (2%)
Straight, that is, not lesbian or gay	1136 (91%)
Bisexual	14 (1%)
Something else	2 (0%)
I don't know	4 (0%)
Decline to respond	67 (5%)
Age	
31-35	83 (7%)
36-40	185 (15%)
41-45	197 (16%)
46-50	172 (14%)
51-55	139 (11%)
56-60	134 (11%)
61-65	130 (11%)
66-70	111 (9%)
71 years or older	76 (6%)
Medical School	
United States	980 (78%)
Canada	8 (1%)
Caribbean	36 (3%)
Other	235 (19%)
AAP Membership	
AAP only	142 (10%)
Both AAP and SONPM	1169 (79%)
Neither the AAP nor SONPM	167 (11%)
AAP District Location	
District I	91 (6%)
District II	93 (7%)
District III	160 (11%)
District IV	144 (10%)
District V	114 (8%)
District VI	194 (14%)
District VII	175 (12%)
District VIII	151 (11%)
District IX	150 (11%)
District X	152 (11%)

Table 2: Professional Activity Across Career Types

	Overall n = 1490	No Appointment n = 482	Academic Appointment n = 1008	p-value	
COVID 19 Impact on Workday	No change	465 (31%)	211 (44%)	254 (25%)	<0.001
	Less time on site	567 (38%)	85 (18%)	482 (48%)	<0.001
	More time on site	152 (10%)	48 (10%)	104 (10%)	NS
	Fewer patients	132 (9%)	48 (10%)	84 (8%)	NS
	More patients	117 (8%)	47 (10%)	70 (7%)	NS
	Fewer work hours	63 (4%)	24 (5%)	39 (4%)	NS
	More work hours	332 (22%)	87 (18%)	245 (24%)	0.005
	Reduced compensation	413 (28%)	142 (29%)	271 (27%)	NS
	Increased compensation	13 (1%)	3 (1%)	10 (1%)	NS
	Other	108 (7%)	30 (6%)	78 (8%)	NS
COVID 19 Impact on Research	Respondents conducting research	810 (54%)	143 (27%)	667 (65%)	<0.001
	Research impacted	559 (69%)	23 (19%)	56 (9%)	0.024
	Lab shut down	81 (10%)	7 (6%)	74 (12%)	0.017
	Grants affected	63 (8%)	2 (2%)	61 (10%)	<0.001
	Clinical Study shut down	187 (24%)	13 (10%)	174 (27%)	<0.001
	Unable to complete a project	193 (25%)	19 (15%)	174 (27%)	0.002
	Had to restart a project	52 (7%)	5 (4%)	47 (7%)	NS
	Team members unable to continue	144 (19%)	19 (15%)	125 (19%)	NS
	Planned grant missed	76 (10%)	3 (2%)	73 (11%)	<0.001
	Paper significantly delayed	231 (30%)	21 (17%)	210 (33%)	<0.001
Tenure jeopardized	19 (2%)	1 (1%)	18 (3%)	NS	
Other	79 (10%)	23 (19%)	199 (31%)	0.008	

Table 3: Professional Time and Compensation Across Career Types

	Overall n = 1490	No Appointment n = 482	Academic Appointment n = 1008	p-value	
COVID 19 Impact on Career	Retired earlier	7 (0%)	2 (0%)	5 (1%)	NS
	Stayed longer	60 (4%)	18 (4%)	42 (4%)	NS
	Changed jobs	61 (4%)	17 (4%)	44 (4%)	NS
	Temporarily left	30 (2%)	13 (3%)	17 (2%)	NS
	Fewer opportunities for promotion	97 (7%)	21 (4%)	76 (8%)	0.011
	Other	89 (6%)	31 (6%)	58 (6%)	NS
COVID 19 Impact on Work-Life Balance	No change	1185 (80%)	390 (82%)	795 (80%)	NS
	More time with Family	713 (51%)	214 (48%)	499 (53%)	NS
	Less time with Family	254 (18%)	90 (20%)	164 (17%)	NS
	Childcare Struggle	254 (18%)	90 (20%)	164 (17%)	NS
	Eldercare Struggle	303 (22%)	78 (17%)	225 (24%)	0.004
	Increased Stress with Significant Other	429 (31%)	143 (32%)	286 (30%)	NS
	Decreased stress with Significant Other	78 (6%)	19 (4%)	59 (6%)	NS
	Self quarantine	146 (11%)	42 (9%)	104 (11%)	NS
	More Teaching Children	225 (16%)	70 (16%)	155 (17%)	NS
Other	176 (13%)	65 (15%)	111 (12%)	NS	

This pandemic exposed the need for flexible and resilient systems that will support neonatologists to provide their best care and will protect their scientific missions.

