

Medical Care and First Aid: a framework for organised non-elite sport during the COVID-19 pandemic

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Background

This guidance defines and rationalises emergency and first aid care during the current time of heightened awareness of contracting and transmitting COVID-19. This follows on from an elite sport framework which uses Public Health England (PHE) policy and the UK Government guidance on return to sport and recreation^{1,2}. Please refer to any regional variation as applicable to your area of practice. We attempt to address the potential consequences of returning to sport, whilst balancing the risk of exposure to both the participant and the medical responder. At all times social (physical) distancing in addition to strict personal and environmental hygiene measures, are paramount in reducing infection rates and transmission of COVID-19. It must be acknowledged that any standard operating procedures (SOP) put into place on return to training can only act as a risk mitigation measure for COVID-19 transmission; a zero risk environment cannot be achieved.

Practitioners should remain up to date with Public Health and government authority guidance on COVID-19 case management, and Personal Protective Equipment (PPE) recommendations. Any update of Resuscitation Council UK (RCUK), Public Health England (PHE) guidance, or updated guidance from the equivalent body in other countries supercedes the content of this document.

General Rationale

COVID-19 is the infection caused by the Novel Coronavirus SARS-CoV-2. Respiratory droplets containing virus particles can be produced from coughing, sneezing, and forceful breathing and form the main route of transmission, either via contact with contaminated surfaces (fomite spread) or airborne transmission following aerosolisation of respiratory secretions.³

Although the COVID-19 infection is relatively novel, adverse cardiac and respiratory outcomes, with potentially serious acute and long-term sequelae, have been acknowledged in a significant proportion of affected individuals irrespective of illness severity.⁴ Up to 30% of hospitalised COVID-19 patients demonstrate elevated Troponin levels indicative of myocardial injury with multiple plausible explanations, including myocardial necrosis due to myocarditis. Consequently, there are justifiable concerns that exercise in the context of an acute or recent COVID-19 infection may pose a risk for malignant arrhythmias and in extreme cases sudden cardiac death.⁵ In an attempt to mitigate the risk of exercise-induced complications due to myocardial injury from COVID-19, scientific bodies recommend screening of athletes with specialist review and investigations where medically indicated prior to return to training, paired with a graduated return to play protocol.⁴

Most recommendations are investigation intense as they are aimed for the higher echelons of sport and financially endowed organisations. It is recognised that the level of medical provision/first aid below the elite level varies across different governing bodies, sporting levels, settings and countries. This framework seeks to provide structure for those circumstances where health care professionals are provided (Tier 1) and where emergency care is provided by first aid responders (Tier 2).

¹ <https://www.gov.uk/government/publications/coronavirus-covid-19-guidance-on-phased-return-of-sport-and-recreation>

² <https://blogs.bmj.com/bjbm/2020/07/08/pitch-side-emergency-care-personal-protective-equipment/>

³ https://apps.who.int/iris/bitstream/handle/10665/331695/WHO-2019-nCov-IPC_PPE_use-2020.3-eng.pdf

⁴ Bhatia R et al, Eur J Prev Cardiol 2020

⁵ <https://jamanetwork.com/journals/jamacardiology/fullarticle/2766124>

Priorities for Organisations that manage Non-Elite Sport in the context of Emergency/First Aid Care

- Conduct an emergency and first aid risk assessment and amend Emergency Action Plans (EAPs) to mitigate identified risks. Include modifications to the emergency/first aid kit, provision of personal protective equipment (PPE) and plans should individuals present with symptoms whilst at training
- All Health Care Professionals (HCPs) and first aid responders should be aware of all EAPs before entering the environment for the first time.
- Attempts should be made to identify Individuals involved in the sporting environment considered to be at a higher risk of severe COVID-19 infections⁶ and mitigation strategies applied as appropriate.
- Para-sport athletes and those participants with underlying health conditions are recommended to undertake a pre participation check with a healthcare professional, to determine their own personal risk, health and vulnerability
- Optimal personal and environmental hygiene should be practised at all times by all individuals within the sporting environment (see Table 1).
- Adherence to government social/physical distancing restrictions (preferably 2m) at all times⁷ except in times of delivery of emergency care where appropriate PPE is provided
- Consideration of self-screening for participants (see Table 2) as a means of minimising those with COVID-19 or suspected COVID-19 of attending a training session or competition and therefore minimising transmission.
- Where HCPs and first aiders are provided, ensure the appropriate type and quantity of PPE⁸ are available at all times (see Table 3/Figure 1) and that appropriate training (including donning and doffing)^{9,10} is accessible. PPE must reflect all potential medical and first aid situations that may arise through the course of related sporting activity. Please refer to table 2 regarding single use, sessional use and reusable PPE guidance¹¹
- Implementation of systematic cleaning protocols with the appropriate cleaning products and techniques, for environments and equipment; both first aid and sporting^{12,13}. Where this is not practical, clean duplicate equipment should be made available.
- Correct discarding of all PPE and contaminated equipment as per the country/local authorities' clinical waste policy¹⁴, which will require a clinical waste bin and appropriate disposal procedure.
- Organisations should keep a clear record of who was present on site to support national track and trace systems in the event of a positive COVID-19 case

⁶ <https://www.cdc.gov/coronavirus/2019-ncov/need-extra-precautions/groups-at-higher-risk.html>

⁷ <https://www.gov.uk/government/publications/staying-alert-and-safe-social-distancing/staying-alert-and-safe-social-distancing>

⁸ <https://www.gov.uk/government/publications/wuhan-novel-coronavirus-infection-prevention-and-control/covid-19-personal-protective-equipment-ppe>

⁹ <https://www.gov.uk/government/publications/covid-19-personal-protective-equipment-use-for-non-aerosol-generating-procedures>

¹⁰ <https://www.gov.uk/government/publications/covid-19-personal-protective-equipment-use-for-aerosol-generating-procedures>

¹¹ <https://www.gov.uk/government/publications/covid-19-decontamination-in-non-healthcare-settings/covid-19-decontamination-in-non-healthcare-settings>

¹² https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/877533/Routine_decontamination_of_reusable_noninvasive_equipment.pdf

¹³ <https://www.who.int/publications/i/item/cleaning-and-disinfection-of-environmental-surfaces-in-the-context-of-covid-19>

¹⁴ <https://www.hse.gov.uk/healthservices/healthcare-waste.htm>

Table 1: Practices to keep everyone safe

Personal hygiene	<p>Ensure regular handwashing with soap and water, and where this is not available the use of alcohol hand gel (minimum 70% concentration) is advised^{15,16,17}</p> <p>When coughing or sneezing the use of a tissue and disposed of in a sealed bin, or where no tissues available the crook of an elbow. Organisations/clubs should consider a complete ban on chewing gum as it is either spat out or taken out and rolled into a ball and thus poses a high risk of cross-contamination. Spitting and emptying/clearing of the nose should be forbidden.</p> <p>No sharing of water bottles, each participant should bring their own labelled water bottle for personal use and their own alcohol hand gel and use this frequently throughout the session.</p>
Environmental hygiene	<p>Minimise the use of any shared equipment</p> <p>When gym/training or medical equipment sharing is unavoidable, it must be cleaned between each participant as must all participants' hands¹¹</p> <p>Periodically clean all shared equipment such as balls¹⁴</p> <p>Train outdoors at all times when practically possible or well ventilated indoor facilities utilised</p> <p>Removing and replacing gumshields should be kept to a minimum in order to reduce hand contamination. Hands need to be cleaned before and after replacing the gumshield. Storage should be in a sealed container or cleaning solution.</p>
Social distancing	<p>Do not breach the government-issued physical distancing guidance unless strictly necessary e.g. emergency care. Avoid face-to-face situations where possible, even if maintaining physical distancing, as this is a higher risk for transmission</p> <p>A face-covering cloth or fabric mask has been shown to be an effective way to prevent viral transmission in a community context¹⁸ which could apply to a community sports setting. It should be a recommendation for players and support staff/volunteers. A lack of scientific evidence for the benefits of wearing masks, especially during exercise, has resulted in some conflicting advice^{18,19}. The wearing of masks to protect others in the same (sporting) environment, should be encouraged wherever possible and should be compulsory for all medical and support staff and for athletes moving to and from training/matches and in the change room. Where possible, masks should be encouraged unless it impairs breathing</p>

Table 2: Example of a self-screening check list prior to each training session

Each participant should self-screen prior to leaving home for training to ensure they do not have any of the following symptoms (confirmed by a parent for those under age 18), as these are potential indicators of COVID-19 infection.	Check Negative	Check Positive
A high temperature (above 37.8°C) ²⁰ <ul style="list-style-type: none"> some clubs may include on site temperature checking of participants as part of their standard operating procedure, this is more relevant to clubs who employ medical staff. 	<input type="checkbox"/>	<input type="checkbox"/>
A new continuous cough	<input type="checkbox"/>	<input type="checkbox"/>
Shortness of breath	<input type="checkbox"/>	<input type="checkbox"/>
A sore throat	<input type="checkbox"/>	<input type="checkbox"/>
Loss of or change in normal sense of taste or smell	<input type="checkbox"/>	<input type="checkbox"/>
Feeling generally unwell	<input type="checkbox"/>	<input type="checkbox"/>
Persistent tiredness	<input type="checkbox"/>	<input type="checkbox"/>
Been in close contact with / travel from a high risk region / living with a suspected or confirmed case of COVID-19 in the previous 2 weeks.	<input type="checkbox"/>	<input type="checkbox"/>

Isolation

Should a participant return a positive response to any of the criteria in Table 2, they should stay home and follow the government issued self-isolation guidance²¹.

¹⁵ Appendix I – Hand washing

¹⁶ Appendix II – Rub washing

¹⁷ <https://www.resus.org.uk/covid-19-resources/statements-covid-19-hospital-settings/resuscitation-council-uk-statement-covid-19>

¹⁸ <https://blogs.bmj.com/bjism/2020/06/12/should-people-wear-a-face-mask-during-exercise-what-should-clinicians-advise/>

¹⁹ <https://www.who.int/emergencies/diseases/novel-coronavirus-2019/advice-for-public/myth-busters>

²⁰ <https://www.gov.uk/government/publications/covid-19-guidance-for-ambulance-trusts/covid-19-guidance-for-ambulance-trusts>

²¹ <https://www.gov.uk/government/publications/covid-19-stay-at-home-guidance>

If a participant develops or displays symptoms as outlined above during training, separate them from the wider group in the first instance for broader public safety, place them in the identified quarantine zone and ascertain if they require medical assistance.

In the case of suspected or confirmed COVID-19 cases presenting in training, other participants and coaches present would not need to automatically quarantine unless they developed symptoms, if they have been compliant with physical distancing precautions.

For children, it is recommended that a member of their household remain close by and not leave the child unattended at training. To avoid a gathering, parents should remain in their vehicles where they have arrived by car, thereby, in cases of illness or injury, there will be no delay in getting support and taking the child to a place of safety at the earliest opportunity. In the case that there is no parental/guardian support at the training venue, adequate first aid should be applied and the child should be placed in the identified quarantine zone until a parent/guardian or their appointed emergency contact can be contacted to come and fetch them. For illness or injury concerning adult participants, if safe to do so, they should leave the facility without coming into contact with anyone or touching any surfaces and take themselves home. Alternatively a member of their household/social bubble should facilitate transport in order to minimise exposure to others. Where this is unavoidable a face mask should be worn for shared journeys. All individuals should access relevant medical support as needed.

PPE

Be sure to apply scene safety principles, including the need for PPE as detailed in Table 3, and calling for an ambulance as may be required. It is acknowledged that in a clinical sporting environment donning appropriate PPE can be practically challenging, therefore it is recommended to conduct a thorough risk assessment considering amendments or alterations that may be situation and sport-specific including medical support personnel already wearing PPE in anticipation of any potential scenario. However, risk of transmission from patient to responder and responder to patient, in addition to donning times must be carefully considered before any mitigation is made. No decision to reduce PPE should adversely impact the care provided or cause unnecessary delay in an emergency situation.

Table 3: Definition of situational personal protective equipment level requirements

Situation	Gloves	Apron	Fluid-resistant Long-armed Gown/Coveralls	Fabric / Cloth Mask [^]	Fluid Resistant Surgical Face Mask Type IIR ^{^^}	Filtering Face Piece Respirator 3 (FFP3) Mask ^{^^^}	Goggles / Full Face Visor in addition to Personal Spectacles
	Single use*	Single use*	Sessional use**	Sessional use**	Sessional use**	Sessional use Reusable***	Sessional use Reusable***
Non-medical scenario where social distancing may be breached ¹⁸ including at training	X	X	X	✓	X	X	X
Level 1 where government-advised distancing may not be maintained at all times	X	X	X	X	✓	X	X
Level 2 Within 2m, which may include face to face contact for emergency/first aid management of all individuals	✓	✓	X	X	✓	X	✓
Level 3 / AGP Aerosol-generating procedure (AGP or high potential for aerosol)	✓	X	✓	X	X	✓	✓

[^] 3 layers: 1st water absorbant cotton | 2nd filter layer | 3rd is water resistant²². Please note: a face covering or cloth mask is not the same as a Type IIR surgical face mask, it is consequently not sufficient to form part of a club's EAP

^{^^} When using a fluid repellent surgical face mask, you should mould the metal strap of the mask over the bridge of the nose and make sure the mask fits snugly under the chin, around or across any facial hair if present. Can be worn without removal for up to a 4 hour session, must be changed if visibly soiled, damp or damaged

²² <https://www.who.int/emergencies/diseases/novel-coronavirus-2019/advice-for-public/when-and-how-to-use-masks>

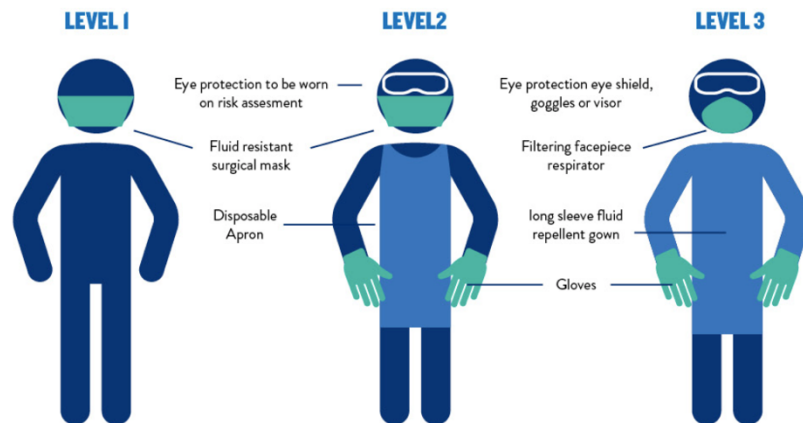
^^^ Please be aware WHO² does recommend FFP2 mask as an alternative in FFP3. However FFP3 is included in this framework as this is in line with PHE. Each individual requiring use of an FFP mask must ensure they have a mask that is compatible to their face shape. Each mask requires a 'fit-testing' process to be conducted to ensure no aerosol leakage occurs through the seal. Facial hair does impact the efficacy of the masks and alternative arrangements may need to be considered in these circumstances²³.

*Single use: equipment that must be changed after each contact

**Sessional use: worn for a period of time when undertaking duties in a specific clinical care setting/exposure environment; a session ends when the responder leaves this defined remit; however masks should be disposed of if they become moist, damaged or visibly soiled;

*** Reuseable equipment appropriately decontaminated to PHE standards that can be reused¹²

Figure 1: Illustration of Personal Protective Equipment (permission to use from LTA)



Clean hands thoroughly with soap and water or 70% alcohol sanitiser¹³ before putting on and after taking off PPE. In all circumstances where some form of PPE is used, the safe removal and disposal of the PPE is a critical consideration to avoid self-contamination⁶. Importantly, no one is expected to provide care which jeopardises their own personal health or safety. In an emergency situation, where suitable PPE is not available, the responder must consider the potential risks to both themselves and the participant and decide what level of care they feel is reasonable, or what level of care they are able to provide in the absence of PPE. This may include providing no assistance at all until the ambulance arrives, or until appropriate PPE is made available²⁴.

Participants returning to sports training who have had the COVID-19 infection

Participants returning back to sport after prolonged abstinence, and in particular those who had confirmed or suspected COVID-19 infection, should undergo a clinical assessment including detailed history and examination by a medical professional. For the majority of participants and regular exercisers who rely on their own means, we recommend a self-assessment algorithm that reflects the principles of the assessment of elite athletes, as suggested by Bhatia et al.³ A pragmatic approach that balances the likelihood of cardiac sequelae from the COVID-19 infection and the feasibility and potential limitations of cardiac testing is necessary, in order to encourage individuals back to safe exercise and avoid unnecessary anxiety and investigations in already overburdened healthcare systems (figure 2).

Participants should be advised to self-isolate for 7 to 14 days and not to engage in regular or intense exercise until they have been symptom free for 7 days. Participants who are experiencing persistent cardiac symptoms even after the acute infection has resolved should seek medical attention prior to return to exercise. On return to training, self-monitoring for recurrence of cardiac symptoms such as chest pain, palpitations, breathlessness disproportionate to the level of activity, exertional dizziness and syncope (Figure 2) and monitoring for arrhythmias through a heart rate monitor (for those who have one available already) is pragmatic. Participants with concerns regarding new symptoms or irregularities in their heart rhythm should liaise with their doctor. For most participants, who never experienced symptoms of viral infection, no cardiac evaluation is necessary prior to resumption of training unless on return to training they develop symptoms of cardiac involvement.

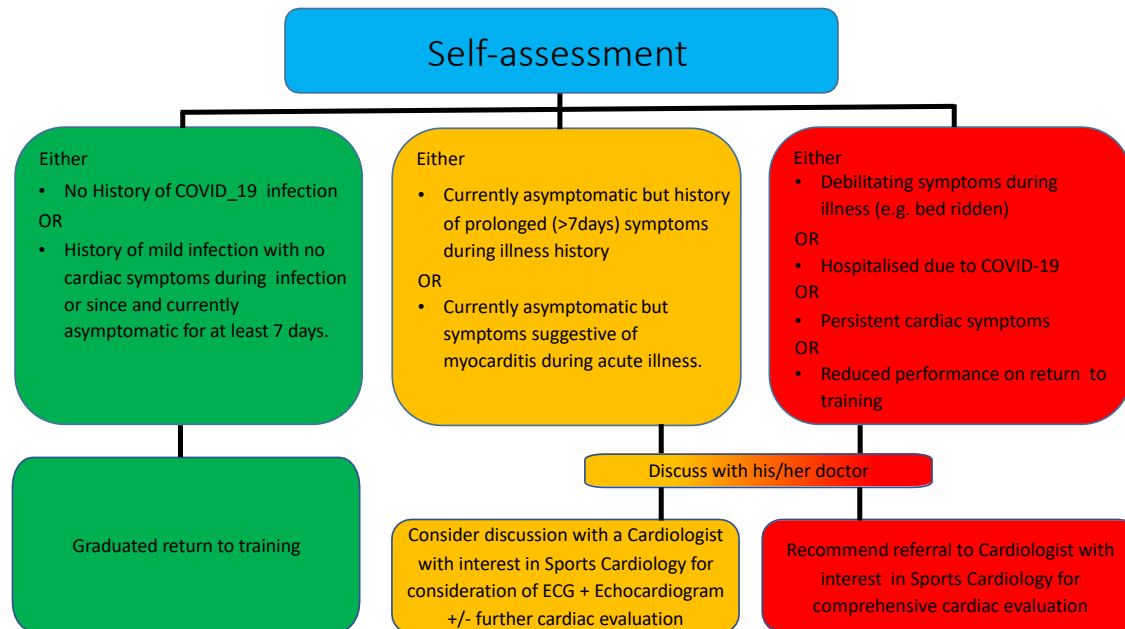
²³ <https://www.hse.gov.uk/news/face-mask-ppe-rpe-coronavirus.htm>

²⁴ <https://www.hse.gov.uk/news/first-aid-certificate-coronavirus.htm#>

Figure 2: Return to sport protocol (endorsed by Cardiac Risk in the Young – CRY)

Cardiac investigations/referral for ALL regular exercisers & amateur athletes prior to return to training

(adapted from Bhatia et al.)



Guidance for Non-Elite Clubs with designated Health Care Professionals (HCPs) – Tier 1

Clinicians with a duty of care acting as a therapist or doctor, where appropriate should follow national public health guidance, conducting their own risk assessment and ensuring they follow full PPE guidance as above.

Medical Treatment Rooms in the non-elite setting – Tier 1

Until the use of on-site facilities are permitted, as updated in Government guidance, in situations where medical care cannot be safely conducted outdoors, participants requiring assessment or treatment should be directed towards their local health care providers.

If treatment rooms are utilised, physical distancing guidance must be followed. Do not allow participants to congregate in the treatment area to ensure social distancing is maintained, and clean the environment to public health standards after each participant’s treatment⁹. Non-essential (maintenance) manual therapy is not recommended (including soft tissue therapy and massage) prior to or after training at the time of writing. If any member of the therapy staff is performing essential physiotherapy or soft tissue treatment they must wear appropriate PPE throughout. At present, Government guidance indicates a minimum of level 2 PPE (see Table 3). Should a participant require an assessment of their head, inclusive of face, mouth or nose – Health Care Professionals must wear, in addition to the PPE above, a fluid resistant visor or goggles. Personal spectacles are not considered equivalent. This needs to be a part of the club EAP.

Delivery of emergency care in the non-elite setting – Tier 1

HCPs are expected to provide care equivalent to their level of training, which may include advanced first aid and thus potentially aerosol-generating ventilatory support.

Aerosol-generating procedures (AGPs) are recognised to be a high source of virus transmission requiring a higher level of PPE. This definition of AGP also includes situations where there is a possibility of generating a cough or sneeze. Sports-related medical care includes many scenarios that are, or have the potential to become AGPs (see Table 4). Any EAP involving any of the scenarios listed in Table 4 will need to reflect the requirement of

responders to wear Level 3 PPE. It must be remembered that once any AGP is commenced, all involved that are not in Level 3 PPE must step back 2m when outdoors, and vacate the room if indoors.

The response time for a medical emergency in individual sports needs to be appropriately risk assessed with the new addition of time taken to don appropriate PPE; this is imperative when considering airway interventions, chest compressions and all clinically relevant scenarios (see Table 5). As time is critical in determining successful outcomes, it is recommended that during training staff should either be wearing or have access to appropriate levels of PPE in a time frame that will not detrimentally affect the outcome of the clinical situation. Individual donning times will vary according to experience and the availability of “donning buddies”.

Table 4: Classification of Aerosol Generating Procedures (AGPs)

AGP procedures	Not currently considered AGP
Cardiopulmonary resuscitation (CPR) ^{25,26}	Nebulising
Airway management: any suction of upper airway, use of airway adjuncts and emergency surgical airway procedures.	High flow oxygen administration via face mask
Breathing Management: any form of manual ventilation-mouth-to-mouth ventilation is not recommended in the current circumstance. Bag valve mask using a viral filter is preferable ²⁶ .	Simple airway opening techniques (head tilt chin lift/ jaw thrust)
Medical emergencies in the context of reduced and impaired consciousness levels (e.g. head injuries), with a risk of or actual airway compromise, that would require the above interventions.	Medical emergencies that don't involve actual or potential airway compromise
Nose, mouth and throat procedures such as managing epistaxis or oral lacerations. ^{27,28}	Nasopharyngeal swabbing

Medical areas for those with a duty of care to respond (club-based medical staff) – Tier 1

For those clubs utilising treatment rooms at their training facilities, they should consider the injury risk profile in their sport and the probability for generating those injuries that could meet the potential to be aerosol generating e.g. injuries to the head and face. In this instance they should have two designated medical areas coded as either non-AGP or AGP zones. These should be well ventilated individual rooms or temporary erected gazebos outdoors, however, if this is not achievable, rooms need to be clearly marked with a minimum of 2m between zones separating the areas.

Non-AGP Area

This is the general medical room and is to be used for:

- All non-aerosol generating procedures, assessment or examination and essential treatment of participants

AGP Area

This is to be used for:

- Aerosol generating procedures (AGPs)
- Urgent assessment or management of a suspected infected participant

Considerations for both areas

- Appropriate PPE (see Table 3) must be worn once entering the area, and it should be adequately disinfected/disposed of following use.

²⁵<https://www.resus.org.uk/media/statements/resuscitation-council-uk-statements-on-covid-19-coronavirus-cpr-and-resuscitation/covid-community/>

²⁶ <https://www.erc.edu/covid>

²⁷ <https://www.entuk.org/sites/default/files/files/COVID%2019%20Epistaxis%20Management.pdf>

²⁸ <https://www.nature.com/articles/s41415-020-1552-4.pdf>

- If an AGP is occurring and areas are not in separate rooms, everyone not in Level 3 PPE must leave the room immediately, and appropriate ventilation and cleaning must occur prior to the non-AGP area being reinstated^{10,29}
- Emergency medical equipment should be situated immediately outside the AGP area, and taken in as needed, to avoid unnecessary contamination.

Optimised pitchside emergency first aid cover at all training sessions should ideally consist of (also applicable when competition returns):

- One appropriately trained responder* in Level 2 PPE with the ability to don Level 3 with minimal delay, if required. For example having additional available PPE on person or in the emergency pitchside bag.
- One appropriately trained responder* who is either already wearing or has immediate access to Level 3 PPE and can respond immediately.
- Additional support personnel that can don the appropriate level of PPE to assist in a medical emergency with minimal delay, when required.
- Additional (support) personnel that can don the appropriate level of PPE to assist with extrication.
- Please note: Where a risk assessment and club facilities/emergency equipment and staffing levels feel that level 3 PPE is beyond their clinical scope of care this should be clearly reflected in the club medical EAP. A include detailed course of action which should include calling for an ambulance and providing the care that can be provided until the ambulance arrives.

**Appropriately trained responders are those Health Care Professionals (HCPs) with any relevant and valid additional qualification in sports emergency or first aid training provision*

Guidance for Non-Elite Clubs with designated First Aid responders – Tier 2

First aid falls into two parts:

- 1) those who respond because of an emergency arising in front of them (lay-responder) including sports coaches running a training session
- 2) allied health care professionals contracted solely as first aiders or designated first aid responders with a duty of care (workplace first-aiders).

The first duty of care as first aider or coach is to themselves and it is imperative that all advised precautions are taken^{24,25,30,31}. The vast majority of incidents encountered in training may be managed with sensible planning and precautions allowing treatment to occur effectively without breaching physical distances. However, delivery of emergency first aid may include the need for the responder to breach advised social distancing guidance and come into close contact with a potentially injured participant, and this may include cardio-pulmonary resuscitation (CPR). If a participant gets injured, ideally a member of their household can aid them (a further benefit for parents to stay nearby during training sessions where participant are U18), but others will still need to physically distance unless a life or limb-threatening injury necessitates compromising guidelines to provide emergency care.

If there is a first aider present, they should be equipped with the appropriate PPE to be used in the event that they need to compromise-physical distancing guidelines to provide medical assistance. They should have updated themselves on any changes in first aid procedure that will be required as a result of the pandemic^{24,25,26}.

The advice for lay people and coaches with no formal duty of care or role in first aid delivery deviates slightly from those with a clearly defined pre-arranged role, but must still follow strict guidance³⁰. This guidance has

²⁹ <https://www.gov.uk/government/publications/wuhan-novel-coronavirus-infection-prevention-and-control/transmission-characteristics-and-principles-of-infection-prevention-and-control>

³⁰ <https://www.gov.uk/government/publications/novel-coronavirus-2019-ncov-interim-guidance-for-first-responders/interim-guidance-for-first-responders-and-others-in-close-contact-with-symptomatic-people-with-potential-2019-ncov>

³¹ <https://www.sja.org.uk/get-advice/first-aid-advice/covid-19-advice-for-first-aiders/>

been adapted, where possible, for the non-elite sports setting. Please refer to your club health and safety officer and your club's EAP for COVID-19 changes, as well as this guidance to inform your planning and sessions.

Additional Information for designated First Aid responders in the non-elite sports setting – Tier 2

Participant contact occurring while delivering emergency first aid care will need to follow PPE guidance^{30,32}, in line with Public Health recommendations:

- The use of PPE is both to protect the responder from the participant, but also protect the participant from the responder.
- Where it is not possible to always maintain the government advised physical distance away from a participant, the responder should wear PPE as advised under Level 2 PPE Table 3.

First Aid qualifications

First aiders should ensure their qualifications are up to date and refer to their respective educating body regarding extensions during the COVID-19 pandemic²⁴.

First aid kits

First aid kits should reflect the additional items that ensure safety during this COVID-19 pandemic inclusive of PPE (see Table 3) and consideration should be applied to what items will become single use.

First aid rooms

First aiders are not recommended to provide any treatments or interventions beyond the emergency first aid outlined in this document during the COVID-19 pandemic, and club EAPs should outline the same. All non-essential treatment should be provided by the local healthcare provider. In the case of an emergency procedure during training this should ideally be undertaken by the emergency services on arrival at the training ground. In the absence of suitable PPE in a Tier 2 club emergency situation, the responder must consider the potential risks and decide what level of care they feel is reasonable, and what level of care they are able to provide. This may include providing no assistance at all until the ambulance arrives.

Guidance per injury/illness for ALL non-elite sport in an emergency situation that a HCP/first aid responder may come into contact with during return to training:

It must be remembered one can never be certain that a participant does not have COVID-19, even in absence of symptoms. The following guidance is based on risk mitigation, and the assumption that someone could be infected during all medical and first aid provision.

Cardiopulmonary resuscitation (CPR)

Sudden cardiac arrest is a recognised potential medical emergency that can occur during sports participation. Cardiac function may be compromised by COVID-19. Therefore, each club must include this in their risk assessment, carefully considering updated precautions for this period, and adopt any appropriate recommended provisions before returning to training.

The UK government guidance as published by the New and Emerging Respiratory Virus Threats Advisory Group (NERVTAG)³³ have detailed that they do not consider chest compressions or the use of an Automatic External Defibrillator (AED) as AGPs. However, this view is not shared by the Resuscitation Council UK (RCUK²⁵), the European resuscitation council (ERC²⁶), the International Liaison Committee on Resuscitation (ILCOR)³⁴ and the World Health Organisation³. A view also supported by the British Medical Association (BMA)³⁵. The latter have all have taken the position that chest compressions themselves are potentially aerosol generating, thus requiring Level 3 PPE. In the context of a shockable cardiac arrest, RCUK advise 3 stacked shocks be administered in a monitored arrest in Level 2 PPE, in the absence of compressions and airway management, whilst additional support dons the Level 3 PPE.²⁵

³² <https://www.resus.org.uk/media/statements/resuscitation-council-uk-statements-on-covid-19-coronavirus-cpr-and-resuscitation/statement-on-phe-ppe-guidance/>

³³ <https://www.gov.uk/government/publications/wuhan-novel-coronavirus-infection-prevention-and-control/phe-statement-regarding-nervtag-review-and-consensus-on-cardiopulmonary-resuscitation-as-an-aerosol-generating-procedure-agp>

³⁴ <https://costr.ilcor.org/document/covid-19-infection-risk-to-rescuers-from-patients-in-cardiac-arrest>

³⁵ <https://www.bma.org.uk/advice-and-support/covid-19>

Given that sports first aid typically follows the RCUK/ERC, it is unwise to contradict these organisations in these unprecedented times of the COVID-19 pandemic. We acknowledge that most sporting environments utilise Automated External Defibrillators (AEDs) and this guidance framework has been adapted to suit these circumstances.

Summary of changes for ADULT OVER 18 Cardiac Arrest:

- In the absence of Level 3 PPE commence compressions with a cover over the participant's face so as to minimise delay. Examples; a non-rebreather mask with oxygen attached (for HCPs) or a towel (for first aid responders.) The towel should provide sufficient cover to cover the player's mouth and nose whilst still permitting breathing to restart following successful resuscitation²⁵
- HCP's should consider the use of bag mask ventilation with a viral filter²⁶ where rescue breathing is required.
- If rescue breathing is considered outside the scope of first aid practice during the pandemic due to the high risk of viral transmission. Perform chest compressions only.^{25,26,33} Compression-only CPR may be as effective as combined ventilation and compression in the first few minutes after cardiac arrest³⁰.
- All other participants and individuals involved in the training session should be asked to vacate the vicinity if they are not involved in the resuscitation
- Responders are ideally already in Level 2 PPE if available (gloves, apron, fluid resistant face mask and goggles) and all other helpers are advised the same (or should apply quickly to not delay treatment), whilst awaiting support responders who are in Level 3 PPE (this may require awaiting an ambulance) to provide rescue breathing.
- After performing compression-only CPR, all rescuers should wash their hands (and face if no mask or eye protection worn) and should also seek advice from the local health care provider/coronavirus advice service and their club medical adviser if concerned about COVID-19 symptoms.

Special considerations for all non-elite youth sport

As the causes of cardiac arrest in children differ from those in adults, ventilation can be imperative to the chance of survival. For those not trained in paediatric resuscitation, the adult process detailed above can be followed. The most important thing is to ensure treatment is provided quickly.

Summary of changes UNDER 18 Cardiac Arrest:

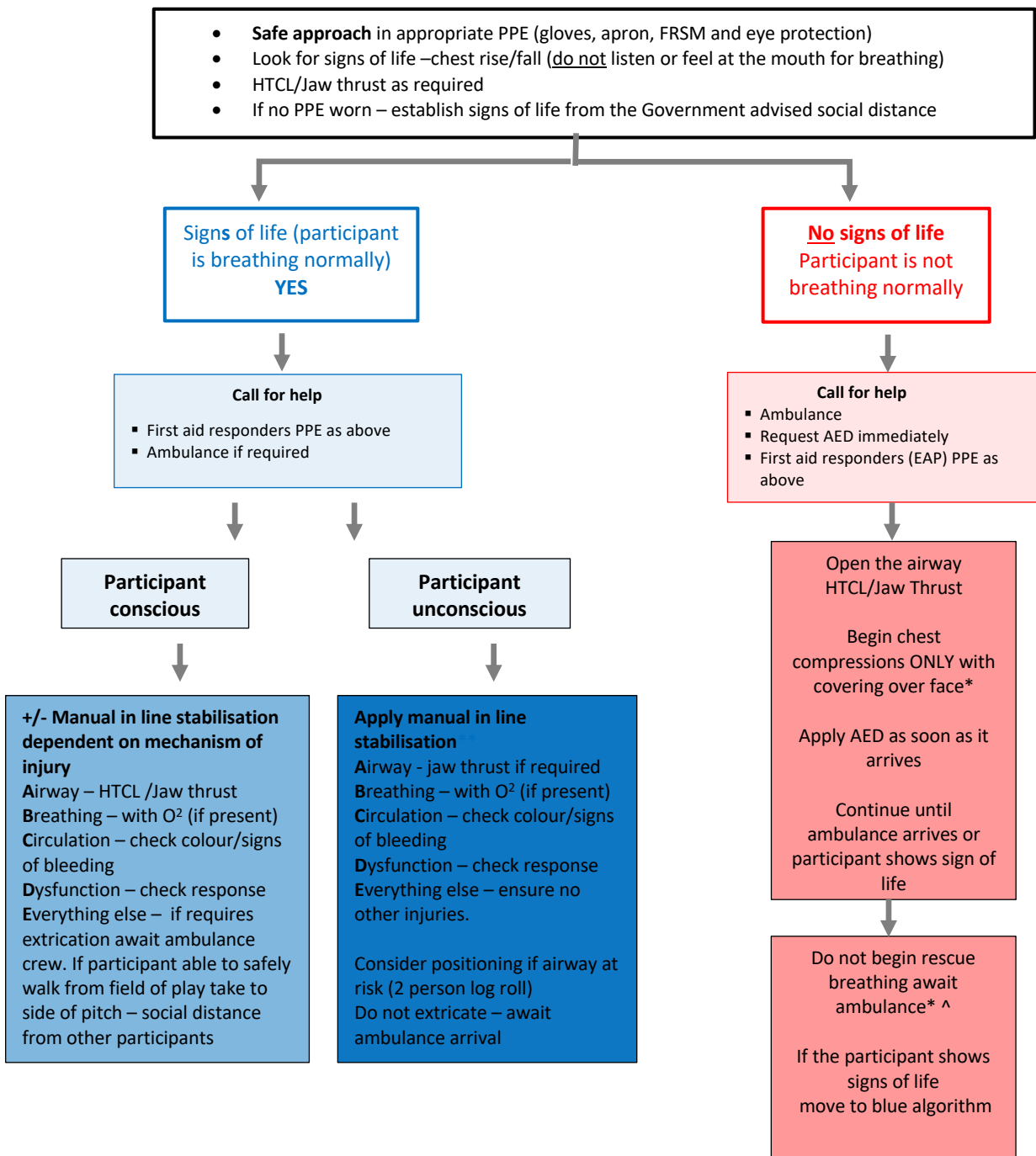
- It is very likely in the sports setting that the child participant is well known to the responder, and to not perform ventilatory support might not be an option they wish to make, despite the risk to the responder. If the decision is made to perform rescue breathing [due to compression only CPR likely to be less effective if a respiratory problem is the cause] utilise the responder should a face shield^{25,30} or pocket mask with a one way filter valve.
- For HCPs a bag valve mask with viral filter is preferable^{26,33}.
- Providing rescue breaths will increase the risk of transmitting the COVID-19 virus, either to the rescuer or the participant. However, this risk is small compared to the risk of taking no action as this will result in certain cardiac arrest and the death of the child^{25,30}
- If rescue breathing has been utilised, there are no additional actions to be taken other than to monitor for symptoms of possible COVID-19 over the following 14 days³⁰.
- Early chest compressions (with face coverings as above), AED application and ensure medical help/emergency services are alerted.

Table 5: Other potential situations and injuries that can occur during sport in ALL settings, with associated PPE guidance

Risk	Injuries that may present in the ALL non-elite sports settings	Level of PPE required
NO face to face contact risk	Maintaining social distancing as advised	1
NOT maintaining social distance WITH face-to-face contact risk	<p>Simple airway manoeuvres +/- Manual In Line Stabilisation for suspected cervical spine injuries An airway can become compromised for many reasons; one of the most common in the sporting setting is due to loss of consciousness resulting in the risk of the participants tongue occluding their own airway. A simple head tilt chin lift (in the absence of any suspected head or neck injury) or jaw thrust can be applied after first ensuring there is nothing occluding the participants airway. All other airway interventions are level 3.</p> <p>Wounds and Bleeding : If there is blood or body-fluid spill Wounds that are open but do not involve the oral or nasal cavities are not classed as AGPs however keep other participants/parents away from the area. Use a spill-kit if available, using the PPE in the kit and follow the instructions provided. If no spill-kit is available, place paper towels/roll onto the spill, and seek further advice from emergency services when they arrive.</p> <p>Soft tissue Injuries and fractures Include soft tissue injuries to the upper and lower limbs Excluding those injuries with C-spine or facial involvement.</p> <p>Head Injuries/medical emergencies that do not involve the airway Are not considered AGPs and can be dealt with as normal by a first aider with appropriate training. If no first aider is present then the coach can assist from a distance where practically possible until a parent, an household member or the first aider or ambulance arrive (will vary dependent on club EAP).</p> <p>Cardiac Arrest Cardiac arrest WITH face covered (towel or non-rebreather mask acceptable) continuous compressions, AED</p>	<p>2</p> <p>2</p> <p>2</p> <p>2</p> <p>2</p>
NOT maintaining social distance WITH face-to-face contact risk AND potential risk of Aerosol Generating Procedures	<p>Loss of Consciousness (LOC) If the mechanism of an injury involving LOC has not been witnessed one must assume that a head/neck injury is present until proven otherwise. Manual Inline Stabilisation (MILS) will be required. In these circumstances there is potential for an airway compromise, particularly when a participant has lost consciousness or has an altered level of consciousness.</p> <p>Airway compromise Any airway intervention beyond simple airway manoeuvres including all ventilatory support <u>Tier-2 first aid responders</u> on recognising airway difficulty should immediately call for medical assistance because an ambulance will be essential.</p> <p>Choking Another form of airway compromise is choking. If the participant is choking then the responder should approach the participant from behind and follow the choking algorithm^{20,36} (up to 5 back slaps, followed by up to 5 abdominal thrust, repeated until the airway is clear). Please note: Emphasis on care when checking the airway between sets is advised as this is an aerosol generating procedure especially in scenarios where PPE is not at the level to alleviate this additional risk</p> <p>Nasal or oral wounds with the potential for spitting, coughing or sneezing would be considered a potential for an AGP and a higher level of PPE required for any management. <u>For Tier-2 first aid responders</u> on approaching nasal or oral wounds, ensure more than the government advised social distance is maintained from the participant by all concerned, and seek urgent medical assistance. Where parents or household members are close by they can be allowed to assist and the first responder can advise from a safe distance. Postural drainage positions - such as leaning forwards or side lying with the head facing towards the ground can help drain fluids from the face or nose. This can be considered if injuries allow, whilst awaiting medical help from those in appropriate PPE, or the emergency services. If the participant is unconscious then the recovery position can be used.</p> <p>Complicated head injury with airway compromise Where additional airway management is required beyond simple airway opening, such as adjuncts or suction these are classed as AGP</p> <p>Cardiac arrest WITHOUT covered compressions (30:2), AED and airway interventions</p>	<p>3</p> <p>3</p> <p>3</p> <p>3</p> <p>3</p> <p>3</p> <p>3</p>

³⁶ <https://www.resus.org.uk/choking/>

Figure 3: Adult emergency and first aid care algorithm for non-elite sport during COVID-19 in absence of Level 3 PPE

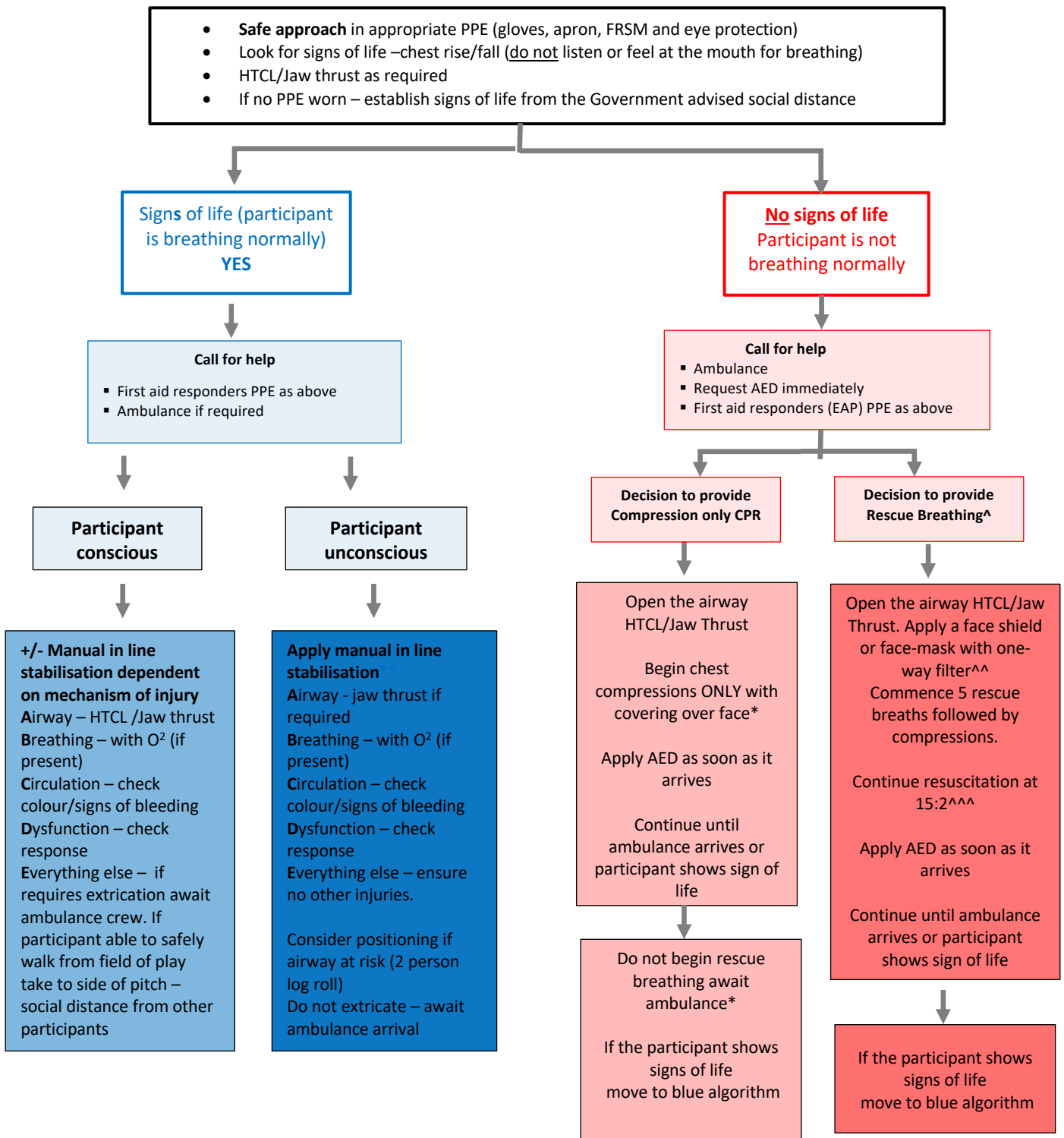


*if the club has health care professionals (HCPs) on site a face covering can be a non-rebreather mask attached to oxygen at 15L/min. If suitably qualified and Level 3 PPE available rescue breathing with airway adjuncts can be commenced before ambulance arrives (elite sport framework²).

Once airway intervention has occurred all staff in Level 2 PPE must move away 2m pitchside (or out of the room indoors), leaving only responders wearing Level 3 PPE.

^in a paediatric arrest, see Figure 4

Figure 4: Paediatric emergency and first aid care algorithm for non-elite sport during COVID-19 in absence of Level 3 PPE



*if the club has health care professionals (HCPs) on site a face covering can be a non-rebreather mask attached to oxygen at 15L/min. If suitably qualified and Level 3 PPE available rescue breathing with airway adjuncts can be commenced before ambulance arrives (elite sport framework²). Once airway intervention has occurred all staff in Level 2 PPE must move away 2m pitchside (or out of the room indoors), leaving only responders wearing Level 3 PPE.

^ An individual decision to perform rescue breathing due to compression only CPR likely to be less effective if a respiratory problem is the cause in a child
^^ If rescuer is wearing a mask this will have to be removed. There are no additional actions to be taken after providing rescue breathing other than to monitor for symptoms of possible COVID-19 over the following 14 days . HCPs can use a bag valve mask with a viral filter (elite sport framework²).

^^^ The paediatric ratio of 15:2 [15 compressions to 2 rescue breaths] can be provided or if more familiar with the adult provision of 30:2 this can be equally applied. The emphasis is on the speedy provision of resuscitation. Breath provision is 1 second as per an adult and depress the chest 4-5cm in a younger child/adolescent.