ROAD RACE MEDICAL SERVICES

A GOOD PRACTICE GUIDE

FOR THE PROVISION OF FIRST AID & MEDICAL SERVICES AT

UK ATHLETICS LICENSED ROAD RACES

runbritain **MEDICAL ADVISORY GROUP**

UK ATHLETICS

2nd EDITION

January 2013

CONTENTS

GOOD PRACTICE GUIDE

APPENDIX

UKA ROAD RACE MEDICAL SERVICES

INTRODUCTION

Background

UK Athletics is responsible for management and administration of the licencing process for athletics events within the United Kingdom of Great Britain and Northern Ireland delegated to their respective national association (Athletics Northern Ireland, England Athletics, Scottish Athletics & Welsh Athletics)

The Michael Watson case in 1991 reinforced the legal responsibility of sports governing bodies to ensure the provision of adequate medical facilities at their own licenced events

The death of a competitor at the Bath Half Marathon in 1998 prompted a review into safety and medical provision at UK road races by the National Sports Medicine Institute, resulting in the adoption of voluntary levels of medical cover within UK Athletics Licence Standards in 2004

The death of four competitors at the 2005 Great North Run led to the setting up of the Road Race Medical Conference, a group of leading UK road races and Triathlons meeting to combine expertise from their race directors and medical directors. Their initial project was to publish best practice advice for competitors preparing for endurance events on the Runners Medical Resource website at **www.runnersmedicalresource.com** in 2006

A report by UKA's Chief Medical Officer in 2006 revealed wide variation and serious shortcomings in the medical care provided at UKA licenced road races. 24% of marathons & half marathons were found not to have any first aid at all, and the majority of licenced road races (even at marathon or half marathon distance) did not have a doctor. Many event organisers were considered to be medically understaffing their event, underestimating the actual risk of injury or medical incident. The majority of licenced races did not advertise the level of medical care provided, and 50% of those who did advertise a level of medical care did not meet the level advertised

runbritain

In 2007 **run**britain (formerly the UKA Road Running Management Group) was established by UK Athletics to provide strategic leadership for road running in the United Kingdom

RunBritain has been tasked to set standards of delivery for road running (how the sport is organised), to facilitate sharing of best practice, assisting race organisers to make the administration of road races easier, ensuring quality control & helping to improve the overall standard and safety of road races in the UK

The Road Race Medical Conference subsequently accepted an invitation to become the official '**run**britain Medical Advisory Group'

UKA Licence Standards

Road races organised by athletic clubs & members affiliated to the governing body UK Athletics (through their national association) are required to meet a number of safety and quality standards as a condition of obtaining a UKA road race licence (and public liability insurance) for the staging of a race

For the purposes of this guidance a 'road race' is defined as any athletic or running event receiving a UK Athletics road race licence. These guidelines were not originally intended for multi-terrain, cross country or fell races, but might be suitable for the assessment of medical cover for races and fun runs within public parks over mixed terrain where ambulance access to treat and evacuate casualties is available across most of the course route

To meet UKA licence conditions road race organisers are required to carry out a risk assessment and to provide suitable qualified first aid and medical services at the start, on the course and at the finish of the race according to the course route, race distance, competitor numbers and weather conditions

Responsibility for updating UKA Licence Standards has now passed to the **run**britain Safety and Standards Group. The current version of UKA Licence Standards can be obtained from the Race Directors' Portal on the **run**britain website at **www.runbritain.com/rdp/**

UKA Good Practice Guide to Road Race Medical Services

The Home Office 'Good Practice Guide to Sporting Events on the Public Highway' 2006, the current statutory guidance for road races in the UK, presumes that advice on medical services for participants will be provided by the governing body for each respective sport

This guidance on medical services at road races has been drafted by a working party from the **run**britain Medical Advisory Group based on current best practice knowledge. It is intended as a practical guide to road race organisers, their medical providers and area licence officers on how to determine the specific first aid and medical resources which would be appropriate for their own particular race. Some of the more basic guidance on medical services is intended to inform race organisers, whilst advice on race management has likewise been included to assist medical providers

This guidance is also intended to assist race organisers, and their medical providers, by relieving their responsibility and liability to determine the appropriate medical resources for their event

This guidance does not attempt to conduct a review of appropriate medical interventions, or treatment guidelines. Medical treatment protocols for resuscitation at road races should follow the guidelines of the UK Resuscitation Council. Clinical treatment protocols for exercise induced conditions such as hyponatremia, exercise induced collapse and heat illness (heat stroke and hypothermia) will need to be defined and agreed between the event organiser and the respective medical provider/s

This advice is particularly targeted to assist organisers of small to medium sized road races, defined as 100 to 5,000 entrants – where general similarities of medical cover were more marked. But the basic criteria and methodology will also have general application to determine appropriate first aid and medical services for larger races over 10,000 entrants – where a more diverse range of solutions was observed

It is intended that this guidance will be reviewed by the working group on a periodic basis, based on feedback from races and on-going analysis of incident data obtained from the Post-Race Medical Returns

Duty of Care & Basis of Risk

Many races have been staged over many years without serious incident. But past performance is not a reliable indicator of future outcome. Runners competing in endurance events put themselves under significant additional stress, and significantly increase their background risk of harm, although this is largely offset by long-term health benefits.

The most serious hazard at road races (after road traffic collision) is fatality due to cardiac arrest caused by exercise associated collapse. There are currently on average 3-4 such fatalities each year at UKA licenced races. Although this incident rate is very low in relation both to the overall number of UKA road races (around 8,500 races per year), and the overall number of participants (around 1.5m per year), it does still occur, with a higher incidence at longer distance races of over 5km.

There can be no doubt that prompt access to first aid and medical facilities can and does save lives at public sporting events, and the benefits of cardio-pulmonary resuscitation (CPR), defibrillation (automated external defibrillators - AED's) and qualified first aid providers are clearly proven, the successful resuscitation rate for cardiac arrest through appropriate medical intervention at road races being significantly higher than the ambulance service resuscitation rate for the general public.

Race organisers owe a clear legal duty of care to provide appropriate first aid and medical facilities for competitors, volunteers (and staff) sufficient to respond to foreseeable additional medical risks which might be reasonably anticipated arising out of participation at their event. This duty also extends to spectators on private or public land under the exclusive control of the event organiser.

This legal duty of care cannot be avoided or transferred by the organiser to the participant, for instance through disclaimers on entry forms placing all risk on the competitor – indeed in the event of a claim the use of such a disclaimer could be interpreted as being evidence of an organiser's clear intent to avoid meeting their duty of care.

It must be accepted that all activities, including participation in endurance running, involve some level of inherent risk and a balanced judgement must be made by race organisers and competitors between practical and reasonable delivery of services and potential (ie anticipated or likely) medical outcome.

However such judgement can only be made on the basis of clear understanding of the risks and issues involved, and informed consent by the competitor. Accordingly, race organisers should warn competitors of the additional risks involved in participating in endurance events, and their own responsibility to ensure proper preparation, training and fitness to compete through pre-event publicity (for instance by directing competitors to the **www.runnersmedicalresource.com** website), supplemented where necessary by race day information & public announcements

OBJECTIVES

Management Objectives

The management objectives of this advice are to ensure that UK Athletics licensed road races have consistently high medical standards by : -

- Providing guidance on appropriate minimum first aid and medical services for respective types/sizes of races, for adoption within UK Athletics Licence Standards
- Producing best practice medical advice for race organisers and first aid and medical providers (including model medical risk assessments)

Clinical Objectives

The clinical objectives of this guidance are to ensure that UK Athletics licensed road races provide : -

- An appropriate, effective & prompt first aid and medical service to competitors, spectators, volunteers (and staff). Such care to be sufficient to respond to foreseeable additional medical risks which might be reasonably anticipated arising out of participation at their event. This duty to also extend to spectators on land under the exclusive control of the event organiser

- Basic life support ('BLS') plus defibrillation (where applicable) to injured competitors, spectators or event volunteers, officials, staff or contractors in a timely & effective manner – within 8 minutes of receipt of report of an injury by the event and/or medical team. Note : for this to be achieved an effective procedure for observation & reporting of injuries and deployment of resources will be required (see Appendix 7)

Unless otherwise indicated by the medical risk assessment it is recommended that :

- All UKA licensed road races should provide basic life support ('BLS') plus defibrillation capability – reflecting the favourable response rate to treatment for the type of cardiac arrest typically experienced at endurance events (see requirements for smaller races Matrix tables 1 & 2)

- Sole reliance on '999' NHS emergency ambulance service response will not meet the duty of care required of a road race organiser (see requirements for smaller races Matrix tables 1 & 2)

It should also be noted that event medical staff are also under a duty of care to the general public and may be diverted to respond to emergency calls by local residents etc if they are the nearest available medical resource. In the unlikely event that first aid / medical cover is diverted to another incident – so that facilities for the race are compromised - management procedures should be in place to postpone, divert or cancel the race.

MINIMUM RECOMMENDED MEDICAL SERVICES

Assessment of a Race 'Profile'

The working group identified a number of critical factors (or variables) effecting the medical resources required at any particular road race. These included (but are not limited to) :

1. Race distance

2. Competitor numbers attending on the day (as distinct from entry numbers)

3. Course (& venue) terrain & configuration (eg point to point, out & back, single lap, multiple laps), isolation of venue, crowd numbers, single start (vs wave start or time trial)

4. Competitor age & experience / type of race (ie closed elite championship, experienced club runner, novice, fun run)

5. Accessibility of each section of the course for the first aid and medical team, both to attend and to evacuate patients

6. The past history of the event (the number of years staged in the current format, past medical incident data, significant changes from previous years etc)

7. Time of year (and day)

8. Weather & environmental conditions – temperature, humidity, precipitation (rain, snow etc), wind, exposure, ground conditions and altitude. Particularly when weather and/or environmental conditions anticipated on race day will be significantly different from those the competitors will be acclimatised to in the training period in the months & weeks /months before the event

9. Accessibility to the nearest NHS Accident & Emergency Hospital - the maximum travel distance from the furthest part of the course & the capability of the hospital to receive event casualties (determined through consultation through the Safety Advisory Group)

10. Availability of first aid and medical providers – first aiders, doctors, nurses, paramedics, statutory ambulance service, voluntary and/or commercial providers. Local area protocols – eg 'blue light' service restrictions (eg availability of emergency ambulance drivers)

11. Reliability of communications across the whole course route (mobile phone and/or radio)

Note : it necessarily follows that a more cautious view should be taken of new events, or whenever significant changes are made to the course or competitor profile of an existing event, or where there are changes in event or medical management, availability of medical resources, communications etc

It is strongly recommended that race organisers make enquiries of medical cover at least 6 months before their event date, to give adequate time for the level of required cover to be assessed and booked

MINIMUM RECOMMENDED MEDICAL SERVICES

MATRIX TABLE 1
RACE DISTANCE UNDER 6km (incl 5km)

The Matrix table can be used to determine a recommended minimum level of medical service for a road race of any given distance or size, based on a number of assumed 'standard' variables. Each race organiser will need to adjust the actual medical services required for their own race to ensure : firstly that sufficient mobile resources are available (see note [2] below), and secondly to suit the specific circumstances of their race

	Competitor numbers (finishers)	Under 150 runners	151 – 500 runners	501 – 1,000 runners	1,001 - 5,000 runners	5,001 - 10,000 runners
1	Qualified event team volunteer First Aiders [1]	Either 2				
2	First Aiders from CQC registered medical provider	Or 2	1 per 100 (Min 4)	1 per 150 (Min 6)	1 per 350 (Min 8)	1 per 350 (Min 14)
3	Covered First Aid Post at finish	Optional	Required	Required	Required	Required
4	Covered First Aid Posts on course	Optional	Optional	Min 1	Min 1	Min 2
5	Mobile BLS Smaller races only [1]	Either 1				
6	Mobile BLS plus AED [2]	or 1	Either 1	Either 1		
7	Mobile ALS [2]	or 1	or 1	or 1	Min 1	1 per 5,000
8	Ambulances & crew [2]	or 1	or 1	1 per 500	1 per 2,500 (Min 1)	1 per 2,500
9	Paramedics [2]				1 per 2,500 (Min 1)	1 per 2,500
10	Doctors [2]				1 per 2,500 (Min 1)	1 per 2,500
11	Nurses				1 per 5,000 (Min 1)	1 per 5,000
12	First Aid or Medical Manager		Either	Either	Either	
13	Medical Director		or	or	or	Required
14	Dedicated Medical Control				Required	Required
15	Sweeper bus or car		Required	Required	Required	Required
16	Beds or cots		Min 1	1 per 500 (Min 1)	1 per 1,500 (Min 2)	1 per 2,000 (Min 3)

Notes :

[1] **The provision of automated external defibrillators (AED's) and the use of First Aiders from an external Care Quality Commission (CQC) registered medical provider is recommended for all road races**. Smaller races should only consider not providing AED's and/or using event team volunteer first aiders where a reliable service is available from the local NHS ambulance service trust, where easy access is available to the local NHS accident & emergency hospital and where a reliable mobile phone network exists across the whole course route, otherwise AED's and an external provider will be required.

[2] Sufficient **mobile resources must be provided at all road races** to ensure that at a minimum BLS plus AED (or BLS alone for smaller races with less than 150 competitors and under 11km in distance) can be delivered to a casualty at any point of the course within 8 minutes of receipt of report of injury by the event team.

MINIMUM RECOMMENDED MEDICAL SERVICES

MATRIX TABLE 2
RACE DISTANCE FROM 6 TO 10km inclusive (including 5m)

The Matrix table can be used to determine a recommended minimum level of medical service for a road race of any given distance or size, based on a number of assumed 'standard' variables. Each race organiser will need to adjust the actual medical services required for their own race to ensure : firstly that sufficient mobile resources are available (see note [2] below), and secondly to suit the specific circumstances of their race

	Competitor numbers (finishers)	**Under 150 runners**	**151 – 500 runners**	**501 – 1,000 runners**	**1,001 - 5,000 runners**	**5,001 - 10,000 runners**
1	Qualified event team volunteer First Aiders [1]	Either 2				
2	First Aiders from CQC registered medical provider	Or 2	2 per 150 (Min 4)	1 per 125 (Min 6)	1 per 300 (Min 8)	1 per 300 (Min 16)
3	Covered First Aid Post at finish	Optional	Required	Required	Required	Required
4	Covered First Aid Posts on course	Optional	Min 1	Min 1	Min 2	Min 2
5	Mobile BLS Smaller races only [1]	Either 1				
6	Mobile BLS plus AED [2]	or 1	Either 1	Either 1		
7	Mobile ALS [2]	or 1	or 1	or 1	Min 1	1 per 5,000
8	Ambulances & crew [2]	or 1	or 1	1 per 500	1 per 2,500 (Min 1)	1 per 2,500
9	Paramedics [2]				1 per 2,500 (Min 1)	1 per 2,500
10	Doctors [2]				1 per 2,500 (Min 1)	1 per 2,500
11	Nurses				1 per 5,000 (Min 1)	1 per 5,000
12	First Aid or Medical Manager	Required	Either	Either	Either	
13	Medical Director		or	or	or	Required
14	Dedicated Medical Control				Required	Required
15	Sweeper bus or car	Required	Required	Required	Required	Required
16	Beds or cots	Min 1	Min 2	1 per 300 (Min 2)	1 per 1,250 (Min 3)	1 per 1,500 (Min 4)

Notes :

[1] **The provision of automated external defibrillators (AED's) and the use of First Aiders from an external Care Quality Commission (CQC) registered medical provider is recommended for all road races**. Smaller races should only consider not providing AED's and/or using event team volunteer first aiders where a reliable service is available from the local NHS ambulance service trust, where easy access is available to the local NHS accident & emergency hospital and where a reliable mobile phone network exists across the whole course route, otherwise AED's and an external provider will be required.

[2] Sufficient **mobile resources must be provided at all road races** to ensure that at a minimum BLS plus AED (or BLS alone for smaller races with less than 150 competitors and under 11km in distance) can be delivered to a casualty at any point of the course within 8 minutes of receipt of report of injury by the event team.

MINIMUM RECOMMENDED MEDICAL SERVICES

MATRIX TABLE 3
RACE DISTANCE FROM 11 TO 25km inclusive (including 10 mile & half marathon)

The Matrix table can be used to determine a recommended minimum level of medical service for a road race of any given distance or size, based on a number of assumed 'standard' variables. Each race organiser will need to adjust the actual medical services required for their own race to ensure : firstly that sufficient mobile resources are available (see note [2] below), and secondly to suit the specific circumstances of their race

	Competitor numbers (finishers)	**Under 150 runners**	**151 – 500 runners**	**501 – 1,000 runners**	**1,001 - 5,000 runners**	**5,001 - 10,000 runners**
1	Qualified event team volunteer First Aiders [1]					
2	First Aiders from CQC registered medical provider	Min 4	2 per 125 (Min 4)	2 per 150 (Min 8)	1 per 200 (Min 12)	1 per 200 (Min 20)
3	Covered First Aid Post at finish	Required	Required	Required	Required	Required
4	Covered First Aid Posts on course	Min 1	Min 1	Min 2	Min 2	Min 3
5	Mobile BLS Shorter races only [1]					
6	Mobile BLS plus AED [2]	Either 1	Either 1	Either 1		
7	Mobile ALS [2]	or 1	or 1	or 1	Min 1	1 per 5,000
8	Ambulances & crew [2]	or 1	or 1	2 per 500	1 per 1,500 (Min 1)	1 per 1,500
9	Paramedics [2]				1 per 2,500 (Min 1)	1 per 2,500
10	Doctors [2]				1 per 2,500 (Min 1)	1 per 2,500
11	Nurses				1 per 5,000 (Min 1)	1 per 5,000
12	First Aid or Medical Manager	Required	Either	Either	Either	
13	Medical Director		or	or	or	Required
14	Dedicated Medical Control				Required	Required
15	Sweeper bus or car	Required	Required	Required	Required	Required
16	Beds or cots	Min 1	Min 2	1 per 300 (Min 2)	1 per 1,000 (Min 4)	1 per 1,250 (Min 6)

Notes :

[1] All road races of over 150 competitors and/or over 11km in distance must provide automated external defibrillators (AED's) and engage the services of a Care Quality Commission (CQC) registered First Aid provider.

[2] Sufficient **mobile resources must be provided at all road races** to ensure that at a minimum BLS plus AED can be delivered to a casualty at any point of the course within 8 minutes of receipt of report of injury by the event team.

MINIMUM RECOMMENDED MEDICAL SERVICES

MATRIX TABLE 4
RACE DISTANCE Over 26km (including 20 mile & marathon)

The Matrix table can be used to determine a recommended minimum level of medical service for a road race of any given distance or size, based on a number of assumed 'standard' variables. Each race organiser will need to adjust the actual medical services required for their own race to ensure : firstly that sufficient mobile resources are available (see note [2] below), and secondly to suit the specific circumstances of their race

	Competitor numbers (finishers)	Under 100 runners	101 – 300 runners	301 – 1,000 runners	1,001 - 4,000 runners	4,001 - 10,000 runners
1	Qualified event team volunteer First Aiders [1]					
2	First Aiders from CQC registered medical provider	Min 4	2 per 100 (Min 4)	1 per 100 (Min 10)	6 per 1,000 (Min 20)	6 per 1,000 (Min 30
3	Covered First Aid Post at finish	Required	Required	Required	Required	Required
4	Covered First Aid Posts on course	Min 2	Min 4	Min 1	Min 3	Min 4
5	Mobile BLS Shorter races only [1]					
6	Mobile BLS plus AED [2]	Either 1		Either 1		
7	Mobile ALS [2]	or 1	Min 1	or 1	1 per 1,500 (Min 1)	1 per 2,500
8	Ambulances & crew [2]	or 1	Min 1	1 per 500	1 per 1,500 (Min 1)	1 per 1,500
9	Paramedics [2]		Min 1	Min 1	1 per 2,500 (Min 1)	1 per 2,500
10	Doctors [2]		Min 1	Min 1	1 per 2,500 (Min 1)	1 per 2,500
11	Nurses				1 per 5,000 (Min 1)	1 per 5,000
12	First Aid or Medical Manager	Required	Either	Either	Either	
13	Medical Director		or	or	or	Required
14	Dedicated Medical Control				Required	Required
15	Sweeper bus or car	Required	Required	Required	Required	Required
16	Beds or cots	Min 2	Min 2	1 per 250 (Min 4)	1 per 500 (Min 6)	2 per 1,500 (Min 8)

Notes :

[1] All road races of over 150 competitors and/or over 11km in distance must provide automated external defibrillators (AED's) and engage the services of a Care Quality Commission (CQC) registered First Aid provider.

[2] Sufficient **mobile resources must be provided at all road races** to ensure that at a minimum BLS plus AED can be delivered to a casualty at any point of the course within 8 minutes of receipt of report of injury by the event team.

GUIDANCE NOTES ON THE USE OF THE MATRIX TABLES

Interpretation

Where 2 requirements produce different results, the higher standard will apply.

Nothing in this guidance would prevent a race organiser adopting a higher standard of care, by providing additional resources (for instance additional first aid posts) or a higher level of staffing or equipment resource over and above the minimum recommend level (for instance replacing first aiders with first responders or paramedics, cycle responders with ambulances, nurses with ODP's or ECP's).

Spectators. Additional medical services will be required if more than 500 spectators are anticipated to attend on private or public land under the exclusive control of the race organiser. Note for relay races, runners watching the race either before or after competing should be treated as spectators.

Definition of terms

Numbers of Competitors. The number of runners actually starting the race (as opposed to the number of registered entrants). There can be a non-attendance rate of up to 30% in larger races which sell out many months before race day – and a significantly higher attendance rate for smaller races, or where entries sell out close to race day. In planning appropriate medical provision a race organiser should allow for a higher attendance rate when race day weather conditions are favourable, or when entries are taken on race day. See comments regarding race day entries for longer distance races below

First Aider. A professional or volunteer trained to provide basic life support. First Aiders must be engaged by bodies **registered** with the Care Quality Commission (CQC), qualified & insured to provide medical services at public events.

For larger events, with over 150 competitors and/or over 11km in distance, event team volunteers with appropriate occupational or workplace 'first aid at work' training can provide initial first aid in the event of incident until the arrival of the main service provider (and such volunteers will be covered by UKA insurances for the provision of incidental first aid), but such **unregistered** volunteers cannot be used to replace or supplement the main or only medical provider.

Event Team Volunteer First Aider. An event team volunteer with a current qualification in event first aid, first aid at work or other suitable medical qualification from an Ofqual registered training body.

The use of First Aiders from an external CQC registered medical provider (and the provision of AED's) is recommended for all road races. Smaller races should only consider using event team volunteer first aiders (and/or not providing AED's) where a reliable service is available from the local NHS ambulance service trust, where easy access is available to the local NHS accident & emergency hospital and where a reliable mobile phone network exists across the whole course route, otherwise an external First Aid provider (and AED's) will be required.

First aid provided by qualified event team volunteers, either in supplemental initial care at larger events prior to arrival of the main medical provider, or in primary care at smaller events, will be covered by UK Athletics insurance.

First Aid Post ('FAP'). A designated and signposted location within a marquee or building where initial basic treatment can be provided to competitors, spectators, event volunteers & staff. Situated at intervals around the course route, within the finish area and often within the runners assembly area

Note : First aid posts typically comprise at least 2 trained first aiders

Distance between first aid posts ('FAP's'). The distance between FAP's should be reduced after 75% of the race distance to reflect the increased risk of exhaustion & collapse in the later stages of the race

Basic Life Support ('BLS'), or First Aid. Initial care for injury or illness, including life-saving techniques without medical equipment (eg cardio-pulmonary resuscitation or 'CPR'), until definitive medical treatment can be provided. May also be sufficient for minor injuries or self-limiting conditions. May be delivered by any member of the medical team from first aider to nurses, paramedics or doctors

The provision of automated external defibrillators (AED's) (and the use of First Aiders from an external CQC registered medical provider) is recommended for all road races. Smaller races should only consider not providing AED's (and/or using event team volunteer first aiders) where a reliable service is available from the local NHS ambulance service trust, where easy access is available to the local NHS accident & emergency hospital, and where a reliable mobile phone network exists across the whole course route, otherwise AED's (and an external First Aid provider) will be required.

'BLS plus AED'. The delivery of a higher level of basic life support supplemented by an automated external defibrillator (AED) - a portable machine that can restart the heart in some cases of cardiac arrest by delivering an electric shock

At pre-planned events medical providers normally ensure that responders using AED's are provided with additional training in the safe and effective use of this equipment, over and above the basic BLS skills

Mobile 'BLS plus AED'. Mobile delivery can be by a motorbike or cycle responder (or on foot), ambulance car or ambulance

Advanced Life Support ('ALS') - Resuscitation. The ability to deliver advanced life support techniques including defibrillation, advanced airway management (including oxygen) and advanced drug administration

Mobile 'ALS'. Mobile delivery can be by motorbike or cycle responder (or on foot), ambulance car or ambulance, typically provided by a registered healthcare professional such as a paramedic, doctor or nurse with the appropriate skills and competency

Deployment of medical team. Mobile response staff should be positioned at suitable locations around the course route and at the finish. The majority of collapses occur in the finish and in the last 10% of the race distance, but cardiac arrests can occur at any point around a course.

Ambulance. An emergency 'blue light' ambulance crewed and equipped to a standard specified by the local **NHS** ambulance service. Capable of passenger transport (single patient) & equipped to deal with a range of patient complaints including defibrillator, oxygen, pain relief & splints

Off-road ambulances can be used to deliver medical crew & equipment to an incident, and to repatriate patients over rough terrain or soft ground where access by conventional **emergency** ambulances is not possible

Paramedic ambulances provide a higher level of skills & medical interventions than a standard **emergency** ambulance

Rapid response vehicles ('RRV') can deliver a practitioner (doctor, paramedic, EMT or equivalent) to provide ALS interventions. Whilst some 4x4 RRV's have the capability to carry patients and can be used to extract patients from off-road locations, they do not have the same space capacity as ambulances to allow treatment, and should not therefore be treated as an emergency ambulance

Paramedic. A registered paramedic with the UK Health Professions Council ('HPC') and appropriate equipment. Paramedics are typically qualified to administer a range of prescription drugs. Operating either from a vehicle (eg emergency ambulance, rapid response vehicle or motorcycle) or within a treatment facility

Other emergency Health Care Professionals ('HCP'). There are a number of other registered health care professionals qualified to work in emergency care including Emergency Care Practitioners ('ECP') and Operating Department Practitioners ('ODP'). See definitions below

Other emergency first aiders. There are also a number of other practitioners qualified to work in emergency first aid including Emergency Medical Technician ('EMT') and Emergency Care. See definitions below

Doctor. A registered medical practitioner with the UK General Medical Council ('GMC') with relevant experience of pre-hospital and emergency care, and appropriate equipment. Doctors are qualified to administer a full range of prescription drugs & treatments. Operating either from a vehicle (eg ambulance or rapid response vehicle) or within a treatment facility

Nurse. A registered practitioner with relevant experience of pre-hospital and emergency care and appropriate equipment - Registered with the NMC (Nurses and Midwifery Council)

First Aid or Medical Manager. The nominated point of contact for the medical team. Probably a member of the first aid / medical team (rather than the race organiser), could also be acting as a clinician (ie most senior first aider or doctor working on the day)

Medical Director. The appointed manager & point of contact for the medical team, also responsible for setting the medical strategy & preparing the Medical Plan. Independent of the clinical team – ie overseeing care management, not treating patients. Would normally be a registered medical practitioner with relevant experience of pre-hospital and emergency care

Dedicated Medical Control. A facility (building, marquee or vehicle) providing accommodation for the operational medical command including co-ordination and communication between all medical resources (ambulances etc) and liaison with other services (police, ambulance service, event control, fire brigade). In larger races this is typically part of a multi-agency joint control room, often at a separate location from the clinical team

Sweeper bus. A minibus or car providing transport for exhausted runners but non-injured ('drop-outs') from the course to the finish. Typically with a first aider to attend to minor medical conditions.

Note. This is not a medical resource, such as an emergency ambulance or patient transfer vehicle ('PTS'). Neither should it be used to collect event equipment, signage etc from the course as the roads are re-opened

Treatment beds. An examination couch, folded stretcher, cot or bed space within a treatment facility used for the assessment and treatment of non life-threatening (primary care) casualties provided with appropriate nursing care and equipment

Treatment beds are often supplemented by additional holding beds (or chairs) within a treatment facility used for observation of casualties during recovery

CQC (Care Quality Commission). The regulatory body for registered health and adult social care service providers. Website : **www.cqc.org.uk/public**

AED (automated external defibrillator). A portable machine that can restart the heart in some cases of cardiac arrest by delivering an electric shock

Sole function. Medical staff, equipment etc can only perform a single designated function at any one point in time. For instance an ambulance cannot *at the same time* act as both a mobile and a static asset (eg both an ambulance and a static first aid post), neither can a first aider also *at the same time* act as a marshal. This does not prevent resources being re-deployed during the event - for instance from the start or the course to the finish after runners have passed

Adjusting the 'Standard' Race Profile

'Standard' Race Profile

The 'minimum cover' recommended in the matrix tables is based on a number of assumed 'standard variables' for a race

These presume a single lap course with unrestricted vehicle access for the first aid and medical team (both to treat and evacuate casualties), an established race with settled format unchanged from previous years, a mix of more experienced (club affiliated) and recreational (non-affiliated) runners, where entry numbers & attendance rates are known (no entries taken on race day), with no significant history of casualties at previous stagings of the event, mild weather conditions, easy access to the local NHS A&E hospital, options & choice of a number of different medical providers, and a limited number of spectators attending the event (under 500 spectators)

It also assumes that competitors will be over 16 years of age. Additional medical & management requirements will apply for under age competitors – child protection issues, paediatric medical staff, parental consent for treatment etc – see below

Races with Less Favourable Profiles

The 'minimum cover' recommended in the matrix as appropriate for races held under 'standard conditions' needs to be adjusted to take into account the more cautious view and additional resources required to respond to 'less favourable variables' such as :

- Races held on point to point courses
- Where sections of the course are inaccessible to the medical team by vehicle
- New (or substantially changed) races
- Races with an unusual competitor profile (eg high proportion of elderly or disabled competitors, junior runs or family fun runs)
- Races predominantly comprised of less experienced recreational (ie over 80% non-affiliated) runners

- Where entry numbers and attendance rates are unknown (entries taken on race day)
- Races with significant past record of casualties
- Races in exposed or remote locations
- Where there are significant variations or extremes of weather conditions (both on race day and in the training weeks/months before the event)
- Where access to the local NHS Accident & Emergency hospital is poor – both in terms of maximum travel distance from the course and its capacity to receive event casualties
- Where there is a restricted choice of first aid / medical providers (first aiders, doctors, nurses, statutory ambulance service, voluntary and/or commercial providers), or restrictive local area protocols (for instance shortage of emergency ambulance drivers)
- Where more than 500 spectators can be anticipated to attend the event
- Where communications (mobile phone and/or radio)are unreliable

It is intended that this section will be expanded by the working group in future versions of the guidance to discuss how each of the varying factors might affect medical cover – for instance where sections of the course are inaccessible by normal vehicles, it may be necessary to provide off-road vehicles, or cycle first responders etc

Races with More Favourable Profiles

Equally the 'minimum' level of medical cover recommended in the matrix can be adjusted downwards to reflect 'more favourable variables' such as

- Multi-lap courses (where runners pass first aid stations more than once)
- Closed championship races or races predominantly comprised of more experienced athletes (ie over 80% of club affiliated athletes)
- Very few casualties at previous stagings of the event

Treatment Facilities

The location of treatment facilities should be determined by the first aid and medical team according to the configuration of the course, safe routes for ambulance access etc. Likewise the medical team should also determine the allocation or designation of treatment beds & holding beds within the treatment facility/facilities according to the anticipated clinical need

Junior Runs & Family Fun Runs

The 'standard' matrix level of first aid and medical cover is intended largely for adult competitors (ie over 16 years of age on race day). A higher duty of care and additional requirements must be taken into account in planning races and fun runs involving juniors and youths

For junior runs and family fun runs first aid and medical staff will need training & experience in paediatric medicine (in most cases this will already be covered by existing qualifications), arrangements must be made to obtain parental/carer consent prior to treatment & for parents/carers to attend children during treatment (attending adults are normally excluded from medical areas), and additional equipment & paediatric drugs may also be required for smaller children

Further management requirements (ie non-medical) will apply at junior age group competitions and family fun runs in terms of child protection procedures & lost child facilities, and ensuring attendance & supervision by attending parents or carers

Guidance for Larger Races

The matrix tables can only provide general guidance on levels of cover for races of over 10,000 competitors, although the same variable factors described above will need to be taken into account. Actual allocation of resources for larger races of over 10,000 competitors will be determined by the medical team according to the particular requirements & history of the event.

In many larger races, such as the London Marathon and Great North Run the level of medical cover deployed will far exceed the levels suggested by the matrix tables

Entries on the Day for Longer Distance Races

Sale of entries on race day is not recommended for longer distance races over 20km (half marathon, marathon and above) particularly in larger races when less experienced runners might be anticipated, in order to discourage 'impulse' entries from less well prepared runners

PREFACE TO THE 2nd EDITION

The guidance has been amended in response to experience and feedback received from race organisers during the 2012 road race season

ACKNOWLEDGEMENTS

This guidance has been drafted by a working party from the **run**britain Medical Advisory Group

UK Athletics would like to give thanks to the contributors and their organisations listed below. Without their input and sound counsel, this document would not have been possible

With special thanks to David Bedford (Former Race Director, Virgin London Marathon) Katherine Eaton (St John Ambulance London Prince of Wales Division), Nigel Gough (Nova International Ltd & Great Run). Dr Constantin Jabarin (Advanced Medical Events LLP, Medical Director Bath Half Marathon), Dr Courtney Kipps (Assistant Medical Director, Virgin London Marathon), Dr Brian Robertson (Event Medicine Company Ltd, Medical Director Fleet Half Marathon) & Dr Chris Vallis (Medical Director, Bupa Great North Run)

Also contributions from Nick Bitel (Chief Executive, Virgin London Marathon), Dr Jules Blackham (Medical Director, Run Bristol), Dr Paul Dijkstra (former UK Athletics Chief Medical Officer), Dr Steve Haig (Former Medical Director, Run Bristol), Steve Hams (Acting Chief Nursing Officer St John Ambulance) & Professor Sanjay Sharma (Medical Director, Virgin London Marathon)

Author : Andrew Taylor (Running High Events Ltd, Race Director Bath Half Marathon)

UK Athletics
runbritain **Medical Advisory Group**

January 2013

APPENDIX 1

GUIDE TO CONDUCTING A MEDICAL RISK ASSESSMENT

Medical risk assessments for endurance events are unusual in that there is an underlying risk of injury or illness inherent in participation in the event which cannot be entirely removed. In this respect it can be helpful to divide the assessment into 2 parts :

'Controllable hazards' are hazards which are foreseeable, predictable and likely, and which the event organiser can reduce or control, for instance by :

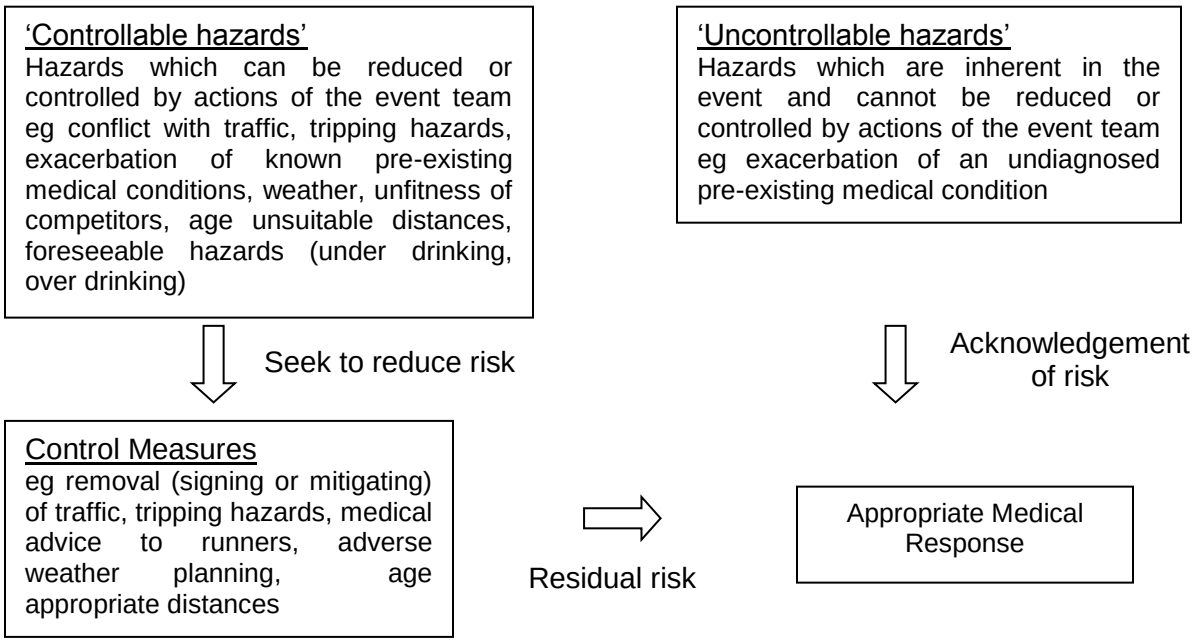
- providing information to competitors in advance of the event eg advising on effect of exertion on pre-existing diagnosed medical conditions (eg asthma or diabetes), fitness & training, sickness before race day, dehydration, over-drinking etc.
- planning for adverse weather by providing additional water and/or showers for hot weather, foil blankets & shelter for cold or wet days, race day information to runners
- ensuring age suitable distances – see UKA Rules of Competition
- removing vehicle traffic, tripping hazards or obstacles on the race route.

Controllable hazards can be analysed using the conventional '5 step' risk assessment, with a view to reducing the risk wherever possible, and many of the hazards (eg obstacles on the course) may conveniently be dealt within the main risk assessment and general control measures for the event as a whole.

'Uncontrollable (or inherent) hazards' on the other hand are hazards which are also foreseeable (predictable or likely) but which the event organiser cannot reduce or control - such as injury or illness to a competitor due to exacerbation of an undiagnosed pre-existing medical condition (for instance underlying heart defect) brought on by exertion caused by participation in the event.

Uncontrollable hazards have to be acknowledged as being 'inherent' in the activity, and predicted or anticipated according to past experience and dealt with by appropriate response measures, rather than being reduced by control measures. These require a different approach in terms of analysis.

The difference of approach is illustrated below :



Assessment of Clinical Need

The race organiser and their first aid / medical team should assess the likelihood of the most serious and common (ie likely) predictable medical injury, for instance the background statistical risk of cuts & abrasions caused by competitors tripping at road races. It is hoped that more reliable data on incident data will become available in post-race returns from future licenced races.

This analysis needs to be adjusted according to the past accident record etc of your particular event - the actual number of each type of injury reported at your event in past years.

APPENDIX 2

MODEL MEDICAL RISK ASSESSMENT

'Five steps' to risk assessment

Step 1 Identify the hazards
Step 2 Decide who might be harmed and how/where
Step 3 Evaluate the risks and decide on precautions
Step 4 Record your findings and implement them
Step 5 Review your assessment and update if necessary

Caution : This assessment shows the kind of approach a typical race might take where conditions are favourable (see notes). It can be used as a guide to think through some of the hazards in your race and the steps you need to take to control the risks. This is not a 'one-size-fits-all' risk assessment that you can just put your name on and adopt wholesale without any thought. This would not satisfy the law - and would not be effective in protecting people. Every race is different - you need to think through the hazards and controls required in your race for yourself

RISK ASSESSMENT			SAFETY PLAN			
			Risk assessment / safety plan overlap	**4. How will you put the assessment into action** Remember to prioritise those hazards that are high-risk and have serious consequences		
1. What are the hazards	**2. Who might be harmed & how**	**3a. What are you already doing (ie pre-event controls)**	**3b. What further action is required (event day controls)**	**4a. Action by Who**	**4b. Action by when**	**4c. When completed**
GENERALLY						
Consider hazards by inspecting the venue and course, checking post-race	*Identify competitors, spectators, other road*	*List what is already in place to reduce the likelihood of harm or make any harm less serious*	*You need to make sure that you have reduced risks 'so far as is reasonably*			

de-briefs etc	*users, volunteers, officials, contractors. State how harm can be caused*		*practicable'. An easy way of doing this is to compare what you are already doing with good practice. If there is a difference, list what needs to be done.*			
Obstacles & hazards on course	Competitors & volunteers could trip or fall	Course route to be arranged to minimise obstacles & hazards. Remaining hazards to be identified on safety plan	Sector marshals to check protection is provided to remaining hazards	Sector marshals	On arrival at location	
Pre-existing medical conditions (cardiac, asthma, diabetes)	Competitors & volunteers	Pre-event instructions to entrants (at time of entry and/or race packs) to visit **www.runnersmedicalresource.com** website. Volunteers briefings	Ensure reminder is included in entrants final instructions & briefings provided to volunteers	Entry Secretary. Course Director	Final instructions. Pre-event briefing/s	
Unfit competitors, under or over drinking water	See above	See above	See above	See above	See above	
Unsuitable age specific distances	Competitors	Apply age restrictions in UKA Rules of Competition & Licence Standards		Entry Secretary		
Adverse weather – unseasonably hot/humid	Competitors, volunteers & spectators	Chose sensible date & start time for event. Monitor weather reports. Implement adverse weather plan. Consider changing start time, race distance or cancelling race	Provide additional drinking water, sponge station (showers), shade for first aid posts & ice for treatment area/s. Advise runners to slow down	Course Director	On implementation of adverse hot weather plan	
Adverse weather – unseasonably cold/wet/windy	As above	As above	Provide foil blankets, shelter & hot drinks to finishers, first aid posts & treatment area/s	Start/Finish Director	On implementation of adverse cold weather plan	

Layout & management of finish area to provide easy access for medical team to identify, treat & evacuate casualties			Experienced marshals to be provided in finish area. Co-ordination of activities to be agreed in advance with medical team			
Use public address system (if provided) to communicate race day instructions to competitors			Pre-race briefing to commentator on race day public announcements. Ensure sound levels do not interfere with marshals & medical team in finish area. Discourage sprint finishes			
Monitor, de-brief & review			Ensure arrangements to monitor delivery of medical services during the event, and for post event de-briefing & review	All		

MEDICAL						
Assessment of appropriate medical cover	Competitors, spectators & volunteers	Provide first aid and medical services in accordance with UKA Good Practice Guide to Medical Services	See Medical Plan			
If event arrangements and profile are unchanged from previous years		Past casualty rates can provide a good indicator of likely demand & minimum cover recommend in the Guide will be appropriate				

If event arrangements and profile are significantly changed from previous years		Past casualty rates cannot provide a good indicator of likely demand & additional cover over and above the minimum standard recommended in the Guide should be provided				
Anticipated competitor numbers		Medical planning should always be based on the maximum number of competitors likely to attend				
Qualified First Aiders – Smaller races of under 150 competitors and under 11km in distance		The use of First Aiders from an external Care Quality Commission (CQC) registered medical provider is recommended for all road races. Smaller races should only consider using event team volunteer first aiders where a reliable service is available from the local NHS ambulance service trust, where easy access is available to the local NHS accident & emergency hospital and where a reliable mobile phone network exists across the whole course route. Where event team volunteers are used, they should have a current first aid qualification in 'First Aid at Work' or higher qualification.	The provision of first aid by qualified event team volunteer first aiders is covered by UKA insurances			
Qualified First Aiders – Larger races of over 150 competitors or over 11km in distance		Only use qualified first aiders & medical staff provided by a Care Quality Commission registered body (such as St John Ambulance, British Red Cross, or professional or commercial	The provision of supplemental first aid by qualified event team volunteers is covered by UKA			

		providers) trained & insured to 'public duties' standard. Qualified event team volunteers can provide initial first aid to supplement provision until arrival of the primary first aid provider	insurances			
Confirm capability of local A&E hospital to receive casualties from event.		Make enquiries through local authority Safety Advisory Group, based on first aid/ALS & treatment facilities provided at event plus casualty rates from previous stagings of the race.				
Confirm ability of local NHS ambulance service trust to attend & evacuate critical casualties at event on 999 call.		As above				
Mobile BLS - Smaller races of under 150 competitors and under 11km in distance		The provision of automated external defibrillators (AED's) is recommended for all road races. Smaller races should only consider not providing AED's where easy access is available to the local NHS accident & emergency hospital and where a reliable mobile phone network exists across the whole course route, Sufficient mobile resources must be provided to ensure that at a minimum BLS plus AED (or BLS alone for smaller races with less	Ensure efficient reporting procedures are in place and resources to deliver mobile response within target time specified to all points on the course & the race finish			

		than 150 competitors and under 11km in distance) can be delivered to a casualty at any point of the course within 8 minutes of receipt of report of injury by the event team.				
Mobile BLS – Larger races of over 150 competitors or over 11km in distance		Sufficient mobile resources must be provided to ensure that at a minimum BLS plus AED can be delivered to a casualty at any point of the course within 8 minutes of receipt of report of injury by the event team	Ensure efficient reporting procedures are in place and resources to deliver mobile response within target time specified to all points on the course & the race finish			
Check reliability of mobile phone network coverage & radio reception on course & start/finish.		Supplement with RAYNET volunteer radio communications or commercial provider as required				
Confirm procedures in place to ensure first aid in place before race start		Reporting procedure for race day. Contact phone numbers exchanged in event of problems	Race will be cancelled if first aid team do not attend			
Confirm arrangements in place for medical team to access & extract casualties from any sections of the course inaccessible to vehicles			Obtain permission from private land owners where appropriate, ensure gates are unlocked. Provide stretchers & volunteers or off-road ambulances if required			
Ensure effective reporting of			Ensure sufficient marshals are			

casualties by marshals etc.			deployed to provide prompt identification of casualties and nearest ambulance access point at all locations on the course. All volunteers to be briefed on reporting of casualties & directing ambulances to the casualty location			
5. Review Date						

This template is adapted from the advice of the Health & Safety Executive as published in their guidance notes 'Five Steps to Risk Assessment INDG 163 Rev 2. A digital copy can be found on their website at : **www.hse.gov.uk/pubns/indg163.pdf**

APPENDIX 3

MEDICAL RISK ASSESSMENT - WORKED EXAMPLE 1

'SUMMERVALE 10km ROAD RACE'
This is a fictional race, for the purpose of illustrating the guidance note. All similarities to actual events or persons are entirely accidental

1. Background

The 'Summervale 10km Road Race' has been organised under UKA Licence by volunteers from Summervale Athletic Club on the second Sunday in May for the last 15 years, the last 5 under the current race director. In previous years attracting around 150 entries (140 finishers) each year, with a maximum entries limit of 200. 90% of entrants are typically registered as local athletic club members. Entries are by postal entry form circulated to local clubs & on the club website. In previous years entries have also been taken on race day. The course is unchanged from recent years, starting & finishing at the same location in the car park of the Summervale Town Secondary School and adjoining playing pitches before following two-laps over undulating semi-rural lanes with low traffic levels, around a small market town

The race has a reputation as a fast flat course, traditionally popular with more experienced & competitive local club runners, many of whom are known personally by the race secretary having returned for a number of years, but in recent years the race has attracted a growing number of entries from unattached (ie non-club) entries, recreational runners and novices. The race is staged on open carriageways (without road closures), with marshal controlled junctions & crossings at maximum of ½ to 1 km intervals around the course. The course is 90% on tarmac public roads, with 10% on gravel public footpath and grass playing pitches

Cupped drinking water is provided at 5 km and at the finish. No sponge stations are provided. Changing, toilet & hot drinks/sandwiches are available in the school hall

Communication between marshals is by mobile phone, with reliable network coverage over the entire course route

Medical services for the last 5 years have been provided by the local British Red Cross branch, assisted by 2 event team volunteer first aiders. The Summervale Hospital accident & emergency department is 3 miles by road, and there is a reliable service from the local NHS ambulance service. In the past 5 years there have been an average of 2-4 patients treated by the first aiders each year, including 2 collapses amongst slower runners (due to exhaustion) on the gentle incline in last ½ km of the race on one warm race day, 1 collapse by the race leader in the finishing straight (also due to exhaustion), 3 slower runners unable to finish (1 x twisted ankle & abrasions, 2 x exhaustion) and minor treatment at the finish for fainting, blisters etc. There have been no fatalities, resuscitations, or hospital transfers

The race finish will be hand-timed using a single finishing funnel in the car park, allowing ambulance access if required

Volunteer marshals etc are from the organising club plus their family & friends. The regional licencing panel are familiar with the race, one panel member having twice run the race himself in recent years

2. Recommended Provision - Matrix Table 2

Based on 'standard criteria' for :

- Race distance of under 11km (10km race)
- Race of under 150 runners (130 anticipated – see notes)

Recommended minimum provision as set out in **Matrix Table 2** :

Either 2 qualified event team volunteer first aiders, or 2 first aiders from a CQC registered medical provider

Covered first aid posts at finish & on course optional

- Mobile provision - either 1 BLS only, or 1 BLS plus AED, or 1 mobile ALS, or 1 ambulance
- No paramedic, doctor, nurse, or dedicated medical control required
- First Aid or Medical Manager required
- Sweeper bus (or car) required
- Minimum 1 bed (or cot)

Adjustments

If entries are continued to be taken on the day, allow for a maximum of 200 competitors attending. Re-check Matrix Table 2 based on 200 competitors

- Min 4 first aiders from a CQC registered medical provider – volunteer team first aiders can supplement, but not act as primary provider
- Covered first aid post required at finish, plus min 1 covered first aid post on course
- Higher requirement for BLS plus AED (or mobile ALS or ambulance) applies
- Min 2 beds (or cots) required

Accordingly the race organisers has decided to reduce the entries limit to 150 entries, and to advertise entries on the day up to this limit on a first-come-first-served basis.

On the other hand, as a two-lap race - as opposed to the Matrix profile based on one-lap - the provision for on course first aid could be reduced, and this would also reduce the response time for the mobile BLS. The provision at the finish should remain unchanged

The race has been staged in its current form and by the current organisers for many years. Casualty rates at previous races have been low in terms of numbers, but there have been some more serious cases (3 collapses)

Entries are largely by post, with personal knowledge of many runners by the race secretary, and local marketing through athletic clubs ensuring a high proportion of more experienced club runners (as opposed to on-line entries & marketing) with proven fitness levels in terms of preparation for competition. But the increasing number of entries from unattached entries, recreational runners and novices has introduced a proportion of competitors with lower and untested fitness levels

There is a lower injury risk of minor injury (tripping etc) generally associated with (more experienced) club athletes. A higher proportion of older 'veteran' male club runners also reduces the risk of sudden cardiac failure (often associated with younger competitors) but increases the risk of cardiac arrest due to cardio-vascular disease (often associated with older men) which often responds well to swift intervention by CPR and AED

Two sections of the course are inaccessible to ambulance – the grass playing pitches travelled immediately after the start and before the finish, and a 400 metre section of narrow gravel footpath travelled twice. Provision must be made for medical services to reach and extract any casualties occurring at these locations

3. Summervale 10km - Medical Risk Assessment

RISK ASSESSMENT			SAFETY PLAN			
			Risk assessment / safety plan overlap	**4. How will you put the assessment into action** Remember to prioritise those hazards that are high-risk and have serious consequences		
1. What are the hazards	**2. Who might be harmed & how**	**3a. What are you already doing (ie pre-event controls)**	**3b. What further action is required (event day controls)**	**4a. Action by Who**	**4b. Action by when**	**4c. When completed**
GENERALLY		**SEE NOTES ABOVE**				
MEDICAL						
Assessment of appropriate medical cover	Competitors, spectators & volunteers	Provide first aid and medical services in accordance with UKA Good Practice Guide to Medical Services	See Medical Plan			
Event arrangements and profile unchanged from previous years.		Low casualty rate experienced in previous years is a good indicator of likely demand & minimum cover recommend in the Guide would be appropriate.				
Anticipated competitor numbers		Competitor numbers to be restricted to below 150 to ensure higher level of medical service is not required				
Use of event team volunteer first aiders		Due to 3 x collapses in previous years the Race Director has decided to engage British Red		Race Director		

		Cross first aiders to provide the mobile response and at the finish. 2 x event team volunteer first aiders with current 'First Aid at Work' qualifications will be used to supplement the BRC cover				
Check ability of local A&E hospital to receive casualties from event.	"	Hospital notified through district council Safety Advisory Group & confirmed capable to receive any serious casualties		Race Director		
Check ability of local NHS ambulance service trust to attend & evacuate critical casualties	"	Ambulance service trust notified formally through SAG & confirmed capable of attending & evacuate casualties on 999 call if required	Note BRC first aid manager (himself a local ambulance service paramedic) has made direct contact with local ambulance station before race day to co-ordinate access points to evacuate casualties – the ambulance service has decided to locate their duty ambulance car to a point nearer to the event	Race Director		
Ensure capability to deliver BLS (minimum) response within 8 minutes of receipt of report of injury by the event or medical team.		Due to 3 x collapses in previous years the Race Director has decided to provide AED's for mobile response and at the finish See below for reporting procedures	Cycle first responder trained to deliver BLS plus AED will travel behind the rear of the field, contactable by mobile phone & BRC radio. Briefed			

			to look out for signals from marshals. Two-lap configuration of course will allow swift response time			
Procedures to ensure first aid in place before race start.	"	Contact phone numbers exchanged in event of problems.	BRC first aid manager to report to race director on arrival 30 mins before race start. Race will be cancelled if first aid team do not attend	Race Director		
Ensure effective reporting of casualties by marshals etc.			Marshals will be deployed at ½ to 1 km intervals around the course. All volunteers to be briefed on reporting of casualties to the first aid manager			
Ensure medical team can access & extract any casualties occurring at inaccessible locations		Two sections of the course are inaccessible to ambulance – the grass playing pitches travelled immediately after the start and before the finish, and a 400 metre section of narrow gravel footpath travelled twice	Event team volunteer first aiders deployed next to the footpath will be provided with a NATO fold-up stretcher, and marshals briefed to act as a stretcher party if required			
Layout & management of finish area to provide easy access			Ambulance access will be available through the car park at the finish if			

for medical team to identify, treat & evacuate casualties			required. Experienced marshals to be provided in finish area. Co-ordination of activities to be agreed in advance with medical team			
Use public address system to communicate race day instructions to competitors			Pre-start briefing with race day final safety instructions to be provided by start director to assembled competitors using hand held megaphone. Sprint finishes will be discouraged			
Transport of exhausted runners.		Private vehicle insurance to be extended to cover transport of competitors. Polyester blankets (not foil), hot & cold drinks & mobile phone provided.	Race director's wife to drive her own car (7-seater people carrier). Note adult competitors only, so no child protection issues	Race Director		
Monitor			BRC first aid manager to report any serious injuries or hospital transfers to the race director as soon as possible on race day, followed by formal written summary of casualties – based	Race Director		

			on UKA post-race return form			
De-brief & review			Race director to arrange post event medical team de-brief meeting & review	Race Director		
5. Review Date			1 week after race date			

Medical Plan

- 2 x BRC first aiders, plus AED at the start/finish contactable by mobile phone & BRC radio. To be relocated from the start to the 5 km drink station (the nearest section of the two-lap course, some 200 metres across the playing pitches from the start/finish) and returning to the finish before the first finisher.
- Plus 2 x event team volunteer first aiders initially located with a private car in a layby at the end of the 400 metres long gravel footpath (passed by the runners at approx 2.5 km and 7.5km) and returning to the finish after the last runner has passed. Contactable by mobile phone. To be provided with 1 x NATO type fold-up stretcher in case of a casualty on the footpath section, plus arrangements for adult marshals to available as a stretcher party if required.
- BLS plus AED response. 1 x cycle first responder (trained to deliver BLS plus AED) riding at the rear of the race. Contactable by mobile phone & BRC radio
- First aiders to be provided with polyester blankets (not foil), bottled water & energy drink.
- Marshals to be briefed on reporting of casualties, including meeting emergency ambulance on arrival at designated access points
- BRC to provide casualty report immediately after the race to enable Race Director to submit UKA post-race return

Departures from UKA medical standards

None proposed

APPENDIX 4

MEDICAL RISK ASSESSMENT - WORKED EXAMPLE 2

'BRIDGETOWN HALF MARATHON & FUN RUN'

This is a fictional race, for the purpose of illustrating the guidance note. All similarities to actual events are entirely accidental

1. Background

Background

The 'Bridgetown Half Marathon & Fun Run' has been organised under UKA Licence by volunteers from Bridgetown Athletic Club in mid-October for the last 5 years. A new volunteer from the club's committee has taken over as race director for next year's race (with no previous experience of race management) with the ambition of doubling entries in the half marathon (from 750 to 1,500 entries - 1,250 anticipated finishers) plus 500 entries in the new 2km fun run, through an energetic marketing campaign supported by distribution of printed flyers, local newspaper advertising and email newsletters through his own stationery supply business. The race date is being brought forward from mid-October to mid-August to attract more families during the summer holidays. It is anticipated that the proportion of experienced club athletes in the half marathon will drop significantly from previous years, to around 30% as the additional entries will come largely from unattached recreational and novice runners

For the first time entries will use the new on-line entry system through the **run**britain **website**, with entries also being taken on the day for both the half marathon and fun run. In previous years entries have been by postal entry, with no entries on the day

The start/finish area will be relocated onto a grassed area next to the new main sponsor's business premises and a number of other changes are also proposed to both the half marathon & fun run course routes to accommodate the additional runners

The half marathon has a reputation as a tough course, typically attracting more experienced & competitive local club runners with proven fitness levels in terms of preparation for competition. But a significant proportion of entries are anticipated in future years from unattached (ie non-club) entrants, recreational runners and novices with lower and untested fitness levels

The half marathon is staged over a 1-lap undulating course, starting & finishing at the same location on a feeder road next to the sponsor's car park over narrow country lanes with low traffic levels on the outskirts of Bridgetown. The half marathon route is mainly on tarmac public roads, but one ½ mile section of public bridlepath (which is at a psychologically difficult 'turn around' point) will be inaccessible to ambulance vehicles

The new fun run will be staged over an out-and-back course on tarmac and gravel footpaths around the sponsor's business park. This will be the first time the course has been used for a running event

The half marathon route is subject to a formal road closure, operated by the district council's highways contractors on major junctions & volunteer marshals at minor road junctions. Volunteer marshals are deployed at maximum intervals of 1 km around the course

Cupped drinking water is provided at 4 drink stations, at approximately 5 km intervals around the course, and at the finish. No sponge stations are provided. Temporary changing & toilets will be provided in the assembly area, plus drinks & refreshments for sale at concession stands

Communication between marshals is by mobile phone, although network coverage is unreliable at 2 designated points on the course. Radio communication between St John Ambulance first aiders has also been hampered in past years by unreliable reception

First aid services for the last 5 years have been provided by the local St John Ambulance branch, assisted by event volunteers with first aid training. Following the recent closure of the local accident & emergency hospital, the nearest receiving hospital is now some 45 miles away. Likewise the nearest NHS ambulance station has been relocated to a new regional centre some 35 miles away, and response times in recent months have been well below national targets (due to recruitment problems coupled with industrial action), and no ambulance staffing is available for public events

In the past 5 years there have been an average of 20-30 patients treated by the first aiders each year, mostly minor treatment at the finish for fainting, blisters etc but also including a total of 5 collapses amongst slower runners (due to exhaustion) in the finishing straight and on the gentle incline in the last 1 km of the race on warm race days, 1 collapse by a lead runner at 12 km (also due to exhaustion), an average of 4 slower runners per year unable to finish (including 1 x twisted ankle & 2 x minor abrasions after trip & falls). There have been no fatalities, or resuscitations, but there have been a total of 2 hospital transfers due to lack of response after treatment for collapse. Casualties are anticipated to rise due to the planned increases in entry numbers, the increased proportion of less experienced competitors, the hotter mid-summer weather and mid-day start time

The race finish will be chip-timed using an open finish (ie no funnels) clear ambulance access provided for the medical team along the entire length of the finish, allowing exit at both ends. Casualties in the public assembly area next to the finish area will need to be evacuated over grass

In past years the race has always started at 10.00am, but in order to allow access to a local church (otherwise cut off by the extended road closures required to accommodate the increased entry numbers) the start time has been postponed until 12.00noon to allow the congregation time to leave after their church service

Many of the experienced club marshals from previous years have declined to assist at this year's event, unhappy with the proposed changes, so the new race director intends to recruit fresh volunteers from amongst his own friends & family, supplemented by volunteers from local charities and staff from the sponsor's business

The newly formed district council's Safety Advisory Group have not been particularly helpful in liaising with the county council's highways department, local ambulance service, and police force

2. Recommended Matrix Provision – Table 3

Half Marathon

Based on 'standard criteria' for :

- Race distance of from 11 to 25km (half marathon = 21 km)
- Race of 1,001 to 5,000 runners (1,500 anticipated entries)

Recommended minimum provision as set out in **Matrix Table 3** :

- 12 first aiders from a CQC registered medical provider (1 per 200 runners, minimum 12)
- Covered first aid post at the finish - required
- 2 x covered first aid posts on the course – required
- Mobile provision – 1 x ALS minimum
- 1 x ambulance (1 per 1,500 runners, minimum 1)
- 1 x paramedic (1 per 2,500 runners, minimum 1)
- 1 x doctor (1 per 2,500 runners, minimum 1)
- 1 x nurse (1 per 5,000 runners, minimum 1)
- Either First Aid/Medical Manager or Medical Director
- Dedicated medical control required
- Sweeper bus required
- 4 x beds or cots (1 per 1,000 runners, minimum 4)

Adjustments

The race has a relatively short history with significant changes year on year as entry numbers have steadily increased, plus a new and inexperienced race director and management committee. Casualty rates at previous races have been relatively low in terms of overall

numbers, but there have been some more serious cases (1 hospital transfer or collapse per year). Casualties are anticipated to rise due to the planned increases in entry numbers, the increased proportion of less experienced competitors, the hotter mid-summer weather and mid-day start time. A more cautious view should be taken

Aggressive marketing and a new on-line entry system will increase the proportion of unattached runners with lower and untested fitness levels, increasing the risk of aggravation of pre-existing medical conditions due to over-exertion and lack of preparation. A higher proportion of younger female runners reduces the risk of cases of cardio-vascular disease (often associated with older men) but increases the risk of cases of sudden cardiac failure (often associated with younger competitors)

The ½ mile section of public bridleway, and the grassed assembly area are inaccessible to ambulances. Provision must be made for medical services to reach and extract any casualties occurring at these locations

The current unreliability of the NHS ambulance service and the long travelling distance to the nearest A&E hospital will necessitate the race providing additional on-site facilities (beds, ambulances and resuscitation capability), and additional capability to transport more serious casualties to hospital by event ambulance, rather than relying on NHS ambulance service cover

The change of race date and start time will increase the risk of heat related injuries and anticipated casualty rates. Additional resources will be needed in anticipation

The lack of availability of experienced club marshals and difficulties in liaising with the local authority and statutory services means than a more cautious view should be taken in estimating required marshal numbers

3. Bridgetown Half Marathon & Fun Run - Medical Risk Assessment

RISK ASSESSMENT			SAFETY PLAN			
			Risk assessment / safety plan overlap	**4. How will you put the assessment into action** Remember to prioritise those hazards that are high-risk and have serious consequences		
1. What are the hazards	**2. Who might be harmed & how**	**3a. What are you already doing (ie pre-event controls)**	**3b. What further action is required (event day controls)**	**4a. Action by Who**	**4b. Action by when**	**4c. When completed**
GENERALLY		**SEE NOTES ABOVE**				
MEDICAL						
Assessment of appropriate medical cover	Competitors, spectators & volunteers	Provide first aid and medical services in accordance with UKA Good Practice Guide to Medical Services	See Medical Plan			
Event arrangements and profile are significantly changed from previous years		Past casualty rates cannot provide a good indicator of likely demand & additional cover over and above the minimum standard recommended in the Guide will be provided				
Medical planning must be based on the maximum number of competitors likely to attend		Aggressive marketing of entries & new on-line entry system are likely to increase entries. Race day entries are likely also to increase attendance numbers. Allow for 1,500 runners in the half marathon & 500 in the fun run				

In past years event volunteers with 'workplace' first aid training have been used as first aiders, to reduce costs.		Only use qualified first aiders & medical staff provided by CQC registered body - St John Ambulance				
Supplemental event team volunteer first aiders		4 x event team volunteers (from the main sponsors own staff) with current 'First Aid at Work' qualifications will be deployed at key locations to supplement the primary SJA medical cover				
Check ability of local A&E hospital to receive casualties from event.	"	Following recent closure of district hospital a longer travel time will be required for any hospital transfers. The new regional hospital has been notified through the district council Safety Advisory Group and confirmed they will be capable to receive any serious casualties	Additional beds to be provided in primary treatment facility at finish, plus additional ambulances provided to compensate for long travel distance to new hospital			
Check ability of local NHS ambulance service trust to attend & evacuate critical casualties	"	Due to current industrial action, the ambulance service trust are unable to provide any services to planned public events. All ambulance and paramedic cover to be provided by St John Ambulance	Additional beds and ambulances to be provided to compensate for current unreliable NHS ambulance service cover. See above			
Ensure capability to deliver BLS plus AED (minimum) response within 8 minutes of receipt of report of injury by		Mobile ALS will be provided by 2 x St John paramedic ambulance cars at key locations around the course and at the finish. See below for reporting procedures	2 x additional SJA cycle first responders trained to deliver BLS plus AED will travel amongst and behind			

the event or medical team.			the rear of the field, contactable by SJA radio & briefed to look out for signals from marshals			
Unreliable mobile phone network coverage at 2 – 3 locations on course, plus unreliable SJA radio reception.	"	Commercial radio provider engaged (including repeater stations) to ensure coverage over entire course, with separate (monitored) channels for marshals and medical team. Supplemented by volunteers from RAYNET at 6 key locations on the course	Radio system to be tested on Friday before event, before handover			
Procedures to ensure first aid in place before race start.	"	Contact phone numbers exchanged in event of problems.	SJA Medical Manager to report to race director on arrival 1 hour before race start. Race will be cancelled if first aid team do not attend.			
1 mile section of bridleway on half marathon route inaccessible to normal vehicles		Permission obtained from landowner for use of private lane & bridleway & gates to be unlocked during half marathon. Course director will strim hedge along access route prior to race	SJA 4x4 off-road ambulance to be located at this location until last runner has passed, then relocated to the grassed assembly area	Additional marshals will be deployed to assist	Marshal to ensure gates are unlocked before race start & locked on completion	
Gravel path on fun run route is accessible to normal ambulance vehicles under caution		Permission obtained from landowner for use of gravel path & gates to be unlocked during Fun Run		Marshals will be deployed to advise ambulance drivers	Ensure gates are unlocked before race start & locked on completion	

Ensure effective reporting of casualties by marshals etc.			Marshals will be deployed at approximately ½ km intervals around the course. All volunteers to be briefed on reporting of casualties to their radio control. Marshals' channel to be monitored by SJS medical control			
Ensure effective management and co-ordination of medical team		Dedicated medical control adjacent to the race start/finish, will provide communication (by mobile phone and SJA radio) between first aid posts, finish treatment areas, mobile units and the event organiser, under the supervision of the SJA Medical Manager	SJA radios to be tested before race day			
Bringing forward the race date to mid-August & postponing the start to 12.00 noon will increase likelihood of runners being effected by hot weather at midday in midsummer	"	The final decision on the start time will be made by the event 1 week before race day, based on weather forecast. Start will be brought forward to 9.30am if hot weather is forecast (particularly after period of colder weather). Decision to be communicated to entrants, volunteers, medical providers & the church. Monitor weather conditions in the week before the race.	If hot weather is predicted - provide an additional sponge station on course (before the last steep hill), and advise runners (before the start & at drink stations) to take care & slow down. Also provide cold drinks & ice in the primary finish treatment area			

Layout & management of finish area to provide easy access for medical team to identify, treat & evacuate casualties		A segregated (fenced & marshalled) ambulance lane will be provided through the grassed public assembly area and along the entire length of the finish	SJA landrover ambulance to be re-deployed on grassed area after main field has cleared bridleway section			
Shortage of experienced marshals		To be addressed by recruitment from other road races & endurance officials (through regional licencing panel)	Co-ordination of activities in the finish area to be agreed in advance with medical team			
Use public address system to communicate race day instructions to competitors		See adverse weather provisions	Pre-start briefing with race day final safety instructions to be provided by start director to assembled competitors using hand held megaphone. Sprint finishes will be discouraged			
Transport of exhausted half marathon runners		SJA patient transfer vehicle to be drive behind last half marathon runner to collect exhausted runners off the course back to the finish area.	Polyester blankets (not foil), drinks & radio to be provided			
Transport of exhausted fun run participants		Sweeper car to be provided by race organiser, with 2 CRB checked volunteers to collect exhausted fun run participants	Polyester blankets (not foil), drinks & radio to be provided			
Injury reporting		SJA medical control to report any serious injuries or hospital transfers to the race director as soon as possible on race day	Commentator & information desk briefed to direct relatives			

De-brief & review		SJA to provide written summary of casualties – based on UKA post-race return form	Race director to arrange post event medical team de-brief meeting & review			
5. Review Date			1 week after race date			

Medical Plan

- Covered on-course first aid posts (3 x 3m marquees) will be provided at 5km, 10km and 18km contactable by mobile phone and SJA radio. Each FAP will be staffed by 2 x SJA First Aiders with an AED, provided with 2 x fold-up stretchers (as treatment beds), plus chairs for observation, blankets, hot & cold drinks if required – see hot weather plan

- Mobile ALS will be provided by 2 x SJA paramedic ambulance cars initially located at the 10km first aid post (at the psychologically challenging turnaround point) and at the 18km first aid post, then relocating to the finish after the main field has passed, contactable by mobile phone and SJA radio

- Further mobile BLS plus AED will be provided by two SJA cycle first responders riding amongst the main field and at the rear of the race, contactable by mobile phone and SJA radio

- 1 x SJA ambulance will be located at the 18km first aid post, contactable by mobile phone and SJA radio

- A second SJA paramedic ambulance will be located at the finish, contactable by mobile phone and SJA radio

- 1 further SJA 4x4 landrover ambulance will be located on the inaccessible bridleway section on the half marathon route, then relocating to the grassed assembly area after the main field has passed, contactable by mobile phone and SJA radio

- Primary treatment facility. A marquee (6 x 10m) will be provided by the race organiser alongside the finish area to serve as a treatment facility. This will be accessible to ambulances. This will be staffed by 1 x doctor, 1 x nurse & 6 x first aiders, and provided with an AED, 6 x fold-up stretchers (as treatment beds), plus chairs for observation, blankets, hot & cold drinks, power & lighting. Ice will be provided if required – see hot weather plan

- Secondary treatment facility. A smaller marquee will be provided by the race organiser in the assembly area for first aid for more minor 'walking wounded' cases. This will be accessible to ambulances. It will be staffed by 2 x SJA first aiders. These first aiders will provide pre-race first aid & relocate to the fun run during the half marathon, contactable by mobile phone and SJA radio

- A dedicated medical control will be provided in the sponsor's office adjacent to the race start/finish, providing communication (by mobile phone and SJA radio) between first aid posts, the finish treatment areas, mobile units and the event organiser, under the supervision of the Medical Manager - whilst keeping the clinicians clear of logistical responsibilities

- A SJA Patient Transfer minibus will be provided to collect and transport exhausted half marathon competitors from the course to the assembly area, contactable by mobile phone

- If hot weather is predicted extra provision will be made by introducing an on-course sponge station, and providing cold drinks & ice in the primary finish treatment facility. In extreme weather consideration will be given to bringing the start time forward, and/or to advising competitors to run 'under caution'

Fun Run

All medical services provided for the half marathon will also be available for the fun run, in case of emergency

- 2 x SJA first aiders from the assembly area will be temporarily re-located to the fun run turn around point during the fun run

- A sweeper 'people carrier' car (with CRB registered volunteers) will be provided to collect exhausted fun run participants, contactable by mobile phone

Departures from UKA medical standards

None proposed

APPENDIX 5

GLOSSARY

This glossary is intended to explain and clarify the meaning of terms used in medical services to assist better-informed discussions between the race organiser, their medical provider and the licencing panel (officer)

Other Medical Resources

Accident & Emergency Hospital. The capacity of local NHS Accident & Emergency hospitals to receive patients from events will vary significantly from area to area across the UK, and according to demand from other patient workload or other events. It is common for ambulances carrying less seriously injured patients to be required to wait (with patients on board) outside hospital for significant periods of time during busy times until a bed becomes available. This needs to be taken into account in considering appropriate ambulance provision and treatment protocols for a race

Care Quality Commission ('CQC'). The regulatory body for all registered health and adult social care service providers, effective from April 2010. Race organisers engaging providers to deliver first aid and/or medical services must ensure that the chosen provider is registered with the CQC

Clinical Waste. Containment, storage & disposal of clinical waste, needles, 'sharps' and other medical equipment & supplies contaminated by bodily fluids etc should only be handled by the medical services provider or by a licensed waste contractor. Such waste should be clearly labelled and stored safely away from contact with the public or event staff/volunteers

Cycle/Motorcycle First Responder. A bicycle or motorcycle equipped to deliver a first aider or practitioner (paramedic, EMT or equivalent) to provide an initial response (possibly with a defibrillator and oxygen)

Emergency Care Practitioner (ECP). May come from either a paramedic, nursing or allied health professional background and most have additional academic qualifications, usually at university, with enhanced skills in medical assessment and extra clinical skills over and above those of a standard paramedic, qualified nurse or other ambulance crew such as technicians.

Emergency Medical Technician (EMT). Some EMT's are trained by IHCD to deliver ALS

Family Liaison. A member of the event team specifically designated to liaise with the families of critically injured runners. Duties may include providing families with contact information for key event staff (eg race director & medical director) and local statutory authorities (eg receiving hospital, coroner's office), arranging transport of family members to the receiving hospital, collection of injured runner's baggage, removal of their details from the race results & race photographs, issuing press statements etc. In larger races a waiting room may be provided for relatives, adjoining the treatment facilities, but separate from the public area

Identification of clinical team members. Instances of persons impersonating doctors & medical staff are not unknown. Qualification & identification checks of staff & volunteers will already have been carried out by medical providers registered with the Care Quality Commission (such as your NHS ambulance service, St John Ambulance, British Red Cross or independent private medical provider) prior to appointment, but checks (including passport or driving licence photo ID) should be considered when employing individuals outside such bodies. Registrations of clinical team members can be checked through relevant websites (the General Medical Council

www.gmc-uk.org for doctors, the Health Professions Council **www.hpc-uk.org** for paramedics and the Nursing and Midwifery Council **www.nmc-uk.org** for nurses)

Similarly whilst assistance to injured runners by qualified members of the public (typically runners or spectators) is welcome, unidentified clinicians should be asked to step aside and hand over care on the arrival of the event medical team

Medical Practice Insurance. We recommend that only CQC registered organisations with medical practice insurance should be used as medical service providers at public events

UKA insurance, obtained following the issuing of the road race licence, will cover first aid provided by qualified event team volunteers both for smaller races of under 150 competitors and up to 11km distance and supplemental to the services by the appointed medical provider at larger and longer distance events, but will not cover either medical treatment or first aid provided by other bodies

Ofqual. The regulator of qualifications, examinations and assessments in England and vocational qualifications in Northern Ireland, including First Aid training providers

Operating Department Practitioner (ODP) are mainly employed in surgical operating departments but can be found in other clinical areas including Accident & Emergency, Intensive Care Units, and Ambulance Service. The title of 'operating department practitioner' is a protected title in the United Kingdom and the profession has been regulated since 2004 by the UK's Health Professions Council. ODPs work as a member of a multi-disciplinary team that includes doctors, nurses and support workers

Other emergency Health Care Professionals ('HCP'). There are a number of other registered health care professionals qualified to work in emergency care including Emergency Care Practitioners ('ECP').

Other emergency first aiders. There are also a number of other practitioners qualified to work in emergency first aid including Emergency Medical Technician ('EMT') and Emergency Care.

Patient transport vehicle (PTS). A specialist vehicle providing transport of a number of non-critically injured patients (either to the finish or to hospital) staffed by trained first aiders. Capable of transporting patients lying down, seated and/or in wheelchairs

Resuscitation. In terms of event medicine - the term commonly refers to the 'ALS' life-saving response to cardiac and/or respiratory arrest, intended to stabilise a casualty prior to transportation to hospital

Note : the term 'resuscitation' has a more defined meaning in clinical circles used to describe a higher management of critical care cases, including intubation and other interventions rarely provided at road races

Treatment Facility. A facility (building or marquee) used for treatment and assessment of casualties, normally provided with privacy, shelter, lighting, power & heating. The allocation of resuscitation bays, treatment beds and observation beds (or chairs) should be determined by the medical team

The location of other treatment facilities will be determined by the requirements of the event, course configuration, ambulance access etc. At larger events it is common to provide a primary treatment facility for more serious cases within the competitor only 'sterile area' and a secondary treatment facility for 'walking wounded' (primary care) in the public assembly area

Consideration must be given to safe vehicle access for ambulances to and from treatment facilities

Event Management

This section deals with areas relating to management of the event

Accident reporting. Race organisers are required to report fatalities and serious medical incidents to UK Athletics as soon as possible after the event. Contact details are listed on the bottom of the post-race return form

Injury or sickness of runners are not reportable to the Health & Safety Executive or local authority environmental health department as 'workplace accidents' (under RIDDOR), unless caused by the negligence of event staff (eg runner tripping over equipment)

Adverse weather planning. Contingency plan in the event of adverse weather conditions on race day, for unseasonably sunny, hot, humid, cold, wet or windy weather. Typically will include responsibility for monitoring long/medium range weather forecast in the period leading up to the race (useful information sources include local BBC or MetCheck websites) procedures for providing additional drinking water, sponge stations or showers for hot/humid weather, blankets & shelter for cold/wet weather, warning less experienced competitors to take extra care (such as slowing down & adjusting target times in hot weather, or wearing extra clothes & getting changed quickly in cold & wet weather), circumstances & procedures for cancelling the race, shortening or diverting the course & notifying competitors & officials
Heat Injury Guidance – based on wet globe bulb temperatures

- Above 28^{o}C (82^{o}F) – high risk of hyperthermia ('over-heating') and heatstroke. Races should be cancelled, postponed or modified (ie shortened)
- 23-28^{o}C (73-82^{o}F) – moderate risk of hyperthermia ('over-heating') and heatstroke. Runners should be advised to slow down & take additional measures to ensure hydration. Runners with sensitivity to heat or humidity to be advised not to compete. Additional shelter and drinking water, also 'shower' stations should be provided, plus adequate supplies of ice for medical team
- 18-23^{o}C (65-73^{o}F) - increased risk of hyperthermia ('over-heating') and heatstroke. Runners should be advised to take measures to ensure adequate hydration. Runners with high sensitivity to heat or humidity to be advised not to compete
- Below 18^{o}C (65^{o}F) – Low risk of heat injury – either hyperthermia ('over-heating') or hypothermia ('exposure').
- Below 10^{o}C (50^{o}F) – increased risk of hypothermia ('exposure'). Runners should be advised to adjust clothing & preparation. Additional shelter and hot drinks should be provided for runners, plus heating and hot drinks for treatment centres

Unusual weather patterns and sudden changes in weather on (or even during) race day can have significant adverse effects on competitors (volunteers & spectators), for instance when a sudden change to hot and/or humid weather occurs on race day after a sustained period of cool, dry weather in the weeks/ or months leading up to the race. Variations and extremes of weather will also have significantly greater adverse effects at longer distance races over 10k, than at shorter distances

Heatstroke may occur in races of any distance, including races under 5km. Exertion related injuries and hyponatremia ('over-drinking') are more likely in races over 10km

Age suitable distances. See UKA Rules of Competition. For fun runs see UKA Licence Standards

Designated 'drop out' point. A pre-arranged location on the course, advertised with facilities for exhausted (but otherwise well) runners to drop out of the race, with transport & shelter etc back to the finish. Provision needs to be made for exhausted runners, particularly in exposed locations or unfavourable weather, to prevent them deteriorating to the point where they require medical treatment

Course & Venue Maps. Detailed briefing maps should be provided to marshals and medical team members incorporating a numbered grid overlay to accurately identify casualty locations, plus instructions on access points for ambulance vehicles, any locked gates etc

Event team briefing. Event staff and volunteers are not expected to carry out medical treatment, unless qualified to do so, although the provision of first aid by qualified event team volunteers both for smaller races of under 150 competitors and up to 11km distance and supplemental to the services by the appointed medical provider at larger and longer distance events –typically administered by a marshal until the arrival of a medical team member - is covered under UK Athletics public liability insurance.

Event staff and volunteers should be briefed to assist both runners in difficulty and medical team in getting to and evacuating an injured runner. In many races the marshal will be the first point of contact for an injured runner. They should be briefed to look out for runners in difficulty, to notify the medical team (contact details & means of communication) including details of the location and injury type (eg conscious/unconscious, breathing/not breathing, head injury, minor injury etc)

The risk assessment should identify any points on the course which are inaccessible to normal ambulance vehicles, and provide measures to assist and direct medical staff to casualty locations, and to assist in extracting casualties from inaccessible locations. Typically this might include briefing marshals on the nearest access point for ambulances on each section of the course (which may be some distance from a casualty location), including GPS or specific locations to give for 999 calls (112 for mobile phones), instructing marshals to meet ambulances on arrival at the venue and to direct them to the casualty location, measures to ensure that any locked access points are unlocked prior to start of the race, and provision of supplementary equipment (eg stretchers and volunteers) to assist in carrying casualties from inaccessible locations to the nearest point accessible to ambulance vehicles.

See Marshal's Briefings – Appendix 10 & 11

Injury & fatality protocols. Procedures for handling family, press and official (health & safety executive, coroner, UKA etc) enquiries in the event of an injured runner (or fatality) at or as a result of the race should be pre-arranged before the event between the event organiser and medical provider. See family liaison

Licensed road race. A 'road race' staged by an affiliated club (or associate member) of the one of the national athletic associations (England Athletics, Scottish Athletics, Welsh Athletics, Athletics Northern Ireland) under a UK Athletics Road Race Licence

Licence Officer. The designated regional panel (or officer) appointed by the national association to administer race licence applications on behalf of UK Athletics. Can also be a useful source of information and support for race organisers

Medical advice to competitors. Information provided to entrants on common medical conditions arising out of participation in endurance races such as pre-existing medical conditions, fitness to compete, training, diet, hydration strategy (dehydration and over-drinking), sickness before race

day, race day tips, injury prevention and treatment. This information is typically provided before the race, often at time of entry, in race packs and/or in final instructions

Sprint finishes should be discouraged by race organisers and announcers/commentators, except for elite athletes who incorporate regular speed sessions within their training

A useful reference is the **www.runnersmedicalresource.com** website by the **run**britain Medical Advisory Group, and available as a free point of reference and information resource for use by licenced road races

Medical demand. Medical demand increases in later stages of the race (eg after 10 miles for a half marathon) & according to the psychological profile of the course (eg higher incidents of collapse and/or drop out at first aid posts, or at the bottom of a hill, away from spectators)

Medical Plan. A description of the medical services to be provided by your first aid or medical provider, including a summary of the resources (numbers & locations of first aid posts, ambulances etc), treatment protocols (extent of on-site treatment services & procedures for transportation of urgent casualties), access & use of equipment & drugs, insurance etc plus details of facilities required to be provided by the race organiser

Patient confidentiality & privacy. Medical staff and event team members are required to respect patient confidentiality and not to release information which could result in the identification of any patient (even to family members) without the consent of the patient. Races should include a disclaimer within the entry form (and on the rear of the race number) authorising release of a runner's personal and contact details by the medical team to the event staff for the purpose of contacting relatives and statutory authorities in the event of a medical emergency. Staff should be briefed not to disclose personal details (eg name, or age) over the radio or public address system, in conversation or in correspondence

Wherever possible treatment facilities should be screened to respect patient privacy & means provided (eg security) to exclude public access (photographers etc)

Race date/time selection. The important of choosing a date and start time to avoid extreme weather conditions – for instance cold weather in mid-winter (early morning or late afternoon) & hot weather in mid-summer (or midday)

RAYNET. A national licensed amateur radio network within each local authority in the UK providing emergency communications for statutory and volunteer emergency service organisations. Local RAYNET groups are often willing to provide radio communications for road races, as a useful training exercise. For contact details of your local group see **www.raynet-uk.net/main**

Rear of Race Number. A form on the rear of the race number worn on race day, completed by the competitor with their own contact details, next of kin & previous medical history (eg current medication), to assist identification and appropriate medical treatment in the event of collapse. Also including a disclaimer giving consent by the runner for the medical team to release details of the patient to the race organisers for the purpose of contacting next of kin in the event of a medical emergency

Provision of this form on the back of race numbers is a requirement for all UKA licenced road races under Rules of Competition 206 (1 & 2)

Response time. The time taken from the initial call for medical assistance (eg from the marshal) until the arrival of the first medical team at the scene of the incident. See appendix 6

Road Race. For the purposes of this paper, 'road race' is assumed to mean any road running event receiving a UK Athletics Road Race Licence

Safety Advisory Group ('SAG') or equivalent. The regulatory group set up by each local council to co-ordinate statutory (eg ambulance, police & fire) and local authority services (eg highways safety, refuse, public transport, parking, food hygiene, emergency planning) for public events outside the requirements of the Licensing Act or the Safety of Sports Ground Act. This is the first point of contact for road race organisers with the local council, NHS ambulance service, police, highways etc. Sometimes known as the 'event safety group'

Arrangements vary from one local authority to another, but SAG groups are often chaired by a representative from the licencing section from the public protection or environmental health department

UKA Adjudicator. The adjudicator is a recent innovation, a UKA licenced endurance official appointed by each race organiser to inspect the event to ensure compliance with Licence Standards, reporting to the regional licencing office (formerly county licence officer)

Adjudicators replace the previous scrutineering scheme by the British Association of Road Races ('BARR') scrutineers, and some of the reporting duties previously undertaken by the race referee

UKA Licence Standards. The mandatory minimum safety and management standards required to be met as a condition of staging a road race under a UK Athletics Licence, reviewed annually by the **run**britain technical group

Unlicensed road race. A road race staged without a UK Athletics Licence. For instance a road race organised by a charity or commercial organisation not affiliated to UK Athletics

Medical treatments

Note : This section is intended to inform race organisers about the most likely injuries & treatments to be experienced at a road race, to inform discussions with your medical providers

This guidance does not attempt to conduct a review of appropriate medical interventions, or treatment guidelines. Medical treatment protocols for resuscitation at road races should follow the guidelines of the UK Resuscitation Council. Clinical treatment protocols for exercise induced conditions such as hyponatremia, exercise induced collapse and heat illness (heat stroke and hypothermia) will need to be defined by the respective medical provider/s

Airway management. In terms of road race medical services, airway management will largely be restricted to first aid procedures to ensure oxygen supply to the lungs in cases of respiratory (breathing) failure

Intubation is an emergency procedure used in cases of severe respiratory failure, involving the insertion of a flexible plastic tube into the trachea to protect a patient's airway & provide a means of mechanical ventilation. Rarely required at road races

AED (automated external defibrillator). A portable machine that can restart the heart in some cases of cardiac arrest by delivering an electric shock

BM monitor (Glucometer). Instrument to measure blood glucose levels. Useful for diagnosis of hypoglycaemia. Sometimes used in primary treatment facilities at larger races, relatively cheap

equipment. Should ALWAYS be available if a health care professional – Doctor, Nurse or Paramedic are on site

Clinical drugs. The supply & prescription of clinical drugs to an event, typically for pain relief, cardiac resuscitation, asthma relief & intravenous (injection or drip) fluids is the responsibility of the doctor/s and/or paramedic/s

Cardiopulmonary resuscitation 'CPR'. Cardiopulmonary resuscitation 'CPR' focuses on the medicine 'ABC's of pre-hospital emergency care :

- Airway - the protection and maintenance of a clear passageway
- Breathing - inflation and deflation of the lungs
- Circulation - providing an adequate blood supply to critical organs

Dehydration. Condition due to low fluid intake, often associated with over-exertion in hot weather. Rehydration treatment is normally by oral fluid. In extreme cases intravenous fluids (saline injection or drip) may be required

Mild to moderate dehydration is common during and after participation in endurance events, particularly in hot or humid conditions. Dehydration is generally easy to identify and to treat or self-medicate. Far more dangerous is the common practice of 'over drinking' – see Hyponatremia below. Runners should be educated in sensible hydration strategy for both pre-race training and race day conditions. Guidance on hydration strategy is contained in the **www.runnersmedicalresource.com** website

See adverse weather planning above

'Heart attack'. A life threatening medical emergency caused by blockage of a coronary artery supplying blood to the heart, usually associated with coronary artery disease, often accompanied by chest pain & shortness of breath potentially leading to heart damage, cardiac arrest and death. Primary first aid response is 'CPR' (cardiopulmonary resuscitation) and external defibrillation

Hyponatremia ('Over-Drinking Water'). Sometimes fatal condition causing kidney failure due to low blood salt levels, often associated with failure to replace salts lost through over-exertion (and sweating) in hot weather, and dilution due to excessive 'over-drinking' of water

Cases of hyponatremia (and fatalities) have increasing been reported at UK road races in recent years. Hyponatremia can be difficult to diagnose and medical staff should be alert for the possibility of this diagnosis. The best way to prevent serious illness and death from Hyponatremia is to educate runners on the dangers of over drinking. Runners should rely on their thirst to tell them when they should drink – whilst being aware that the excitement in anticipation before a race can also cause a 'dry mouth'. See further advice to runners on avoiding hyponatremia at the **www.runnersmedicalresource.com** website. Also see adverse weather planning above

Hyperthermia. 'Overheating of the body'. Ranges from mild symptoms with exhaustion to severe and potentially life threatening heatstroke. People suffer hyperthermia when the body's temperature control system is overloaded, often associated with exertion in hot and humid weather. As distinct from Hypothermia ('exposure') below

Treatment will normally include rest, protection from further heat exposure (in shaded treatment facilities) provision of fluids and cooling (ice treatment). In hot weather conditions it is essential that adequate supplies of ice are provided at treatment facilities. See adverse weather planning

Hypoglycaemia. Low blood sugar typically associated with over-exertion (and diabetes), usually treated by oral fluids ('sugary' sports drink). In more extreme cases dextrose/glucose type intravenous fluids (injection or drip) may be required

Hypothermia. 'Exposure'. A condition where the normal body temperature drops below 35^{o}C. Sometimes referred to as 'exposure' in cold & wet weather. As distinct from Hyperthermia ('overheating') above. Usually determined by measurement of core body temperature using rectal thermometer

Treatment is normally by rest, protection from further exposure and warming the body (covered and heated treatment facilities, blankets and hot drinks). See adverse weather planning

Other medical disciplines. Physiotherapists can be useful to treat runners who experience cramp immediately after finishing the race. Sports masseurs & podiatrists - useful, but not essential

Pre-existing medical conditions. Whilst a number of medical conditions (eg asthma, diabetes, heart disease) can benefit from regular exercise, runners with certain medical conditions (eg angina) should be advised in pre-race literature or by reference to the **www.runnersmedicalresource.com** website) either not to compete in endurance events, or only to do so on the advice of their GP

Runners should also be advised not to compete if they have suffered a fever or sickness in the week before the race

Triage. The initial medical diagnosis of injured and/or sick runners by the medical team

APPENDIX 6

PLANNING & DELIVERY OF MEDICAL SERVICES

A summary of the planning & delivery process for medical services at road races is set out below.

Documentation

To satisfy both the requirements of the 'duty of care' and UKA licence conditions an event organiser must ensure that a Medical Risk Assessment and a Medical Plan are prepared in good time before the event, both must be recorded in writing and should be prepared in collaboration between the event organiser and the first aid and medical provider/s.

The medical risk assessment analyses the type, severity and probability of hazards, considering appropriate control measures to reduce that risk, taking into account both the clinical need and the individual circumstances of the event. At larger events the action points arising out of the risk assessment are often extracted for convenience into a separate safety (or operational) plan for use by the event team on the day

The event medical plan is in effect the operational plan for the medical team, describing the first aid and medical resources to be provided to the event including :

- Names, responsibilities, locations & contact details for key first aid & medical staff, key event team members & emergency services
- Details & locations for first aid & medical resources (static & mobile)
- Details of the local NHS receiving hospital/s
- Command & communication structures. Sign in and stand down procedures
- Services & equipment to be provided by the event organiser
- Treatment protocols for likely medical conditions
- Arrangements for recording & reporting of casualties. Family liaison & welfare
- Reporting advice to marshals
- Volunteers, staff & first aid / medical team welfare
- Fatality protocols & media relations

Local Authority Consultation

Prior to the tender process initial consultations should be undertaken with the emergency & event planning officer for your local NHS ambulance service (and accident & emergency hospital/s) – through the local authority Safety Advisory Group ('SAG') or equivalent, and the UKA area licence officer.

Determining Appropriate Medical Resources

- Select the relevant matrix for your event, using the event distance & competitor numbers, to determine the recommended 'standard minimum' medical cover. The 'standard minimum' cover is based on a number of stated assumptions about the profile of the event.
- Conduct the medical risk assessment comparing the profile of your particular event against the assumed 'standard' variables.

- In preparing the event medical plan the 'standard minimum' cover recommended by the appropriate matrix should be adjusted to reflect the higher (or lower) risks of your particular race, as identified in the medical risk assessment.

Pre-Contract / Tender Stage

The appointment of the first aid / medical provider should follow a quotation/tender exercise and formal order for supply of defined services based on an assessment of the risk and medical requirements.

Great care should be taken in the selection of first aid / medical providers for public events. Besides cost, a range of factors needs to be considered, including evidence of qualification & insurance (registration with the Care Quality Commission – 'CQC'), the range of services & skills available, expertise & experience at similar events (written references should be obtained & performance at other events observed), reliability of attendance (voluntary sector providers rely upon turnout by volunteers),

There are advantages in continuing to use previous providers, having gained valuable experience of your particular event, course configuration, competitor & injury profile, and established communication paths with your event team. But periodic review of medical providers is also beneficial (say every 2-3 years).

Option A – Selection by Negotiation - Preferred Medical Provider

When the first aid / medical provider has already been pre-selected, for instance when the race organiser wishes to re-appoint the previous year's provider, the following appointment process is appropriate :

- The appointment of the preferred first aid / medical provider by the race organiser. Based on a 'letter of intent' to place a contract, subject to confirmation of final requirements.

- The race organiser and first aid / medical provider jointly prepare the medical risk assessment & jointly determine medical requirements using the UKA Good Practice Guide to Medical Services.

- The submission of quotation for medical services by the first aid / medical provider. The placing of a formal order for defined medical services by the race organiser.

Option B – Selection by Tender – New Medical Provider

This appointment process is applicable when the race organiser wishes to consider appointing a new first aid / medical provider, for instance for a new event or significantly changed event, or for periodic review of first aid / medical services at an existing event :

- The race organiser prepares the draft medical risk assessment & determines a provisional requirement for first aid / medical services based on the UKA medical services guide.

- The submission of competitive tenders for medical services from alternative suppliers, based on the provisional medical requirements.

- The appointment of the successful first aid / medical provider by the race organiser based on a provisional order, subject to confirmation of final requirements.

- Joint review of the medical risk assessment & medical services requirement carried out by the race organiser and first aid / medical provider.

- The submission of amended quotation from the appointed provider, based on the amended requirements – if applicable.

- The placing of a formal order for defined medical services by the race organiser, based on the agreed final requirements.

Post Contract

Arrangements following the appointment of the first aid / medical provider can be briefly summarised as follows :

- The race organiser should prepare the Event Safety Plan – incorporating the action points identified in the risk assessment for use by the event team on race day.

- The chosen first aid / medical provider should prepare the Medical Plan, defining the medical resources, treatment protocols, command & communication and emergency protocols - for approval by the race organiser.

- The race organiser should organise pre-race liaison and/or meeting between the event & first aid / medical teams, to discuss final arrangements for race day, contact details etc.

Race Day Delivery of Medical Services

A brief summary of the race organisers responsibilities for the provision of medical services on race day are set out below :

Attendance – the race organiser must ensure that procedures are in place to check that the agreed first aid / medical team resources have arrived on the day, before the race is started.

Identify casualties – the race organiser must ensure that marshals and/or first aid observers (with means of communication) are located at regular intervals around the entire course to promptly identify & report injured competitors to the event and/or medical teams. Ideally a 'sweeper vehicle', cyclist or runner should be provided to identify the last competitor (and enable marshals & first aid and medical team members to stand down) and to ensure that no competitors are left remaining on the course.

The frequency of observers should be increased in the last third of the race distance, and additional observers provided in the finishing straight, finish area, and post-finish (assembly) areas.

Assess casualties – the race organiser must ensure that all event marshals are briefed to carry out an initial assessment of the medical condition of any casualty (checking breathing, consciousness, responsiveness, pulse, obvious injury, illness or medication noted by the competitor on the medical form on the rear of the race number).

Report casualties – the race organiser must ensure that event marshals are provided with means to communicate with the first aid and medical team (either direct or via event control) from all parts of the course.

Provide BLS/ALS to casualty – the race organiser must ensure that mobile first aid and medical resources are available to reach a casualty at any part of the course to provide an effective initial medical response within 8 minutes of receipt of a report of a life-threatening injury.

Evacuate casualty – the race organiser must ensure that resources are provided to evacuate casualties from any part of the course to the event treatment facility (if provided), or to hospital, and to collect & transport 'exhausted' runners back to the finish.

Inform – the race organiser must ensure that resources are available both to receive information on casualties from the first aid and medical team (particularly serious or emergency cases) and to communicate information on casualties to family members & emergency services – subject to patient confidentiality.

Before standing down from the event the first aid and medical provider should provide the race organiser with a brief report (verbally or in writing) summarising any serious cases or emergency cases treated at the event

In the event of fatality or serious injury notification must be provided to UKA Athletics Services by the race organiser as soon as possible after the event.

Post-Race Review & De-Brief

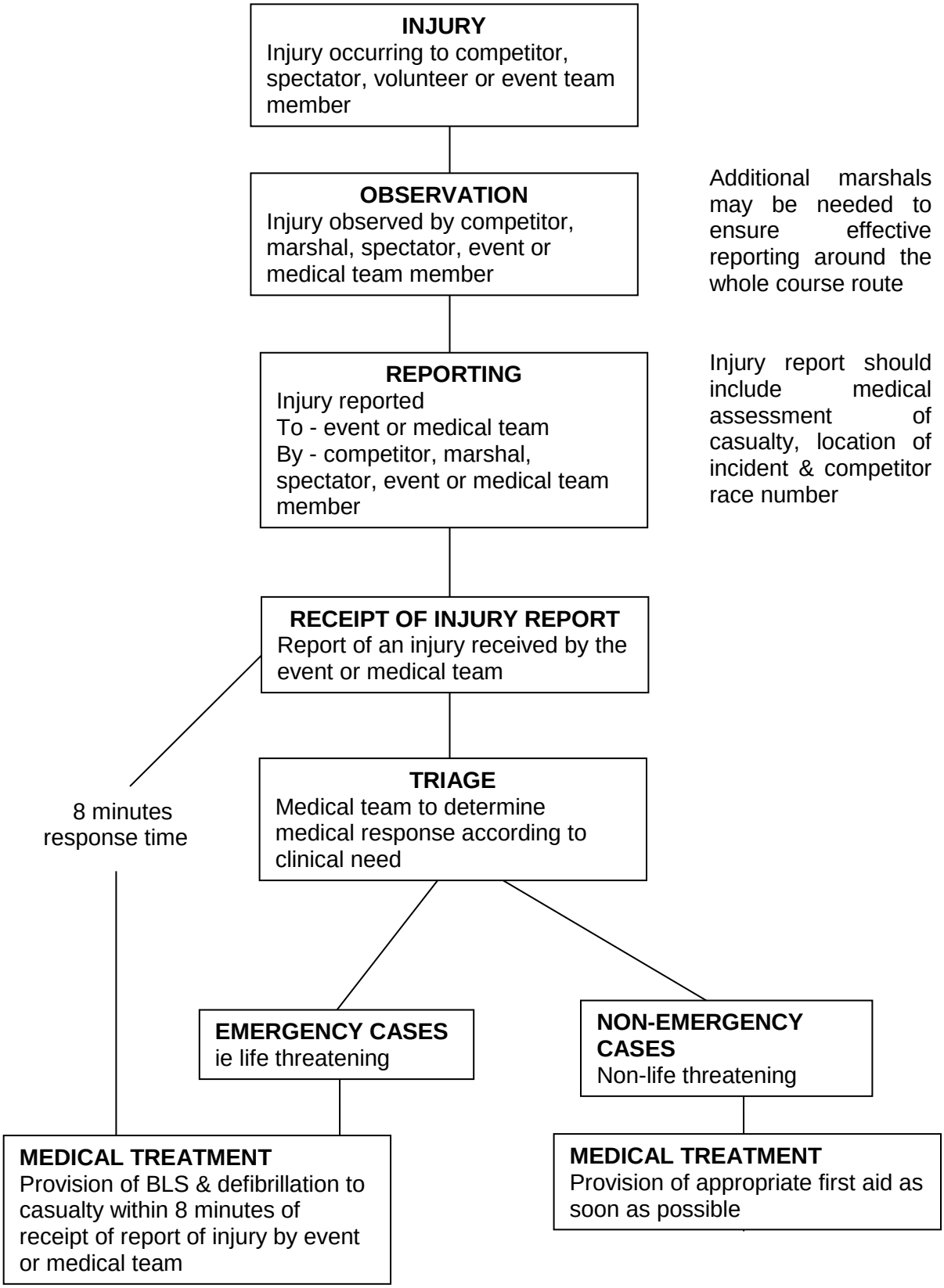
- The first aid and medical provider should provide the event organiser with a summary report of the total number of medical contacts (patients treated) and details of any serious cases (hospital transfers etc)

- The race organiser should submit the completed UKA Medical Return form to the licence officer based on the incident report provided by the first aid and medical provider

- The race organiser should carry out a post-race review & de-brief jointly with the first aid and medical provider

- In the event of serious incident, fatality, accident or any circumstance '*which might reasonably be expected to give rise to a claim*' the race organiser must also notify UK Athletics using the form on their website at http://www.uka.org.uk/governance/health-safety/what-to-do-in-the-event-of-an-accident-or-dangerous-incident/

APPENDIX 7 **INJURY REPORTING & RESPONSE PROCEDURES**



APPENDIX 8

MODEL CONTACT FORM ON REAR OF COMPETITORS' RACE NUMBERS

<table>
<tr><td colspan="4"><u>RACE ENTRIES ARE NON-TRANSFERABLE</u>
Any participant taking part without a valid paid entry registered in their own name will be disqualified</td></tr>
<tr><td colspan="4"><u>COMPETITOR'S MEDICAL DETAILS</u>
All runners are required to complete the personal details on this form <u>for use in a medical emergency</u>. Please complete all sections of the form carefully in block capitals using waterproof biro ballpoint pen or similar. Where competitors are under 16 yrs this form must be completed by parents or guardians</td></tr>
<tr><td colspan="4">Runners Details :</td></tr>
<tr><td>Surname</td><td>First name</td><td colspan="2">Date
of birth</td></tr>
<tr><td>Address

Postcode</td><td colspan="3">Please list brief details of any relevant medical history, current medication and allergies</td></tr>
<tr><td colspan="4">Any runner with an existing medical problem which requires special attention, such as epilepsy, diabetes or a history of heart problems, is required to mark a large cross in black felt tip pen on the front of their race number</td></tr>
<tr><td colspan="4"><u>NEXT OF KIN</u> As a condition of entry to this event all runners agree to their personal and medical details being released by the medical team to the event organisers to inform next of kin and statutory authorities in the event of a medical emergency</td></tr>
<tr><td colspan="4">Next Of Kin Contact Details : (for race day)</td></tr>
<tr><td>Surname</td><td>First name</td><td>Are they at the event ?</td><td>Y/N</td></tr>
<tr><td>Mobile phone no

Home phone no</td><td colspan="3">Address

Postcode</td></tr>
</table>

All UKA licenced road races must provide this pre-printed form on the rear of competitors' race numbers, Rules of Competition 206 (1 & 2)

The conditions of entry should include the medical disclaimer including the runner's consent for his/her personal and medical details being released by the medical team to the race organiser to inform next of kin and statutory authorities in the event of a medical emergency

The race rules should also include a requirement for competitors to complete the contact form before competing. Reminders should be provided in pre-race publicity and race day signage and/or announcements, plus facilities

APPENDIX 9

FINISH AREA ARRANGEMENTS & MANAGEMENT

Special consideration should be given to the arrangement and management of the race finish area to ensure prompt identification of casualties and clear access for medical teams. Planned arrangements for the finish area should be discussed and agreed between the event and medical teams in advance of race day

General guidance on the layout and management of finish areas is set out in UK Athletics 'Road Race Handbook', published by the RunBritain technical group

Peak demand. In shorter distance races, or races with larger competitor fields finisher numbers can exceed 100-150 across the finish line per minute at peak finishing time. Sufficient marshal and medical resources must be provided to deal with a significant proportion of runners requiring assistance in the primary finish area, suffering from conditions varying from temporary exhaustion, to unsteady balance, vomiting, or even collapse

Runners' collapse. Most incidents of collapse due to exhaustion (or cardiac arrest) at endurance events occur in the primary finish area, others are commonly encountered in the last 10% of the course as runners become more exhausted, at more physically challenging points of the course (such as the top of steep hills), or at more psychologically challenging points (such as turnaround points, at the bottom of steep hills, or where spectators are scarce). But collapse due to cardiac arrest can occur at any point around the course

Interaction between marshals and the medical team. Marshals play a vital role in the finish area and on the course identifying and assisting casualties, preventing further injury (by catching stumbling runners, or protecting them from traffic or being trampled by following runners), and in reporting injuries to the medical team, assisting the medical team get access to and to repatriate casualties. It is essential that the arrangements for communication and co-operation between marshals and the medical team for the assistance and reporting of casualties are agreed and clearly understood by all parties before race day

Exclusion of non-essential personnel. As far as possible non-essential personnel should be excluded from the primary finish area, allowing clear access for catching marshals and the medical team. Separate facilities or viewing areas should be provided for spectators & general public, press, sponsors, officials etc and provision made to prevent re-entry by runners who have already finished waiting for friends etc still on the course

Primary treatment area. A first aid post, or facility provided within or with direct access to the primary finish area to provide immediate response to urgent casualties at the race finish. Ideally with have direct ambulance route from the course and to the shortest route to the local NHS A&E hospital

Secondary treatment area. A first aid post provided after the post finish area at larger races to provide treatment of more minor 'walking wounded' cases. Ideally with direct access to the course route, typically to receive exhausted but uninjured runners repatriated by the sweeper bus from the course

Timing methods. The method of timing at a race finish selected by the race organiser can significantly effect the arrangement and management of the finish area, particularly for shorter distance races, or races with larger numbers of competitors when finisher numbers can exceed 100-150 across the finish line per minute. The following notes are provided for the benefit of medical providers unfamiliar with the alternative timing methods available

With traditional manual timing (or 'hand timing') the finishing time of each runner is recorded by a timekeeper using a hand held stopwatch as the runner crosses the finish line, and their race number usually separately recorded as they emerge from a finishing funnel at the end of the secondary finish area. The finish times and sequence of finishers race numbers are then merged to produce a single results list

With modern chip timing each competitor's finishing time and number is recorded automatically as the transponder in their timing chip (typically worn on their shoe, ankle or on their race number) crosses a series of mats laid on the ground on (or under a wire suspended over) the finish line

In hand timed races the secondary finish area is usually divided into long narrow funnels through which runners walk slowly in single line in finish order. This has the advantage (over chip timed finishes) as side barriers used to segregate funnels and the runner behind & in front of each competitor tend to assist unsteady competitors as they walk down the funnel. On the other hand segregation into long narrow funnels can restrict access for the medical team, unless clear trolley lanes for medics (with intermediate access points, and ready exit points at each end) are provided alongside the runners funnels. See layout plans in the UKA Road Race Handbook

Chip timed finishes which are becoming more and more common, particularly at larger races, have the benefit of being free of finishing funnels and simpler to manage, providing easy access for the medical team, but requiring closer attention by catching marshals and the tendency to 'clutter up' with non-essential personnel and finished competitors waiting on the line for friends etc still to finish

Sterile area. The area provided at the finish of larger races for competitors, medical team, officials etc from which spectators, general public etc are typically excluded. As distinct from 'public' or unrestricted areas

Primary finish. The area immediately adjacent to and behind the finish line where competitors change down from running to walking

Secondary finish. The area between the primary finish and post-finish allowing runners to recover and walk immediately after finishing - with sufficient capacity to avoid congestion of finished runners backing up over the finish line. In hand timed finishes this area is normally subdivided into narrow finishing funnels

Post Finish. The area for distribution of drinks, medals, race mementoes, goody bags etc and removal of timing chips. This should be placed far enough from the finish to avoid congestion over the finish line. At larger races typically prior to dispersal into the public assembly area

Public address systems. Race announcers or commentators, typically provided at larger races, play an important role in providing final safety instructions or information on race day changes to runners assembled at the race start (see adverse weather planning above), and in the finish area, including requests for runners to keep walking through the finish area (not to linger or obstruct), information to spectators and in the event of emergency, evacuation etc

PA systems within finish areas should be arranged (speaker location, sound levels & duration of broadcast) so as not to impede communication between marshals, runners and the medical team. Loudspeakers should not be provided adjacent to the primary finish or treatment areas

Incidence of finish line collapse at endurance events is significantly increased where competitors engage in sprint finishes. Runners should be discouraged from sprint finishes in pre-race advice and race day public announcements unless they are experienced or elite athletes with regular practice at interval or speed training. The practice of commentators encouraging sprint finishes by less experienced runners by 'counting down' to key finishing times (eg 20 mins for 5km, 40 mins for 10km or 90 mins for half marathon) is dangerous and should be discouraged

Forward 'catchers'. Experienced marshals provided to identify and assist exhausted runners prone to collapse in sight of the finishing line, directing collapsing runners to the medical team

Primary 'catchers'. Experienced marshals provided to identify and assist exhausted runners prone to collapse or to sudden stop (blocking the path of following runners) as they cross the finishing line, directing collapsing runners to the medical team or recovery areas (typically barriers provided as leaning posts) at the side of the finish area, whist keeping the central pathway clear. Typically working in pairs on either side of the finish area

Secondary 'shovers'. Experienced marshals encouraging runners to keep walking through the finish area (within funnels at hand timed finishes) and preventing access by unauthorised personnel or the re-admission of runners already finished

Post-finish observers. Marshals provided in the post-finish area to assist and direct 'walking wounded' runners to the first aid post, and to identify cases of post finish area collapse

Post finish refreshments. Drinking water must be provided adjacent to the finish area at all endurance events. The provision of sugary energy drinks and/or food items is also recommended to reduce incidence of post finish area collapse. Drinks should also be provided at first aid posts and treatment areas for distribution by medical team. For requirements on drinks on course see UKA licence standards. Also see adverse weather planning above

Personal hygiene. Marshals should try to avoid contact with a casualty's bodily fluids (vomit, blood, urine etc). Basic hygiene should be provided to clear up any spills and to clean marshals. Sterile gloves, bagged sand, disposable sick trays, stiff brooms and personal wash facilities are useful

APPENDIX 10

MARSHAL'S BRIEFINGS

ASSESSMENT & REPORTING OF CASUALTIES

Protect the Casualty

Protect the casualty from further injury, or other runners from tripping over them. Deploy marshals to divert runners and/or vehicles around the casualty. Do not move the casualty if there is any indication of neck or back injury – otherwise move them to a safe location (where they can easily be evacuated) & place in the recovery position – see CPR notes below

Assess the Casualty

- Is he/she conscious ? Are they responding (talking sensibly) ?
- Is there any obvious sign of injury ? eg bleeding, bruising, twisted limbs

- If they are unconscious – are they breathing freely ?
  If not check that their airway is not obstructed
  ** Note checking the pulse is not a reliable indicator **

- If unconscious or not responding check the back of the casualty's race number for details of any medical condition listed & report to the first aid and medical team.
  Note : If you remove the race number make sure you hand it to the first aid and medical team on their arrival.

Report the Casualty

Report the casualty immediately to your team manager

Phone number to report casualties ……* to be completed *
Radio channel to report casualties ……..

Please try to speak calmly & have the following information ready when you call :

- Your own name, contact details (phone number or radio call sign) & time of the incident
- Exact location of the casualty
- Casualty's race number (do not give out the casualty's name or personal details over the radio – this is OK on the phone)
- Nature of the incident & condition of the casualty - including any notes on back of race number

For instance :
Marshal John Smith at point 14.
requesting medical support for injured runner at junction of Avon Road and Broadmead Avenue.
Male competitor race number 234 collapsed & unresponding but conscious and no obvious injury, declared as diabetic on back of race number

Ensure your message is acknowledged, but don't contact control again unless the condition of the casualty either significantly deteriorates or improves. The first aid and medical team will prioritise their resources to the most urgent cases first – and repeated calls about your casualty

could block calls about other more urgent cases, or lead the medical team to believe they are required at multiple casualties, or to ignore another reported casualty

Stay with the casualty

Stay with the casualty until the first aid and medical team arrive, monitor his/her condition periodically. Prepare the access route for the first aid and medical team – you may need to move barriers or spectators

Try to stop anyone taking photos of the casualty – this is a breach of the patient's confidentiality

Offer the casualty space blankets and fluids (water and/or energy drink) if available. Provide shelter/shade in cold/hot weather or in exposed locations

Try to avoid contact with a casualty's bodily fluids (vomit, blood, urine etc). Use basic hygiene to clear up any contamination

APPENDIX 11 **MARSHAL'S BRIEFINGS**

CPR GUIDANCE FOR MARSHALS **www.sja.org.uk/sja/first-aid-advice.aspx**

Treatment of faints

Improve blood flow to the brain. Assist the casualty into a lying position and elevate the legs, supporting on your shoulders. Reassure. If casualty does not regain consciousness quickly check airway and breathing

Unconscious but breathing casualty – place in Recovery Position

- Turn casualty onto their side
- Lift chin forward in open airway position
- Lay lower leg straight out
- Lay lower arm diagonally away from the shoulder
- Fold upper arm under the cheek
- Fold upper knee up towards chest
- Check they cannot roll forwards or backwards
- Monitor breathing continuously

When someone has stopped breathing

Open airway - If they are unconscious, check their airway is open and clear

Tilt head - Tilt their head and lift their chin to open their airway

Check for breathing

1. Look along their chest, and listen and feel for breaths
2. If they are not breathing, their heart will stop. CPR must be started immediately

Call for help - Call event/medical control (112 for mobile phones or 999) & ask for an ambulance

Pump

1. Place one hand on the centre of their chest. Place the heel of your other hand on top of the fist and interlock your fingers, keeping your fingers off their ribs
2. Lean directly over their chest and pressing down vertically about 5-6cm (2-2½ inches). Release the pressure but don't move your hands
3. Give 30 compressions at a rate of 100-120 per minute

Breathe

If you are unable, or don't want to give rescue breaths you can continue with chest compressions only but CPR is more effective when chest compressions are combined with rescue breaths

1. Tilt their head back with one hand and lift their chin with two fingers of your other hand to ensure their airway is open
2. Pinch their nose to close their nostrils. Take a breath, seal your lips over their mouth and breathe out until their chest rises
3. Maintaining the head tilt and chin lift, take your mouth away from theirs. Look along their chest and watch it fall
4. Repeat to give two rescue breaths. Repeat 30 chest compressions, follow by two rescue breaths.

Continue

Continue CPR until emergency help arrives, they start to breathe normally or until you're too exhausted to continue

APPENDIX 12

USEFUL REFERENCES

1. EVENT TEAM

runbritain *'Race Directors Portal'* website **www.runbritain.com/rdp/**

runbritain Road Race Co-ordinator. Gavin Lightwood
tel : 0771 852 6353 email : glightwood@uka.org.uk

- UK Athletics. Reporting requirements and advice for race organisers in the event of an accident or dangerous incident. See UKA website : **http://www.uka.org.uk/governance/health-safety/what-to-do-in-the-event-of-an-accident-or-dangerous-incident/**

- **run**britain Medical Advisory Group *'Runners Medical Resource'* best practice advice for runners preparing for endurance events **www.runnersmedicalresource.com**

- CPR guidance for marshals - **www.sja.org.uk/sja/first-aid-advice.aspx**

- Health & Safety Executive '*Five Steps to Risk Assessment'* INDG 163 Rev 2 **www.hse.gov.uk/pubns/indg163.pdf**

- Home Office '*Good Practice Safety Guide for Small & Sporting Events on the Highway, Roads and Public Places'* 2006. See **run**britain website **http://runbritain.com/static/pdfs/good_practice_safety_guide.pdf**

- UK Athletics '*Road Running Handbook'* current edition. See **run**britain website **www.runbritain.com/rdp/**

- UK Athletics '*Licence Standards'* current edition. See **run**britain website **www.runbritain.com/rdp/**

- Health & Safety Executive '*Event Safety ('Purple') Guide*' 1999. Note this is currently being updated and the medical provisions in the Guide are no longer relevant See HSE website **www.hse.gov.uk/entertainment/eventsafety/index.htm**

- UK Athletics '*Rules of Competition'* current edition. See UK Athletics website www.uka.org.uk/competitions/rules/

- CQC (Care Quality Commission). The regulatory body for registered health and adult social care service providers. See website **www.cqc.org.uk/public**

2. MEDICAL TEAM

Resuscitation Council UK guidelines