

Supplementary Material 4. Impact of COVID-19 on endoscopy training for training faculty compared to program directors

Survey questions	Teaching faculty (%)	Program director (%)	<i>p</i> value
Has the COVID-19 pandemic affected ANY aspect of GI fellowship training at your program? (<i>n</i> =299)			
No	8 (6.7)	12 (6.7)	0.99
Yes	112 (93.3)	167 (93.3)	
PRIOR to the COVID-19 pandemic, how many procedures were trainees performing on average per week per trainee? (<i>n</i> =279)			
0–5	22 (19.6)	41 (24.6)	0.95
6–10	4 (3.6)	6 (3.6)	
11–15	27 (24.1)	38 (22.8)	
16–20	24 (21.4)	34 (20.4)	
21–25	16 (14.3)	24 (14.4)	
≥26	19 (17)	24 (14.4)	
Have your trainees been allowed to perform ANY endoscopy procedures during the COVID-19 pandemic? (<i>n</i> =279)			
Yes	78 (69.6)	112 (67.1)	0.65
No	34 (30.4)	55 (32.9)	
What was the primary reason for trainees not being allowed to perform any endoscopy procedures? (<i>n</i> =89)			
Decision by division/PD	8 (23.5)	20 (36.4)	0.17
Hospital policy	5 (14.7)	15 (27.3)	
National policy or society guidelines	4 (11.8)	6 (10.9)	
Our hospital was shut down to become isolation	1 (2.9)	1 (1.8)	
Shortage of PPEs	7 (20.6)	3 (5.5)	
Trainees assigned to different roles (assist with COVID-19 demands)	9 (26.5)	10 (18.2)	
DURING the COVID-19 pandemic, how many procedures were trainees performing on average per week per trainee? (<i>n</i> =190)			
0–5	50 (64.1)	57 (50.9)	0.31
6–10	17 (21.8)	31 (27.7)	
11–15	5 (6.4)	16 (14.3)	
16–20	3 (3.8)	2 (1.8)	
21–25	1 (1.3)	1 (0.9)	
≥26	2 (2.6)	5 (4.5)	
PRIOR to the COVID-19 pandemic, what % of all endoscopy procedures had trainee participation? (<i>n</i> =279)			
0–25%	23 (20.5)	17 (10.2)	0.05
26–50%	29 (25.9)	47 (28.1)	
51–75%	37 (33)	52 (31.1)	
76–100%	23 (20.5)	51 (30.5)	
DURING the COVID-19 pandemic, what % of all endoscopy procedures had trainee participation? (<i>n</i> =190)			
0–25%	43 (55.1)	50 (44.6)	0.34
26–50%	13 (16.7)	30 (26.8)	
51–75%	15 (19.2)	20 (17.9)	
76–100%	7 (9.0)	12 (10.7)	
Were trainees allowed to perform procedures on COVID-19 positive patients? (<i>n</i> =299)			
Yes	30 (25)	43 (24)	0.91
No	48 (40)	69 (38.5)	
Not answered	42 (35)	67 (37.4)	

Supplementary Material 4. (Continued)

Survey questions	Teaching faculty (%)	Program director (%)	<i>p</i> value
What one factor had the greatest impact on endoscopy training during the COVID-19 pandemic? (<i>n</i> =190)			
Endoscopy training was minimally affected in our unit	2 (2.6)	4 (3.6)	0.95
PPE shortage	7 (9.0)	11 (9.8)	
Suspension of elective procedures	63 (80.8)	90 (80.4)	
Trainees assigned to cover ICU/ward teams	6 (7.7)	7 (6.3)	
As an educator, did you feel endoscopy teaching was supported by your program during the COVID-19 pandemic? (<i>n</i> =279)			
Yes, endoscopy teaching was supported by my program	37 (33)	59 (35.3)	0.52
No, priorities were shifted away from endoscopy teaching	35 (31.3)	59 (35.3)	
Neutral, I was left to decide how to approach endoscopy teaching	40 (35.7)	49 (29.3)	
How many confirmed COVID-19 cases have been admitted to your hospital to date? (<i>n</i> =279)			
<50	42 (35.0)	65 (36.3)	0.41
51–100	14 (12.5)	14 (8.4)	
101–250	20 (17.9)	27 (16.2)	
251–500	16 (14.3)	19 (11.4)	
>500	20 (17.9)	41 (24.6)	
Did trainees express concerns regarding their safety and risk of exposure to COVID-19? (<i>n</i> =279)			
Yes	80 (71.4)	128 (76.6)	0.43
No	20 (17.9)	28 (16.8)	
I don't know	12 (10.7)	11 (6.6)	
Have any of your trainees tested positive for COVID-19? (<i>n</i> =279)			
Yes	20 (17.9)	30 (18)	0.01
No	77 (68.8)	129 (77.2)	
I don't know	15 (13.4)	6 (3.6)	
Have any of your teaching faculty tested positive for COVID-19? (<i>n</i> =279)			
Yes	31 (27.7)	50 (29.9)	0.77
No	69 (61.6)	105 (62.9)	
I don't know	11 (9.8)	11 (6.6)	
COVID-19 pandemic will impact your senior fellows' preparation for performing endoscopy independently after graduation? (<i>n</i> =279)			
Maybe	8 (7.1)	13 (7.8)	0.41
No	29 (25.9)	52 (31.1)	
Yes, but will likely graduate as planned	42 (37.5)	61 (36.5)	
Yes, may need to extend training	31 (27.7)	41 (24.6)	
Yes, senior fellows were graduated early due to COVID-19 pandemic demands	2 (1.8)	0	
Have trainees been asked to assume roles outside of GI? (<i>n</i> =279)			
Yes	59 (52.7)	92 (55.1)	0.04
No	43 (38.4)	71 (42.5)	
Maybe	10 (8.9)	4 (2.4)	
What has been the overall impact of the COVID-19 pandemic on the endoscopy training? (<i>n</i> =279)			
Negative impact	72 (64.3)	103 (61.7)	0.72
Strongly negative impact	32 (28.6)	52 (31.1)	
No impact	7 (6.3)	8 (4.8)	
Positive impact	1 (0.9)	4 (2.4)	

Supplementary Material 4. (Continued)

Survey questions	Teaching faculty (%)	Program director (%)	<i>p</i> value
Trainees and faculty received formal training on how to care for COVID-19 patients (<i>n</i> =279)			
Yes	86 (76.8)	132 (79.0)	0.15
No	17 (15.2)	30 (18.0)	
I don't know	9 (8.0)	5 (3.0)	
Trainees and faculty received formal training on how to appropriately use personal protective equipment (PPEs) (<i>n</i> =279)			
Yes	99 (88.4)	151 (90.4)	0.42
No	8 (7.1)	13 (7.8)	
I don't know	5 (4.5)	3 (1.8)	
What steps were taken to address the impact of COVID-19 pandemic on endoscopy training for fellows? (<i>n</i> =279)			
Allowing trainees to scope at other hospitals/sites	6 (5.4)	12 (7.2)	0.54
Allowing trainees to work with multiple faculty members	20 (17.9)	56 (33.5)	0.004
Online or virtual teaching	45 (40.2)	83 (49.7)	0.11
Conserving endoscopy procedures for existing and senior fellows	110 (98.2)	166 (99.4)	0.56
Use of endoscopy simulators	14 (12.5)	15 (9.0)	0.34
Extension on the training duration	1 (0.9)	0	0.40
Flexibility in trainee schedules	55 (49.1)	102 (61.1)	0.04
Gradual easing of restrictions	2 (1.8)	0	0.16
Improvement in testing and adequate PPE resulted in the resumption of training	1 (0.9)	0	0.40
None of above	27 (24.1)	19 (11.4)	0.005
The program has developed education focused on helping trainees cope with stress from COVID-19 and improving their well-being (<i>n</i> =279)			
Yes	53 (47.3)	86 (51.5)	0.61
No	42 (37.5)	62 (37.1)	
I don't know	17 (15.2)	19 (11.4)	
What steps have been taken by your program to avoid excessive work hours for trainees? (<i>n</i> =279)			
Faculty taking on larger roles in patient care	14 (12.5)	13 (7.8)	0.19
Increased monitoring of work hours & endorsed fewer working hours	39 (34.8)	51 (30.5)	0.45
Online resources	18 (16.1)	24 (14.4)	0.69
Wellness activities (for example, virtual happy hour)	31 (27.7)	69 (41.3)	0.02
Regular discussions with trainees	21 (18.8)	34 (20.4)	0.74
No step taken	50 (44.6)	70 (41.9)	0.65
Shortened rotations (for example, one week on and one week off)	0	1 (0.6)	0.99
Theoretical and practical endoscopy teaching was postponed less hours	0	1 (0.6)	0.41

COVID-19, the coronavirus disease of 2019; GI, gastroenterology; ICU, intensive care unit; PD, program director; PPE, personal protective equipment.