BSR ES1.5 – 202x,
Event Safety Requirements – Medical Preparedness

Approved by the ANSI Board of Standards Review on _____

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Technical Standards Program

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The Event Safety Working Group, which authored this standard, consists of a cross section of entertainment industry professionals representing a diversity of interests. ESTA is committed to developing consensus-based standards and recommended practices in an open setting.

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Voting members:

Observer (non-voting) members:

Interest category codes:

DE = designer	DR = Equipment dealer or rental company
EQP = Equipment provider	EVP = Event producer
EW = Event worker	G = general interest
INS = Insurance company	P = Performing Artist

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Foreword

The Event Safety Guide was first published by the Event Safety Alliance in 2014, as a guideline for discourse regarding the many aspects of special event safety. It originated in the UK Health and Safety Executive's *HSG195 "The event safety guide (Second edition) A guide to health, safety and welfare at music and similar events."* where its purple cover subsequently led to its reference as, simply, "*The Purple Guide*". In 2016 the Event Safety Working Group was established within ESTA's Technical Standards Program for the purpose of converting the Event Safety Guide chapters into formally recognized, consensus-based standards that could be universally referenced across special events organizers, producers, enforcement agencies and user-groups. This document is one of many such chapters, intended to be used in conjunction with each other, as a collection of standards, which are used to establish minim um standards for care and public safety for special events. Because event technology and requirements constantly evolve, so too will this collection of standards change and evolve to accommodate industry needs.

It has been assumed in the drafting of this standard that the execution of any design provision is entrusted to appropriately qualified and experienced people, and that any fabrication and use provision is carried out by qualified and suitably experienced people and organizations.

This standard presents a coordinated set of rules that may serve as a guide to government and other regulatory bodies and municipal authorities responsible for the guarding and inspection of the equipment within its scope. The suggestions leading to accident prevention are given both as mandatory and advisory provisions; compliance with both types may be required by employers of their employees.

Compliance with this Standard does not of itself confer immunity from legal obligations.

This document uses explanatory notes to provide additional reference information about certain specific section requirements, concepts, or intent. Such explanatory notes are located immediately after the relevant clause and are distinguished by an “E” prefix to the referenced clause number. Additional general information and reference material are located in the ANNEX.

Introduction
The goal of this standard is to identify and describe the steps necessary to create a reasonable level of protection from medical hazards that can be caused, exacerbated or effective treatment delayed as a result of the unique challenges & circumstances presented by the event environment.

This include identifying the responsibilities of the event organizer to ensure that appropriate medical, ambulance and first-aid assistance are available to all those involved in the Event. It will explore how the event organizer can minimize the effects of an event on the healthcare provision for the local population and, wherever possible, reduce its effect on the local hospital facilities and emergency medical services (EMS).

1 SCOPE, PURPOSE, AND APPLICATION

The standard shall apply to the provision and availability of appropriate medical treatment as it relates to health and safety in the event industry. The event industry includes, but is not limited to, musical productions, festivals, concerts, theatre and film production, video productions, special events, corporate events, trade shows, sporting events, broadcast production, and events related to them.

This shall include the identification and assessment of specific medical hazards related to health and safety risks and the effects that the lack or delay of appropriate medical treatment can have on health and safety at the Event. In addition, it shall include the identification, assessment and mitigation of the potential impact on local medical services provided for the local population, caused by the presence of the Event.

1.1 Purpose

The purpose of this document is to address and describe selected steps necessary to minimize the potential medical hazards caused by the lack of provision of appropriate medical treatment at the Event

1.2 Intent

This document intended for use by both users and enforcement officials in order to help establish and maintain minimum standards for care and public safety for special events.

1.3 Equivalency

The provisions of this standard are not intended to prevent the use of any materials or to prohibit any design, method of fabrication, or services not specifically prescribed by this standard, provided that any such alternative materials, design, method of fabrication, or services complies with the intent of the provisions of this standard. The quality, strength and effectiveness of all materials, methods of work and services shall be at least equivalent to those prescribed in this standard.

This standard is not intended to replace or supersede any applicable local rules or laws, but should supplement them in an abundance of caution with the ultimate goal of improving safety.

1.4 Application

This document is one part of a larger collection of standards relating to special event safety. The requirements of the complete collection shall be considered in relation to the application of this standard, where necessary to coordinate and correlate all related requirements into the scope of a the Event.

1.5 Normative references

The following documents contain requirements relating to the scope of this standard. They are provided for guidance only, unless otherwise referenced specifically elsewhere within this standard. Where a specific version is not given, the version applicable to the event jurisdiction shall be used.

ANSI E1.21 – 2020, *Entertainment Technology— Temporary Structures Used for Technical Production of Outdoor Entertainment Events*

ANSI ES1.7 – 2021, *Event Safety - Weather Preparedness*

2 DEFINITIONS

2.1 Ambulance. a vehicle specially equipped for taking sick or injured people to and from the hospital, especially in emergencies

2.2 Allostatic load. The “wear and tear on the body" which accumulates as an individual is exposed to repeated or chronic stress. The term was coined by McEwen and Stellar in 1993.

2.3 Authority Having Jurisdiction (AHJ). The entity, agency, or individual responsible for enforcing compliance with the requirements of a code or standard, or for approving equipment, materials, an installation, or a procedure.

2.4 Casualty. Any person, group, thing, etc., that is harmed, killed or destroyed as a result of an incident.

2.5 Casualty transport. Any method used to transport a casualty from the location or site of the original incident to a facility where the casualty will receive additional evaluation or medical care.

2.6 Competent person (competent personnel). One who is qualified and capable of identifying existing and predictable hazards in the surroundings or working conditions which are unsanitary, hazardous, or dangerous to employees, volunteers, patrons, or the public; and who has authorization to take prompt corrective measures to eliminate them.

2.7 Control measure. Includes action that can be taken to reduce or eliminate exposure to the hazard
https://www.hsa.ie/eng/Topics/Hazards/

2.8 Decisional capacity/incapacity (Medical). The ability or inability of subjects to make their own medical decisions.
https://plato.stanford.edu/entries/decision-capacity/
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5527273

2.9 Emergency Action Plan (EAP). A written document, required by particular national occupational safety and health organizations and laws, to be properly prepared for any event, which describes the actions event organizers and staff should take to ensure their safety if any onsite emergency situation occurs. It involves conducting a workplace evaluation that describes.

2.10 Emergency Operations Plan (EOP). An ongoing plan for responding to a wide variety of potential hazards. An EOP describes how people and property will be protected; details who is responsible for carrying out specific actions; identifies the staff, equipment, facilities, supplies, and other resources available; and outlines how all actions will be coordinated.
FEMA https://training.fema.gov/programs/emischool/el361toolkit/glossary.htm#E

2.11 Emotional labor. Emotional labor refers to regulating or managing emotional expressions with others as part of one’s professional work role. (Hochschild, 1983, The Managed Heart),

Emotional labor, like physical labor, requires effort and is fatiguing when done repeatedly all day long, and can be costly in terms of performance errors and job burnout.
https//weld.la.psu.edu/what-is-emotional-labor/

2.12 EMS. Emergency Medical Services, more commonly known as EMS, is a system that provides emergency medical care. Once it is activated by an incident that causes serious illness or injury, the focus of EMS is emergency medical care of the patient(s).
https//www.ems.gov/whatisems.html

2.13 Event. Any assembly, public or private, indoor or outdoor, which is presented to a live or virtual audience. As used herein, this includes the planning for, preparation for and dismantling of (load in, load out) the event. See also Live Event.

2.14 Event health and safety. Includes laws and health and safety policies that provide the health and safety framework to set out the rights and duties of all parties that participate in an event.

2.15 Event medical communication plan. The plan to communicate effectively about incidents that require a medical response, before, during and after any individual incident.

2.16 Event medical personnel. Event Personnel assigned responsibility for responding to Medical emergencies at the Event. This may include people advanced medical training to people with minimum levels of first aid training.

2.17 Event medical management. The process and organizational structure required to effectively manage the reasonably foreseeable medical risks at the Event.

2.18 Event Medical Plans (EMP). The plan for the Event to effectively respond to reasonably foreseeable risks that require a medical response. (E.g., First aid, EMS, Ambulance etc.)

2.19 Event Medical Risk Assessment (EMRA). A process that includes written documentation that evaluates the reasonably foreseeable medical risks at the Event.

2.20 Event medical service provider. A person, group or organization that provides medical services at the Event.

2.21 Event organizer. The event organizer is the individual, group or organization (or their authorized representatives) that originates, organizes, promotes and or manages an event.

2.22 Event personnel. Anyone working the event, including the production team, vendors, contractors, subcontractors, laborers, volunteers, etc. See also event staff.

2.23 Event site. The location, physical, or virtual, where the event occurs, regardless of the original use or designation of the location (includes venues)

2.24 First aider. is a person who holds a current certificate of first aid, usually at the advanced first-aid level, such as provided by the American Red Cross, St Johns Ambulance etc. To be effective at an event, the first aider should have prior training or experience in providing first aid at events.

2.25 First Aid. emergency care or treatment given to an ill or injured person before regular medical aid can be obtained.
https. //www.ccohs.ca/oshanswers/hsprograms/hazard_risk.html

2.26. Hazard. any source of potential damage, harm or adverse health effects on something or someone.

2.27 Health and safety. Regulations, Laws, rules, principles, guidelines, policies and procedures that are intended to keep people safe from injury or disease at work or in public places. Sometimes referred to as Occupational Safety and Health or Life Safety. Note the definition above is amalgamation of these three sources:
https//www.healthandsafetycourse.co.uk/articles/what-is-health-and-safety-and-what-does-it-mean-for-me/
https//dictionary.cambridge.org/us/dictionary/english/health-and-safety
https//www.lexico.com/definition/health_and_safety

2.28 Health and safety coordinator
A person authorized by the Event Organizer to coordinate, implement and comply with all safety related laws, actions, activities, methods, practices, documentation and information.

2.29 Health and safety management.
The task of managing health and safety related risks as part of the Event, part of the Event Safety Management Plan (ESMP).

2.30 Health Risk. an adverse event or negative health consequence due to a specific event, disease, or condition
https//www.rxlist.com/health_risk/definition.htm

2.31 Event Safety Management Plan (ESMP). An Event Safety Management Plan (ESMP) states how the safety of all those present during the entire event will be managed. It describes, in particular, how safety at work during all phases of the event as well as crowd safety during the event itself will be taken care of. It may also describe roles and responsibilities of the Incident Command Team, identifies key staff, and contains information on site/venue infrastructure. The ESMP also describes, in detail, plans and emergency procedures to activate if

an incident were to arise. The ESMP often includes a risk assessment (RA), an emergency action plan (EAP), and an emergency operation plan (EOP).

2.32 Incident. An occurrence, natural or human-caused, that requires a response to protect life or property (FEMA EMI, 2018). For the purpose of this standard an incident is further defined into two categories that of minor incident and major incident. Minor incident may be undesirable events that did or could have resulted in personal harm or property damage, or any undesirable loss of resources. Minor incidents may involve few resources, be located within a small geographical area, and last for only a short time. They may include events such as a near-miss, when a forklift is carrying a load, and the load almost falls off the forklift, potentially injuring people and equipment. In the area of security, a minor incident could result in the loss of property through theft. Major incidents may involve the coordination of vast resources from many organizations and emergency resources, including municipal, provincial/state, and federal governments. They may include occurrences or events, natural or man-made, that require a unified response to protect life, property, or the environment. Incidents can, for example, include major disasters, mass casualty incident, active attackers, active or implied threats, civil unrest, wild-land and urban fires, floods, hazardous materials spills, nuclear accidents, aircraft accidents, earthquakes, hurricanes, tornadoes, tropical storms, tsunamis, war-related disasters, public health and medical emergencies, and other occurrences requiring an emergency response (NRF, 2008).

2.33 Live Event
See also “event”.

2.34 Life Safety
See also “Health and Safety”

2.35 Mass gathering. An occasion, either organized or spontaneous where the number of people attending is sufficient to strain the planning and response resources of the community, city, or nation hosting the event.

2.36 Major incident. A “major incident” refers to an occurrence that does or is likely to require the implementation of special or non-routine arrangements and resources from one or more emergency services. A major incident would typically involve the local authorities for:

- The initial treatment, rescue and transport of a large number of casualties
- The involvement either directly or indirectly of large numbers of people
- The handling of a large number of inquiries likely to be generated both from the public and the news media, usually to the police

2.37 Main medical facility. See Primary Care Area

2.38 Mass casualty incident. A mass casualty incident (MCI) is defined as an incident where the number and severity of casualties significantly overwhelms the capacity of the available medical resources to respond.

2.39 Medical care provider. See health care provider

2.40 Medical risk. See health risk

2.41 Medical waste. is a subset of wastes generated at health care facilities, such as hospitals, physicians' offices, dental practices, blood banks, and veterinary hospitals/clinics, as well as medical research facilities and laboratories. Generally, medical waste is healthcare waste that that may be contaminated by blood, body fluids or other potentially infectious materials and is often referred to as regulated medical waste.
https://www.epa.gov/rcra/medical-waste

2.42 Minor incident. A “minor incident” refers to a simple, undesired event (a) that adversely affects a task or process, (b) whose consequences can be managed through normal service delivery, and (c) which is not likely to escalate

2.43 Must. Interchangeable with “shall” and is considered mandatory.

2.44 Staff. See Event Personnel.

2.45 Occupational safety and health. See also “Health and Safety”

2.46 Personal protective equipment (PPE). Personal protective equipment is the safety equipment worn by a user to prevent bodily harm. It is only to be used to mitigate the remaining risk of injury after all technical and organizational means to reduce the risk of injury have been implemented. Examples include, but are not limited to, steel toed or safety shoes, hi visibility vests, hard hats and safety (fall arrest) harnesses.

2.47 Primary care area. The Area at the Event Designated for the collection, assessment, triage and possible treatment of casualties. The level of treatment provided beyond first aid will be determined by any Qualified Medical Personnel present. At large or complicated events more than one Primary Care Area may be required.

The scope and scale of the Primary Area should be evaluated as part of the Event Medical Risk Assessment.

2.48 Prehospital Care Report (PCR; ePCR when in electronic format). An electronic or written report completed by a prehospital provider that contains demographic and medical information as well as a record of the treatment and transport of a patient, and given to the receiving facility as a medical reference and for inclusion in the patient's medical record.

2.49 Pre-Event (Phase 1). The planning phase describes the period before the Event (Phase 2) begins. During the planning phase, all aspects of the event are planned. Risk assessments are created and reviewed, recreated and reviewed again, and all elements related to the event are considered and, should be, planned for and completed prior to Phase 2. This is considered “The Planning Phase 1” (Also referred to as Pre-Production or the Pre-Production Phase)

2.50 The Event (Phase 2). The Event phase describes the period of time once the Event occupies the venue. This phase includes not only the actual event time (when the attendees are present) but also includes the setup time (including initial site layout and marking of the site, if applicable) and the dismantle time, along with execution of a site restoration plan, which would include returning the venue to its original state before the event began, if applicable. This is considered “The Event Phase 2”

2.51 Post-Event (Phase 3). The Post-Event phase describes the period after the event has relinquished control of the venue back to the venue owner. During this time, typically, final accounting is completed, post analysis reports are reviewed and discussed, rental items are returned, recaps are completed, and, in some cases, assets are stored and managed for future use. This is considered “The Post-event Phase 3”.

2.52 Programmed Activities. Any activity that has been pre-planned as part of the Event.

2.53 Psychological Safety. being able to show and employ one's self without fear of negative consequences of self-image, status or career.
(*Kahn, William A. "Psychological Conditions of Personal Engagement and Disengagement at Work". Academy of Management Journal.*)

2.54 Qualified medical personnel. means a physician, physician's assistant, nurse, emergency medical technician, or other person authorized under local, regional or national, (in US State or Federal) law or regulation.
https. //www.law.cornell.edu/cfr/text/46/4.03-6

2.55 Risk. the chance or probability that a person will be harmed or experience an adverse health effect if exposed to a hazard.
https://www.acs.org/content/acs/en/chemical-safety/basics/hazard-vs-risk.html
https://www.ccohs.ca/oshanswers/hsprograms/hazard_risk.html
https://www.osha.gov/sites/default/files/2018-12/fy10_sh-20854-10_hazard_id_facilitatorguide.pdf

2.56 Risk Assessment. A process to identify potential hazards and analyze what could happen if a hazard occurs (Ready.gov, 2018).

2.57 Shall. denotes a mandatory requirement.

2.58 Should. denotes a recommendation.

2.59 Qualified person (Qualified personnel). A person who by profession or recognized degree or certificate of professional standing, who by extensive knowledge, training, and experience, has successfully demonstrated the ability to solve and resolve problems relating to the subject matter and work. (OSHA)

2.60 Wet Bulb Globe Temperature. The Wet Bulb Globe Temperature (WBGT) is a composite temperature. It is used to estimate the effect of temperature, solar radiation and wind speed on the human body. The WBGT is not the same as the ambient (dry) temperature, as it takes into account the levels of radiation, wind movement, humidity and the ambient temperature.
https://www.gpsil.co.uk/our-products/heat-stroke-checkers/measuring-principle/x

2.60 Wet Bulb Globe Temperature. An indicator of heat related stress on the human body at work (or play) in direct sunlight. It takes into account multiple atmospheric variables, including: temperature, humidity, wind speed, sun angle, and cloud cover.
(National Oceanic and Atmospheric Administration; https://www.weather.gov/arx/wbgt)

2.61 UV index. An international standard measurement of the strength of sunburn producing ultraviolet (UV) radiation at a particular place and time.
https://en.wikipedia.org/wiki/Ultraviolet_index

2.62 Venue. See Event Site

3 GENERAL

3.1 Compliance

The Event must be planned, designed, constructed, equipped, maintained and operated in accordance with this standard

3.1.1 Additional Compliance: Every Medical safety plan shall comply with NFPA 101, *Life Safety Code*.

3.1.2 Corrective Action: Any event in violation of this standard shall be required to take corrective action to come into compliance with this standard unless a specific waiver has been given by the AHJ. This exemption shall not apply if the waiver violates existing applicable codes, unless said code permits an exemption to be approved by the AHJ.

3.1.3 Waivers: In no circumstances must any approved exemption/waiver reduce the duty of care in this standard to health and safety or actual and potential hazards described or contained in this standard or applicable codes.

3.1.4 Responsible Parties: Any entity (owner, operator, subcontractor, occupant, personnel) shall be responsible for complying with this standard and all applicable codes.

3.1.4.1 Equipment & Materials: All equipment, devices and materials must be used in accordance with the manufacturers' instructions. Where applicable and/or required certifications, listings, labels, data and limitations must be displayed at all times

3.1.4.2 Manufacturers Instructions: When manufacturers provide user manuals and operating instructions in written or digital form they must be made available to the user prior to use.

3.1.5 Required Documentation: All necessary documentation for the Event required by applicable codes, this standard, and the AHJ shall be maintained onsite throughout the totality of the event. These documents should be maintained in a binder or equivalent that also contains the Medical Risk Assessment and Medical Safety Plan and should be easily identifiable as such and readily accessible.

E 3.1.5 It is recommended that each event or venue where appropriate have a Medical Advisor who is a licensed physician and is qualified and capable of providing medical guidance to the Event Medical Personnel. While it is not necessary that this person be on site for events, this advisor should be familiar with the event or venue and be available to the Event Medical Personnel for questions, advice, and support whether in person, by telephone, or by email.

3.1.6 General Planning Requirements: The Event must have plans in place for the safe appropriate medical treatment of people at the Event. At a minimum, plans for accomplishing the following must be developed:

- Promptly responding to a medical emergency
- Providing emergency medical care (e.g. first aid etc.)
- Effective reporting, documentation and communication of a medical incidents & injury and their location
- Designated triage, treatment or relocation areas
- Maps and/or Plans displaying the location of applicable equipment and facilities (e.g. medical supplies, First Aid/ EMS, AED's, transport and emergency communications)
- Mass casualty incident protocols
- Orderly evacuation for all people required to initiate appropriate medical treatment
- Contacting & co-ordination with EMS
- The location of the nearest appropriate medical facilities & where necessary co-ordination with said local medical facilities
- (e.g. directions, complete address and phone numbers to level 1 & 2 trauma centers, children's hospitals, urgent care etc. (printed and available to event personnel and attendees)
- The potential impact of reasonably foreseeable medical treatment needs on local medical facilities and EMS
- Drills & training for Event Personnel on procedures for medical incidents and/or emergencies.
- Designated Triage, Treatment or relocation areas
- Location of First aid kits and AED's
- Protocols for the treatment & evacuation of people with disabilities

E 3.1.6 It should be noted that it is often beneficial to provide access to interpretation including multiple languages and American Sign language, these services are often offered via subscription.

3.1.6 Sharing Information: The following information must be made available to Event Medical Personnel working at the event site

- Applicable local/regional emergency plans (e.g. mass casualty, emergency operations and other disaster plans.)
- Event specific protocols for all emergency medical response, triage and treatment.

3.2 Required Competencies for Event Medical Personnel

3.2.1 First-aid, medical and ambulance personnel must all:

- Be at least 16 years old (first-aid personnel under 18 years old must not work unsupervised);
- Have current certification, education, training, accreditation and/or licensing by a recognized organization appropriate for their role and responsibilities and any requirements of the AHJ.
- Have no other duties or responsibilities that would materially interfere with their ability to provide first-aid/medical services when necessary;
- Have identification;
- Have all necessary personal protective equipment (PPE) and appropriate clothing;
- Have relevant experience or knowledge of requirements for first aid/medical services appropriate to the Event where they will be providing first aid/medical services;
- Be physically and psychologically equipped to carry out their assigned role.
- Only perform Medical duties to the level of their training and as allowed by law.

3.2.2 Qualified Medical Personnel: Any Qualified Medical Personnel (e.g., physician, nurse practitioner etc.)working at the Event should have experience with the potential medical requirements and procedures for the Event.

-
- Any Qualified Medical Personnel hired to provide medical treatment services at larger events (over 1000 people) or events with complex medical risks should:
- Have a working knowledge of appropriate incident/emergency management protocols and or systems (e.g. (USA) National Incident Management System (NIMS) Incident Command System (ICS) etc.)

- Be familiar with, and have access to, local/county/regional emergency plans such as mass casualty, emergency operations, and disaster plans;
- Have experience with the handling & triage of multiple, simultaneous emergencies in the pre-hospital (out of hospital) setting;
- Be familiar with the operation of the local emergency medical services (EMS) and casualty transport (ambulance) service, which may not both be the same entity; Be familiar with the training and capabilities of the local EMS responders.

3.3 General Considerations for the Main Medical Facility/ Primary Care Area

The need for a main medical facility or Primary Care Area must be evaluated based upon the reasonably foreseeable medical risks at the Event.

3.3.1 *Minimum Requirements***:** As a minimum requirement, the onsite designated main medical facility for the Event must have:

- A Designated location as a “no smoking area;”
- Of an adequate size for the anticipated number of casualties and readily accessible for the admission of casualties and attending ambulance crews;
- Accessible at ground level or by appropriately sized elevator and have a doorway large enough to allow access for an ambulance cot or wheelchair;
- Maintained in a clean and hygienic condition, free from dust and with adequate heating and or cooling, lighting and ventilation.
- Within proximity of an easily accessible wheelchair-user’s toilet facility.
- Provided with a supply of running hot and cold water. If this is not possible, provide adequate fresh potable water in suitable containers;
- Provide soap, towels, hand sanitizer for handwashing/hand hygiene.
- Provide drinking water, disposable cups and flexible straws
- Where necessary provided with suitable secure storage facilities for drugs and equipment used by the medical providers.
- Have easy access to ambulances or associated emergency vehicles.
- Have copies of local EMS contact information displayed in a prominent location and be easily read.
- Have appropriate communications provision as outlined in section 8 of this standard.
- Provide appropriate PPE (See appendix for suggested items)
- First aid kit with appropriate supplies (see appendix)
- Clip boards, Forms, paper, pens, sharpies etc.

3.3.2 As a minimum requirement, the onsite designated main medical facility for the Event should be:

- Large enough to accommodate at least two examination couches or ambulance stretchers or cot, with adequate space to walk around (e.g., 4ft (1.2m) per side), and an area for the treatment of sitting casualties.
- Provided with adequate first aid and medical equipment and privacy screens, etc., including resuscitation equipment, patient-care consumables and where appropriate, a defibrillator, all of which should be separate from those contained in ambulances or other locations.
- An agreement should be reached during the planning stage about who will provide such items

3.3.3 Mental Health & Wellbeing: Event Personnel at any event medical facilities should be made aware of the arrangements for Mental Health/well-being provision so that people can be suitably redirected to those facilities.

3.4 Medical Waste

Specific arrangements for the disposal of medical waste must be planned. Special bio-hazard containers for the disposal of needles (“sharps”) and appropriately marked “bio bags” for the disposal contaminated materials shall be required. Suitable arrangements must also exist for the disposal of non-medical waste at medical facilities

3.5 First-Aid for Event Personnel

3.5.1 Provision: Event Organizers are responsible for ensuring that sufficient first-aid facilities, equipment and personnel are provided for all Event Personnel if they are injured or become ill at work. The provision of appropriate medical treatment for all Event Personnel must not materially be affected by the provision of appropriate medical treatment for attendees with regards to delay of treatment and/or limitation of access.

3.5.2 Evaluation: To determine the level of first-aid provision necessary, event organizers must assess the first aid needs appropriate for the circumstances of the event site. Event personnel who are appointed as first-aiders must have successfully completed the necessary training with an approved training organization.

3.5.3 Welfare of Personnel: Planning for the welfare of Event medical, ambulance, nursing and first-aid personnel.

An Event that lasts more than four hours must provide rest areas, sanitary and dining facilities. Where practicable, these areas should be separate from the audience facilities.

E3.5.4 Further guidance on Health and Safety (First Aid) Regulations is contained in the U.S. Department of Labor's Workplace Safety & Health laws, the HSA in Canada, HSE in the UK.

3.6. Transfer & Discharge
The Event Organizer or their representative must comply with all applicable local & national laws for patient transfer or discharge.

4 PLANNING

4.1 Planning
The event organizer must evaluate the need for medical services by conducting an Event Medical Risk Assessment (EMRA) in the Pre-Event (Phase1) of the Event.

A written risk assessment shall be created during the Pre-Event (Phase1) for the Event.

Depending on the size and complexity of the Event, the EMRA may be a few sentences, a few pages or more extensive.

Whatever its size or complexity, it must identify all reasonably foreseeable medical risks present at the Event and the Event Medical Risk Assessment (EMRA) must be included as part of the Event ESMP.

4.1.1 Protecting Local Resources: The Plan for the provision of medical, ambulance and first-aid services should be sufficient to avoid overburdening local EMS and other statutory services.

Large and/or complex events relying on local EMS resources/ operations must include said resources in the planning process with sufficient lead time to allow effective coordination of emergency response and resources.

E 4.1.1 In general events should never rely just on calling 911 for their emergency planning, as this could lead to lengthy response times at the Event and reduce the available emergency response to the community they normally serve.

Personnel or organizations' appointed to provide Event medical management need not be the sole provider of medical resources at the Event, but must demonstrate competence in managing the potential medical risks at the Event.

They should provide an appropriate management and operational control infrastructure and coordinate with other medical providers.

4.2.1 Roles & Responsibilities: Using an EMRA the identified medical provider should determine all of the necessary roles, responsibilities and qualifications for all personnel required to mitigate the medical risks identified. Such roles and responsibilities shall be clearly communicated to all affected parties.

4.2.2 Prompt Response: All Event Medical Plans (EMP) must include clearly identified means, methods and protocols for communication. Methods should facilitate the swift supply of medical aid and be designed (as far as possible) to protect patient confidentiality* (see section 8 of this standard).

4.3 Co-ordination with Local Services: Where the risk of a major medical incident is reasonably foreseeable the event organizer must coordinate with local EMS and Medical Services to advise them of the potential risks and impact. The event organizer should seek the input of local EMS and Medical Services in planning for the Event.

4.4 Pre-emptive Co-ordination: It is recommended that where the risk of a major incident is low that contact and dialogue should still occur.

4.5 Provision for Set-up and Dismantle: The event organizer must evaluate the availability of medical, ambulance, and first-aid provision during the load-in and load-out of the Event and provide prompt access to such services where necessary .

4.4.Impacts Outside Event Perimeter: The event organizer must evaluate the need for medical, ambulance and first-aid arrangements for any attendees outside of your physical event perimeter, before, during and after the Event and provide prompt access to such services where necessary.

4.7 Adequate Signage and Information: Information on the location of First-Aid facilities must be available to all those attending. The event organizer must provide adequate signage and consider printing the location of first-aid facilities on tickets for the Event. In addition, event personnel should be informed of the location of nearest first aid facility.

4.8 Overnight Camping: At events with overnight campsites, appropriate medical, ambulance and first-aid services should be available whenever the campsite is open.

4.9 Emergency Vehicle Access: A route should be designated for emergency vehicle access and where practicable, routes should be for the exclusive use of emergency vehicles and kept clear of obstacles.

4.10 Personnel, Location and Identification: The identification and location of event medical personnel must be chosen to minimize response time throughout the event site.

4.11 Risk of Vehicle Movement: Any movement of vehicles or ambulances into areas accessible to attendees should be evaluated for the risks posed to the attendees and coordinated with any event personnel responsible for the safety of the attendees (e.g., Security, FOH staff etc.). Vehicles should only move through attendee areas under the control of competent personnel and additional measures to protect attendees (such as the use of spotters) should be used when necessary.
Vehicles should be outfitted with visual and auditory warning signals.

4.11 Resource Levels: Appropriate levels of equipment, personnel & resources must be maintained throughout the Event to maintain sufficient levels of medical response to reasonably foreseeable incidents under the circumstances.

4.12 Helicopter Evacuation : The reasonably foreseeable need for medical evacuation by helicopter may be required and a suitable landing site, either at the site or nearby, should be evaluated, designated, prepared operated and maintained by competent personnel.

E 4.12 Advice from the local airspace manager, qualified pilot or airport should be solicited. to speak with someone at a nearby Flight Service Station. The person who answers the phone should be able to answer your questions or refer you to someone who can.

4.13 Medical Service Providers :The event organizer should evaluate any event medical service provider prior to contracting with them to determine that their experience, personnel, policies & procedures are sufficient for the reasonably foreseeable medical risks at the Event.

E 4.13 The following is a partial list of example questions that my help in the evaluation of an event medical service provider.

- Have you covered special events before?
- If so what events?
- Do you have any references/case studies?
- What level of support can you provide BLS , ALS, physician level?
- What is your support capacity ?
- How do monitor/manage your staff on site?
- Do you have a medical director if so who, what are their qualifications?
- Do you have a Quality assurance process?
- What is your Documentation process?
- Do you have experience working with the local jurisdiction ?
- Are there any permit requirements and can you facilitate those for our location?
- How do handle RMA's (*refusal of medical assistance)/patient transfer ?
- What kind of risk assessment process do you follow?
- Equipment do you provide/own/rent?
- What Insurance coverage do you have?
- How do you Verify qualifications of your staff?
- Can you tell us how you dealt with any situation that did not go well?
- Do you have any established methods of communication for medical provision?
- What is your hierarchy of roles, responsibilities and decision making?
- What is your experience managing a crisis and/or mass casualty situation?
- What are your protocols if an incident exceeds planned capacity?
- Do you have a plan for activating additional resources?
- What is your plan for maintaining coverage during a response?
- Do you have a plan for casualty collection site(s)?
- Is there a local EMS system and how is it activated?
- Is there a local trauma center/cardiac resuscitation center nearby?
- What are the capabilities of local medical facilities?
- Do you have a plan for overnight medical coverage (if required) ?
- What are your protocols for observing attendees who are intoxicated?

5 MEDICAL RISK ASSESSMENT

The medical risk assessment for the event is a key pillar of risk mitigation at any event. The following paragraphs provide more detail on key considerations.

5.1 The Medical Risk Assessment (MRA) should be constructed using a consistent method and all of the Medical risk criteria be evaluated for every event.

This method encourages the "active determination" that something does not apply in the given circumstances and reduces the possibility that something may be missed or forgotten.

5.2 Minimum Requirements: Any method or model should contain the following as a minimum standard:

1. It should be written document and relevant sections shall be made freely available to event personnel as applicable & appropriate.
2. It should be revised as necessary throughout the production process
3. Who or what the risk or hazard may impact should be identified.
4. The steps taken to reduce the risks likelihood &/or severity, (the "control measure")
5. The control measure should reduce the likelihood & severity to an acceptable level in the given circumstances.
6. A physical examination of the event site or space & event production elements to determine the risks present.

5.3 Risk assessment factors. It is recommended that the following topic headings should be used to establish a consistent approach to assessing risks for an event. Each of the topic headings can & should contain several sub-headings (some have been included as examples).

Risk Factors Specific to Medical Provision at the Event:

Location & Date

- Weather
- Lightning
- High Winds & Storms
- Extreme Temperatures (both Hight & Low)
- Humidity
- UV Exposure
- Topography
- Terrain Features & Slopes
- Water Features
- Access roads
- Surface Textures and Substrates
- Seismic Activity (Earthquake)
- Altitude

Audience size & Demographic

- Behavior
- Average Expected Age
- Overcrowding
- Crowd Density
- Drugs & Alcohol
- Smoking Policy

Site/Venue

- Building(s) Age & Construction
- Capacity & Suitability for intended use
- Entry & Exit Requirements
  - Evacuation Routes
  - Casualty Collection Points
  - Evacuation Assistance & Verification
- Rally/Assembly points
- Major incident hazards associated with the event - e.g.
  - structure collapse
  - civil unrest
  - Protests
  - Flash mobs
  - Civil Disobedience
  - crushing
  - explosion
  - fire
  - chemical release
  - food poisoning
  - Bomb Threats
  - Active Shooter

Special considerations

- Unattended packages or bags
- UAV’s/Drones
- General public access
  - Is your event site open for other uses that you do not control?
- Is there any camping?
- Are there permit requirements?

Emergency Medical Services (EMS)

- Identify AHJ responsible for Medical and EMS providers
- Determine Applicable codes & Laws

- EMS Activation & Response times
  - Primary asset and secondary asset (backfill) response times
- EMS response Capacity & Capability
- EMS Access to patients
  - Vehicular Access
  - Foot Patrols & or Bike Teams
- Documentation Requirements
- Compliance verification

Event content

- Pyrotechnic
- Lasers
- Cryogenics
- Audio Levels
- Artist/Performer interaction

Design & production

- Occupancy Load
- Required Egress
- Evacuation Communication
- Emergency Signs & Lighting
- Catering & Promotions
- Open Flame
- Site Induction
- Backstage Egress
- Availability of hospitality and other social services
- “Pit Area” Medical Provision & Equipment
- Maps and Plans
- Number and location of Onsite medical facilities & Assets

Staffing

- Previous relevant Event Experience
- Previous relevant Local Experience
- Verified Qualifications & Training Level
- Assignments & Roles
- Work Hours & Staffing Levels
- Availability of experienced medical first-responders and medical staff
  - Availability within the surrounding area or community
  - Impact on local EMS capability
- Medical Group Supervisor (as the size of the event requires) with overall responsibility (accounting for Span of Control)
- Psychiatric Care & Mental Health Capabilities as appropriate.
- Transport of non-urgent medical conditions
- Overnight Coverage

Logistics

- Vehicles
- Heavy Equipment
- Falling from Height
- Transport of urgent Medical conditions
- Transport of non-urgent medical condition
- External factors (e.g., including the complexity of travel arrangements)
- Time spent in queues

Communication

- Communication Methods
- Communication Breakdown
- Decision Tree
- Intelligence from other agencies/entities regarding previous experience of similar events
- Limited Visibility
- Confusion
- Delayed Evacuation
- Failing Sensors
- Documentation

Security

- Restricted Ingres or Egress

Medical coverage

- References/Case Studies of Potential provider
- Levels of support (e.g., ALS/BLS etc.)
- Support Capacity
- Quality Assurance
- Insurance Coverage
- Medical Equipment Provision
- Policies & Procedures (e.g., Refusal of Medical Care)
- Oxygen storage

Crowd management

- Bumps & Bruises
- Slips, Trips & Falls
- Crush Injuries
- Asphyxiation injuries

Food & beverage

- Open Flame
- Ignition Sources
- Fuel/ Hazardous Chemicals
- Food Safety

Sanitary services

- Explosive Gases
- Chemical Spills
- Disease Exposure

Physical disabilities & vulnerable attendees

- Evacuation routes
- Evacuation duration
- Evacuation Assistance
- Sanitary Services

Major incidents (Medical)

- Relevant Management Experience
- Protocols & Procedures
- Triage/Casualty Collection
- Maintenance of Base Line Coverage

- Activation of Additional Resources

6 COMMUNICATIONS

6.1 Protecting confidentiality: Confidential medical information includes any information which could identify the patient All event medical personnel, EMS and any other event personnel involved in the handling of confidential medical information must comply with all applicable laws, regulations, standards, and guidelines on the protection of patient privacy. They should never retain or communicate any patient information outside of authorized, secured channels. This includes but is not limited to the use of unencrypted radios.

6.1.1 Disclosures. Disclosures of confidential medical information shall not be shared with persons other than the individual receiving medical care and medical care providers directly involved in providing care except where such disclosures are required or allowed by applicable law or regulation.

6.2 Plain language use: At the event all communication must be in plain language where practicable. When referring to a patient over a radio channel where privacy cannot be maintained the patient may be referred to by their initials.

E 6.2 It should be noted that codes, shorthand etc. often may create misunderstanding should not be used.

6.3 The Event must have a communication plan which is specific to that event and must be provided to all event medical personnel.

6.3.1 Communication plan requirements: Every Event Medical Communication Plan must include, at minimum:

- The name of the event.
- The location of the event.
- The date and time of the event.
- The name of the lead medical care provider for the event.
- All telephone numbers, radio channels, e-mail addresses, or other means which could reasonably be expected to be used for medical communications. Each means of communication listed on the communication plan must include a label and brief description.
- Special instructions, if any.
- The name of the person who prepared communication plan.
- The date and time at which the communication plan was prepared.

6.3.2 Distribution: The Event Medical Communication Plan must be made available to all event medical personnel by either direct distribution, posting, or a combination thereof.

6.4 Internal communications

6.4.1 Inter-Facility communications: If the event requires the use of multiple medical facilities reliable real-time communications shall be established and maintained between all medical facilities. Telephones, radios, or other means of communication which meet the intent of this standard may be used.

6.4.2 Reliable communications: A reliable means of communication must be established and maintained between event medical personnel and the event personnel having decision making authority over the Event.

6.5 External communications: A reliable means of communication must be established and maintained between event medical personnel and external medical resources such as EMS, ambulance services, and air-ambulance services.

At minimum, these means of communication shall exist at the primary care area however such means of communication should exist at all medical facilities to be used for the event.

6.6 Radio communications:

6.6.1 Call signs: If radio call signs are to be used they must be determined before the event and clearly understood by all persons who may be reasonably expected to use them.

6.6.2 Sensitive transmissions: Where practicable, sensitive information such as vitals and medical status updates shall be transmitted by alternate means which cannot be publicly monitored. Telephones, in person contact, or other means of communication which meet the intent of this standard may be used.

6.6.3 Reserved channels: Radio channels which are to be used solely for medical communication must be clearly labeled as such on all communications plans.

6.6.3.1 Use of reserved channels: Reserved medical channels must not be used to carry radio traffic other than medical or other emergency communication.

6.7 Transfer reports: All event medical personnel who may reasonably be expected to transfer responsibility for an individual receiving care to another medical care provider, whether internal or external, must be trained to give accurate and effective transfer reports. Transfer reports should, where practicable, be given verbally to the medical care provider who is accepting responsibility for the individual receiving care. Transfer reports must be accompanied by a completed pre-hospital care report.

6.7.1 Required inclusions: Every transfer report must include, at a minimum:

- The name and qualification level of the event medical personnel who is transferring responsibility.
- The name, age, and other pertinent identifying information of the individual(s) receiving care.
- Any pertinent background information, such as what happened to the individual(s), medical history, allergies, and medications.
- The current status of the individual(s), such as whether they are stable/unstable, signs, symptoms, complaints, and vitals.
- Details of any medical treatments the individual(s) has received so far including how the individual(s) responded to treatment and whether it was effective.

7 DOCUMENTATION

7.1 Sensitive information: Medical documentation must comply with all applicable laws, regulations, standards, and guidelines on the protection of patient privacy.

7.1.1 Disclosures sensitive: Medical information must not be shared with persons other than the individual receiving medical care and medical care providers directly involved in providing care except where such disclosures are required or allowed by applicable law or regulation.

7.1.2 Information security: Medical documentation must be secured against access by unauthorized persons.

7.2 Medical personnel and credentials: The event organizer or personnel having decision making authority over the Event must maintain a record of all event medical personnel including care providers and other personnel assigned to the medical team.

7.2.1 Required inclusions: The of Event Medical Personnel record must include, at minimum:

- The names of all Event Medical Personnel
- Level of medical qualification for each individual.
- A copy of all medical credentials.
- Issuance dates of medical credentials.
- Expiration dates of medical credentials.

7.3 Pre-Hospital Care Reports (PCRs): A pre-hospital care report, otherwise known as a PCR, must be created for every individual requiring care from event medical personnel in order to establish a medical record.

7.3.1 Required inclusions: All PCRs shall include, at minimum, the following information where available:

- The date and time at which Event Medical Care was initiated.
- The location where Event Medical Care was provided.
- The name of the Event Medical Personnel providing care.

- The qualification level of the medical care provider.
- The name of the individual receiving medical care.
- The contact information of the individual receiving care.
- The age of the individual receiving medical care.
- The sex of the individual receiving medical care.
- Details of the events leading up to the injury/illness.
- Medical background, if any, such as medical history, medications, allergies, and last oral intake.
- Status information such as whether the individual is stable/unstable, signs, symptoms, and complaints.
- A timeline record of patient condition, vitals, treatment given, and patient response to treatment.
- The reason for cessation of care such as discharge, transfer, or refusal.
- The signature of the medical care provider upon completion of the PCR.

7.4.1 Decisional capacity: If a person requiring care does not have decisional capacity over themselves this must be clearly marked on the PCR including the name and contact information of the person having medical decision-making authority. This includes persons such as a minor with a parent or other legal guardian, or other persons with a legal guardian.

7.4.2 Unaccompanied persons: If a person requiring medical care does not have medical decisional capacity over themselves and is unaccompanied by their legal guardian this shall be clearly marked on the PCR.

7.5. Refusal of care: If a person requiring care or their legal guardian refuses medical care this shall be documented on the PCR with date and time. This statement of refusal shall be signed by both the refusing individual and the event Medical Personnel providing medical care.

7.6. Transfer of care: If an individual receiving care is transferred to an external medical care provider the following information shall be added to the PCR, at minimum:

- The date and time of the transfer.
- The name of the person authorizing the transfer.
- The signature of the person authorizing the transfer.
- The name of the organization accepting medical responsibility.
- The contact information of the organization accepting medical responsibility.
- The name of the individual accepting the transfer.
- The signature of the individual accepting the transfer.

7.7 Duplication: A duplicate and identical copy of the PCR must be created. One copy must be given to the person or organization accepting the transfer of medical responsibility. One copy must remain on file with the event Medical Services Provider.

7.8 Discharge: If an individual receiving care is discharged the following information must be added to the PCR, at minimum:

- The date and time of the discharge.
- The name of the person authorizing the discharge.
- The signature of the person authorizing the discharge.
- The signature of the person being discharged.

7.9 Signature refusal: If any individual whose signature is required on a PCR refuses to sign this must be documented on the PCR with date and time. This statement of refusal must be signed by the event Medical Personnel providing medical care

7.10 Reports: The lead or their designated appointee must generate periodic reports to the personnel having decision-making authority over the event.

7.10.1 Required inclusions: Reports must include at minimum:

- The name of the person who prepared the report.
- The date and time at which the report was prepared.
- The total quantity of persons who have received or are receiving medical care.

- The quantity of persons still receiving care from event Medical Service Provider.
- The quantity of persons discharged from care.
- The quantity of persons transferred to EMS or other external medical care.
- The names and contact information of persons or organizations accepting medical responsibility for transfers, if any.
- Generalized descriptions of the types of injuries and illnesses treated, if any.
- event or site hazards identified in the course of providing medical care, if any.

7.10.2 Exclusions: Reports must not include any information which could be used to identify the individual(s) receiving medical care.

7.11 Storage of documentation: Documentation described in this section must be kept on file for a minimum of 12 months.

8 FATIGUE & WORKING CONDITIONS

8.0 Responsibility*:* All events and event organizers, whether directly, or through their designates, are responsible for ensuring the welfare, working conditions, and limiting the fatigue of event personnel.

8.1 Mitigating risks*:* All events and event organizers must take steps to mitigate the reasonably foreseeable risks to event personnel caused by working conditions and fatigue. Poor working conditions and fatigue have a foreseeable, direct, deleterious, and measurable effects on the Health & Safety of event personnel. The increased risks of accident, injury, and poor mental health have been shown to impact levels of bullying, harassment and intimidation at events.

8.2 Known previous working conditions*:* Where event personnel are working under the direction of the same venue, management team, event organizer or employer; previous working conditions, (e.g., hours and welfare) must be factored into the evaluation of reasonably foreseeable Health & Safety risks, for the most current event, and actions taken to mitigate them.

E8.2 In a venue where the venue personnel are dealing with multiple concurrent and/or consecutive events, the risks caused by fatigue and working conditions must be factored into the risk exposure for the current event. If event personnel worked experienced any of the following:

- Worked more than 40 hours the previous week.
- No days off between events in the preceding 7 days.
- Worked more than 12 hours on the day prior to the current event.
- Less than 8 hours of rest before the current event.

These risks must be carried over into the risk assessment for the current event and the risks mitigated.

8.3 Unknown previous work conditions*:* Where an event organizer, venue, management team, employer or event has no knowledge or is not responsible for the previous work schedule and working conditions of event personnel, they must make all reasonable efforts, to ensure that event personnel are capable of fulfilling their event roles and responsibilities safely.

If they discover, or it is reasonably foreseeable, that event personnel as a result of previous work schedule and working conditions are at additional risk during the current event, they must take steps to mitigate those reasonably foreseeable risks. (e.g., assigning lower risk work assignments).

8.4 Reasonable practices: The following is guidance on reasonable practices for ensuring the welfare of event personnel. This includes effectively identifying and mitigating the risk exposure caused by poor working conditions and fatigue.

The focus of the guidance is *physical stressors*. For the purpose of this standard, physical stressors shall be defined as any factors, at the event that increase the allostatic load experienced by the body.

8.4.1 Mitigation examples

- All event personnel must have access to clean and sanitary working conditions.

- Risks created by exposure to extreme conditions such as temperature or environmental conditions must be mitigated.
- (Often this requires that event personnel reduce their exposure to said conditions by increasing the frequency and length of rest breaks.)
- Rest breaks should be taken in a location/ environment that reduces or removes event personnel from said extreme conditions
- The physical intensity of the work may need to be reduced.
- Working hours or length of the working day for Affected Personnel may also need to be reduced.
- Increased availability and intake of fluids and food may be required.

8.4.3 Extreme conditions: Exposure to extreme conditions will predictably increase the fatigue levels of event personnel and the rate at which they will experience fatigue. They may also increase the risk of injury.

Examples of extreme conditions (others may apply):

- Wet Bulb Globe Temperature 79F (26C) or above.
- UV index of 6-7.
- Altitudes above 5000ft.
- Snowy, icy, wet, muddy, sandy surface conditions.
- Sustained noise levels above 85db.
- Snow, ice, or rain.
- Winds above 15mph sustained and gusts above 25mph.
- Humidity below 30%
- High Levels of physical exertion.

8.5. **Working hours**: event personnel should not be scheduled to work more than 12 hours* (*ideally not more than 10 hours) in a 24-hour period.

E8.5.1 Once the number of hours worked in one day increases beyond 12 hours, dangerous levels of fatigue are predictable and reasonably foreseeable. Studies in the airline industry have shown that exposures in excess of 16 hours awake, (awake not just working), are equivalent in terms of impairment, to a 0.08 blood alcohol level, when measuring reaction times and decision making.

E8.5.2 event personnel working more than 10 hours in a 24-hour period daily are at an increased risk from fatigue, and are impacted by hours previously accumulated. A study by Folker and Tucker (Liberty Mutual Group New York) showed a 13 percent risk increase of injury when compared to a baseline of an 8-hour shift, when comparing the baseline of 8 hours to a 12-hour shift the risk increased by 27%.

E8.5.3 Once event personnel have accumulated 40 hours or more without 48 hours of rest, the risks associated with fatigue increase. These risks are impacted by the speed with which the 40 hours are accumulated - e.g., working 40 hours over 4 days raises the risk of fatigue compared to working 40 hours over 5 days). Productivity declines rapidly after 50 hours at work. Jobs with regular overtime (over 40 hours) have a 61% higher injury hazard. At 60 hours the injury hazard increases by 23%. *(National Longitudinal Survey of Youth (NLSY))*

8.6 Rate of Fatigue: Exposure to extreme conditions outlined in 8.4.2 will fatigue event personnel in, significantly less time, than the hours outlined in section 8.4.3.

8.7 Proper Rest*:* event personnel should receive a fifteen-minute break every two and half hours, and a one-hour meal break, every five hours. Certain roles and responsibilities may require more frequent breaks.

8.8 Sleep: The work schedule should allow sufficient time for a minimum of 8 continuous hours of sleep in any 24-hour period.

8.9 Time away from work*:* All event personnel should be given a minimum of 10 continuous hours away from the event, between their scheduled calls, in any 24-hour period.

8.10 Additional accommodations: Other factors, can impact the need for increased rest, or a reduction in work hours, (e.g., job tasking, time of day etc.). These factors must be evaluated as part of the risk assessment.

8.11 Alternative mitigation: Where event personnel are exposed to fatigue and the hours or exposure cannot be reduced, alternative mitigation measures must be utilized. (e.g., providing accommodation within walking distance or a car service etc.)

E8.11 There are many peer reviewed studies that conclude adults require between 7 and 9 hours of sleep per 24-hour period. It is unreasonable to expect event personnel to have 7-9 hours of sleep if the period between calls is less than 10 hours.

Most event personnel will incur some travel time, to, and from, the Event. In order to reduce risks from fatigue, the key mitigation is the amount of *available* time for sleep, not simply time away from work.

It is reasonably foreseeable that only allowing event personnel 8 hours away from the Event, will result in approximately, 5 or less hours of sleep. The impacts on reaction times, complex attention, hand eye co-ordination and decision making, result in levels of impairment similar to working more than 16 hours in a day. The travel time for many event personnel, can exceed an hour or more, in each direction.

The biggest risk to event personnel, is often on the way home from an event.

Falling asleep at the wheel when working more than twelve hours or functioning on less than 6 hours of sleep per night is reasonably foreseeable. A study by the AAA (American Automobile Association) showed that less than 4 hours of sleep increased the risk of a road traffic accident by 11.5 times when compared to 8 hours of sleep.

To this point, many countries around the world, have regulations governing the duration truck drivers are permitted to drive in a day and how many hours they can work in total.

Similar regulations, due to studies on fatigue, work and rest hours are instituted for commercial pilots.

Even where event personnel have access to closer accommodations – e.g. a hotel close to the event site - any break of less than nine hours, will reasonably foreseeably result, in less than 7-8 hours of sleep.

8.12 Reducing fatigue: To help reduce levels of fatigue, event personnel must, (to the extent possible) have access to break facilities where they can sit and remove themselves from the hazards and stressors of the event site,(see section 8.4.2).

Periods of inactivity must not be counted as rest breaks, since personnel are still exposed to the hazards and stressors present.

8.13 Hydration*:* Easily accessible cool or cold potable water for drinking and hydration must be provided for all event personnel. Depending on additional risk factors (like physical exertion, temperature, UV, humidity and wind,). Messaging/ information that informs and encourages self-monitoring of personal hydration is should be used.

8.14 Working at height: (especially in buildings), can expose event personnel to higher heat levels, physical exertion and stress. This increases the rate at which exposed personnel will fatigue and negatively affect their welfare.

Periods of inactivity at height must not be counted as rest breaks, since personnel are still exposed to the hazards present.

Rest breaks must be provided, in a location, that removes them from the hazards that, they were exposed to at height, and sufficient time must be added to allow safe ascent and decent, without, reducing the time they get to rest.

9 MENTAL HEALTH & PSYCHOLOGICAL SAFETY

9.0 Evaluation: The event organizer, or their designates, must evaluate the mental health risks in three broad categories:

- Risks to event personnel.

- Risks to Attendees .
- Risks that crossover to impact both groups (Common Risks).

This evaluation must be included in the risk assessment for the Event.

E9.0 Psychological safety, for event personnel and Attendees, is an essential part of Heath & Safety at the Event. Ignoring or failing to identify these risks, can have the same impact to the safety of the Event, as failing to identify risks to physical safety.

9.1 Exclusions: Pre-existing mental health conditions: diagnosed by a qualified mental health professional, and/ or being managed with professional treatment, or prescribed medication, are outside the scope of this standard, except under the following circumstances:

- Where such a condition, has been voluntarily disclosed to the event organizer by the individual. In these cases, the risk factors to good mental health, for these personnel may now be reasonably foreseeable and reasonably accommodated.

- Where the reasonably foreseeable risks, Psychological Safety at the Event, would be likely to, negatively impact the mental health of event personnel and/or Attendees, without, pre-existing and professionally diagnosed mental health conditions.

9.3 Risk assessment methods: A risk assessment, evaluating contributing risk factors to Psychological Safety at the Event must contain, at a, minimum the following:

- It must be a written document.
- It must identify, the reasonably foreseeable situational risks, under the circumstances to Psychological Safety.
- It must identify, evaluate, reasonable mitigation measures.
- It must identify, roles and responsibilities of Event Personnel, who are required, to mitigate those risks.

9.4 Risks to psychological safety: The Event, as a minimum, must evaluate the reasonably foreseeable risks, under the circumstances, to Psychological Safety from:

- The Programmed Activities at the Event.
- The schedule of the Event.
- The demographic of the Attendees.
- The demographic of Event Personnel.
- The security risks at the Event.
- Other medical risks at the Event.
- The location of the Event.

Event Personnel

9.5 Factors: A wide variety factors should be evaluated for their potential impact on the Psychological Safety of Event Personnel whilst working at the Event. Factors may include but are not limited to:

- Event related, emergencies and catastrophic events.
- Work related, injury and illness.
- Bullying, Harassment and Intimidation.
- Interpersonal violence.
- Long work hours.
- Sleep deprivation/inadequate rest.
- High job demands.
- Job insecurity.
- Work/family conflict.
- Lack of job control.
- Unpredictable work schedule.
- Emotional Labor.
- Being constantly on call.

- Fatigue.
- Crowds & crowd behavior.
- Poor event facility hygiene.
- Poor/ unclear organizational communication.
- Working conditions.
- P.M.S. & Menstruation.
- Pregnancy.
- Menopause.
- Prostate conditions
- Chronic illness
- Physical disability
- Local and national disasters/ emergencies.
- Substance misuse

Event Attendees

9.6 Factors: A wide variety factors should be evaluated for their potential impact on the Psychological Safety of Event Attendees while attending events. Factors may include but are not limited to:

- Event related emergencies and catastrophic events.
- Injury and illness.
- Bullying, Harassment and Intimidation.
- Interpersonal violence.
- Substance use/misuse.
- Fatigue.
- Environmental Stressors (Noise, Light Levels, Temperature etc.)
- Crowds and crowd behavior.
- Poor event facility hygiene.
- Lack of /or Poor Event communication.
- Lack of Information.
- P.M.S and Menstruation.
- Pregnancy.
- Menopause.
- Prostate conditions.
- Chronic illness.
- Physical & Invisible disability* (*disabilities that may not be visible).
- Local and national disasters/ emergencies.
- Bullying, Harassment & Intimidation

10 OTHER HAZARDS

Bullying, Harassment and Intimidation (BHI) at the Event, can be a significant source of hazard and risk exposure, for Event Personnel and Attendees.

10.1 Policies: Event Organizers must, develop policies to prevent and respond to, Bullying, Harassment and Intimidation (BHI).

10.2 Definitions: Event Organizers must clearly define what is considered BHI for Event Personnel and Attendees.

10.3 Training & information: Event Organizers must, provide training, (for Event Personnel), and information, (for Event Personnel and Attendees), distinguishing appropriate from inappropriate behavior.

10.4 Training for supervisors: Event Organizers must, provide training for all supervisors of Event Personnel. Training must include how to identify potential situations and complaints in addition to procedures for handling complaints promptly and confidentially.

10.5 Policy statement: Event Organizers must create a policy statement that, BHI are will not be tolerated. This statement must be disseminated via screens/signage etc. to all Event Personnel & Attendees, using all reasonable communication methods, given the circumstances of the Event. The policy must:

- State in clear terms, the Events policy toward BHI and clearly state their commitment to the prevention of BHI.
- Clearly state the consequences of, making threats or committing acts.
- Encourage reporting of all incidents, of BHI
- Identify and communicate, the potential risks and consequences, of BHI.
- Identify support and resources for people who experience it.

10.6 Prevention: Event Organizers must, take active steps to prevent, or at least minimize, BHI at the Event.

10.7 Reports & complaints: Event Organizers must, provide ongoing incident reporting and complaint procedures. This must include specific procedures for Event Personnel if, the alleged perpetrator is a supervisor or other individual with authority, to ensure that retaliation does not take place. The procedures must include:

- Training to maintain confidentiality throughout the process and identify to whom reports should be made.
- Outline the procedures, for investigating and resolving complaints.
- Include the contact details, of trained contact personnel for complainants, who do not want to approach their supervisor.

10.8 Procedures: Event Organizers must, create procedures for dealing with incidents of BHI and any associated complaints. These include investigation procedures, investigation reporting and appropriate follow up.

10.9 Equality of application: Event BHI policies and procedures must, apply equally to all Event Personnel regardless of role, responsibility or affiliation.

10.10 Working with venues: Event Organizers must, when working in venues they do not control, make all reasonable efforts, to acquire the venues' policies and procedures on BHI, and incorporate them into their ESMP. Event Organizers should, share their policies and procedures on BHI with the venue, and request that such information be shared with all Venue Personnel, involved with the Event.

10.11 Examples of BHI: Examples of BHI behavior at the Event, include, but are not limited to:

- Spreading malicious rumors, gossip, or innuendo.
- Excluding or isolating someone socially.
- Intimidating a person.
- Undermining or deliberately impeding a person's work.
- Physically abusing or threatening abuse & hazing behaviors.
- Removing areas of responsibilities without cause.
- Making jokes that are 'obviously offensive' physically or by spoken word or via electronic communication.
- Intruding on a person's privacy by pestering, spying or stalking.
- Assigning unreasonable duties or workload which are unfavorable to one person (in a way that creates unnecessary pressure).
- Underwork - creating a feeling of uselessness.
- Constantly changing work guidelines.
- Establishing impossible deadlines that will set up the individual to fail.
- Withholding necessary information or purposefully giving the wrong information
- Blocking applications for training, leave or promotion.
- Yelling or using profanity.
- Criticizing a person persistently or constantly.
- Belittling a person or their opinions. (e.g., using sarcasm & ridicule)
- Unwarranted (or undeserved) punishment.
- Tampering with a person's personal belongings or work equipment.
- Threats relating to job security.
- Over-stringent supervision.
- Unwanted physical contact or touching (e.g. repeatedly invading personal space).
- Cyberbullying

ANNEX

Other useful terms

A1.1 Physician is a professional (doctor) who has been educated, trained, and licensed to practice the art and science of medicine. In the United States and Canada, the term physician also describes all medical practitioners holding a professional medical degree. Each state in the United States, and each province in Canada, has its own requirements for licensing physicians—a requirement for legally practicing medicine in North America.

A1.2 Registered Nurse(RN): is a nurse who has graduated from a nursing program at a college or university and has passed a state licensing exam.

A1.3 Paramedic: Paramedics provide advanced levels of care for medical emergencies and trauma. A paramedic's required competencies and capabilities vary from jurisdiction to jurisdiction but usually include the administration of limited medications via intramuscular, subcutaneous, sublingual and intravenous routes; cardiac monitoring and defibrillation; insertion of advanced airways (e.g., endotracheal intubation, etc.); treating medical emergencies such as hypoglycemia, imminent child birth, trauma, apnea/dyspnea, shock, allergic reactions, etc.; and, selected emergency invasive techniques such as needle reduction of a tension pneumothorax (collapsed lung) and cricothyrotomy (emergency surgical airway).

A1.4 Paramedics: operate away from a hospital on written standard operating procedures approved by a specific medical director physician (a.k.a. "protocol). This set of standard procedures describes what a paramedic is permitted to do medically in certain situations. A paramedic away from a hospital may also establish direct communication with the medical director, or his/her designee, to receive specific instructions (orders) via radio or, more commonly, telephone.

Many jurisdictions also refer to a paramedic as an "Emergency Medical Technician – Paramedic" (EMT-P), which should not be confused with lesser trained and qualified levels of EMT described below.

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A1.5 ALS (Advanced Life Support): is a term often used to describe emergency, high level medical interventions performed by someone trained as a paramedic or higher (e.g., nurse, physician, etc.). "BLS" (Basic Life Support) is the term used to describe emergency medical interventions performed by someone trained as a paramedic or lower (e.g., Basic EMT, first aider, etc.) and include basic first aid, CPR and/or similar basic first aid skills.

Other Useful resources

A2.1 When providing examples for the wind speeds in section **E10.4.2.** We started with the information from the definition of High Wind in the OHSA CFR 1926 Construction Standard.
However, we also consulted many High Wind Action Plans for outdoor events, and it was determined that to protect workers especially those working on temporary structures at height needed to perform their tasks at much lower wind speeds to protect their health and safety and reduce fatigue.
High wind. A wind of such velocity that one or more of the following hazards would be present:

1. The wind could blow an employee from an elevated location,
2. The wind could cause an employee or equipment handling material to lose control of the material, or
3. The wind would expose an employee to other hazards not controlled by the standard involved.

Note to the definition of "high wind": The Occupational Safety and Health Administration normally considers winds exceeding 64.4 kilometers per hour (40 miles per hour), or 48.3 kilometers per hour (30 miles per hour) if the work involves material handling, as meeting this criteria, unless the employer takes precautions to protect employees from the hazardous effects of the wind
https://www.osha.gov/laws-regs/regulations/standardnumber/1926/1926.968

A2.2 For more information on the UV index visit the epa website for information on sun safety.https://19january2017snapshot.epa.gov/sunsafety/uv-index-scale-1_.html

Exposure Category	Index Number	Sun Protection Messages
LOW	<2	You can safely enjoy being outside. Wear sunglasses on bright days. If you burn easily, cover up and use sunscreen SPF 30+. In winter, reflection off snow can nearly double UV strength.
MODERATE	3–5	Take precautions if you will be outside, such as wearing a hat and sunglasses and using sunscreen SPF 30+. Reduce your exposure to the sun's most intense UV radiation by seeking shade during midday hours.
HIGH	6–7	Protection against sun damage is needed. Wear a wide-brimmed hat and sunglasses, use sunscreen SPF 30+ and wear a long-sleeved shirt and pants when practical. Reduce your exposure to the sun's most intense UV radiation by seeking shade during midday hours.
VERY HIGH	8–10	Protection against sun damage is needed. If you need to be outside during midday hours between 10 a.m. and 4 p.m., take steps to reduce sun exposure. A shirt, hat and sunscreen are a must, and be sure you seek shade. Beachgoers should know that white sand and other bright surfaces reflect UV and can double UV exposure.
EXTREME	11+	Protection against sun damage is needed. If you need to be outside during midday hours between 10 a.m. and 4 p.m., take steps to reduce sun exposure. A shirt, hat and sunscreen are a must, and be sure you seek shade. Beachgoers should know that white sand and other bright surfaces reflect UV and can double UV exposure.

A2.3 For More information on the Wet Bulb Globe Temperature visit the NOAA website for information on Extreme Temperatures. https://research.noaa.gov/article/ArtMID/587/Article

Wet Bulb Globe Temperature Category Work/Rest and Water Intake

08/07/15

Unacclimated and Acclimated Work/Rest and Water Intake Chart

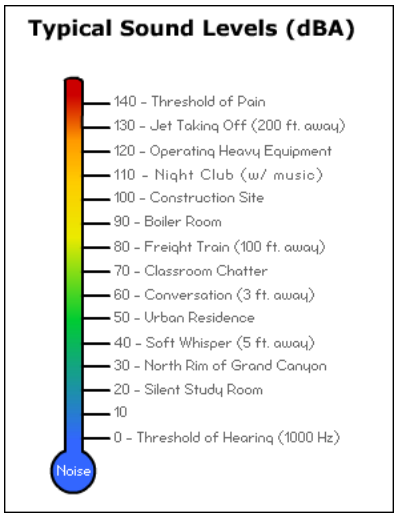
Heat Risk Category		Wet Bulb Globe Temp	Light Work Work/Rest	Light Work Water Intake (quart/hr)	Moderate Work Work/Rest	Moderate Work Water Intake (quart/hr)	Heavy Work Work/Rest	Heavy Work Water Intake (quart/hr)
No Risk	Unacclimated	78 – 79.9	50/10 min	½	40/20 min	¾	30/30 min	¾
	Acclimated	78 – 79.9	continuous	½	continuous	¾	50/10 min	¾
Low	Unacclimated	80 – 84.9	40/20 min	½	30/30 min	¾	20/40 min	1
	Acclimated	80 – 84.9	continuous	½	50/10 min	¾	40/20 min	1
Moderate	Unacclimated	85 – 87.9	30/30 min	¾	20/40 min	¾	10/50 min	1
	Acclimated	85 – 87.9	continuous	¾	40/20 min	¾	30/30 min	1
High	Unacclimated	88 – 90	20/40 min	¾	10/50 min	¾	avoid	1
	Acclimated	88 – 90	continuous	¾	30/30 min	¾	20/40 min	1
Extreme	Unacclimated	> 90	10/50 min	1	avoid	1	avoid	1
	Acclimated	> 90	50/10 min	1	20/40 min	1	10/50 min	1

Adapted from: 1) USGS Survey Manual, Management of Occupational Heat Stress, Chapter 45, Appendix A. 2) Manual of Naval Preventive Medicine, Chapter 3: Prevention of Heat and Cold Stress Injuries. 3) OSHA Technical Manual Section III: Chapter 4 Heat Stress. 4) National Weather Service Tulsa Forecast Office, Wet Bulb Globe Temperature.

The National Weather Service defines Wet Bulb Globe Temperature (WBGT) as "...*a measure of the heat stress in direct sunlight, which takes into account: temperature, humidity, wind speed, sun angle and cloud cover (solar radiation). This differs from the heat index, which takes into consideration temperature and humidity and is calculated for shady areas. If you work or exercise in direct sunlight, this is a good element to monitor. Military agencies, OSHA and many nations use the WBGT as a guide to managing workload in direct sunlight.*"

More information about WGBT is contained in the OSHA Technical Manual, Section III, Chapter 4, found at: https://www.osha.gov/dts/osta/otm/otm_iii/otm_iii_4.html.

A2.4 For More information on the risks of Sound levels:
https://www.osha.gov/otm/section-3-health-hazards/chapter-5



A2.5 For More information on the Fatigue

https://www.flightsafetyaustralia.com/2019/09/your-sleep-really-matters/

https://flightsafety.org/wp-content/uploads/2019/01/ar-2015-095_final_ATSB-pilot-fatige-report.pdf

A2.6 For More information on the Low Humidity and Dehydration

https://www.denverhealth.org/blog/2019/02/winter-dehydration

https://blog.getawair.com/6-health-symptoms-associated-with-humidity