

Supplementary material 1: Formative DOPS Assessment Form Diagnostic Upper GI Endoscopy

Trainee

Faculty

Date (DD/MM/YYYY)

Scale and Criteria Key

- 4 Highly skilled performance
- 3 Competent and safe throughout procedure, no uncorrected errors
- 2 Some standards not yet met, aspects to be improved, some errors uncorrected
- 1 Accepted standards not yet met, frequent errors uncorrected
- n/a Not applicable

Criteria	Score	Comments
Assessment, consent, communication Obtains informed consent using a structured approach <ul style="list-style-type: none"> ○ Satisfactory procedural information ○ Risk and complications explained ○ Sedation ○ Opportunity for questions Demonstrates respect for patient's views and dignity during the procedure Communicates clearly with patient, including outcome of procedure with appropriate management and follow up plan. Full endoscopy report.		
Safety and sedation Safe and secure IV access Gives appropriate dose of analgesia and sedation and ensures adequate oxygenation and monitoring of patient Demonstrates good communication with the nursing staff.		
Endoscopic skills during insertion and procedure Checks endoscope function before intubation Intubates the oesophagus under direct vision Maintains clear luminal view Demonstrates awareness of patient's consciousness and comfort during the procedure and takes appropriate actions Uses distension, suction and lens washing appropriately Passes the scope into the second part of the duodenum Uses retroflexion to visualise fundus and cardia Completes procedure in reasonable time		
Diagnostic and therapeutic ability Adequate mucosal visualisation Recognises and notes the position of the gastro-oesophageal junction, and is appropriately orientated within the stomach and duodenum Accurate identification and management of pathology Uses diathermy and therapeutic techniques appropriately and safely High quality images recorded Recognises and manages complications appropriately		

Case Difficulty

Extremely easy	Fairly easy	Average	Fairly difficult	Very challenging
1	2	3	4	5

Trainee comments

Supplementary material 2: Formative DOPS Assessment Form Colonoscopy

Trainee

Faculty

Date (DD/MM/YYYY)

Scale and Criteria Key

- 4 Highly skilled performance
- 3 Competent and safe throughout procedure, no uncorrected errors
- 2 Some standards not yet met, aspects to be improved, some errors uncorrected
- 1 Accepted standards not yet met, frequent errors uncorrected
- n/a Not applicable

Criteria	Score	Comments
Assessment, consent, communication Obtains informed consent using a structured approach <ul style="list-style-type: none"> ○ Satisfactory procedural information ○ Risk and complications explained ○ Co-morbidity ○ Sedation ○ Opportunity for questions Demonstrates respect for patient's views and dignity during the procedure Communicates clearly with patient, including outcome of procedure with appropriate management and follow up plan. Full endoscopy report.		
Safety and sedation Safe and secure IV access Gives appropriate dose of analgesia and sedation and ensures adequate oxygenation and monitoring of patient Demonstrates good communication with the nursing staff, including dosages and vital signs		
Endoscopic skills during insertion and procedure Checks endoscope function before intubation Performs PR Maintains luminal view / inserts in luminal direction Demonstrates awareness of patient's consciousness and pain during the procedure and takes appropriate action Uses torque steering and control knobs appropriately Uses distension, suction and lens washing appropriately Recognises and logically resolves loop formation Uses position change and abdominal pressure to aid luminal views Completes procedure in reasonable time		
Diagnostic and therapeutic ability (Polypectomy, sclerotherapy) Adequate mucosal visualisation Recognises caecal/desc. colon landmarks or incomplete examination Accurate identification and management of pathology Uses diathermy and therapeutic techniques appropriately and safely Recognises and manages complications appropriately		

Case Difficulty

Extremely easy	Fairly easy	Average	Fairly difficult	Very challenging
1	2	3	4	5

Trainee comments

Supplementary material 3:

GAGES - UPPER GI ENDOSCOPY SCORESHEET

GLOBAL ASSessment of GASTROINTESTINAL ENDOSCOPIC SKILLS

INTUBATION OF THE ESOPHAGUS

SCORE

Reflects patient management, understanding of anatomy and sedation

5 Able to independently (successfully) intubate esophagus without patient discomfort

4

3 Requires detailed prompting and cues

2

1 Unable to properly intubate requiring take over

SCOPE NAVIGATION

SCORE

Reflects navigation of the GI tract using tip deflection, advancement/withdrawal and torque

5 Expertly able to manipulated the scope in the upper GI tract autonomously.

4

3 Requires verbal guidance to completely navigate the upper GI tract

2

1 Not able to achieve goals despite detailed verbal cues, requiring take over

ABILITY TO KEEP A CLEAR ENDOSCOPIC FIELD

SCORE

Utilization of insufflation, suction and/or irrigation to maximize mucosal evaluation

5 Uses insufflation, suction, and irrigation optimally to maintain clear view of endoscopic field

4

3 Requires moderate prompting to maintain clear view

2

1 Inability to maintain view despite extensive verbal cues

INSTRUMENTATION (if applicable; leave blank if not applicable)

SCORE

Random biopsy: targeting is assessed by asking the endoscopist to take another biopsy from the identical site. Targeted instrumentation: evaluation is based on ability to direct the instrument to the target.

5 Expertly directs instrument to desired target

4

3 Requires some guidance and/or multiple attempts to direct instrument to target

2

1 Unable to direct instrument to target despite coaching

QUALITY OF EXAMINATION

SCORE

Reflects attention to patient comfort, efficiency, and completeness of mucosal evaluation

5 Expertly completes the exam efficiently and comfortably

4

3 Requires moderate assistance to accomplish a complete and comfortable exam

2

1 Could not perform a satisfactory exam despite verbal and manual assistance requiring takeover of the procedure

Supplementary material 4:

GAGES - COLONOSCOPY SCORESHEET

GLOBAL ASSESSMENT OF GASTROINTESTINAL ENDOSCOPIC SKILLS

SCOPE NAVIGATION

SCORE

Reflects navigation of the GI tract using tip deflection, advancement/withdrawal and torque

- 5 Expertly able to manipulate the scope in the GI tract autonomously
- 4
- 3 Requires verbal guidance to completely navigate the lower GI tract
- 2
- 1 Not able to achieve goals despite detailed verbal guidance requiring takeover

USE OF STRATEGIES

SCORE

Examines use of patient positions, abdominal pressure, insufflation, suction and loop reduction to comfortably complete the procedure

- 5 Expert use of appropriate strategies for advancement of the scope while optimizing patient comfort
- 4
- 3 Use of some strategies appropriately, but requires moderate verbal guidance
- 2
- 1 Unable to utilize appropriate strategies for scope advancement despite verbal assistance

ABILITY TO KEEP A CLEAR ENDOSCOPIC FIELD

SCORE

Utilization of insufflation, suction and/or irrigation to maximize mucosal evaluation

- 5 Used insufflation, suction, and irrigation optimally to maintain clear view of endoscopic field
- 4
- 3 Requires moderate prompting to maintain clear view
- 2
- 1 Inability to maintain view despite extensive verbal cues

INSTRUMENTATION (if applicable; leave blank if not applicable)

SCORE

Random biopsy: targeting is assessed by asking the endoscopist to take another biopsy from the identical site. Targeted instrumentation: evaluation is based on ability to direct the instrument to the target.

- 5 Expertly directs instrument to desired target
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QUALITY OF EXAMINATION

SCORE

Reflects attention to patient comfort, efficiency, and completeness of mucosal evaluation

- 5 Expertly completes the exam efficiently and comfortably
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- 2
- 1 Could not perform a satisfactory exam despite verbal and manual assistance requiring takeover of the procedure

Supplementary material 5: Prompt questions for Facilitator in Focused Group Discussion

Experience on the ease of use the four assessment tools.

- Please describe your experience with using the different endoscopic skill assessment tools in a gastroenterology residency program
- In your opinion rate each of the tools from the easiest to use and to the most difficult to use.
- What was difficult to use about the tool you identified?

Ease of interpretation about the four assessment tools.

- Where there any ambiguous items/ items in the tools? If so which one(s)?
- Was the language used in the assessment tools easy to understand?
- In your opinion there any item/ task in any of the assessment forms that could have been misinterpreted?

Resources required in the resident assessment processes.

- Were the resources provided (material, time, space, personnel) adequate for carrying out the assessment?
- In your opinion, is there anything that can be provided that would help the assessment process?