MANAGEMENT OF CARDIAC ARREST IN PATIENTS WITH CONFIRMED OR SUSPECTED COVID-19

Document Change History (changes from previous issues of SOP (if appropriate) :

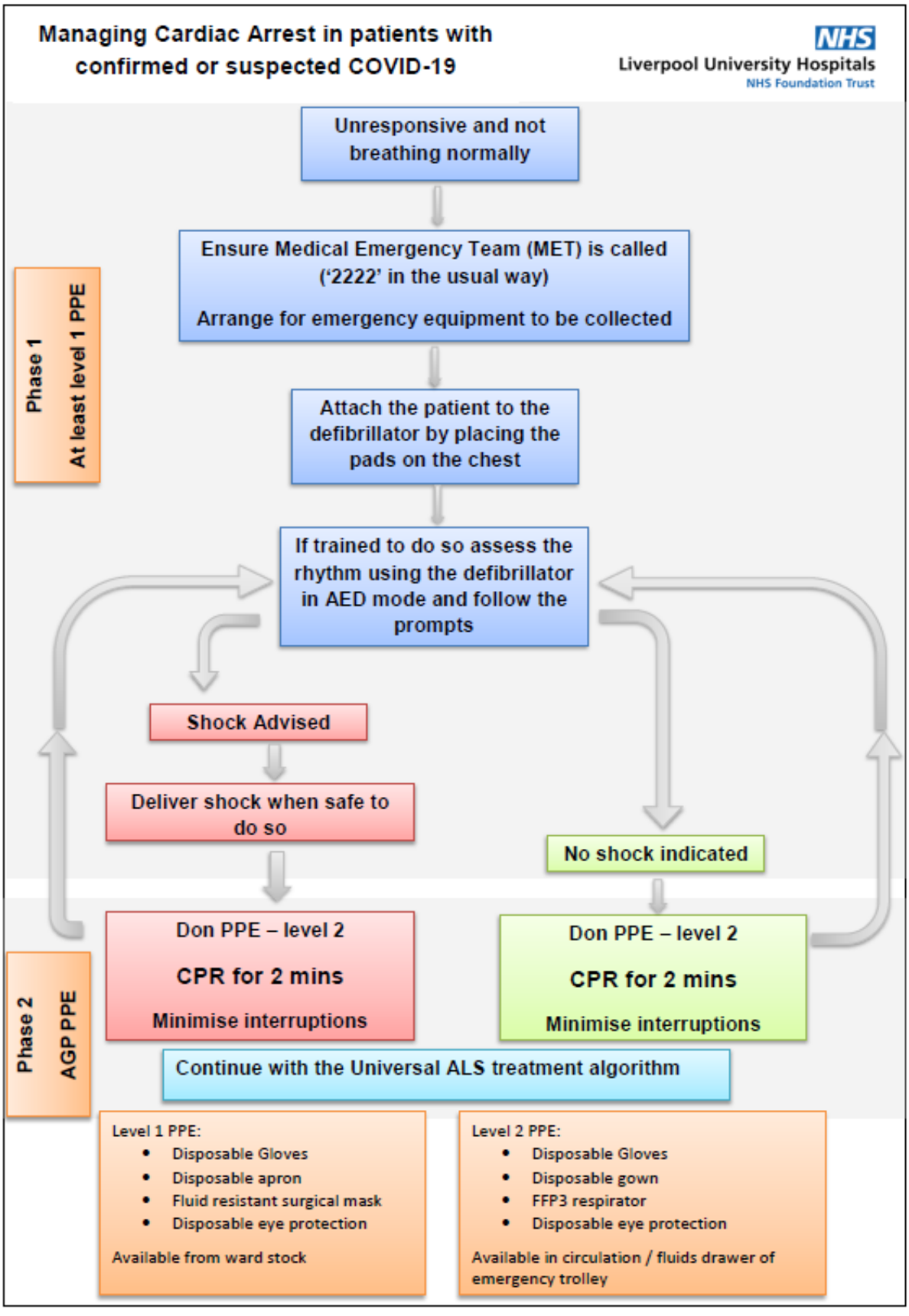
Version number	Page	Changes made with rationale and impact on practice	Date
1		New SOP for LUHFT.	April 2020
2		Minor changes to wording.	May 2021

Contents

1. Purpose

This SOP describes the procedure for the management of Cardiac Arrest in patients with confirmed or suspected COVID-19.

2. Flow Chart


Managing Cardiac Arrest in patients with confirmed or suspected COVID-19
Liverpool University Hospitals
NHS Foundation Trust
Unresponsive and not breathing normally
Ensure Medical Emergency Team (MET) is called ('2222' in the usual way)
Arrange for emergency equipment to be collected
Phase 1
At least level 1 PPE
Attach the patient to the defibrillator by placing the pads on the chest
If trained to do so assess the rhythm using the defibrillator in AED mode and follow the prompts
Shock Advised
Deliver shock when safe to do so
No shock indicated
Don PPE – level 2
CPR for 2 mins
Minimise interruptions
Don PPE – level 2
CPR for 2 mins
Minimise interruptions
Phase 2
AGP PPE
Continue with the Universal ALS treatment algorithm
Level 1 PPE:
Disposable Gloves
Disposable apron
Fluid resistant surgical mask
Disposable eye protection
Available from ward stock
Level 2 PPE:
Disposable Gloves
Disposable gown
FFP3 respirator
Disposable eye protection
Available in circulation / fluids drawer of emergency trolley

3. Procedure

The following SOP should be read in conjunction with the algorithm in section 2. A printed version (see appendix 4) of the algorithm and guidance below will be available on all cardiac arrest trolleys.

3.1 Upon discovering an unconscious patient

- Don Surgical mask, gloves and apron prior to any contact with the patient (staff should already be wearing this as a minimum where patients are situated in a red or yellow area).

- Carryout an initial assessment – open the patient's airway (Head tilt & chin lift) and look at the chest for signs of normal breathing. **Do not** listen or feel for breathing by placing your ear and cheek close to the patient's mouth

- If cardiac arrest is suspected ensure the MET is called and arrange for the resuscitation trolley / box to be collected.

- Attach the patient to the defibrillator by placing the pads on the chest as shown on the packet. If trained to do so assess the rhythm using the defibrillator in AED mode and follow the prompts, remembering to remove oxygen prior to delivery of a shock.

- If the defibrillator says "no shock indicated" or following successfully delivery of a shock (when indicated) don level 2 PPE* and commence cardiac compressions – **do not** perform mouth to mouth or use a pocket mask

- If the patient is currently receiving supplemental oxygen via a face mask leave this in situ (replace following a shock) until additional staff are available to ventilate using a bag valve mask.

- Upon arrival the 2nd member of staff to arrive should don level 2 PPE* and commence chest compressions (as per the algorithm Additional staff attending the MET call from the local area should not don PPE, instead staff should wait outside the side room or bay until the resuscitation attempt is over or it is clear they will not be needed.

3.2 MET Attendance at a Cardiac Arrest Call

The first 2 members of the MET (3 if only 1 member of ward staff is wearing level 2 PPE) should undertake the following actions:

- Don level 2 PPE*

- On arrival the Anaesthetic team who will be equipped with FFP3 masks will take over management of the patient's airway.

- **Additional members of the team should not don PPE, instead staff should wait outside the side room or bay until the resuscitation attempt is over or it is clear they will not be needed. Additional staff may be required to collect equipment, provide advice or replace members of the team performing chest compressions – in which they would need to don level 2 PPE*.**

*Please see algorithm below for details

4. Exceptions

The only exception being when a patient is found to have a valid DNACPR order, in which case Resuscitation should not be commenced

5. Training

None specific

6. Monitoring of Compliance

Minimum requirement to be monitored	Process for monitoring e.g. audit/ review of incidents/ performance management	Job title of individual(s) responsible for monitoring and developing action plan	Minimum frequency of monitoring	Name of committee responsible for review of results and action plan	Job title of individual/ committee responsible for monitoring implementation of action plan
Section 3	Review of incidents	Resuscitation Officers (AUH & RLH)	Weekly	Resuscitation Officers (AUH & RLH)	Resuscitation Officers (AUH & RLH)

7. Relevant Regulations, Standards and References

Resuscitation Council (UK) ALS Algorithm for COVID-19 patients
https://www.resus.org.uk/_resources/assets/attachment/full/0/36193.pdf

Resuscitation Council (UK) Statement on COVID-19 in relation to CPR and resuscitation in healthcare settings
https://www.resus.org.uk/_resources/assets/attachment/full/0/36124.pdf

8. Equality, Diversity and Human Right Statement

The Trust is committed to an environment that promotes equality and embraces diversity in its performance both as a service provider and employer. It will adhere to legal and performance requirements and will mainstream Equality, Diversity and Human Rights principles through its policies, procedures, service development and engagement processes. This SOP should be implemented with due regard to this commitment.

9. Legal Requirements

This document meets legal and statutory requirements of the EU General Data Protection Regulation (EU 2016/679) and all subsequent and prevailing legislation. It is consistent with the requirements of the NHS Executive set out in Information Security Management: NHS Code of Practice (2007) and builds upon the general requirements published by NHS Digital/Connecting for Health (CfH).

10. Appendices

Appendix1: Control Front Sheet

Author with contact details	Emma Wilkinson-Hall, Arran Banks, Patient Safety Manager, 0151 706 2373		
Lead Executive/ Senior Manager	Dr. Nagaraja Shankara		
Original Issue date	April 2020		
Issue Date:	May 2021	**Review Date:**	May 2024
Approval Group	Clinical Reference Group – COVID-19		
Consultation	Deteriorating patient and resuscitation functional group		
Location of Staff applicable to	Trust wide	**Staff groups applicable to**	All staff
Equality, Diversity And Human Right Statement	The Trust is committed to an environment that promotes equality and embraces diversity in its performance both as a service provider and employer. It will adhere to legal and performance requirements and will mainstream Equality, Diversity and Human Rights principles through its policies, procedures, service development and engagement processes. This procedure should be implemented with due regard to this commitment.		
To be read In conjunction with / Associated Documents:		**Information Classification Label**	☐ **NHS Confidential** ☐ **NHS Protect** ☒ **Unclassified**
Access to Information	To access this document in another language or format please contact the policy author.		

Appendix 2: Equality Impact Assessment

Title	Management of Cardiac Arrest In Patients with Confirmed or Suspected COVID-19
Strategy/Policy/Standard Operating Procedure	SOP
Service change **(Inc. organisational change/QEP/** **Business case/Project**	COVID-19
Completed by	Aaron Banks
Date Completed	2 April 2020

Description *(provide a short overview of the principle aims/objectives of what is being proposed/changed/introduced and the impact of this to the organisation)*
Management Of Cardiac Arrest In Patients With Confirmed Or Suspected Covid-19

Who will be affected *(Staff, patients, visitors, wider community including numbers?)*
Patients and staff who use it

The Equality Analysis template should be completed in the following circumstances:

- **Considering developing a new policy, strategy, function/service or project(Inc. organisational change/Business case/ QEP Scheme);**
- **Reviewing or changing an existing policy, strategy, function/service or project (Inc. organisational change/Business case/ QEP Scheme):**
  - If no or minor changes are made to any of the above and an EIA has already been completed then a further EIA is not required and the EIA review date should be set at the date for the next policy review;
  - If no or minor changes are made to any of the above and an EIA has NOT previously been completed then a new EIA is required;
  - Where significant changes have been made that do affect the implementation or process then a new EIA is required.

Please note the results of this Equality Analysis will be published on the Trust website in accordance with the Equality Act 2010 duties for public sector organisations

Section 1 should be completed to analyse whether any aspect of your paper/policy has any impact (positive, negative or neutral) on groups from any of the protected characteristics listed below.

When considering any potential impact you should use available data to inform your analysis such as PALS/Complaints data, Patient or Staff satisfaction surveys, staff numbers and demographics, local consultations or direct engagement activity. You should also consult available published research to support your analysis.

Section 1 – Initial analysis

Equality Group	Any potential impact? Positive, negative or neutral	Evidence *(For any positive or negative impact please provide a short commentary on how you have reached this conclusion)*
Age *(Consider any benefits or opportunities to advance equality as well as barriers across age ranges. This can include safeguarding consent, care of the elderly and child welfare)*	neutral	
Disability *(Consider any benefits or opportunities to advance equality as well as impact on attitudinal, physical and social barriers)*	Neutral	
Gender Reassignment *(Consider any benefits or opportunities to advance equality as well as any impact on transgender or transsexual people. This can include issues relating to privacy of data)*	Neutral	
Marriage & Civil Partnership *(Consider any benefits or opportunities to advance equality as well as any barriers impacting on same sex couples)*	Neutral	
Pregnancy & Maternity *(Consider any benefits or opportunities to advance equality as well as impact on working arrangements, part time or flexible working)*	Neutral	
Race *(Consider any benefits or opportunities to advance equality as well as any barriers impacting on ethnic groups including language)*	Neutral	

Religion or belief *(Consider any benefits or opportunities to advance equality as well as any barriers effecting people of different religions, belief or no belief)*	Neutral	
Sex *(Consider any benefits or opportunities to advance equality as well as any barriers relating to men and women e.g.: same sex accommodation)*	Neutral	
Sexual Orientation *(Consider any benefits or opportunities to advance equality as well as barriers affecting heterosexual people as well as Lesbian, Gay or Bisexual)*	neutral	

If you have identified any **positive** or **neutral** impact then no further action is required, you should submit this document with your paper/policy in accordance with the governance structure.

You should also send a copy of this document to the equality impact assessment email address

If you have identified any **negative** impact you should consider whether you can make any changes immediately to minimise any risk. This should be clearly documented on your paper cover sheet/Project Initiation Documents/Business case/policy document detailing what the negative impact is and what changes have been or can be made.

If you have identified any negative impact that has a high risk of adversely affecting any groups defined as having a protected characteristic then please continue to section 2.

Section 2 – Full analysis

If you have identified that there are potentially detrimental effects on certain protected groups, you need to consult with staff, representative bodies, local interest groups and customers that belong to these groups to analyse the effect of this impact and how it can be negated or minimised. There may also be published information available which will help with your analysis.

Is what you are proposing subject to the requirements of the Code of Practice on Consultation?	**Y/N**
Is what you are proposing subject to the requirements of the Trust's Workforce Change Policy?	**Y/N**
Who and how have you engaged to gather evidence to complete your full analysis? (List)	
What are the main outcomes of your engagement activity?	
What is your overall analysis based on your engagement activity?	

Section 3 – Action Plan

You should detail any actions arising from your full analysis in the following table; all actions should be added to the Risk Register for monitoring.

Action required	Lead name	Target date for completion	How will you measure outcomes

Following completion of the full analysis you should submit this document with your paper/policy in accordance with the governance structure.

You should also send a copy of this document to the equality impact assessment email address

Section 4 – Organisation Sign Off

Name and Designation	Signature	Date
Individual who reviewed the Analysis		
Chair of Board/Group approving/rejecting proposal		
Individual recording EA on central record		

Appendix 3: Roles and Responsibility

Role	Responsibility

Appendix 4: Algorithm & Guidance

Managing Cardiac Arrest in patients with confirmed or suspected COVID-19

Liverpool University Hospitals
NHS Foundation Trust

The following SOP should be read in conjunction with the algorithm overleaf.

Upon discovering an unconscious patient

Staff should undertake the following actions:

- Don Surgical mask, gloves and apron prior to any contact with the patient (staff should already be wearing this as a minimum where patients are confirmed or suspected Covid-19).
- Carryout an initial assessment – open the patient's airway (Head tilt & chin lift) and look at the chest for signs of normal breathing. **Do not** listen or feel for breathing by placing your ear and cheek close to the patient's mouth
- If cardiac arrest is suspected ensure the MET is called on 2222 and arrange for the resuscitation trolley / box to be collected.
- Attach the patient to the defibrillator by placing the pads on the chest as shown on the packet. If trained to do so assess the rhythm using the defibrillator in AED mode and follow the prompts, remembering to **remove oxygen prior to delivery of a shock** and replace once shock administered.
- If the defibrillator says "no shock indicated" or following successful delivery of a shock (when indicated by defibrillator) await arrival of 2nd member of staff who is donned in level 2 PPE*
- If the patient is currently receiving supplemental oxygen via a face mask leave this in situ (replace following a shock) until additional staff are available to ventilate using a bag valve mask.
- Upon arrival the 2nd member of staff donned in level 2 PPE* commence chest compressions once first responder not in level 2 PPE has vacated the immediate area. Additional staff attending the MET call from the local area should not don PPE, instead staff should wait outside the side room or bay to collect and prepare additional equipment.

MET Attendance at a Cardiac Arrest Call

- Appropriate members of the team should don level 2 PPE*. It is recommended that no more than 4 people should be directly involved with the resuscitation attempt (not including the anaesthetist and ODP). Members of the team should replace staff already in the room if this is appropriate.
- On arrival the Anaesthetic team, who will be equipped with FFP3 masks, will don level 2 PPE* and take over management of the patient's airway.
- **Additional members of the team should not don PPE, instead staff should wait outside the side room or bay until the resuscitation attempt is over or it is clear they will not be needed. Additional staff may be required to collect equipment, provide advice or replace members of the team performing chest compressions – in which they would need to don level 2 PPE*.**

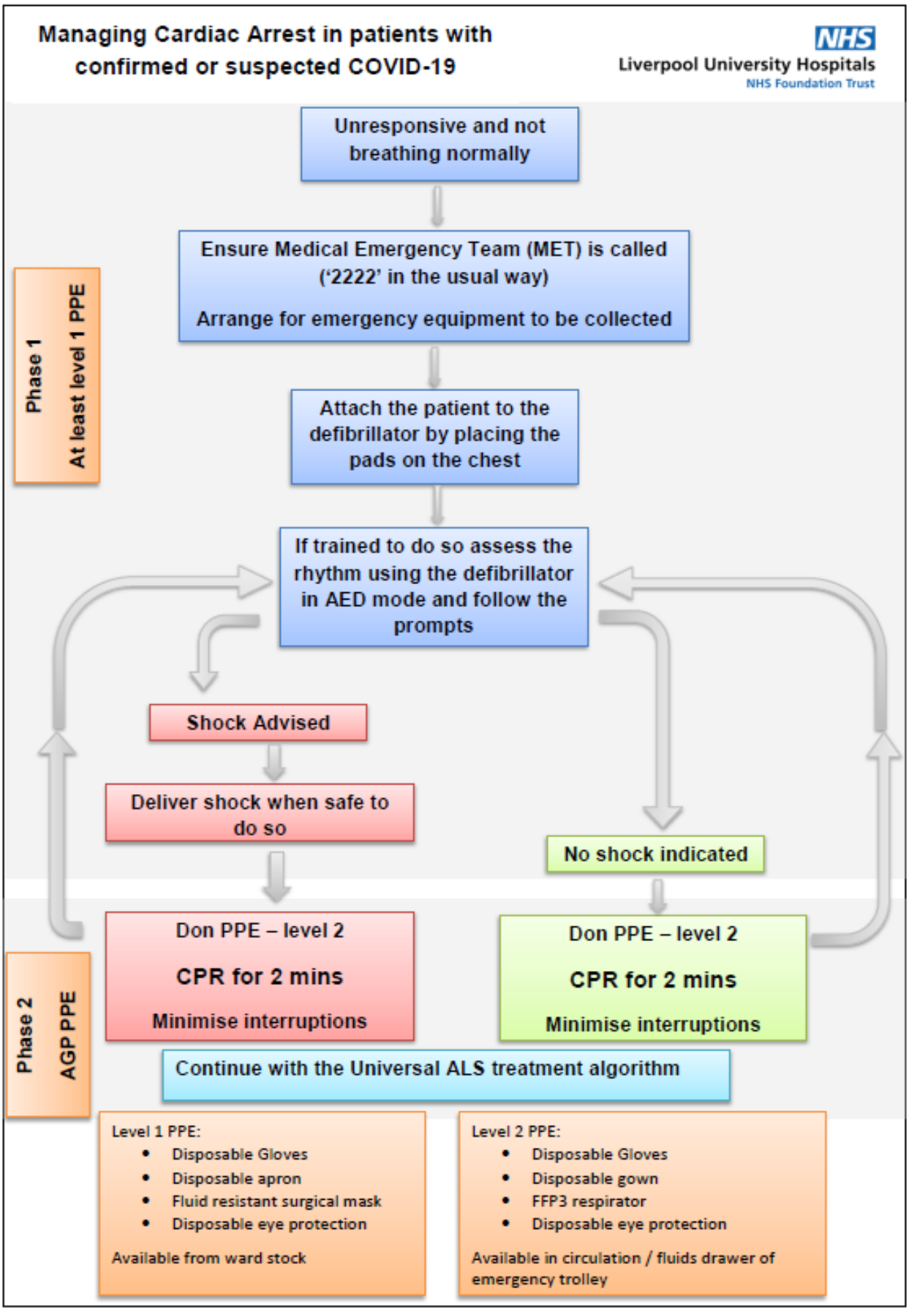
Managing Cardiac Arrest in patients with confirmed or suspected COVID-19 (Community Setting)

Liverpool University Hospitals
NHS Foundation Trust

Upon discovering an unconscious patient

Staff should undertake the following actions:

- Shout for assistance if appropriate
- Don PPE
- Carryout an initial assessment – open the patient's airway (Head tilt & chin lift) and look at the chest for signs of normal breathing. **Do not** listen or feel for breathing by placing your ear and cheek close to the patient's mouth
- Ensure an emergency ambulance has been called by dialling 999 and stating COVID-19 patient
- Connect the patient to the defibrillator and shock if indicated
- If no PPE available place a cloth / towel / surgical mask over the patient's mouth & nose and commence cardiac compressions – **do not** perform mouth to mouth or use a pocket mask
- Where other staff are present the following actions should be carried in addition to compression only CPR:
    - Don Aerosol Generating Procedure PPE (if available)
- Ventilations and further Advanced Life Support measures should only be initiated when assistance has arrived wearing Aerosol Generating Procedure PPE
- A Maximum of 3 members of staff should be directly involved with the resuscitation attempt at any one time. Other staff attending to assist should remain outside the immediate area and not don additional PPE, they should be prepared to bring equipment as it is needed, direct the ambulance crew and swap with staff involved with the resuscitation attempt where necessary.


Managing Cardiac Arrest in patients with confirmed or suspected COVID-19
Liverpool University Hospitals
NHS Foundation Trust
Unresponsive and not breathing normally
Ensure Medical Emergency Team (MET) is called ('2222' in the usual way)
Arrange for emergency equipment to be collected
Phase 1
At least level 1 PPE
Attach the patient to the defibrillator by placing the pads on the chest
If trained to do so assess the rhythm using the defibrillator in AED mode and follow the prompts
Shock Advised
Deliver shock when safe to do so
No shock indicated
Don PPE – level 2
CPR for 2 mins
Minimise interruptions
Don PPE – level 2
CPR for 2 mins
Minimise interruptions
Phase 2
AGP PPE
Continue with the Universal ALS treatment algorithm
Level 1 PPE:
Disposable Gloves
Disposable apron
Fluid resistant surgical mask
Disposable eye protection
Available from ward stock
Level 2 PPE:
Disposable Gloves
Disposable gown
FFP3 respirator
Disposable eye protection
Available in circulation / fluids drawer of emergency trolley