TEAMWORKING IN ENDOSCOPY:
A HUMAN FACTORS TOOLKIT FOR THE COVID-19 ERA

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ENDOSCOPY TEAM TOOLKIT

A TOOLKIT FOR ENDOSCOPY TEAMS working in the COVID-19 ERA

v1.1
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1. Overview

- COVID-19 has changed the way we work for the foreseeable future

- This handbook provides practical guidelines to enhance teamwork in endoscopy through use of a novel toolkit

- The toolkit contains cognitive aids to support team briefings, debriefings and endoscopic non-technical skills (ENTS) - the foundation for effective teamwork in endoscopy

- Toolkit aids were designed with human factors principles in mind, based on novel challenges that endoscopy teams face during the COVID-19 pandemic
2. Whole Team Huddle

- A daily huddle for all endoscopy team members (includes endoscopists, nurses, healthcare assistants, decontamination staff and porters)

- This should occur at the start of the day at an allocated time and location

- The objectives are to:
  1. Familiarise team members with each other
  2. Plan tasks for the day ahead

- Huddle aid: page 4
- Huddle aid descriptors: page 5-7
Whole Team Huddle

Planning for case management for the day ahead

Location & time: e.g. Endoscopy Recovery 8:00 am
Team present: e.g. Endoscopy consultant, endoscopy registrar, lead nurse, recovery nurses, decon staff

TEAM CHECK-IN
- Introductions & greeting
- Health-check

STAFF
- Staffing levels, sickness & requirements
- Allocate specific roles (incl. runners and buddies)
- Ensure appropriate skill mix available
- Plan breaks

PATIENTS
- INPATIENTS
  - Review outstanding inpatient cases & prioritise
  - Arrange cases by COVID status (or other infectious disease)
  - Alerting specialties if backup required
- OUTPATIENTS
  - Identify lists running and timings

FLOW
- Outline clinical setting for cases
- Contact parent team
- Convey anticipated running order to relevant teams

EQUIPMENT
- Specific alerts for endoscopes/other equipment

PPE
- Ensure appropriate stocks of PPE
- Ensure stocks of cleaning/disinfectant materials

Endoscopy COVID Toolkit Huddle v1.5
Whole Team Huddle descriptors

**TEAM CHECK-IN**

**Introductions and greeting**
- Set the tone for the huddle by an open introduction and greeting all team members
- Acknowledge team members who may be new or not used to the team huddle

**Health-check**
- Check team members are ok and agree a way to share concerns if needed.
- Ask if any staff meet SCOTS criteria (indication to isolate):
  1. Symptoms of COVID-19
  2. Close contact with known or suspected COVID-19 case
  3. Occupational exposure to COVID-19 patients
  4. Travel to at-risk area
  5. Shielding

**STAFF**

**Staffing levels, sickness and requirements**
- Enquire about staffing levels and sickness for the day to aid planning and allocation of staff
- Check and reiterate staff have had relevant mask-fit tests and completed any COVID-related competencies

**Allocate specific roles**
- Allocate specific roles to all staff so they have an idea of tasks and responsibilities for the day ahead
- This includes allocation of ‘buddies’ for donning and doffing and ‘runners’ (outside room assistants) for rooms where full PPE is being used

**Ensure skill mix available**
- Ensure the appropriate skill mix of staff is available for the cases and tasks for the day (endoscopists and assistants)

**Plan breaks**
- Remind staff to factor in breaks accordingly, particularly in between cases if donning and doffing
### Whole Team Huddle descriptors

#### PATIENTS

**INPATIENTS**
- **Review outstanding inpatient cases**
  - Review any outstanding cases that need to be performed today and ensure COVID status is known
  - Identify whether other investigations/therapy (e.g. CT, interventional radiology) may be warranted as an alternative to endoscopy
  - Prioritise cases in order of clinical need and appropriateness for COVID-minimised or 'hot' location

**Arrange cases by COVID status**
- Consider whether COVID (or other infectious disease) cases can be deferred towards end of the list/day
- Consider special arrangements for shielded patients

**Alert other specialties if assistance/backup required**
- Highlight which cases may need support or backup from other specialties e.g. anaesthetics, surgery, haematology

**OUTPATIENTS**
- **Identify lists running and times**
  - Identify how many outpatient lists are running and what time they are due to begin
  - Ensure timings factor in downtime for air exchanges and cleaning as per local unit guidance

#### FLOW

**Outline clinical setting for cases**
- For inpatients, identify where cases will be performed (e.g. theatre, ITU) based on patient information
- For outpatient cases, allocate lists to relevant room location

**Contact parent team**
- For inpatients, alert the ward-based teams to check the patient has been prepped appropriately for the procedure and documentation is ready
- Ensure COVID-safe transfer arrangements made for inpatients between base ward and endoscopy (e.g. patient mask)

**Convey anticipated running order**
- Give a brief running order to the portering/decontamination/housekeeping team of any potential inpatient cases
## Whole Team Huddle descriptors

<table>
<thead>
<tr>
<th>EQUIPMENT</th>
<th>Specific alerts for endoscopes/equipment</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Check the availability of endoscopes or equipment (highlighted by decontamination or other staff)</td>
</tr>
<tr>
<td></td>
<td>Identify if any issues or faults with equipment</td>
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<table>
<thead>
<tr>
<th>PPE</th>
<th>PPE stocks</th>
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<tbody>
<tr>
<td></td>
<td>Identify appropriate stocks of PPE and ensure accessible to use, based on the list and case load</td>
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**Cleaning stocks**
- Cleaning stocks should also be identified and accessible
3. List Team Briefing

- A briefing for the core team running an endoscopy list (endoscopist, assistants, room runner)

- This should occur at the start of every list/session or case

- The objectives are to:
  1. Familiarise team members with each other
  2. Enhance communication between members
  3. Plan and prepare for procedure(s) ahead

- Briefing aid: page 9
- Briefing aid descriptors: page 10-12
List Team Briefing

Preparing for the list and cases ahead
Endoscopist, nurses, assistants, room runner

TEAM CHECK-IN
- Introductions & greetings
- Health-check
- Encourage open discussion

TEAM MEMBERS
- Names
- Allocate specific roles
- Review ENTS plan (see ENTS in PPE aid)

CASE PLANNING
- Review the case(s)
- Discuss the plan
- Identify & anticipate problems

EQUIPMENT
- Identify & source equipment
- Clarify essential and standby equipment
- Equipment check

PPE
- Review donning and doffing procedures
- Clarify any specific PPE requirements

CHECKLIST
- Complete the relevant checklist elements outside of room (if needed)
- Ensure adequate patient communication and consent confirmed
List Team Briefing descriptors

TEAM CHECK-IN

**Introductions and greeting**
- Set the tone for the briefing by an open introduction and greeting all team members
- Acknowledge team members who may be new or not used to the team briefing

**Health-check**
- Check individual team members are well and agree a way to share concerns if needed

**Encourage open discussion**
- Reiterate that team members should feel able to express their opinions, concerns and comments in an open atmosphere
- Actively listen to team members’ input

TEAM MEMBERS

**Names**
- Ensure staff names can be clearly visualised after donning (later)
- Name and role may be needed in some situations where there are several unfamiliar staff (e.g. theatres)

**Allocate specific roles**
- Explicitly define roles and make sure everyone is clear on their responsibilities
- Take action on any skill mix issues
- Buddies for donning/doffing and the room runner should be identified at this stage, if not done earlier

**Review ENTS plan**
- Plan how the team will communicate (verbal and non-verbal) with each other whilst donned in PPE
- Refer to the ENTS in PPE aid
### List Team Briefing descriptors

#### CASE PLANNING

**Review the case(s)**
- Review the cases scheduled, to have an idea of what will be done
- Before each case, the referral details should be reviewed to identify indication, comorbidities, consent and any anticipated challenges
- Re-order cases if needed

**Discuss the plan**
- Anticipate the course of the procedure and outline a plan for all team members to consider
- Encourage open discussion about all potential plans and contingencies

**Identify & anticipate problems**
- Planning should incorporate identifying and anticipating problems

#### EQUIPMENT

**Identify & source equipment**
- Based on planning, all relevant equipment should be identified and sourced so available – this prevents unnecessary delays during the procedure
- This should incorporate scopes, specialised equipment and accessories

**Clarify essential and standby equipment**
- Agree on essential equipment required in procedure room and what can be on 'standby' outside the room

**Equipment check**
- Ensure equipment working and prepped where necessary
List Team Briefing descriptors

PPE

Review donning/doffing procedures
• Check team members are happy with donning/doffing procedures
• Act on any PPE concerns raised by team members

Clarify any specific PPE requirements
• Check if any team members have specific PPE requirements

CHECKLIST

Complete the relevant checklist elements outside of room (if needed)
• If checklists are paper-based, ensure that the relevant elements are completed outside of the room with the patient before donning
• Complete ID check and final equipment check in room
• Consider a visual checklist aide in the endoscopy procedure room

Ensure adequate patient communication and consent confirmed
• Set the scene for the patient and tell them what to expect
• Discuss a communication plan with the patient (refer to ENTS in PPE aid)
• Confirm procedural consent
4. List Team Debrief

• A debrief for the core endoscopy team (endoscopist, assistants, room runner)

• This should occur at the end of each case (recurring debrief) and list/session (final debrief)

• The objectives are to:
  1. Reflect and learn from procedures
  2. Develop action points for future procedures
  3. Support team members

- Debrief aid: page 12
- Debrief aid descriptors: page 13-14
List Team Debrief

Learn from experiences and support team members
After each case and/or list

DESCRIBE
What happened?

ANALYSE
Why did it happen?

APPLY
What can we do next time?

OUTCOMES
• What did we achieve today?
• What worked well?
• What can we improve upon?

TEAM WORKING
• Team dynamics
• Communication
• Roles and responsibilities
• Leadership

SAFETY
• Review any safety issues
• Incident reporting

EQUIPMENT
• Equipment issues or faults
• Stock replenishment

PPE
• Donning/doffing experiences
• PPE issues

WELLBEING
• Check-in with all team members
• Review performance-limiting factors
• Signpost to relevant resources

Endoscopy COVID Toolkit Debrief v1.5
## List Team Debrief descriptors

### OUTCOMES
- Open questions regarding outcomes:
  - What did the team achieve and what were they proud of?
  - Why did the plan work well (acknowledge successes)?
  - What could we do better next time?

### TEAM-WORKING

#### Team dynamics
- Generally, how well did the team work together? It’s important to identify processes that could be improved.

#### Communication
- Did the communication plan work? What were the challenges, and how could this be improved upon next time?

#### Roles and responsibilities
- Was the skill mix appropriate for the room? Was everyone aware of what they were meant to be doing and when? How did things work with the runner (if utilised)?

#### Leadership
- Did the team feel appropriately led? How did team co-ordination work? Was the planning prior to the procedure adequate?
- Was there good followership – did the lead feel the team were on board?

### SAFETY

#### Review any safety issues
- Identify if there were any safety issues related to the following incident categories:
  - Technical skills
  - Non-technical skills
  - Oxygen and monitoring
  - Drugs and sedation
  - Sampling

#### Incident reporting
- If any safety issues are identified, they should be reported.
- This may a useful point for learning, particularly if causative factors are identified during the debrief.
- Ensure staff are adequately supported following any significant issues.
- An individual debrief away from the team maybe required.
# List Team Debrief descriptors

## EQUIPMENT

**Equipment issues or faults**
- Review whether the equipment in the room was sufficient and in good working order
- Identify whether equipment changes need to be made

**Stock replenishment**
- Highlight stocks that need to replenished

## PPE

**Donning/doffing experiences**
- Highlight any areas that need addressing for the next cycle of donning and/or doffing

**PPE issues**
- Discuss experiences of wearing PPE
- Identify if there were any issues of mask fit
- Identify if there are any concerns from team members?

## WELLBEING*

**Check-in with all team members**
- Check-in with team members again, recognise and acknowledge all team members’ input

**Review performance-limiting factors**
- Recognition of performance-limiting factors such as tiredness and hunger
- Team members should remind each other to take breaks

**Signpost to relevant resources**
- Provide emotional support to team members where appropriate
- Offer to point them towards allied support services if necessary

*These elements should expanded on in more detail in the final debrief*
5. Endoscopic Non-Technical Skills (ENTS) in PPE

• Personal Protective Equipment (PPE) may affect elements of procedural delivery, most notably endoscopic non-technical skills (ENTS)

• Endoscopic non-technical skills (ENTS) include the communication, teamwork, leadership, situational awareness and judgement fundamental to performing endoscopic procedures

• Both verbal and non-verbal communication may be impaired through use of FFP3 masks and head coverings

• This aid provides endoscopy teams with useful tips on how to enhance teamwork while wearing PPE

• Additional recommendations are also made for patient communication

- ENTS in PPE aid: page 18
- ENTS in PPE aid descriptors: page 19-20
Endoscopic Non-Technical Skills (ENTS) in PPE

Tips to optimise ENTS in PPE (for in-room team and dedicated runner)

**KEY CUES**
- Agree verbal/non-verbal cues that summarise intentions with clear meaning before procedure
- Verbal cues = key words/phrases
- Non-verbal cues = hand gestures

**CLOSED-LOOP COMMUNICATION**
- The sender conveys a message, the receiver acknowledges this verbally with sender
- Sender acknowledges message correctly understood

**DISPLAY YOUR NAME ON OUTER GOWN**

**DIRECTED COMMUNICATION**
- Sender directs information to intended team member(s) by name
- Speak louder than you normally would
- Focused attention from the person receiving
- Eye contact between sender and receiver

**REPEITION**
- Key pieces of information need to be repeated back to team
- Use different phrases to repeat information to optimise delivery

**PATIENT COMMUNICATION**
- Agree short, directed verbal and non-verbal cues with patient before procedure:
  - FROM patient: pain, pause or stop
  - TO patient: instructions or manoeuvres

**SHARED AWARENESS**
- Promote confidence to speak up (flatten hierarchy)
- Remain vigilant and communicate if loss of situational awareness recognised in others or team
ENTS in PPE descriptors

KEY CUES

- Pre-defining a few verbal and non-verbal cues before the procedure can help to reduce communication errors in the endoscopy room
- Verbal cues should be short, succinct phrases that summarise intentions with clear meaning
- Non-verbal cues may be hand gestures that signify intent
- These can be tested with team members in the donning area prior to entering the endoscopy room

Example:
Verbal: “Move patient, right lateral” (moving patient into right lateral position)
Non-verbal: “Yes” = nod, “No” = shake, “Stop” = hand raised

DIRECTED COMMUNICATION

- Verbal phrases should be directed to the person they are intended for, by name
- Hearing will likely be impaired secondary to PPE and in-noise room, therefore communication should be loud and slow
- A consequence of non-directed communication with PPE is that messages may be unheard or misinterpreted
- The receiver of the message should focus their attention on the message sender and both should maintain eye contact during this time

Example:
"Jane, please give 25 micrograms of fentanyl"

REPETITION

- Key messages need to be repeated to ensure there is no misunderstanding.
- It may be helpful to phrase the message slightly differently on repetition to maximise the chances of the receiver understanding it

Example:
Peter says: "Jane please give 25 micrograms fentanyl, that is two five micrograms"
ENTS in PPE descriptors

CLOSED-LOOP COMMUNICATION

- This specific method ensures information has been received by relevant team members, acted upon and fed back
- The sender conveys a message to the receiver
- The receiver acknowledges they have received this and feeds this back to the sender
- Finally, the sender acknowledges the message is correctly understood

Example:
Peter says: “Jane, please give 25 micrograms fentanyl, that's two five micrograms”
Jane says: “Peter, you want me to give 25 micrograms fentanyl?”
Peter says: “Yes”
Jane says: “I have given 25 micrograms fentanyl”

PATIENT COMMUNICATION

- The patient is an active participant within most endoscopy procedures
- The challenges faced by endoscopy teams are the same as those faced by our patients. These may be exacerbated if there is a language barrier or the patient is hard of hearing or visually impaired
- Short, directed cues can be agreed with the patient to communicate if they experience pain or to pause or stop a procedure
- Equally, patient instructions or communicating procedural progress to the patient can be succinctly verbalised or gestured by team members
- These concepts should be discussed with the patient before the procedure and the end of the checklist is an opportune moment to do this

SHARED AWARENESS

- PPE may hinder the usual methods of situation perception both at an individual and team level
- Team members should try to remain vigilant at all times and communicate if they recognise a loss of situational awareness in other team members or the wider group
- The confidence to speak up should be encouraged during team huddles and briefings