

Supplementary Data Tables

Table S1a: Reported Financial impact of COVID-19 pandemic on CF care team and care delivery (SoC1: Summer 2020)

	Total (n = 286)	Small (n = 113)	Medium (n = 105)	Large (n = 68)	Pediatric (n = 128)	Adult (n = 118)	Affiliate (n = 40)	P-value
Anticipated future support: I anticipate that institution / hospital support for the CF program will continue at the pre-pandemic level.								¹ 0.064 ² 0.583 ³ 0.024
Somewhat / strongly disagree	50 (17.5)	22 (19.5)	10 (9.5)	18 (26.5)	20 (15.6)	20 (16.9)	10 (25.0)	
Neither agree nor disagree	16 (5.6)	6 (5.3)	6 (5.7)	4 (5.9)	8 (6.3)	5 (4.2)	3 (7.5)	
Somewhat / strongly agree	220 (76.9)	85 (75.2)	89 (84.8)	46 (67.6)	100 (78.1)	93 (78.8)	27 (67.5)	
Current financial impact: Have members of your program been impacted by actions that your institution / hospital has taken such as:								
Any impact (% yes)	177 (61.9)	66 (58.4)	63 (60.0)	48 (70.6)	85 (66.4)	70 (59.3)	22 (55.0)	¹ 0.232 ² 0.326 ³ <0.001
Re-deployed to other areas (% yes)	121 (68.4)	44 (66.7)	41 (65.1)	36 (75.0)	61 (71.8)	44 (62.9)	16 (72.7)	¹ 0.502 ² 0.443
Furloughs (% yes)	92 (52.0)	32 (48.5)	35 (55.6)	25 (52.1)	44 (51.8)	31 (44.3)	17 (77.3)	¹ 0.724 ² 0.026
Hiring freezes (% yes)	90 (50.8)	27 (40.9)	30 (47.6)	33 (68.8)	44 (51.8)	38 (54.3)	8 (36.4)	¹ 0.011 ² 0.332
Pay cuts (% yes)	61 (34.5)	14 (21.2)	23 (36.5)	24 (50.0)	29 (34.1)	27 (38.6)	5 (22.7)	¹ 0.006 ² 0.393
Layoffs (% yes)	18 (10.2)	11 (16.7)	3 (4.8)	4 (8.3)	6 (7.1)	4 (5.7)	8 (36.4)	¹ 0.073 ² <.001
Impact of COVID-response on quality: Do you believe your CF program is delivering the same level of quality care despite actions that your institution / hospital took to respond to COVID-19? (% yes)	127 (71.8)	47 (71.2)	52 (82.5)	28 (58.3)	61 (71.8)	47 (67.1)	19 (86.4)	¹ 0.019 ² 0.218 ³ 0.052

1 = Analysis of dependent variable by program size; 2 = Analysis of dependent variable by program type.; 3 = Comparison between SoC1 and SoC2

14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35
36
37
38
39
40
41
42
43
44
45
46
47
48
49
50
51
52
53
54
55
56
57
58
59
60
61
62
63
64
65

Table S1b: Reported Financial impact of COVID-19 pandemic on CF care team and care delivery (SoC2: Spring 2021)

	Total (n = 280)	Small (n = 108)	Medium (n = 104)	Large (n = 68)	Pediatric (n = 127)	Adult (n = 115)	Affiliate (n = 38)	P-value
Anticipated future support: I anticipate that institution / hospital support for the CF program will continue at the pre-pandemic level. (n (%))								¹ 0.445 ² 0.054 ³ 0.024
Somewhat / strongly disagree	30 (10.7)	11 (10.2)	8 (7.7)	11 (16.2)	12 (10.7)	15 (13.0)	3 (7.9)	
Neither agree nor disagree	13 (4.6)	5 (4.6)	4 (3.8)	4 (5.9)	1 (0.8)	9 (7.8)	3 (7.9)	
Somewhat / strongly agree	237 (84.6)	92 (85.2)	92 (88.5)	53 (77.9)	114 (89.8)	91 (79.1)	32 (84.2)	
Current financial impact: Have members of your program been impacted by actions that your institution / hospital has taken such as: (n (% yes))								
Any impact (% yes)	117 (41.8)	45 (41.7)	41 (39.4)	31 (45.6)	53 (41.7)	46 (40.0)	18 (47.4)	¹ 0.725 ² 0.727 ³ <0.001
Re-deployed to other areas (% yes)	83 (70.9)	32 (71.1)	26 (63.4)	25 (80.6)	35 (66.0)	33 (71.7)	15 (83.3)	¹ 0.280 ² 0.373
Furloughs (% yes)	39 (33.3)	13 (28.9)	13 (31.7)	13 (41.9)	15 (28.3)	18 (39.1)	6 (33.3)	¹ 0.477 ² 0.522
Hiring freezes (% yes)	48 (41.0)	18 (40.0)	14 (34.1)	16 (51.6)	24 (45.3)	19 (41.3)	5 (27.8)	¹ 0.323 ² 0.427
Pay cuts (% yes)	27 (23.1)	9 (20.0)	9 (22.0)	9 (29.0)	13 (24.5)	12 (26.1)	2 (11.1)	¹ 0.641 ² 0.417
Layoffs (% yes)	13 (11.1)	7 (15.6)	5 (12.2)	1 (3.2)	6 (11.3)	3 (6.5)	4 (22.2)	¹ 0.235 ² .199
Impact of COVID-response on quality: Do you believe your CF program is delivering the same level of quality care despite actions that your institution / hospital took to respond to COVID-19? (n, % yes)								
	94 (80.3)	40 (88.9)	36 (87.8)	18 (58.1)	47 (88.7)	31 (67.4)	16 (88.9)	¹ <0.001 ² 0.018 ³ 0.052

1 = Analysis of dependent variable by program size; 2 = Analysis of dependent variable by program type. 3 = Comparison between SoC1 and SoC2

14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35
36
37
38
39
40
41
42
43
44
45
46
47
48
49
50
51
52
53
54
55
56
57
58
59
60
61
62
63
64
65

Table S2: Impact of COVID-19 pandemic on licensure of CF clinical care staff and care delivery

	Total (n = 286)	Small (n = 113)	Medium (n = 105)	Large (n = 68)	Pediatric (n = 128)	Adult (n = 118)	Affiliate (n = 40)	P-value
Out-of-state patients: Does your program have patients located in a state other than where your program is located? (% yes)	199 (70.3)	67 (60.9)	73 (69.5)	59 (86.8)	84 (66.1)	97 (82.9)	18 (46.2)	¹ <0.001 ² <.001
Approximate % of patients out-of-state; (Median; Inter-quartile range)	6 (3-15)	7 (2-14)	5 (2-15)	10 (5-20)	6.5 (3-15)	7 (3-15)	4 (1-26)	
Availability of licensing waivers: Are licensing waivers available in states where your out-of-state patients live?								¹ 0.005 ² 0.117
All	49 (24.6)	21 (31.3)	17 (23.3)	11 (18.6)	25 (29.8)	17 (17.5)	7 (38.9)	
Some	48 (24.1)	12 (17.9)	11 (15.1)	25 (42.4)	23 (27.4)	24 (24.7)	1 (5.6)	
None	16 (8)	6 (9)	5 (6.8)	5 (8.5)	4 (4.8)	10 (10.3)	2 (11.1)	
Don't know	86 (43.2)	28 (41.8)	40 (54.8)	18 (30.5)	32 (38.1)	46 (47.4)	8 (44.4)	
Completion of waivers: Did your program complete any licensing waivers?	57 (58.8)	17 (51.5)	15 (53.6)	25 (69.4)	29 (60.4)	27 (65.9)	1 (12.5)	¹ 0.256 ² 0.019
Have your program's clinical care team members obtained out-of-state licensure to deliver telehealth services to patients?								¹ 0.051 ² 0.041
Yes, for all states	14 (7)	6 (9)	2 (2.7)	6 (10.2)	8 (9.5)	2 (2.1)	4 (22.2)	
Yes, for some states	43 (21.6)	16 (23.9)	12 (16.4)	15 (25.4)	20 (23.8)	22 (22.7)	1 (5.6)	
No states	114 (57.3)	34 (50.7)	44 (60.3)	36 (61)	46 (54.8)	58 (59.8)	10 (55.6)	
Don't know	28 (14.1)	11 (16.4)	15 (20.5)	2 (3.4)	10 (11.9)	15 (15.5)	3 (16.7)	
Proportion of care programs with any out-of-state patients not able to access telehealth services due to issues related to licensure of your program's clinical team members	37 (20.1)	3 (4.9)	14 (19.7)	20 (38.5)	15 (19.7)	21 (22.3)	1 (7.1)	¹ <0.001 ² 0.414

1 = Analysis of dependent variable by program size; 2 = Analysis of dependent variable by program type

14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35
36
37
38
39
40
41
42
43
44
45
46
47
48
49
50
51
52
53
54
55
56
57
58
59
60
61
62
63
64
65

Table S3: Availability to provide telehealth services* (SoC1: Summer 2020)

	Yes, available to provide telehealth		No, telehealth services not reimbursable		No, licensing restrictions		No, not able to access telehealth technology		No, redeployed to other duties		No, furloughed	
Physician (MD)	142	98%	1	0.7%	1	0.7%	1	0.7%				
Registered nurse (RN)	97	67%	40	28%	3	2%	4	3%			1	0.7%
Registered dietitian (RD)	105	72%	28	19%	4	3%	5	3%	3	2%		
Social work (SW)	90	62%	36	25%	10	7%	6	4%	2	1%	1	0.7%
Respiratory therapist (RT)	83	57%	40	28%	5	3%	7	5%	10	7%		

*Data provided from program directors that indicated at least some reimbursement limitations for telehealth (n=145)

14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35
36
37
38
39
40
41
42
43
44
45
46
47
48
49
50
51
52
53
54
55
56
57
58
59
60
61
62
63
64
65

Table S4: Reported differences with telehealth reimbursement (SoC1: Summer 2020)

	Total (n = 286)	Small (n = 113)	Medium (n = 105)	Large (n = 68)	Pediatric (n = 128)	Adult (n = 118)	Affiliate (n = 40)	P-value
Reimbursement: How does reimbursement for telehealth services compare to equivalent in-person services (e.g., routine visit with physician)? (n, %)								¹ 0.366 ² 0.954
Somewhat more	1 (0.4)	0 (0)	0 (0)	1 (1.9)	1 (0.9)	0 (0)	0 (0)	
About the same	141 (61.8)	50 (58.1)	57 (64)	34 (64.2)	67 (63.2)	58 (61.1)	16 (59.3)	
Somewhat less	54 (23.7)	22 (25.6)	23 (25.8)	9 (17)	23 (21.7)	24 (25.3)	7 (25.9)	
Much less	32 (14)	14 (16.3)	9 (10.1)	9 (17)	15 (14.2)	13 (13.7)	4 (14.8)	
On average what percent less are telehealth services reimbursed than in-person services? Median; Inter-quartile range	25.0 (20-47)	27.5 (20-45)	25 (18-45)	30 (20-60)	25 (20-50)	30 (20-50)	25 (20-30)	¹ 0.722 ² 0.452
What effect has less reimbursement for telehealth services had on your program? Clinical team members are (n, %)								
Spending less time with patients	22 (25.6)	9 (25)	10 (31.3)	3 (16.7)	9 (23.7)	11 (29.7)	2 (18.2)	¹ 0.523 ² 0.697
Not able to see patients	23 (26.7)	9 (25)	8 (25)	6 (33.3)	7 (18.4)	15 (40.5)	1 (9.1)	¹ 0.777 ² 0.035
Laid off	1 (1.2)	0 (0)	0 (0)	1 (5.6)	0 (0)	1 (2.7)	0 (0)	N/A
Furloughed	14 (16.3)	7 (19.4)	5 (15.6)	2 (11.1)	8 (21.1)	3 (8.1)	3 (27.3)	¹ 0.731 ² 0.181
Re-deployed to other duties	18 (20.9)	7 (19.4)	5 (15.6)	6 (33.3)	10 (26.3)	5 (13.5)	3 (27.3)	¹ 0.322 ² 0.339

1 = Analysis of dependent variable by program size; 2 = Analysis of dependent variable by program type