ORIGINAL RESEARCH

Impact of COVID-19 on American Family Physicians' Intent to Retreat from Clinical Care

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Purpose: **This survey evaluated whether the COVID-19 pandemic was a traumatic stress event for family physicians associated with burnout, changes in life priorities, and intentions to retreat from clinical practice.**

Methods: **We report on 683 clinically active family physicians surveyed through the Council of Academic Family Medicine's Educational Research Alliance (CERA) in the fall of 2021.**

Results: **Overall, 35.2% of family physicians experienced the pandemic as a traumatic stress like event. This was associated with changing life priorities (OR 2.6, CI 1.8-3.9), burnout (OR 1.6, CI 1.1 to 2.4), and withdrawal from clinical practice in various ways. Those who changed their priorities in life were more likely to restrict scope of practice (OR 3.9, CI 2.6-5.9), reduce clinical work effort (OR 3.4, 2.3 to 5.1), relocate (OR 3.1, CI 2.0 to 4.8), retire (OR 2.7, CI 1.4-4.9), reroute their career away from patient care (OR 2.1, CI 1.4-3.1) and less likely to avoid redesigning the practice to improve well-being (OR 0.3, CI 0.2-0.7). Those who experienced burnout were more likely to retire (OR 5.5, CI 2.8 to 10.5), reduce clinical work effort (OR 4.2, CI 2.9-6.1), reroute their career away from patient care (OR 3.9, CI 2.6-5.8), relocate (OR 3.8, CI 2.4 to 5.9), and restrict scope of practice (OR 3.3, CI 2.3 to 4.9). Overall, 48.5% of family physicians expressed some intention to retreat from clinical practice.**

Conclusion: **The COVID-19 pandemic impacted family physician's career plans. Remedying burnout is a high-yield opportunity for retaining clinically active family physicians. Physicians retreating from clinical medicine related to changing life's priorities needs further exploration. (J Am Board Fam Med 2023;36:905–915.)**

Keywords: **COVID-19, Family Medicine, Family Physicians, Occupational Burnout, Pandemics, Primary Health Care, Psychological Burnout, Surveys and Questionnaires, Workforce**

Introduction

Before the pandemic, in late 2017, nearly half of physicians[1,2] in the United States reported symptoms of burnout, characterized as emotional exhaustion, cynicism, and reduced efficacy,[3] and this has been considered a "public health crisis."[4] Burnout has been found to be an independent predictor of intent to reduce clinical work and leave current practice. Family medicine was among specialties with higher intent to reduce clinical hours (23.8%) and leave practice (28%).[5]

The pandemic added to the toll on health care workers,[6–10] with adverse impact on their mental health and potential for long-term emotional consequences.[10,11] A national survey conducted December 2021-January 2022, showed a 24.6 percentage point increase in physicians experiencing burnout. On multivariate analysis, family physicians were 1.57 times more likely to report burnout (referent population: internal medicine subspecialists).[12] A recent report of family physicians suggests that in response to the pandemic, older physicians are more likely to reduce their hours and younger physicians are changing how they think of their career.[13] There is need to further delineate the types of career changes family physicians are contemplating as these impact health care

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delivery, such as worsening the prepandemic prediction of shortage of primary care.[14]

This study evaluated the impact of COVID-19 on family physicians and the various ways they intend to retreat from clinical work. We hypothesize that the pandemic experience, especially if traumatic: (1) changed family physicians' priorities about what is important in life; (2) affected burnout; (3) changed family physicians' commitment to clinical practice; and (4) affected some demographic groups more than others.

Methods

Data were gathered and analyzed as part of the 2021 Council of Academic Family Medicine's (CAFM) Educational Research Alliance (CERA) survey of all members of the participating organizations. CAFM is a joint initiative of 4 major academic family medicine organizations: the Society of Teachers of Family Medicine, the North American Primary Care Research Group, the Association of Departments of Family Medicine, and the Association of Family Medicine Residency Directors. Members of these organizations are wide ranging, and include practicing physicians, students, residents, behavioral clinicians, public health scientists, medical and educational researchers, social scientists, advanced practice clinicians, administrators, and coordinators, among many others. We aimed to capture practicing front-line physicians. Participants were selected based on membership in CAFM organizations, excluding program directors, clerkship directors, and department chairs, based on other recent CERA surveys of those groups. We also excluded anyone who did not indicate they held a medical degree (eg, MD, DO). The resulting sample used for analysis was therefore composed of physicians who belonged to one of the academic family medicine organizations, and did not hold other primary administrative appointments (chair, program director, clerkship director). Because membership in one of the aforementioned organizations is closely tied to academic practice, the sample used for this analysis was composed of nonadministrator physician members of at least 1 of the 4 North American Family Medicine academic organizations. CERA surveys' purpose and methodology have been described elsewhere.[13,15,16]

The study was approved by the American Academy of Family Physicians Institutional Review Board in September 2021.

The survey was distributed to 4538 candidates between September 29, 2021, and October 29, 2021. Of these, 160 were returned as undeliverable and 64 were excluded who had previously opted out of receiving surveys from Survey Monkey, resulting in a final sample of 4314 members of the CAFM organizations. The response rate was 22% (total n = 949). Of the respondents we excluded Canadian physicians (n = 25), those who were less than 4 years post medical school (to exclude trainees) (n = 22), those who did not see patients in a clinical setting (n = 159), and/or those without DO/MD, MD/PhD, or DO/PhD degrees (n = 188) for a total analytic sample of 683 clinically active family physicians in the United States.

The degree of COVID-19-related traumatic stress was approximated by a single-item question (adapted by author KO) derived from Acute Traumatic Stress Criteria defined in the Diagnostic and Statistical Manual of Mental Disorders (DSM-5®) and previously described in publication.[10,17] (Table 1)

Changing priorities about what is important in life due to COVID-19, was assessed by a single-item (adapted by author KO) from a question on Post-Traumatic Growth used by Pietrzak et al. (Table 1).[18] Post traumatic growth is "a positive psychological change experienced as a result of a struggle with highly challenging life circumstances."[19]

Burnout was assessed by 2-items from the Professional Fulfillment Index (PFI) by Trockel et al.[20] (Table 1). The selected items had the highest correlation with the full burnout subscales of the PFI using item response theory psychometric analyses on a sample of 13,170 physicians.[21] Based on a previous study of 7700 physicians[22] responding to the full PFI, receiving operating characteristic analysis determined that a score of 1.75 for the 2 items led to a sensitivity of 94% and specificity of 82% in identifying burnout.

We evaluated intent to retreat from clinical work or otherwise re-engage to improve the practice of family medicine using 7 "Retreat factors" or "R" factors (developed by KO)[23] (Table 1). Principal Components Analysis of the 7 R-factors revealed the Kaiser-Meyer-Olkin Measure of Sampling Adequacy was 0.787. The first 2 principal components have eigenvalues greater than 1, explaining 61% of the variation in the data. The first principal component has large positive associations with Reduce, Restrict, Reroute, Relocate, and Retire (coefficients ranging from 0.592-0.822). The second principal component has large positive

Table 1. Description of Questions

Variable	Question	Response Options (5 Point Likert Scale)
Burnout	*To what degree have you experienced:* During the past two weeks I have felt emotionally exhausted at work.	Not at all to extremely
Burnout	*To what degree have you experienced:* During the past two weeks my job has contributed to me feeling less sensitive to others' feelings/emotions	Not at all to extremely
Traumatic stress	*To what degree have you experienced:* During the COVID-19 crisis, how much exposure to death or threat of death did you perceive for yourself or your loved ones, or through witnessing it in others, or through repeatedly hearing the extreme adverse details?	Not at all to extremely
Changing priorities	Because of the COVID-19 Pandemic, I changed my priorities about what is important in life*	Strongly disagree to strongly agree
R-factor	Based on your work-life experience over the past year, to what extent are you contemplating the following over the next two years?	
Reduce	Reduce your clinical work effort (e.g., fewer hours of patient care).	Strongly disagree to strongly agree
Restrict	Restrict scope of practice (e.g., do less of some specific aspect of your work).	Strongly disagree to strongly agree
Reroute	Reroute your career away from patient care (e.g., research, administration, etc.).	Strongly disagree to strongly agree
Relocate	Relocate, seek a new place to work.	Strongly disagree to strongly agree
Retire	Retire from or quit clinical medicine.	Strongly disagree to strongly agree
Re-engage**	Re-engage with colleagues to improve work-life well-being in your field.	Strongly disagree to strongly agree
Redesign**	Redesign your practice or your workflow to improve work-life well-being.	Strongly disagree to strongly agree
R5: "Composite R" of first 5 R-factors that correlate	Total score of Reduce, Restrict, Re-route, Relocate, Retire	

Notes. *"Agree (4)" and "strongly agree (5)" were scored as present for each R-factor.
**Reverse coded because they do not represent withdrawal from clinical care.

associations with Re-engage and Redesign (coefficients: 0.817, 0.785). The 5 factors in the first principal component represent withdrawal from clinical practice (overall withdrawal) and are presented as a Composite R5 factor (ranging from 5 to 25; mean = 12.5, median = 12, mode = 5). The inter-scale reliability of the R5 factors (Cronbach α) was 0.79. As 12.5 is the mean of the Composite R5 factors, representing a normal distribution, we used it as an empiric cutoff score to differentiate those who are likely to withdraw from clinical practice (>12.5) and those who are likely to remain in clinical practice (<=12.5).

We conducted standard descriptive statistics for demographic variables and calculated statistical difference and associations with traumatic stress, changing priorities, and burnout by Spearman's c^2 and logistic regression. Variables were dichotomized to compare the top 2 Likert scale responses versus other responses. We assessed individual R-factors and the composite R5 factor by COVID-19 related traumatic stress, changing priorities and burnout. All regressions were adjusted for age, race, gender, ethnicity, and institution type. We did not adjust for highest degree, region, population density and underserved areas to avoid collinearity with other factors. The statistical significance was set at 0.05. We used IBM SPSS version 28.

Results

Respondents' demographic characteristics are listed in Table 2. Overall, 35.2% of respondents experienced high exposure to or threat of death due to COVID-19, a marker of a traumatic stress event; 41.4% experienced burnout; and 48.5% were likely to withdraw from clinical practice in various ways, using the composite R5 score.

Table 2. Descriptive Statistics for Demographic Information and Variables (Total n = 683)

	Valid N	%
Age		
<45	317	49.0
>=45	330	51.0
Gender		
Female	408	60.1
Male	260	38.3
Other/Non-binary/Choose not to Disclose	11	1.6
Race		
White	537	79.0
Black or African-American	33	4.8
Asian	68	10.0
Other/Choose not to Disclose	42	6.2
Ethnicity		
Hispanic/Latino	48	7.2
Non-Hispanic/Latino	618	92.8
Region		
Northeast	119	17.4
South	180	26.4
Midwest	211	30.9
West	173	25.3
Institution type		
Medical school	397	58.3
Not at a medical school	284	41.7
Population density		
Urban	339	49.6
Suburban	226	33.1
Rural	118	17.3
Underserved area		
Yes	393	57.8
No	222	32.6
Unsure or N/A	65	9.6
Highest degree earned		
DO/MD	642	94.0
MD/PhD or DO/PhD	41	6.0
Traumatic Stress		
Not at all/Very little/Moderately	428	64.8
A lot/Extremely	232	35.2
Changing Priorities		
Strongly disagree/disagree/ neither agree nor disagree	528	77.3
Agree/Strongly agree	155	22.7
Burnout		
No (<1.75 cutoff)	385	58.6
Yes (>=1.75 cutoff)	272	41.4
Reduce		
Strongly disagree/Disagree/ Neither agree nor disagree	373	57.0
Agree/Strongly agree	281	43.0
Restrict		
Strongly disagree/Disagree/ Neither agree nor disagree	434	66.9
Agree/Strongly agree	215	33.1
Reroute		
Strongly disagree/Disagree/ Neither agree nor disagree	475	73.0
Agree/Strongly agree	176	27.0
Relocate		
Strongly disagree/Disagree/ Neither agree nor disagree	521	79.1
Agree/Strongly agree	138	20.9
Retire		
Strongly disagree/Disagree/ Neither agree nor disagree	571	88.0
Agree/Strongly agree	78	12.0
Re-engage (reverse)		
Neither agree nor disagree/ Agree/Strongly agree	595	90.8
Strongly disagree/Disagree	60	9.2
Redesign (reverse)		
Neither agree nor disagree/ Agree/Strongly agree	570	86.5
Strongly disagree/Disagree	89	13.5
Composite R5 above cutoff score (12.5)		
No	343	51.5
Yes	317	48.5

Bivariate analyses are presented in Table 3, illustrating traumatic stress, changing priorities, burnout and composite R score by demographics/ participant background. Of the characteristics tested, female gender and those not affiliated with a medical center were statistically more likely to have experienced the pandemic as traumatic ($P < = 0.001$). Those less than age 45 and female gender were more likely to report a change in life priorities and experience burnout (all $P < .05$). Women were also more likely than men to intend to withdraw from clinical practice using the composite R5 score ($P = .009$). Suburban family physicians were more likely to report a change in life priorities ($P = .032$). The differences in traumatic stress, changing priorities and burnout by region, serving the underserved, race, and ethnicity did not reach statistical significance.

As shown in Table 4, those who experienced the pandemic as a traumatic stress event were more likely to change their priorities of what is important

Table 3. Bivariate Analyses of Traumatic Stress, Change in Priorities, Burnout, and Overall Withdrawal from Clinical Practice (Composite R5) by Participant Demographic Information

	Traumatic Stress		Change in Priorities		Burnout		Composite R5 Above Cutoff score (12.5)	
	% A lot/Extremely	*P* value	% Agree/Strongly agree	*P* value	% >= 1.75 Cutoff score	*P* value		*P* value
Age		0.156		0.009		<0.001		0.871
<45	38.6		27.4		50.5		48.6	
>=45	32.9		18.5		33.8		47.9	
Gender		0.001		0.017		<0.001		0.009
Female	40.2		26.5		50.0		52.4	
Male	26.4		17.7		28.1		42.0	
Other/Non-binary/Choose not to Disclose	44.4		9.1		44.4		77.8	
Race		0.170		0.105		0.425		0.082
White	34.9		21.2		40.5		46.0	
Black or African-American	46.7		39.4		53.3		51.7	
Asian	26.2		25.0		38.5		56.3	
Other/Choose not to Disclose	42.5		23.8		47.5		64.1	
Ethnicity		0.061		0.481		0.649		0.755
Hispanic/Latino	47.9		27.1		37.5		45.5	
Non-Hispanic/Latino	34.2		22.8		41.6		48.5	
Practice/program location		0.084		0.164		0.574		0.840
Northeast	35.9		16.8		43.2		47.0	
South	40.0		27.2		39.9		46.6	
Midwest	28.3		20.9		38.5		51.0	
West	38.1		24.3		45.2		48.4	
Institution type		<0.001		0.853		0.936		0.936
Medical school	28.6		22.4		41.8		48.7	
Not at a medical school	44.3		23.2		41.2		48.3	
Area of working		0.232		0.032		0.592		0.235
Urban	32.1		18.9		39.4		47.3	
Suburban	37.1		28.3		42.9		52.7	
Rural	40.2		22.9		44.1		43.3	
Underserved area		0.082		0.845		0.932		0.378
Yes	38.4		22.6		42.0		46.2	
No	29.3		23.4		40.4		52.2	
Unsure or N/A	34.9		20.0		41.3		50.0	

in life (35.3% vs.16.4%; adjusted OR 2.6; 95% CI, 1.8-3.9), and experience burnout (50.6% vs 36.5%; adjusted OR 1.6; 95% CI, 1.1 to 2.4). Those with burnout were more likely to have changed their priorities (35.3% vs 14.3%; adjusted OR 3.0; 95% CI, 2.0 to 4.5).

As shown in Table 5, respondents who experienced the pandemic as traumatic were more likely to restrict scope of practice (adjusted OR 1.5; 95% CI, 1.0 to 2.1), reroute their career away from patient care (adjusted OR 1.5; 95% CI, 1.0 to 2.3), and relocate (adjusted OR 1.5; 95% CI, 1.0 to 2.3), and they were not statistically more likely to reduce clinical work effort (adjusted OR 1.4; 95% CI, 1.0 to 2.0), retire (adjusted OR 1.4; 95% CI, 0.8-2.5), re-engage with colleagues (reverse-adjusted OR 1.0; 95% CI, 0.5-1.8), or redesign clinical practice (reverse-adjusted OR 1.0; 95% CI, 0.6-1.6). They were overall more likely to withdraw from clinical practice using the composite R5 score (Adjusted OR 1.6; 95% CI, 1.1 to 2.3).

Those who reported that they changed their priorities about what is important in life to a great or a very great degree were more likely to restrict scope of practice (adjusted OR 3.9; 95% CI, 2.6-5.9), reduce clinical work effort (adjusted OR 3.4; 95% CI, 2.3 to 5.1), relocate (adjusted OR 3.1; 95% CI, 2.0 to 4.8), retire (adjusted OR 2.7; 95% CI, 1.4-4.9),

Table 4. Associations Between Traumatic Stress, Changing Priorities, and Burnout, Adjusted for Age, Race, Gender, Ethnicity, and Institution Type

	Traumatic Stress				
	Not at all/Very little/ Moderately (n = 428)	A lot/Extremely (n = 232)	*P* value	OR	CI
Changing Priorities			<0.001	2.6	1.8 to 3.9
Strongly disagree/ Disagree/Neither agree nor disagree	83.6%	64.7%			
Agree/Strongly agree	16.4%	35.3%			

	Traumatic Stress				
	Not at all/Very little/ Moderately (n = 425)	A lot/Extremely (n = 231)	*P* value	OR	CI
Burnout			0.007	1.6	1.1 to 2.4
<1.75 cutoff score	63.5%	49.4%			
>=1.75 cutoff score	36.5%	50.6%			

	Burnout				
	<1.75 cutoff score (n = 385)	>=1.75 cutoff score (n = 272)	*P* value	OR	CI
Changing Priorities			<0.001	3.0	2.0 to 4.5
Strongly disagree/ Disagree/Neither agree nor disagree	85.7%	64.7%			
Agree/Strongly agree	14.3%	35.3%			

	Traumatic stress, adjusted for burnout				
	Not at all/Very little/ Moderately (n = 428)	A lot/Extremely (n = 232)	*P* value	OR	CI
Changing Priorities			<0.001	2.5	1.6 to 3.7
Strongly disagree/ Disagree/Neither agree nor disagree	83.6%	64.7%			
Agree/Strongly agree	16.4%	35.3%			

Abbreviations: OR, odds ratio; CI, confidence interval.

reroute their career away from patient care (adjusted OR 2.1; 95% CI, 1.4-3.1), and less likely to redesign their practice (adjusted OR 0.3; 95% CI, 0.2-0.7). Re-engaging with colleagues (adjusted OR 1.1; 95% CI, 0.6-2.2) was not associated with change in priorities in life. They were overall more likely to withdraw from clinical practice using the composite R5 score (Adjusted OR 3.7; 95% CI 2.4 to 5.8).

Those who experienced burnout were more likely to retreat from clinical practice by retiring (adjusted OR 5.5; 95% CI, 2.8 to 10.5), reducing clinical work effort (adjusted OR 4.2; 95% CI, 2.9-6.1), rerouting their career away from patient care (adjusted OR 3.9; 95% CI, 2.6-5.8), relocating (adjusted OR 3.8; 95% CI, 2.4 to 5.9), and restricting scope of practice (adjusted OR 3.3; 95% CI, 2.3 to 4.9). Burnout was not associated with re-engaging with colleagues (reverse-adjusted OR 1.8; 95% CI, 1.0 to 3.3) or redesigning practice (reverse-adjusted OR 0.7; 95% CI 0.4-1.2). Respondents who experienced burnout were overall more likely to withdraw from clinical practice using the composite R5 score (adjusted OR 4.0; 95% CI 2.7-5.8).

Table 5. R-Factors by COVID-19 Related Traumatic Stress, Changing Priorities, and Burnout, Adjusted for Age, Race, Gender, Ethnicity, and Institution Type

R-Factors	Traumatic Stress					Changing Priorities					Burnout					Traumatic Stress, Adjusted for Burnout				
Agree/Strongly Agree on the following items	Not at all/ Very little/ Moderately	A lot/ Extremely	*P* value	OR	CI	Strongly Disagree/ Disagree/ Neither Agree nor Disagree	Agree/ Strongly Agree	*P* value	OR	CI	<1.75 Cutoff Score	>=1.75 Cutoff Score	*P* value	OR	CI	Not at all/ Very little/ Moderately	A Lot/ Extremely	*P* value	OR	CI
Reduce	38.9%	50.4%	0.069	1.4	1.0 to 2.0	**35.8%**	**66.9%**	**<0.001**	**3.4**	**2.3 to 5.1**	**29.9%**	**62.1%**	**<0.001**	**4.2**	**2.9 to 6.1**	38.9%	50.4%	0.302	1.2	0.8 to 1.8
Restrict	**29.9%**	**39.2%**	**0.044**	**1.5**	**1.0 to 2.1**	**26.0%**	**57.5%**	**<0.001**	**3.9**	**2.6 to 5.9**	**23.2%**	**47.5%**	**<0.001**	**3.3**	**2.3 to 4.9**	29.9%	39.2%	0.152	1.3	0.9 to 1.9
Reroute	**23.5%**	**33.5%**	**0.030**	**1.5**	**1.0 to 2.3**	**23.6%**	**38.7%**	**<0.001**	**2.1**	**1.4 to 3.1**	**17.4%**	**41.0%**	**<0.001**	**3.9**	**2.6 to 5.8**	23.5%	33.5%	0.110	1.4	0.9 to 2.1
Relocate	**17.6%**	**27.2%**	**0.048**	**1.5**	**1.0 to 2.3**	**15.9%**	**37.7%**	**<0.001**	**3.1**	**2.0 to 4.8**	**10.9%**	**35.4%**	**<0.001**	**3.8**	**2.4 to 5.9**	17.6%	27.2%	0.236	1.3	0.8 to 2.0
Retire	10.9%	14.1%	0.202	1.4	0.8 to 2.5	**10.2%**	**18.2%**	**0.002**	**2.7**	**1.4 to 4.9**	**9.0%**	**16.4%**	**<0.001**	**5.5**	**2.8 to 10.5**	10.9%	14.1%	0.330	1.3	0.7 to 2.4
Re-engage (reverse)	9.0%	9.5%	0.967	1	0.5 to 1.8	8.9%	9.9%	0.735	1.1	0.6 to 2.2	7.3%	11.4%	0.067	1.8	1.0 to 3.3	9.0%	9.5%	0.933	1.0	0.5 to 1.8
Redesign (reverse)	13.8%	13.0%	0.947	1	0.6 to 1.6	**15.9%**	**5.3%**	**0.006**	**0.3**	**0.2 to 0.7**	15.7%	9.9%	0.211	0.7	0.4 to 1.2	13.8%	13.0%	0.840	1.1	0.6 to 1.8
CompositeR above cutoff (12.5)	**44.0%**	**57.0%**	**0.011**	**1.6**	**1.1 to 2.3**	**41.6%**	**72.2%**	**<0.001**	**3.7**	**2.4 to 5.8**	**36.1%**	**66.4%**	**<0.001**	**4.0**	**2.7 to 5.8**	44.0%	57.0%	0.060	1.4	1.0 to 2.1

Abbreviations: OR, odds ratio; CI, confidence interval.

Burnout was the experience most strongly associated with retreat from clinical practice. When controlling for burnout on the impact of traumatic stress on retaining clinically active family physicians, adjusted for age, gender, race, ethnicity and institution type, the individual R-factors were no longer statistically significant. However, after adjusting for burnout (Table 4), those who experienced the pandemic as traumatic were still more likely to report a change in life priorities (35.3% vs.16.4%, adjusted OR 2.5; 95% CI, 1.6-3.7).

Discussion

Our results support that the COVID-19 pandemic has had significant impact on family physicians. A third of family physicians reported experiencing the pandemic as a traumatic stress event a lot or extremely. This was significantly associated with re-evaluation of what is important in life, higher levels of burnout, and the overall likelihood of retreating (withdrawing) from clinical practice. These results demonstrate vulnerabilities in losing family physicians who are young, female, suburban, and not located in a medical school. It is possible that younger physicians may have less experience navigating practice stressors and may have less developed peer support networks at that stage of their career leading to more isolation and negative impact from the pandemic. Similarly, those located in suburban practices and not within the structure of a medical school may have had less support as well. Female physicians may have been more impacted by the significant shift in family responsibilities that occurred due to COVID-19 in addition to increases in work burdens.

After controlling for the contribution to burnout, the pandemic stress event was no longer an independent predictor of the overall intent to retreat from clinical practice and the independent R-factors. Burnout was more highly associated with the intent to retreat from clinical practice than experiencing the pandemic as a traumatic stress event or in changing one's priorities in life. Burnout was highly associated with all R5 modes of withdrawing from clinical practice after adjusting for demographics characteristics. Notwithstanding a pandemic, remedying burnout may be the most important factor in retaining family physicians in the clinical workforce. This is hopeful because best practices have been established to remedy burnout.[24–26] However, given that pandemic-related changes in life priorities persisted after controlling for burnout, reinvigorating family physicians' meaning in work as a "priority important in life" and "a calling" may also improve retention. The effect of the pandemic on physician's life priorities merits further exploration.

Neither those who experienced the pandemic as traumatic, nor those who were burnt out, or changed priorities in life were likely to re-engage with colleagues to improve work-life well-being. A minority of those with changing priorities were likely to engage in clinical redesign to improve clinical work. It is possible that at the time of the survey respondents had neither the time or energy to create new peer engagements or practice flows. It was more likely that a majority of those with burnout (62.1%) or changing priorities (66.9%) intended to reduce their clinical work-effort. This is concerning given the high number of physicians who report burnout.[12] Whether intent to leave predicts leaving has been addressed in the literature and seems to predict actually leaving.[27–30] For example, in 1 longitudinal study at a US academic medical center, those with intent to leave were 3 times more likely to leave,[28] and a study of family physicians showed that intention to leave was a significant predictor of actually leaving.[30]

To our knowledge, there has not been a report that delineates the various ways physicians may retreat from clinical practice. Physicians may be counted in the workforce but may have moved their activities away from clinical care. The Retreat Factors Scale herein may provide a more accurate understanding of the health care workforce that is available for patient care.

These results heighten concerns about losing an important primary care workforce that was already projected to be insufficient before the pandemic. The current 30% of primary care physicians within the US health care workforce already falls short of the 40% recommended for optimal care.[14] The Association of American Medical Colleges predicts shortages ranging between 21,100 and 55,200 primary care physicians by 2032.[14] The COVID-19 pandemic may worsen existing and/or future shortages, mostly by exacerbating burnout.

Given that respondents are CAFM members and involved in medical education, our findings suggest that the COVID-19 pandemic may negatively impact the pool of clinical teachers in family medicine. We are already seeing a declining trend of US

graduating medical students who choose family medicine.[14] Fewer clinical teachers could translate in even fewer students choosing to pursue family medicine, potentially further reducing the availability of primary care.

This gives more urgency to implementing policy and organizational changes that are recommended[24–26] to support clinician well-being and impact the professional fulfillment of clinicians including American family and primary care physicians.

Limitations

Our response rate of 22% represents a limitation of this survey. However, the 35% of respondents who reported experiencing the pandemic as traumatic is consistent with other reports[10] and the robust association of that exposure with the R-factors our findings still clearly show cause for concern. The timing of the survey, when COVID-19 related fatigue was likely impacting respondents, may have adversely affected response rates but was appropriate for our goal of understanding the impact of the pandemic on this population.

CERA does not provide demographics characteristics of the larger sample versus the analytic sample. Compared with the demographic statistics by the 2020 American Academy of Family Physicians, the CERA sample is grossly comparable, with some over-representation of those identifying as white, non-Hispanic, and female.[31] While the prevalence of traumatic stress, changing priorities and burnout may be impacted by overrepresentation by these demographic groups, the influence of these measures were controlled for these demographics.

The CERA survey likely has a predominance of educators with more options to reroute their practice into nonpatient care activities, than those entirely devoted to private practice. This ability to shift from practice to teaching may have been protective for educators. On the other hand, educators may have experienced additional burdens from the pandemic compared with physicians solely in clinical practice such as having to teach in new and stressful ways. This may impact the generalization of this survey to physicians who are solely in clinical practice.

Because this article reflects data obtained from across the country, the date of pandemic onset may have varied for various respondents and affected them differently at the time of the survey.

The single-item approximating a traumatic stress event is based on DSM-5® criteria, though has yet to be validated against the established longer validated scales. Use of the long form validated scale to assess traumatic stress events would have been ideal. However, the CERA survey process limited the number of questions we could pose to accommodate numerous investigators who contribute questions to the survey, and to reduce survey fatigue and improve the response rate.[15]

While our study was based on one sample, at one time point, and is relevant primarily to trends among US Family Physicians, we believe the phenomena we report related to burnout and lower well-being among health care workers, are likely global in nature.[7,32,33] More research is needed to see if this also translates to changes in priorities and intent to retreat from clinical practice among health care providers globally.

More research is needed to determine if R-factors lead to actual withdrawal from clinical practice. Our next direction is to understand how to use the R-factors as predictors of a vulnerable workforce and how to plan for retention. Further studies are needed to determine the cut off score that predicts actually retreating from clinical practice with the best sensitivity and sensitivity. The "R-factors" we described are physical ways physicians retreat from clinical practice, and did not include signs of psychological retreat, such as reclusiveness (eg, isolation), relationship dysfunction, risk taking (eg, substance use, suicidal ideations), or recklessness (eg, errors related to inattentiveness).[23] Both, retreating physically ("absenteeism") or psychologically ("presenteeism") can have adverse effects on health care delivery and patient care.

Conclusion

The COVID-19 pandemic has had significant impact on family physicians including burnout, change in life priorities and intent to withdraw from clinical practice in various ways. This report supports the urgent need for organizational policies and interventions to address burnout, sustain the well-being of our primary care workforce and prevent a potentially more serious decline of the United States primary care workforce.

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