

Impact of COVID-19 on endoscopy trainees: An international survey

Supplementary Digital Content

Appendix 1: The international training (EndoTrain) survey	Page 1-4
Appendix 2: Supplementary Table 1 - List of societies that supported dissemination of the survey	Page 5
Appendix 3: Supplementary Table 2 - List of countries with respondents	Page 6
Appendix 4: Supplementary Figure 1 - International distribution of EndoTrain survey respondents	Page 7
Appendix 5: Supplementary Figure 3 - Association between anxiety, as measured by the Generalized Anxiety Disorder 7 (GAD-7) instrument, and rates of burnout	Page 8

Appendix 1: The International Training (EndoTrain) Survey

A - Demographics

1. What is your age (*optional - numerical box*)
2. Your gender (*optional*)
 - a. Female
 - b. Male
 - c. Other (*free text option*)
3. Country of training
4. What specialty are you in?
 - a. Adult gastroenterology
 - b. Pediatric gastroenterology
 - c. Surgery
 - d. Internal Medicine
 - e. Other (*free text option*)
5. Number of years in endoscopy training (*numerical box*)
6. Are you currently doing an advanced endoscopy fellowship? YES/NO
7. What is the focus of your endoscopy training program? (*Tick all that apply*)
 - a. Upper GI
 - b. Lower GI
 - c. ERCP
 - d. EUS
 - e. Other (*free text*)
9. Prior to the COVID-19 pandemic, approximately how many procedures would you perform each month **independently** (without supervision within the room) for the following: (*numerical box, default value set at 0*)
 - a. EGD/OGD
 - b. Colonoscopy
 - c. ERCP
 - d. EUS
 - e. Therapy for Upper GI bleed
10. Has your exposure to endoscopy cases decreased during the COVID-19 pandemic?
 - a. YES (if Yes, please indicate the reason(s) for decreased endoscopy case volume- tick all that apply)
 - i. Lack of cases
 - ii. Lack of PPE availability
 - iii. Personal decision
 - iv. Institutional policy
 - v. Redeployed to another clinical area
 - vi. Other (specify [free text comment])
 - b. NO
11. Which endoscopy opportunities still remain for you? (tick all that applies)
 - a. None (not performing endoscopy)
 - b. No restrictions
 - c. Only procedures which I can perform without supervision
 - d. Only patients at low-risk/negative for COVID-19
 - e. ICU cases
 - f. Emergency cases
 - g. Other (*free text comment*)

B – Endoscopy

8. Prior to the COVID-19 pandemic, approximately how many procedures would you perform each month **under supervision** for the following:
 - a. EGD/OGD
 - b. Colonoscopy
 - c. ERCP
 - d. EUS
 - e. Therapy for Upper GI bleed
12. Prior to the COVID-19 pandemic, did you participate in an emergency (on-call) endoscopy rota/schedule?
 - a. YES – If Yes, since COVID-19, has this:

- i. Stopped
 - ii. Reduced infrequency
 - iii. Remain unchanged
- b. NO

13. How has your institution's case volume been affected by the COVID-19 pandemic?
- a. Not affected
 - b. Yes, but don't know
 - c. Decreased by 1-25%
 - d. Decreased by 26-50%
 - e. Decreased by 51-75%
 - f. Decreased by 76-99%
 - g. Decreased by 100% (no endoscopy being performed at all)

14. During the COVID-19 pandemic, approximately how many procedures are you performing each month **under supervision** for the following: *(numerical box, default value set at 0)*
- a. EGD/OGD
 - b. Colonoscopy
 - c. ERCP
 - d. EUS
 - e. Therapy for Upper GI bleed

15. During the COVID-19 pandemic, approximately how many procedures are you performing each month **independently** for the following: *(numerical box, default value set at 0)*
- a. EGD/OGD
 - b. Colonoscopy
 - c. ERCP
 - d. EUS
 - e. Therapy for Upper GI bleed

D – PPE

16. Have you received any training on appropriate use of PPE for COVID-19 patients?
- a. YES

b. NO

17. Have you received any training on how to manage a COVID-19 patient in your endoscopy unit?

- a. YES
 - i. In person
 - ii. By virtual meeting
 - iii. By written communication

b. NO

18. Do you feel that the level of PPE used in your endoscopy unit during the COVID-19 pandemic is adequate?

- a. YES
- b. NO

19. Has your institution restricted endoscopy volume because of insufficient PPE?

- a. YES
- b. NO

20. Does your endoscopy unit follow guidelines for protection against COVID-19?

- a. YES (pick one)
 - i. National
 - ii. Societal
 - iii. Hospital's own recommendations

b. NO

E – Well Being

21. Have you taken time off work because of confirmed or suspected COVID-19?

- a. YES
 - i. For Myself
 - ii. For a household member

b. NO

22. Have you tested positive for COVID-19?

- a. YES

- b. NO
 - c. Not tested
 - d. Prefer not to answer
23. How concerned are you about COVID-19 exposure during your current endoscopy training?
- a. Not concerned
 - b. Slightly concerned
 - c. Moderately concerned
 - d. Extremely concerned
 - e. N/A (not training)
24. How concerned are you that the COVID-19 pandemic is going to affect your competency in performing endoscopy?
- a. Not concerned
 - b. Slightly concerned
 - c. Moderately concerned
 - d. Extremely concerned
25. Are you concerned that the impact of COVID-19 on endoscopy training may prolong your fellowship/specialty training?
- a. Not concerned
 - b. Slightly concerned
 - c. Moderately concerned
 - d. Extremely concerned
26. Over the last 2 weeks, how often have you been affected by the following: (*responses: Not at all, Several days, Over half of the days, Nearly every day*)
- a. Feeling nervous, anxious or on edge
 - b. Not being able to stop or control worrying
 - c. Worrying too much about different things
 - d. Trouble relaxing
 - e. Being so restless that it is hard to sit still
 - f. Becoming easily annoyed or irritable
 - g. Feeling afraid as if something awful might happen
- h. Feeling loss of control
 - i. Not being able to focus on work
 - j. Anxiety of yourself or a loved one getting ill from COVID-19
27. During this COVID-19 pandemic, how difficult is it for you to be yourself with others?
- a. Not difficult at all
 - b. Somewhat difficult
 - c. Very difficult
 - d. Extremely difficult
28. Overall, how would you rate your level of burnout? (*select the most appropriate statement*)
- a. I enjoy my work and have no symptoms of burnout
 - b. Occasionally I am under stress, and I don't always have as much energy as I once did, but don't feel burned out
 - c. I am definitely burning out and have one or more symptoms of burnout, such as physical and emotional exhaustion
 - d. The symptoms of burnout that I'm experiencing won't go away. I think about frustration at work a lot
 - e. I feel completely burned out and often wonder if I can go on. I am at the point where I may need some changes or may need to seek some sort of help
29. Is your institution/program offering emotional or mental health support during these times?
- a. Yes
 - i. Formal group or individual session
 - ii. Drop-in sessions
 - iii. Yes, but did not access
 - b. No

F – Education

30. If the COVID-19 pandemic has impacted your hands-on endoscopy training, what additional training have you undertaken to supplement your endoscopy education? (*responses: 1) Have not used, 2) 1-2 times in the last month, 3) Weekly, 4) 1-2 times per week, 5) 3-5 times per week, 6) Daily*)
- a. Physically attending organised teaching from your institution
 - b. Distance learning from your institution
 - c. Online courses from national/international societies
 - d. Social media education
 - e. Endoscopy journals (including electronic)
 - f. Webinars
 - g. Other (free-text)
31. Do you believe that your national/societal guidelines should be modified to support endoscopy training during COVID-19?
- a. Yes (please feel free to comment -*option for free text*)
 - b. No
32. Do you have any additional comments or suggestions on how to improve training during the COVID-19 pandemic? (optional)

Appendix 2: List of societies that supported dissemination of the survey

Society/ Group	
<p>America</p> <ul style="list-style-type: none"> • Pan American Crohn’s and Colitis Organization (PANCCO) <p>North America</p> <ul style="list-style-type: none"> • Adult Gastroenterology, Pediatric Gastroenterology and Surgery Program Directors across North America • Canadian Association of Gastroenterology (CAG) • The American College of Gastroenterology (ACG) • The American Gastroenterological Association (AGA) • GI Training Group of North America <p>Latin America</p> <ul style="list-style-type: none"> • Adult Gastroenterology, Pediatric Gastroenterology and Surgery Program Directors across Latin America • Chilean Endoscopy Association/Asociación Chilena de Endoscopia Digestiva (ACHED) • Endoscopy Society of El Salvador • Gastroenterology Society of Argentina/Sociedad Argentina de Gastroenterología (SAGE) • Gastrointestinal Endoscopy Program Directors in Mexico • Mexican Association of Gastroenterology/Asociación Mexicana de Gastroenterología (AMG) • Mexican Association of Gastrointestinal Endoscopy/Asociación • Mexicana de Endoscopia Gastrointestinal (AMEG) • Peruvian Society of Gastroenterology/Sociedad Peruana de Gastroenterología (SGP) • Venezuelan Society of Gastroenterology • Young Trainee Group of Argentina, Brazil, Chile, Colombia, Venezuela • TG of El Salvador, Panamá 	<p>Asia</p> <ul style="list-style-type: none"> • Gastrointestinal Society of Kuwait • Philippine Society of Digestive Endoscopy (PSDE) • Saudi Gastroenterology Association (SGA) • The Asian-Pacific Association of Gastroenterology (APAGE) • The Asian-Pacific Society of Digestive Endoscopy (APSDE) • Kuwait Gastroenterology Association (KGA) • The Hong Kong Society of Gastroenterology • The Japan Gastroenterological Endoscopy Society (JGES) • The Society of Gastrointestinal Endoscopy of India (SGEI) <p>Australia & New Zealand</p> <ul style="list-style-type: none"> • Gastroenterological Society of Australia (GESA) Young Group • New Zealand Society of Gastroenterology (NZSG) <p>Europe</p> <ul style="list-style-type: none"> • Czech Gastroenterological Society (ČGS) • Czech Young Trainee Group • Junge Gastroenterollege Arbietsgruppe (JUGA) • European Society for Paediatric Gastroenterology Hepatology and Nutrition (ESPGHAN) • Polish Society of Young Endoscopist • Spanish Association of Gastroenterology/Asociación Española de Gastroenterología (AEG) • Spanish Association of Digestive Endoscopy/Sociedad Española de Endoscopia Digestiva (SEED) • The British Society of Gastroenterology (BSG)

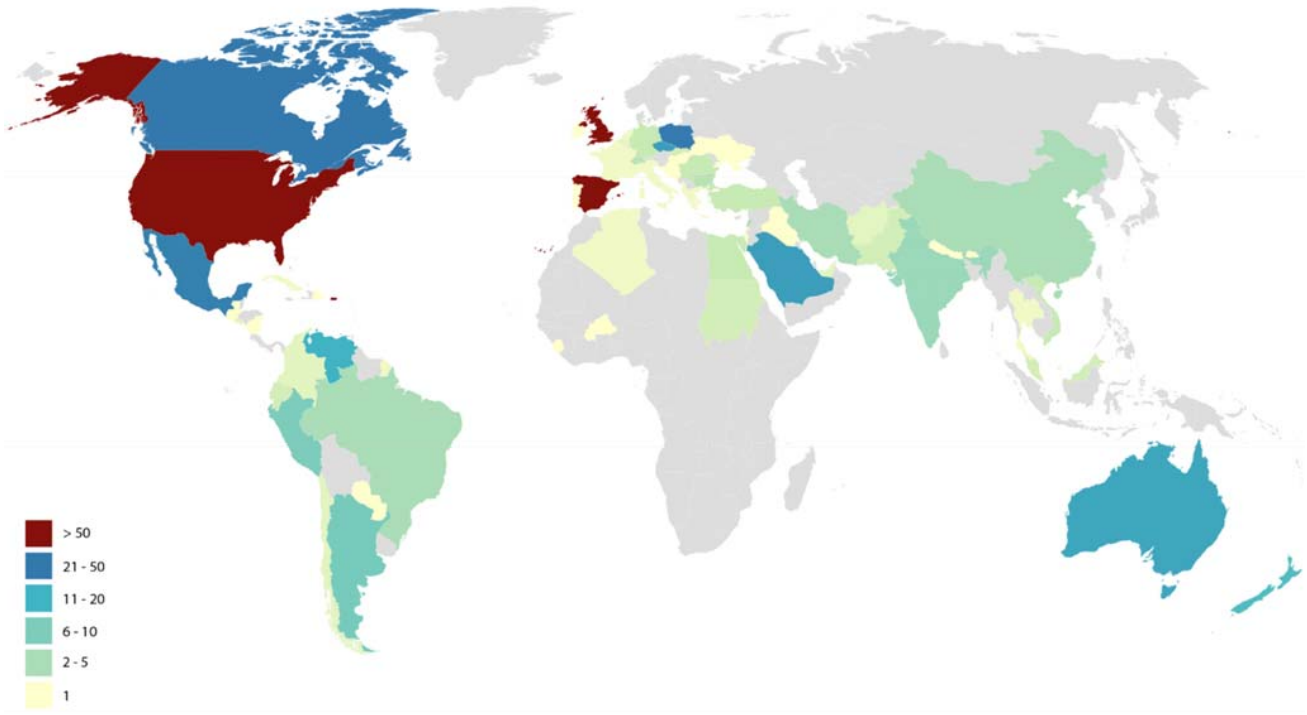
Appendix 3: List of countries with respondents

Country	Number of Responses	Percent
Afghanistan	3	0.39
Albania	2	0.26
Algeria	2	0.26
Argentina	11	1.43
Australia	23	2.99
Barbados	2	0.26
Belgium	3	0.39
Bhutan	1	0.13
Bosnia and Herzegovina	1	0.13
Brazil	7	0.91
Bulgaria	6	0.78
Burkina Faso	1	0.13
Canada	34	4.42
Chile	3	0.39
China	7	0.91
Colombia	3	0.39
Croatia	1	0.13
Cuba	2	0.26
Czech Republic	25	3.25
Dominican Republic	1	0.13
Ecuador	4	0.52
Egypt	5	0.65
El Salvador	3	0.39
France	2	0.26
Germany	5	0.65
Greece	2	0.26
Guatemala	1	0.13
Hungary	1	0.13
India	8	1.04
Iran (Islamic Republic of)	7	0.91
Iraq	1	0.13
Ireland	1	0.13

Country	Number of Responses	Percent
Israel	1	0.13
Italy	2	0.26
Lebanon	8	1.04
Malaysia	4	0.52
Mexico	31	4.03
Nepal	1	0.13
Netherlands	2	0.26
New Zealand	17	2.21
Nicaragua	1	0.13
Pakistan	4	0.52
Paraguay	1	0.13
Peru	10	1.30
Poland	33	4.29
Portugal	1	0.13
Romania	5	0.65
Saudi Arabia	25	3.25
Serbia	5	0.65
Sierra Leone	1	0.13
Singapore	6	0.78
Slovakia	4	0.52
Spain	82	10.65
Sudan	4	0.52
Switzerland	6	0.78
Thailand	2	0.26
Turkey	5	0.65
Ukraine	1	0.13
United Arab Emirates	3	0.39
United Kingdom of Great Britain	132	17.14
United States of America	169	21.95
Venezuela (Bolivarian Republic of)	20	2.60
Vietnam	5	0.65
Total	770	100.00

Appendix 4: International distribution of EndoTrain survey respondents

Number of respondents



Appendix 5: Association between anxiety, as measured by the Generalized Anxiety Disorder 7 (GAD-7) instrument, and rates of burnout

