

Supplementary Material 5. The Impact of COVID-19 on Endoscopy Training and Responses from Programs Classified by WHO Region (*n*=299)

Survey questions	Americas; <i>n</i> =135	Southeast Asia; <i>n</i> =16	Europe; <i>n</i> =44	Eastern Mediterranean & African Regions; <i>n</i> =41	Western Pacific; <i>n</i> =63	<i>p</i> -value
Has the COVID-19 pandemic affected ANY aspect of GI fellowship training at your program? (<i>n</i> =299)						
• No	3 (2.2)	0	2 (4.5)	4 (9.8)	11 (17.5)	0.001
• Yes	132 (97.8)	16 (100)	42 (95.5)	37 (90.2)	52 (82.5)	
Have your trainees been allowed to perform ANY endoscopy procedures during the COVID-19 pandemic? (<i>n</i> =279)						
• Yes	101 (76.5)	9 (56.3)	19 (45.2)	24 (64.9)	37 (71.2)	0.003
• No	31 (23.5)	7 (43.8)	23 (54.8)	13 (35.1)	15 (28.8)	
What was the primary reason for trainees not being allowed to perform any endoscopy procedures? (<i>n</i> =89)						
• Decision by division/PD	14 (45.2)	3 (42.9)	2 (8.7)	7 (53.8)	2 (13.3)	0.005
• Hospital policy	7 (22.6)	1 (14.3)	3 (13)	1 (7.7)	8 (53.3)	
• National policy or society guidelines	1 (3.2)	0	6 (26.1)	1 (7.7)	2 (13.3)	
• Our hospital was shut down to become isolation	0	0	0	1 (7.7)	1 (6.7)	
• Shortage of PPEs	3 (9.7)	2 (28.6)	3 (13)	0	2 (13.3)	
• Trainees assigned to different roles (assist with COVID-19 demands)	6 (19.4)	1 (14.3)	9 (39.1)	3 (23.1)	0	
Were trainees allowed to perform procedures on COVID-19 positive patients? (<i>n</i> =299)						
• Yes	47 (34.8)	1 (6.3)	7 (15.9)	7 (17.7)	11 (17.5)	0.002
• No	54 (40)	8 (50)	12 (27.3)	17 (41.5)	26 (41.3)	
• Not answered	34 (25.2)	7 (43.8)	25 (56.8)	17 (41.5)	26 (41.3)	
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	0	0	0	1 (4.2)	5 (13.5)	
• PPE shortage	8 (7.9)	0	2 (10.5)	1 (4.2)	7 (18.9)	<0.001
• Suspension of elective procedures	89 (88.1)	8 (88.9)	12 (63.2)	20 (83.3)	24 (64.9)	
• Trainees assigned to cover ICU/ward teams	4 (4.0)	1 (11.1)	5 (26.3)	2 (8.3)	1 (2.7)	
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	61 (46.2)	6 (37.5)	3 (7.1)	10 (27)	16 (30.8)	<0.001
• No, priorities were shifted away from endoscopy teaching	38 (28.8)	0	28 (66.7)	17 (45.9)	11 (21.2)	
• Neutral, I was left to decide how to approach endoscopy teaching	33 (25)	10 (62.5)	11 (26.2)	10 (27)	25 (48.1)	

Supplementary Material 5. (Continued)

Survey questions	Americas; n=135	Southeast Asia; n=16	Europe; n=44	Eastern Mediterranean & African Regions; n=41	Western Pacific; n=63	p-value
How many confirmed COVID-19 cases have been admitted to your hospital to date? (n=279)						
• ≤ 50	27 (20.5)	9 (56.3)	11 (26.2)	22 (59.5)	38 (73.1)	<0.001
• 51-100	18 (13.6)	2 (12.5)	0	6 (16.2)	2 (3.8)	
• 101-250	21 (15.9)	4 (25)	9 (21.4)	5 (13.5)	8 (15.4)	
• 251-500	20 (15.2)	0	11 (26.2)	3 (8.1)	1 (1.9)	
• >500	46 (34.8)	0	11 (26.2)	1 (2.7)	3 (5.8)	
Did trainees express concerns regarding their safety and risk of exposure to COVID-19? (n=279)						
• Yes	107 (81.1)	11 (68.8)	23 (54.8)	34 (91.9)	33 (63.5)	0.004
• No	17 (12.9)	4 (25)	12 (28.6)	1 (2.7)	14 (26.9)	
• I don't know	8 (6.1)	1 (6.3)	7 (16.7)	2 (5.4)	5 (9.6)	
Have any of your trainees tested positive for COVID-19? (n=279)						
• Yes	29 (22)	0	12 (28.6)	7 (18.9)	2 (3.8)	<0.001
• No	94 (71.2)	16 (100)	22 (52.4)	25 (67.6)	49 (94.2)	
• I don't know	9 (6.8)	0	8 (19)	5 (13.5)	1 (1.9)	
Have any of your teaching faculty tested positive for COVID-19? (n=279)						
• Yes	51 (38.6)	0	17 (40.5)	12 (32.4)	1 (1.9)	<0.001
• No	69 (52.3)	16 (100)	21 (50)	19 (51.4)	49 (94.2)	
• I don't know	12 (9.1)	0	4 (9.5)	6 (16.2)	2 (3.8)	
The COVID-19 pandemic will impact your senior fellows' preparation for performing endoscopy independently after graduation. (n=279)						
• Maybe	10 (7.6)	2 (12.5)	0	3 (8.1)	6 (11.5)	<0.001
• No	57 (43.2)	2 (12.5)	7 (16.7)	2 (5.4)	13 (25)	
• Yes, but will likely graduate as planned	47 (35.6)	6 (37.5)	15 (35.7)	16 (43.2)	19 (36.5)	
• Yes, may need to extend training	18 (13.6)	6 (37.5)	20 (47.6)	14 (37.8)	14 (26.9)	
• Yes, senior fellows were graduated early due to COVID-19 pandemic demands	0	0	0	2 (5.4)	0	

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Have trainees been asked to assume roles outside of GI? (<i>n</i> =279)						
• Yes	64 (48.5)	11 (68.8)	34 (81)	18 (48.6)	24 (46.2)	0.008
• No	63 (47.7)	5 (31.3)	6 (14.3)	17 (45.9)	23 (44.2)	
• Maybe	5 (3.8)	0	2 (4.8)	2 (5.4)	5 (9.6)	
What has been the overall impact of the COVID-19 pandemic on the endoscopy training? (<i>n</i> =279)						
• Negative/Strongly negative impact	124 (94)	14 (87.6)	39 (92.9)	35 (94.6)	47 (90.4)	0.001
• No impact	8 (6)	1 (6.2)	3 (7.1)	1 (2.7)	2 (3.8)	
• Positive impact	0	1 (6.2)	0	1 (2.7)	3 (5.8)	
Trainees and faculty received formal training on how to care for COVID-19 patients (<i>n</i> =279)	107 (81.1)	12 (75)	37 (88.1)	23 (62.2)	39 (75)	0.09
Trainees and faculty received formal training on how to appropriately use personal protective equipment (PPEs) (<i>n</i> =279)	126 (95.5)	14 (87.5)	39 (92.9)	29 (78.4)	42 (80.8)	0.001
What steps were taken to address the impact of the COVID-19 pandemic on endoscopy training* for fellows? (<i>n</i> =279)						
• Allowing trainees to scope at other hospitals/sites	12 (9.1)	0	2 (4.8)	1 (2.7)	3 (5.8)	0.44
• Allowing trainees to work with multiple faculty members	39 (29.5)	3 (18.8)	11 (26.2)	11 (29.7)	12 (23.1)	0.82
• Online or virtual teaching	75 (56.8)	12 (75)	12 (28.6)	11 (29.7)	18 (34.6)	<0.001
• Conserving endoscopy procedures for existing and senior fellows	2 (1.5)	0	1 (2.4)	0	0	0.72
• Use of endoscopy simulators	7 (5.3)	2 (12.5)	6 (14.3)	1 (2.7)	13 (25)	0.001
• Extension on the training duration	0	0	0	0	1 (1.9)	0.35
• Flexibility in trainee schedules	87 (65.9)	7 (43.8)	15 (35.7)	19 (51.4)	29 (55.8)	0.009
• Gradual easing of restrictions - trainees can now scope	1 (0.8)	1 (6.3)	0	0	0	0.09
• Improvement in testing and adequate PPE resulted in resumption of fellows active training	1 (0.8)	0	0	0	0	0.89
• None of the above	13 (9.8)	1 (6.3)	13 (31)	9 (24.3)	10 (19.2)	0.008
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	91 (68.9)	12 (75)	13 (31)	8 (21.6)	15 (28.8)	
• No	21 (15.9)	4 (25)	24 (57.1)	25 (67.6)	30 (57.7)	<0.001
• I don't know	20 (15.2)	0	5 (11.9)	4 (10.8)	7 (13.5)	

*Recommended to check all that apply.

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