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# Preparing for COVID-19 Simulation Training

Cardiff and Vale University Health Board

March 2020





# Preparing for COVID-19

## Simulation training sessions

### March 2020

**Parallel sessions**

**Registration opens at 9.00**

**Maximum 10 delegates per session**

| Session, duration                                                                   | Start times                                     | Aimed at                                     | Content                                                                                                                                    |
|-------------------------------------------------------------------------------------|-------------------------------------------------|----------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------|
| Keeping safe<br>30 minutes                                                          | 9.30<br>10.30<br>11.30<br>--<br>13.30<br>14.30  | All staff                                    | Welcome and general introduction.<br>Skills practice: hand hygiene, donning, cleaning equipment, doffing.                                  |
| Endotracheal intubation<br>50 minutes                                               | 10.00<br>11.00<br>12.00<br>--<br>14.00<br>15.00 | Intubating teams (intubators and assistants) | Session introduction: airway management, breach of PPE during intubation.<br><br>Scenario 1<br><br>Scenario 2                              |
| Managing cardiac arrest and building resilience for COVID-19 epidemic<br>50 minutes | 10.00<br>11.00<br>12.00<br>--<br>14.00<br>15.00 | All staff                                    | Session introduction: Keeping your teams safe, CPR recommendations, dealing with emotional challenges.<br><br>Scenario 1<br><br>Scenario 2 |

## Learning objectives:

By the end of this session, delegates will be able to

1. Safely perform donning and doffing PPE according to HEE guidance
2. Keep safe when performing tasks and clinical duties
  - a. Intubating
  - b. Caring for critical patients
  - c. During cardiac arrest
3. Build resilience and support others in emotionally challenging situations

**Admin:** Register, waiting list, evaluation form

## Session 1: Keeping safe from COVID

### Learning objectives

By the end of this session, delegates will be able to

1. Safely perform donning and doffing PPE according to HEE guidance
2. Keep safe when performing tasks

### Session structure

30 minute repeat sessions starting at 9.30, 10.30, 11.30, 12.30, 13.30

Any staff member will be welcome to attend.

Aiming for 10 delegates, but could accommodate 16 if extremely high demand.

1 or 2 faculty members

### Props

Screen for presentation (with sound).

Antibacterial hand gel, gowns, face masks, eye protection, disposable gloves

5 buckets, antichlor tablets, access to water, chairs, operating tables or trolleys to clean

Waste disposal bin

Slides intercalated with practice in pairs (buddying)

1. Welcome and general introduction
2. Hand washing - practice
3. Donning - practice
4. Disinfecting contaminated equipment - practice
5. Doffing - practice

## Session 2: Endotracheal intubation in patients with COVID-19

### Learning objectives

By the end of this session, delegates will be able to

1. Safely perform donning and doffing PPE according to HEE guidance
2. Keep safe when performing tasks and clinical duties
  - a. Intubating
  - b. Inserting an NG tube
3. Build resilience and support others in emotionally challenging situations

### Session structure

50 minute repeat sessions starting at 10.00, 11.00, 12.00, 13.00 and 14.00.

Aimed at intubating teams (multiprofessional intubators and assistants).

Ideally 4 - 10 delegates, but could accommodate 12 if extremely high demand.

2 faculty members, mid fidelity manikin

1. Session introduction: airway management, breach of PPE during intubation (10 minutes)
2. Scenario 2.1 (2 min brief, 7 minutes performance, 10 minutes focussed debrief)
3. Scenario 2.2 (2 min brief, 7 minutes performance, 10 minutes focussed debrief)

### Props including Screen for presentation

|                                                                                       | outside the room | Inside the room |
|---------------------------------------------------------------------------------------|------------------|-----------------|
| Antibacterial hand gel                                                                | *                | *               |
| PPE trolley: gowns, face masks, eye protection, disposable gloves                     | *                |                 |
| Airway trolley with intubation equipment, ETT clamp, filters, NG tube, drugs, oxylog. | *                |                 |
| Videolaryngoscopes: C-Mac and McGrath                                                 | *                |                 |
| Paper and pen, ward observations and notes                                            |                  | *               |
| Checklists                                                                            | *                | *               |
| Gaumard manikin on bed (not trolley), monitor                                         |                  | *               |
| Oxygen port with flowmeter + Water's circuit                                          |                  | *               |
| Waste disposal bin                                                                    | *                | *               |



## Scenario 2.1

### SETTING THE SCENE

#### Candidate roles:

Intubation team (intubator plus assistant)  
Clean team member outside the door  
2 Nurses inside the room

**Clinical setting:** COVID cohort ward

#### Brief to candidates:

Intubation team (intubator plus assistant): you have been called to take over the care of Albert the patient in the room. He is a 65 year old man called Albert Jones. History of COPD and HT. He was admitted with respiratory symptoms and has tested positive for coronavirus. He has had a sudden deterioration. He is hypoxic and his breathing is fast and shallow.

Clean team member: stay clean outside the door and assist the team without becoming contaminated.

2 Nurses: you are wearing PPEs, looking after Albert in the room. You only know the details provided.

### SCENARIO DESCRIPTION *(summary of clinical progression)*

The team must perform intubation according to PPE and COVID guidelines  
The patient remains critical but doesn't arrest.  
After the end of the scenario, team members doff before debriefing.

### FACULTY ROLES REQUIRED TO RUN SCENARIO *(which, behaviour, clues)*

Facilitators observe without intervening unless an exit strategy is required.

Prepare for debriefing

- Make notes of positive behaviours.
- Annotate open questions to explore inadequate performances during debriefing.  
*I noticed that you did.... I thought that... How were you seeing the situation at that time?*



## PATIENT PARAMETERS FOR MANUAL RUN

### Initial vital signs:

SatO<sub>2</sub> 89%      Respiratory rate 32bpm

Heart rate 115 bpm, sinus rhythm, BP 168/91

### Changes to vital signs:

1. Trigger:      as time passes      Change: SatO<sub>2</sub> drops to 82%

2. Trigger:      if oxygen is applied      Change: SatO<sub>2</sub> increases to 91%

### EXIT STRATEGIES:

If delegates need support a colleague arrives to help (in full PPE).

### DEBRIEFING:

*\*Tips: be positive and use open questions.*

Gather the group, make a circle, explore feelings, diffuse.  
Ask them to describe what happened during the scenario.

Encourage delegates to identify successful behaviours and areas for improvement.  
Explore what was challenging and strategies to overcome these challenges.  
Make sure that all learning objectives are covered during this discussion.  
Allow time for questions.

Encourage delegates to share what they have learned during the scenario and debriefing.

Summarise the learning points and close the debriefing.



## Scenario 2.2

### SETTING THE SCENE

#### Candidate roles:

Intubation team (intubator plus assistant)  
Clean team member outside the door  
2 Nurses inside the room

**Clinical setting:** COVID cohort ward

#### Brief to candidates:

Intubation team (intubator plus assistant): It's shift change over time. You are relieving the team looking after Albert Jones. He has been intubated but requires an NG tube.

Clean team member: stay clean outside the door and assist the team without becoming contaminated.

2 Nurses: you are wearing PPEs, looking after Albert in the room. You only know the details provided.

### SCENARIO DESCRIPTION *(summary of clinical progression)*

The new team members don their PPE and receive handover from the team in the room. They are very tired and scratch their face underneath the visor as they relate the patient's history. Then they realise and start panicking. They don't know what to do.

If scenario time allows, the team should insert the NG tube and then leave the room doffing appropriately. The patient remains stable.

### FACULTY ROLES REQUIRED TO RUN SCENARIO

One facilitator is in PPE and provides handover, then breaches PPE.

The other facilitator observes without intervening unless an exit strategy is required and prepares for debriefing:

- Make notes of positive behaviours.
- Annotate open questions to explore inadequate performances during debriefing.  
*I noticed that you did.... I thought that... How were you seeing the situation at that time?*



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## PATIENT PARAMETERS FOR MANUAL RUN

### Vital signs:

The manikin is intubated and ventilated. Sedated with propofol and alfentanil.

SatO<sub>2</sub> 92%     Respiratory rate 22bpm

Heart rate 102 bpm, sinus rhythm, BP 135/71

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### EXIT STRATEGY:

If delegates need support a colleague arrives to help (in full PPE)

### DEBRIEFING:

*\*Tips: be positive and use open questions.*

Gather the group, make a circle, explore feelings, diffuse.  
Ask them to describe what happened during the scenario.

Encourage delegates to identify successful behaviours and areas for improvement.  
Explore what was challenging and strategies to overcome these challenges.  
Make sure that all learning objectives are covered during this discussion.  
Allow time for questions.

Encourage delegates to share what they have learned during the scenario and debriefing.

Summarise the learning points and close the debriefing.

## Session 3: Managing cardiac arrest and building resilience in a COVID-19 epidemic

### Learning objectives

By the end of this session, delegates will be able to

1. Safely perform donning and doffing PPE according to HEE guidance
2. Keep safe when performing tasks and clinical duties:
  - a. Caring for critical patients
  - b. During cardiac arrest
3. Build resilience and support others in emotionally challenging situations

### Session structure

50 minute repeat sessions starting at 10.00, 11.00, 12.00, 13.00 and 14.00.

Aimed at any team members providing patient care (multiprofessional).

Ideally 4 - 10 delegates, but could accommodate 12 if extremely high demand.

2 faculty members, low fidelity manikin.

1. Session introduction: How to keep safe, CPR recommendations, discussion on challenges and resilience (10 minutes)
2. Scenario 3.1 (2 min brief, 7 minutes performance, 10 minutes focussed debrief)
3. Scenario 3.2 (2 min brief, 7 minutes performance, 10 minutes focussed debrief)

### Props including Screen for presentation

|                                                                   | outside the room | Inside the room |
|-------------------------------------------------------------------|------------------|-----------------|
| Antibacterial hand gel                                            | *                | *               |
| PPE trolley: gowns, face masks, eye protection, disposable gloves | *                |                 |
| Defibrillator and blue box.                                       | *                |                 |
| Paper and pen                                                     | *                |                 |
| Checklists                                                        | *                | *               |
| Manikin on bed (not trolley)                                      |                  | *               |
| Oxygen port with flowmeter + Water's circuit                      |                  | *               |
| Waste disposal bin                                                | *                | *               |



### Scenario 3.1

#### SETTING THE SCENE

##### Candidate role(s)

Resuscitation team (2 members)

Clean team member outside the door

2 Nurses inside the room

**Clinical setting:** COVID cohort ward

##### Brief to candidate

Resuscitation team (2 members): You have been called to review Emma Williams, a 38 year old type 1 diabetic patient who has been admitted with COVID pneumonia. She has been deteriorating over the last 2 hours and the ward team is very worried about her. Her family keep telephoning the ward to ask about her. She is a single mum, and has 3 children aged 2, 4 and 7.

Clean team member: stay clean outside the door and assist the team without becoming contaminated.

2 Nurses: you are wearing PPEs, looking after Emma in the room. You only know the details provided.

#### SCENARIO DESCRIPTION

Emma is very weak. She doesn't speak. Her GCS is 9/15.

A nurse (played by a faculty member) is very worried as her blood pressure is low.

The team will need to don PPE with increasing pressure from the nurse to hurry up. Before they complete the donning process, Emma arrests and the nurse looking after her shouts for help.

As soon as the team carries out a cycle of CPR and provides adrenaline she regains a pulse and breathes sufficiently.

The team are encouraged to doff as their shift ends and another team is about to arrive.



### **FACULTY ROLES REQUIRED TO RUN SCENARIO** (*which, behaviour, clues*)

A nurse (played by a faculty member) is very worried as Emma's blood pressure is low. The nurse provides all clinical signs to allow the scenario to run as described above.

The other facilitator observes without intervening unless an exit strategy is required and prepares for debriefing:

- Make notes of positive behaviours.
- Annotate open questions to explore inadequate performances during debriefing.  
*I noticed that you did.... I thought that... How were you seeing the situation at that time?*

### **EXIT STRATEGY:**

If delegates need support a colleague arrives to help (in full PPE)

### **DEBRIEFING:**

*\*Tips: be positive and use open questions.*

Gather the group, make a circle, explore feelings, diffuse.  
Ask them to describe what happened during the scenario.

Encourage delegates to identify successful behaviours and areas for improvement.  
Explore what was challenging and strategies to overcome these challenges.  
Make sure that all learning objectives are covered during this discussion.  
Allow time for questions.

Encourage delegates to share what they have learned during the scenario and debriefing.

Summarise the learning points and close the debriefing.



## Scenario 3.2

### SETTING THE SCENE

#### Candidate role(s)

Patient care team (2 members)

Clean team member outside the door

2 Nurses inside the room

**Clinical setting:** COVID cohort ward

#### Brief to candidate

Patient care team (2 members): The hospital is in crisis, with 95 ventilated COVID patients.

You have been called to review Emma Williams, a 38 year old type 1 diabetic patient who has been admitted with COVID pneumonia. She has arrested but recovered spontaneous circulation after 1 cycle of CPR. The ward team is very worried about her. Her family keep telephoning the ward to ask about her. She is a single mum, and has 3 children aged 2, 4 and 7.

You need to refer her to ICU as she continues to be hypotensive and tachycardic. Her past medical history includes HT, renal failure, COPD (ex-smoker) and type 1 DM. She is allergic to penicillin.

Clean team member: stay clean outside the door and assist the team without becoming contaminated.

2 Nurses: you are wearing PPEs, looking after Emma in the room. You only know the details provided.

### SCENARIO DESCRIPTION

Emma is very weak. She doesn't speak. Her GCS is 9/15.

A nurse (played by a faculty member) is concerned about her low blood pressure and tachycardia.

The team will need to don PPE if they wish to come into the room.

An ICU consultant will come by if requested, looking tired. Admission to ITU will be denied as she has 4 comorbidities and does not fulfil criteria for admission.



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### **FACULTY ROLES REQUIRED TO RUN SCENARIO** (*which, behaviour, clues*)

A facilitator plays a nurse who is very worried as Emma's blood pressure is low and heart rate is fast.

The nurse provides all clinical signs required to allow the scenario to run as described above.

The other facilitator is the ICU consultant, who plays their role as described above.

### **EXIT STRATEGY:**

If delegates need support the facilitators within the scenario provide it.

### **DEBRIEFING:**

*\*Tips: be positive and use open questions.*

Gather the group, make a circle, explore feelings, diffuse.  
Ask them to describe what happened during the scenario.

Encourage delegates to identify successful behaviours and areas for improvement.  
Explore what was challenging and strategies to overcome these challenges.  
Make sure that all learning objectives are covered during this discussion.  
Allow time for questions.

Encourage delegates to share what they have learned during the scenario and debriefing.

Summarise the learning points and close the debriefing.