UK Health Security Agency

# Healthcare provision at events

## A rapid scoping review

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# Main messages

The purpose of this rapid scoping review was to identify and summarise existing UK guidance on healthcare provision at events to identify current practice and gaps with the aim of informing the development of an Event Healthcare Standard. The review includes 49 guidance documents (search dates: October 2024).

Of these, 20 were guidance for generic events: the Events Industry Forum ‘Purple Guide’, the Sports Grounds Safety Authority ‘Green Guide’ and 18 from local authorities, local councils or ambulance trusts. Twenty-nine were guidance for sporting events from sports governing bodies, sporting organisations and the Health and Safety Executive. In terms of geographic coverage, 22 of the 49 documents applied to the whole of the UK or Great Britain, 19 were specific to England, 3 to Scotland, one to Northern Ireland and one to Wales. The remaining 3 were international guidance applicable to the whole of the UK.

Engaging with Safety Advisory Groups (SAGs) was mentioned in 19 of the 20 guidance documents for generic events, with larger events or those posing greater risks tending to be the ones requiring full SAG review. However, there was variation across local authorities, probably due to the lack of legislation around SAGs, highlighting the need for clear and consistent guidance in how to engage with SAGs. Only 4 of the 29 guidance documents for sporting events mention engaging with SAGs, although as the aim of the SAG is to advise on public safety at an event, guidance on healthcare provision for participants at sporting events would not necessarily be expected to mention SAGs.

There is also a need for more guidance to support event organisers in planning for major incidents, including engaging with Emergency Preparedness Resilience and Response (EPRR) teams, as well as in relation to recording medical usage and post-event assessments. Finally, there is a need for more guidance on medical risk assessments (or equivalent), medical plans, and procedures for liaising with local NHS provision and patient handover.

There is a lack of consideration of health equity in the guidance on healthcare provision at events with only limited guidance in 7 of the 20 documents for generic events and 2 of the 29 documents for sporting events.

Overall, the guidance for provision of healthcare at events included in this review differs in the level of detail provided and in content, strengthening the need for the Event Healthcare Standard.

The main limitation of this rapid scoping review is that, although we followed a systematic process to identify and screen the evidence, due to the nature of the grey literature sources searched it was not possible to be as systematic as in a review involving peer reviewed evidence.

# Background

## Context

In response to the Manchester Arena Inquiry, the Department of Health and Social Care (DHSC) is overseeing the development of an Event Healthcare Standard to address recommendations from the inquiry regarding the standardisation of healthcare provision at events (1). The Event Healthcare Standard is being written by a group of experts in emergency preparedness and response and event healthcare provision (the 'authorship group'), convened by NHS England, and reviewed by a different group of experts (the 'review panel').

To inform the writing of the standard, DHSC and NHS England commissioned 2 research projects into healthcare provision at events through the National Institute for Health and Care Research (NIHR):

- a rapid scoping review (which is summarised in this report)
- a series of workshops with key stakeholders involved in event healthcare planning and provision, conducted by the NIHR Health Protection Research Unit (HPRU) in Emergency Preparedness and Response

## Purpose

To understand current thinking on event healthcare practice, it was intended to conduct a rapid systematic review of academic (peer-reviewed) evidence on this topic. However, an initial scoping exercise suggested that there was a lack of peer-reviewed evidence on this topic. In particular, Spaepen and others conducted a systematic review on standards of medical planning and response for emergency medical teams during mass gatherings and did not find any studies that met their eligibility criteria (search ran in 2022) (2). However, it should be noted that this was based on a conference abstract and that despite further communication with the authors, we did not obtain their search strategy or list of excluded studies, so we were not able to make a full assessment of this work.

In this context, it was agreed by the review team and stakeholders to conduct a rapid scoping review of existing guidance on healthcare provision at events to identify current practice and gaps. The purpose of this work was not to inspect and evaluate practice and standards currently implemented but to inform the development of the Event Healthcare Standard.

# Agencies and key actors involved in planning and management of health and safety at events

The principal actor is the 'event organiser', who has overall responsibility for the event; they have the principal legal duties for ensuring public safety (3). The 'venue owner', or 'venue operator', is the owner of the premises where the event will occur – they may or may not have a direct involvement with the event organisation.

Safety Advisory Groups (SAGs) – made up of representatives from a local authority, emergency services (police, fire and rescue service, and ambulance service), the event organiser and other relevant bodies – are usually coordinated by local authorities (3). Their aim is to advise on public safety at an event and to support event organisers with the planning and management of an event (3). Their role is also to encourage cooperation and coordination between all relevant agencies (3). They are sometimes also called ESAG (Event Safety Advisory Group), PSAG (Public Safety Advisory Group) PESAG (Public Event Safety Advisory Group), LSAG (Licensing Safety Advisory Group), PEG (Public Event Group), SAGE (Safety Advisory Group for Events); it can also be prefixed by the name of the local authority (4).

SAGs are non-statutory bodies and therefore do not have legal powers or responsibilities and they cannot approve or prohibit an event from taking place (3). There are also no legal requirements for a SAG to be formed or on how SAGs should operate. Therefore, there can be important variation across local authorities on how SAGs function (4). In this context, the UK Good Practice Guide to Working in Safety Advisory Groups, produced by the Emergency Planning College (EPC), provides a core guidance document to support SAGs, their members and the event organisers (4). The UK Good Practice Guide provides some detailed guidance on role and responsibilities of SAGs' core members, including in relation to health and safety (4):

- local authorities: depending on the nature of the local authority, it can be a Category 1 responder under the Civil Contingencies Act, and will be responsible for some matters related to health and safety and duty of care, including those of its own staff
- police service: Category 1 responder under the Civil Contingencies Act; responsible for health and safety and duty of care in respect of its staff
- fire and rescue service: Category 1 responder under the Civil Contingencies Act; responsible for health and safety and duty of care in respect of its staff
- ambulance service: Category 1 responder under the Civil Contingencies Act; responsible for health and safety and duty of care in respect of its staff; they respond to incidents and emergencies; they may provide medical and first aid advice or assessment; they may be a medical provider; they may be responsible for the liaison between the events and the NHS
- venue owner or venue operator: even when not directly involved with an event other than providing the location, they may still have to fulfil general duties under health and safety legislation

- event organiser: responsible for all health and safety-related matters, which may include risk and threat assessment and management, health and safety policy and advice, monitoring as well as audit and record keeping

In addition, Medical Advisory Groups (MAGs), which report to the SAG, may be formed to oversee medical and first aid provision at larger or more complex venues. The MAG includes representatives of medical and first aid providers and venue management. MAGs' remit tends to include medical and ambulance provision, liaising with emergency services, logistical issues, training, annual reviews, and any other issue that may be relevant locally or for specific sports or events (5).

Other key actors involved in planning and management of health and safety at events include the Emergency Planning College (EPC), Events Industry Forum, Health and Safety Executive (HSE), and Sports Grounds Safety Authority.

Definitions of these and other abbreviations, as well as key terms used in this report, are available in Annexe A.

# Methods

## Review process

A rapid scoping review was conducted to address the review question: 'What does existing guidance recommend about healthcare provision at events (including planning and minimum standards)?'

The methods used for this rapid scoping review were based on those used in a previous systematic review of grey literature (6). Full details of the methods used can be found in Annexe B.

To ensure a systematic consideration of health equity, we followed the UKHSA Evidence Network health equity checklist throughout the review process (see Annexe C). In particular, the groups deemed to be at risk of experiencing further health inequalities in relation to this review question were defined as: people from protected characteristics groups related to age (children and older adults), to pregnancy and maternity, and to gender reassignment; people with pre-existing health conditions; people with disabilities (including learning disabilities); and people who don't speak English.

Guidance on planning and logistics of healthcare provision at events were identified through searching databases for grey literature (Google Scholar, King's Fund and Policy Commons; searches conducted on 30 July 2024) and through 77 Google searches (conducted between 19 July 2024 and 21 October 2024). See Annexe D and Annexe E for corresponding search strategies.

Records from database searches were screened using Rayyan (7). Two reviewers screened 154 of the 558 records in duplicate and the remainder were screened by one reviewer (see Annexe B for further details).

For each Google search string, the first 100 hits retrieved when using the UK filter (see Annexe E) were screened by one reviewer. Potentially relevant hits from each search string were recorded in an Excel spreadsheet. To pilot the search strings, 2 reviewers ran 10 different searches independently and compared results. Disagreements about which records were potentially relevant were resolved by discussion. The search results from each search string were screened directly on full text (no title or abstract screening). This is because records from grey literature do not always have an abstract available.

Additional sources of evidence included: checking reference lists of included guidance and compilations of guidance identified by the search, consultation with experts including members of the NHS authorship group and members of the Emergency Preparedness Resilience and Response (EPRR) Events Group (the cutoff date for recommendations was 30 November

2024), and targeted Google searches (see Annexe B for further details). References recommended by experts were included if they met the inclusion criteria for the review. References were screened by one reviewer and checked by a second.

Data extraction was conducted in 2 stages. High-level information was extracted at stage 1 (including the organisation publishing the guidance, type of event and who at the event the guidance for healthcare provision applied to). Only guidance making specific recommendations about provision of healthcare relevant to this review was moved to stage 2, during which more detailed information was extracted (including roles and responsibilities, communication and coordination between teams, training and qualifications required for staff, steps for planning healthcare provision, equipment needed and post-event assessment). Only information directly relevant to the review question was extracted (for instance, recommendations around fire or food safety were not extracted). Data extraction was completed in Microsoft Excel tables, with separate tables for different types of events. Data extraction was undertaken by one reviewer and checked by a second.

A narrative summary was provided to give an overview of the different types of guidance identified, highlighting where guidance was similar across documents, where there were differences in the recommendations made, and areas where guidance was lacking. The general approach taken in the narrative summary was to discuss guidance produced at national level first followed by guidance produced at local level.

# Eligibility criteria

The inclusion and exclusion criteria are provided in Annexe B (Table B.1).

The main focus of this rapid scoping review was to identify guidance from the UK on planning and logistics of healthcare provision at sporting and cultural events, including community events, political events and religious events. Guidance reporting on areas other than healthcare provision (for instance, guidance on how healthcare should be delivered for specific injuries, or on infectious disease surveillance) were excluded.

In terms of population, the main focus of this rapid scoping review was to identify guidance aimed at provision of healthcare for audiences attending events. Guidance aimed solely at the provision of healthcare for participants of sporting events without consideration of healthcare provision to the audience were excluded, unless they made specific recommendations relevant to the review question (for instance, in terms of coordination between organisers, local authorities, ambulance services and local NHS provision).

Guidance produced at national level meeting the other eligibility criteria were all included. Guidance produced at local level were included only if they made specific recommendations relevant to the review question.

Only the most recent versions of the guidance were considered.

# Results

## Search results

The database searches returned 671 records. After removal of duplicates, 558 records were screened. No UK guidance documents meeting the inclusion criteria were identified. The list of 558 records is available on request.

The Google searches returned 60 potentially relevant records. After removal of duplicates (10 of these records had already been recommended by experts), 50 were screened on full text, of which 30 were included for stage 1 data extraction (see Annexe F for the list of 20 records that were excluded); 25 of these were included for stage 2 data extraction.

Forty-three records were recommended by experts, of which 41 were screened on full text (2 could not be retrieved). Thirty-two records were included for stage 1 data extraction (see Annexe F for the list of 9 records that were excluded), of which 17 were included for stage 2 data extraction.

Nine additional unique references were identified through additional methods (checking references of included records or compilations of guidance and additional targeted Google searches), of which 8 were included for stage 1 data extraction (see Annexe F for the one record that was excluded) and 7 were included for stage 2 data extraction.

In total, 658 unique records were screened, and 70 records were included for stage 1 data extraction, of which 49 were included for stage 2 data extraction. A PRISMA diagram is provided in Figure B.1.

Comment on local guidance: due to the lack of legislation and national guidance on SAGs functioning, the guidance documents from local authority SAGs we identified through our searches tended to show great variability in content and or detail. As it was not possible to include all of the guidance from local authorities, we included those that represented a range of recommendations to show the variability present in order to inform the development of the Event Healthcare Standard. Therefore, as the purpose of this work is to inform the development of the Event Healthcare Standard rather than inspect or evaluate current practice, the references to the different local documents have been anonymised as local authority SAG 1 to 8, local council 1 to 5, and ambulance trust 1 to 5.

## Summary of guidance identified

The characteristics of the 70 guidance documents included for stage 1 data extraction can be found in supplementary material 1 and a brief overview of the guidance only included for stage 1 data extraction at the end of the results section.

The full data extraction of the 49 guidance documents included for stage 2 data extraction can be found in supplementary material 2, and a summary of the guidance by type of event and where in the UK the guidance applies in Table 1. Of these 49 documents:

- 29 provide guidance for healthcare provision at sporting events (8 to 36)
- 20 are guidance for healthcare provision at events which are not specific to sport, hereafter referred to as 'guidance for generic events' (5, 37 to 55); of these 20 guidance, 15 are applicable to all events (5, 37 to 46, 48 to 50, 52), and 5 are specific to events held in community settings (47, 51, 53 to 55)

Twelve of the 49 guidance documents included for stage 2 data extraction apply to the whole of the UK (5, 8, 14, 23, 24, 28, 30, 32, 34 to 37) and 10 apply to Great Britain (9 to 13, 15, 16, 20, 25, 31). Twenty-four are specific to one of the UK nations: 6 from sports governing bodies in England, and 18 from local areas in one of the UK nations (England, Northern Ireland, Scotland or Wales): 8 from local authority SAGs, 5 from ambulance trusts, and 5 from local councils (but not from a SAG) (17 to 19, 26, 27, 33, 38 to 55). The remaining 3 are international guidance for sporting events which are applicable to the UK (n=2 worldwide (21, 22) and n=1 Europe (29)).

# Guidance for generic events

## Overview of the guidance identified

Of the 49 guidance documents fully extracted at stage 2, 20 were guidance applicable to events other than sport-specific events. The full data extraction of these 20 guidance documents can be found in supplementary material 2.

Two of the 20 guidance documents are for the whole of the UK: the Purple Guide (37) (compiled and published by the Events Industry Forum), which is primarily applicable to licensed events, and the Green Guide (5) (compiled and published by the Sports Grounds Safety Authority) which is for all types of events occurring at sports grounds. Both guides are intended for event organisers, and the Green Guide is also aimed at sports ground management staff (5). For both guides, we extracted data from the chapters on medical provision (Chapter 5 of the Purple Guide, Chapter 18 of the Green Guide).

The other 18 are local guidance documents from one of the 4 UK nations (38 to 55).

- 13 from England: 5 from ambulance trusts 6 from local authority SAGs, 2 from local councils
- 3 from Scotland: one from a local authority SAG and 2 from the same local council
- one from a local council in Northern Ireland
- one from a local authority SAG in Wales

To note that all 18 local guidance documents make some specific recommendations relevant to this review question but also signpost to the Purple Guide (or a preceding document HSG195 in one guidance (47)) and or the Green Guide for further information.

The 5 documents identified from ambulance trusts all contain guidance on event healthcare provision but are variously named guidance (n=2) (39, 40), policy (n=1) (38), medical specification request (n=1) (42), and event medical assurance form (n=1) (41). The intended users are ambulance service management in one of the 5 documents (38), and event organisers in 4, of which 2 are also aimed at local authorities (39, 40).

The intended user in each of the 5 local council guidance documents is the event organiser (51 to 55). Similarly, the 8 local authority SAG documents all provide guidance for event organisers although 6 of them also provide governance documents (mainly terms of reference, as well as other policy documents) aimed at SAG members (43 to 46, 49, 50).

Only 2 of the 20 guidance documents specify who at the event the guidance for healthcare provision applies to: the Purple Guide states that healthcare should be provided for everyone attending or involved in delivering the event (37) and the Green Guide states that medical provision should be appropriate for everyone present at the grounds but that the recommendations in the guidance are for spectators and staff, with separate arrangements for participants being based on guidance from sports governing bodies (5). The remaining 18 do not clearly state who the recommendations for healthcare provision apply to (38 to 55).

To note that the information from the Purple Guide of relevance to this scoping review was predominantly extracted from August 2023 edition of Chapter 5 (Medical) of the Guide. As this chapter was updated in December 2024 (before completion of our report), we updated the corresponding data extraction and information included in our report to ensure we provided the most up to date information. It is nonetheless important to note that where other guidance documents refer to the Purple Guide for recommendations on healthcare provision at events, they would refer to an earlier edition, in which recommendations may be different.

**Table 1. Summary of guidance included for stage 2 data extraction by type of event and where the guidance applies**

| | Total | UK | Great Britain | England | Northern Ireland | Scotland | Wales | International |
|---|---|---|---|---|---|---|---|---|
| Guidance for sporting events (8 to 36) | n=29 | • equestrian: n=3<br>• athletics: n=3<br>• motorsports: n=2<br>• paddle: n=1<br>• orienteering: n=1 | • motorsports: n=2<br>• equestrian: n=4<br>• athletics: n=1<br>• cycling: n=2<br>• American football: n=1 | • rugby: n=3<br>• hockey: n=1<br>• athletics: n=1<br>• boxing: n=1 | - | - | - | • boxing: n=1<br>• football: n=1<br>• cricket: n=1 |
| Guidance for generic events (5, 37 to 55) | n=20 | • n=2 (Purple Guide; Green Guide) | - | • local authority SAG: n=6<br>• ambulance trusts: n=5<br>• local council (not SAG): n=2 | • local council (not SAG): n=1 | • local authority SAG: n=1<br>• local council (not SAG): n=2 | • local authority SAG: n=1 | - |
| Total | n=49 | n=12 | n=10 | n=19 | n=1 | n=3 | n=1 | n=3 |

### Roles and responsibilities

As mentioned in the overview section, the event organiser has the principal legal duties for ensuring public safety (3). Fourteen of the 20 guidance documents specify who is responsible for ensuring safety at events; the event organiser in 13, including the Purple Guide (37, 42 to 46, 48 to 51, 53 to 55), and sports ground management in one (the Green Guide) (5). The other 6 documents, 4 from ambulance trusts and 2 from local councils, lack clarity on who has overall responsibility for safety at events (38 to 41, 47, 52).

Nine of the documents state that the event organiser (or sports grounds management in the case of the Green Guide) is responsible for ensuring appropriate medical cover is available at the event, including drafting a medical plan and appointing a competent and reliable medical provider (5, 37, 39, 40, 42, 51 to 54). However, it should be noted that none of these guidance documents defined what is meant by 'competent' or 'reliable'.

Although the event organiser is responsible for ensuring safety at events, some of the guidance clarify responsibilities of the medical provider in terms of planning and delivery of healthcare. In particular, 6 of the 20 guidance documents (including the Purple Guide and the Green Guide) recommend having a designated individual from the medical provider to act as a medical coordinator who is responsible for overseeing the delivery of healthcare at the event (5, 37 to 40, 55). Of these 6 documents, only the Purple Guide (37) and the Green Guide (5) state that the medical provider is responsible for determining the required level of medical cover based on information about the event provided by the event organiser. The Purple Guide further advises that the event organiser should ensure that the medical provider has in place a clear leadership structure and responsibility hierarchy, and a command and control system if required, based on the nature and size of an event (37).

Seven guidance documents (the 6 terms of reference documents from local authority SAGs 1 to 4, 7 and 8, and local council 3) set out the role of the SAG members in providing event organisers with advice on public safety at events (43 to 46, 49, 50, 53). For further information about the SAG process, see the 'Planning healthcare provision – engaging with SAGs' section in this report.

The guidance from ambulance trust 1 (38), the only guidance identified which is aimed at ambulance service management, outlines the roles of various individuals from the EPRR department for the trust, including EPRR managers' and EPRR officers' roles in attending SAGs and advising event organisers, as well as having an event commander from the ambulance service to oversee coordination and major incidents. Of the remaining 19 guidance, only 2 (from ambulance trusts 2 and 3) mention that the event organiser should contact the EPRR officer for the trust (39, 40).

To note that 9 of the 20 guidance documents, including the Green Guide, also recommend having a dedicated event safety officer and coordinator or event manager responsible for health and safety matters (5, 39, 40, 43, 48, 49, 51, 52, 55), specifically in the context of an emergency

in one document (55). However, information about who should undertake this role and specific responsibilities is not clearly specified.

Only one document, an event medical assurance form from ambulance trust 4 with short guidance notes, does not provide any information about roles and responsibilities of the event organiser, medical provider, event safety officer or medical coordinator (41).

In summary, 14 of the 20 guidance documents state who is responsible for ensuring safety at events. However, only 9 recommend having a dedicated event safety officer and 9 specify that the event organiser is responsible for appointing an appropriate medical provider. In terms of the role of the medical provider, 6 recommend having a medical coordinator to oversee the delivery of healthcare. All 6 of the SAGs terms of reference outline the role of SAG members in advising event organisers. Only 3 documents refer to engaging with EPRR teams, all 3 from ambulance trusts.

### Planning healthcare provision – engaging with SAGs

Nineteen of the 20 documents refer to notifying or engaging with SAGs (2 national guidance, 8 produced by SAGs from local authorities, 5 from ambulance trusts, and 4 of the 5 local council guidance not produced by SAGs – local councils 1, 2, 3, 5).

Of the national guidance, the Purple Guide recommends that a risk-based approach should be used to determine which events should be referred to a SAG (based on the guidance from the EPC (4)) and if deemed appropriate then event organisers should engage with the SAG 3 months in advance of the event (or 6 months for major events) (37). The 2024 version of Chapter 5 also now recommends that for larger events (not defined), organisers liaise with the Director of Public Health and Local Health Protection teams early in the planning stage to identify local health risks and concerns, and plan mitigating measures (37).

The Green Guide specifies that events at sports grounds are usually subject to regular review by SAGs and recommends that it may be necessary to set up a MAG that reports to the SAG for more complex events (5).

The 8 guidance documents produced by SAGs from local authorities (of which 6 had governance documents for the SAG and guidance for event organisers, while 2 only had guidance for event organisers) provide guidance on when to engage with SAGs and for which events. Among the guidance there is considerable variability in both the level of detail provided and the content of the advice on which events should be notified to the SAGs and when, and on which events would undergo a full review by the SAG (although they tend to recommend that the SAG reviews larger events or those posing greater risks). A summary of recommendations from these 8 documents, including documentation required for SAG review, is provided in Table 2.

The 4 local council guidance documents not produced by SAGs (local council 1, 2, 3, and 5) that refer to engaging with SAGs (51 to 53, 55), show variation in the level of detail provided

and in the content of the advice on which type of events should be notified to the council or SAG, and or the process of engaging with SAGs (refer to supplementary material 2 for further details).

In summary, 19 of the 20 guidance documents refer to notifying or engaging with SAGs when planning healthcare provision at events. Whilst there is variation in the advice on which type of events a SAG will review, guidance from local authority SAGs tends to recommend that the SAG reviews larger events or those posing greater risks. However, there is substantial variability in the level of detail among the guidance, even the guidance published by SAGs. In particular, there are differences in the timelines for engaging with SAGs and the documentation that should be submitted; several don't provide specific recommendations and only recommend engaging with SAGs early on in the planning process. Interestingly, the 2024 update of Chapter 5 of the Purple Guide also recommends liaising with the Director of Public Health and Local Health Protection teams when organising large events.

In the following sections, information in relation to the SAG process applies to events that have been identified as requiring review by the SAG. This would usually be larger events or those deemed to pose a certain level of risk.

**Table 2. Summary of guidance from local authority SAGs on the process for engaging with SAGs**

| Local authority SAG | Events to be notified to SAG | Minimum advance notice for notification | Events to undergo SAG review | Documentation required for SAG review and timelines |
|---|---|---|---|---|
| Local authority SAG 1 (43) | • all outdoor events specified on website, not specified in terms of reference | • 3 months for events with 500 or less attendees<br>• 5 months for events with between 500 and 3,000 attendees<br>• 6 months for events with 3,000 or more attendees | • any event with 3,000 or more attendees (may be lower depending on nature of the event)<br>• events involving:<br>- road closures or obstructions<br>- use of temporary structures<br>- high risk activities (such as fireworks or dangerous activities)<br>- new events or new event organiser<br>- events with improvements following a previous debrief | • 14 working days before initial SAG meeting: draft event plan (covering risk assessment and medical and or welfare plan)<br>• 12 weeks before the event: final version of the event plan to be shared with the local council |
| Local authority SAG 2 (44) | • recommended for all events<br>• requirement for events on council land | • not specified | • triage system based on a number of triggers, including:<br>- 500 or more attendees<br>- density of attendees<br>- whether the event or event organiser or venue is new<br>- high-risk activities (such as fireworks or bouncy castle) | • event documentation (including risk assessments, counter terrorism plans, emergency safety plans, and security and or medical plan) to be submitted in advance of the SAG meeting, which takes place monthly |

| Local authority SAG | Events to be notified to SAG | Minimum advance notice for notification | Events to undergo SAG review | Documentation required for SAG review and timelines |
|---|---|---|---|---|
| Local authority SAG 3 (45) | • SAG to be notified for a range of events, especially outdoor events (including fairs, music festivals, sporting events and firework displays) as well as indoor events that may cause unusual hazards or risks | • not specified | • events of an unusual nature, with significant number of attendees, with significant or unusual level of risks, in new venues, or where there has been previous issues or incidents | • mentions sharing event management plans with SAG but no timeline provided |
| Local authority SAG 4 (46) | • all events | • 6 months for large events<br>• 3 months for smaller events<br><br>No details provided on what is meant by large or small events. | • all public events reviewed by SAG until the event is deemed to be an 'established event' by the SAG (that is, it has demonstrated history of being run safely), at which point the organiser will only need to notify the SAG<br>• if there are changes to an 'established event' or there are any cause for concerns then it | • event documentation (including emergency plans, health and safety arrangements and medical plans) to be submitted "as soon as possible"<br>• event plans for "established events" do not need to be submitted but should be available on request by the SAG |

| Local authority SAG | Events to be notified to SAG | Minimum advance notice for notification | Events to undergo SAG review | Documentation required for SAG review and timelines |
|---|---|---|---|---|
| | | | • may need to undergo full SAG review | |
| Local authority SAG 5 (47) | • All 'unregulated' community events | • 12 weeks [note 1] | • not specified | • not specified |
| Local authority SAG 6 (48) | • no information provided | • not specified | • SAG will review range of events (such as firework displays, carnivals, parades and music festivals) when deemed necessary<br>• for smaller events SAG will likely provide safety advice, whereas for larger events may require meetings between event organiser and SAG | • mentions SAG should review risk assessment and event management plan but no timelines provided |
| Local authority SAG 7 (49) | • all events | • 3 months for events with less than 5,000 attendees (website)<br>• 6 to 9 months for events with 5,000 or more attendees [note 3] | • risk matrix [note 2] used to determine which events require SAG review | • event documentation (including risk assessment and event management plan) to be submitted 3 months before the event |
| Local authority SAG 8 (50) | • advised for all events [note 4] | • no clear timelines provided but mentions that SAG will be better | • not specified | • risk assessment should be shared with council 8 weeks before the event |

| Local authority SAG | Events to be notified to SAG | Minimum advance notice for notification | Events to undergo SAG review | Documentation required for SAG review and timelines |
|---|---|---|---|---|
| | | able to advise with more notice and that it usually takes 6 months to organise a small event and 12 months for a large one | | |

Note 1: 12 weeks recommended on website, but guidance notes recommend at least 6 months (especially if the event requires road closure).

Note 2: risk matrix is similar to the matrix for determining healthcare staff requirements described in the Healthcare staff – number and types section later in this report.

Note 3: webpage recommends 6 months minimum and links to separate document which states 6 to 9 months but recommends 9 months for larger events.

Note 4: website mentions “small and community events” and “large events” while other documents just specify “events”.

### Planning healthcare provision – medical risk assessment and medical plan

All 20 documents recommend conducting a risk assessment in the planning phase of an event. Nine only make generic recommendations to conduct a risk assessment considering health and safety without explicitly mentioning healthcare (43 to 45, 47 to 50, 53, 54). The other 11 refer to the need to conduct a medical needs assessment, also called a medical risk assessment, to determine the level of healthcare provision required (5, 37 to 42, 46, 51, 52, 55). Of these 11, the Green Guide and Purple Guide provide detailed recommendations of what factors to consider when conducting a medical needs assessment, including the nature of the event, the number and age profile of attendees, activities taking place at the event, and environmental conditions (5, 37).

The guidance from local authority SAG 4 also provides some information on how to carry out the medical risk assessment (including consideration of the type of activities, the number of attendees and their age, the site and the structure, access and egress, and any health, safety and welfare issues) (46). Local authority SAG 5 advises that the risk assessment should be performed by a person with appropriate (not defined) experience, knowledge and training, and also provides general guidance for how to conduct a risk assessment with an example completed risk assessment (not specific to healthcare) (47).

Five of the 11 documents which specifically refer to a medical needs or risk assessment suggest using a tool to assess the level of risk: 4 use the same tool to calculate a risk score (40, 41, 51, 52) and one (38) seems to use a tool from a previous version of the Purple Guide. Independently of whether the guidance recommends conducting a risk assessment, 11 of the 20 documents recommend having a dedicated medical plan setting out the details of the required healthcare provision (5, 37 to 46). The documents with the most detailed guidance on what to include in the medical plan are the Purple Guide and the Green Guide (5, 37), covering all aspects of planning healthcare provision, including the number and type of healthcare staff, on-site medical facilities, coordination and communication, and contingency plans for major incidents. Five of the 20 guidance documents refer to the Purple Guide (38, 41, 42, 46, 51) for advice on planning medical provision, 3 of which also refer to the Green Guide (38, 46, 51). Of the 9 documents that do not mention a dedicated medical plan, 7 recommend having an overall event management plan which includes healthcare provision (n=6) (47 to 49, 51, 52, 55) or all health and safety matters (n=1) (50) but without providing much detail nor specifically mentioning a ‘medical plan’. The remaining 2 guidance documents do not mention a medical or event plan (53, 54).

Finally, it should be noted that 9 of the 20 documents mention that medical provision at the event should aim to minimise disruption to local NHS provision (37 to 43, 46, 50).

In summary, all 20 guidance documents recommend conducting a risk assessment to plan healthcare provision. However, only 11 recommend conducting a dedicated medical risk assessment (the other 9 do not explicitly mention healthcare). In addition, 11 of the 20 documents recommend having a dedicated medical plan, and 7 others recommend having an overall event management plan which includes healthcare provision.

### Planning healthcare provision – coordination between teams

Coordination between the different actors involved in healthcare provision at events is usually overseen by the SAGs. For instance, the terms of reference from local authority SAGs 1 and 8 specify that the role of ambulance trusts is to ensure that the arrangements made in relation to ambulance and healthcare provision are linked with the ambulance service to ensure appropriate coordination (43, 50). In addition, local authority SAGs 3, 4, 5, and 6 also mention the ambulance service's role to provide advice on healthcare provision as a SAG member (45 to 48). Interestingly, the guidance from local authority SAG 7 is the only guidance to mention the role of the SAG in determining whether events require a Joint Agency Control Centre at the event, which acts as a central point for communication for all agencies involved (49).

Nine of the remaining 12 documents not from SAGs also refer to seeking advice on medical provision from the ambulance services (the Purple Guide (37), Green Guide (5), ambulance trusts 1 to 5 (38 to 42), and local councils 1 and 5 (51, 55)). One of the 9 states that the ambulance service can also identify any demands that the event could place on the ambulance service, and that they can liaise with other organisations on the SAG regarding the event (51). Five of the 12 documents not from SAGs make recommendations for planning the coordination of healthcare staff during the event (5, 37 to 40, 47, 51, 55). For example, 3 (including the Purple Guide) recommend appointing a lead medical provider (if more than one medical provider is being used) to provide overall coordination and agree procedures for working together, including liaison with statutory ambulance services (37, 39, 40). Other guidance, such as the Green Guide (5) and ambulance trust 1 (which is aimed at ambulance service management) (38) also recommend having a medical coordinator to oversee operational procedures and clinical standards.

Twelve of the 20 documents recommend having arrangements in place for access and egress and or meeting points for emergency ambulances to ensure coordination with emergency services on the day of the event (5 ,37 to 40, 43, 46 to 48, 50 to 52). Three of these documents also recommend that a helicopter landing site should be considered for certain events (38 to 40).

Only 4 of the 20 guidance documents mention arrangements for the onward transfer of patients requiring further treatment (5, 37, 38, 41). Of these, the Purple Guide advises that casualties should be managed on site as far as it is safe and appropriate to do so, and if not, off-site transfer should be arranged within a satisfactory timeframe. It additionally states that the 999 NHS Ambulance service should only be called when it is the opinion of the senior on-duty clinician that it is needed to ensure patient safety (37). The other 3 documents are quite limited in detail. None of the 4 explain the process for handover of patients to ambulance staff.
In summary,15 documents mention the role of the ambulance service in providing advice regarding healthcare provision at events (without necessarily specifying the role of the SAG). However, while 12 of the 20 guidance refer to agreed access and egress routes for emergency services, there is a lack of guidance on procedures for liaising with local NHS provision and handover of care for patients requiring transfer for further medical provision. In relation to coordination between on-site teams, 5 of the 12 non-SAG guidance recommend having an

overall medical coordinator of healthcare staff during the event, although the level of detail is limited.

### Planning healthcare provision – major incidents and emergencies

Under the 2004 Civil Contingency Act, the emergency services (police, fire and ambulance) and the local authorities and health sector remain responsible for putting in place emergency response arrangements in relation to major incidents. In this context, the role of SAGs in relation to planning responses to emergency situations at events is to ensure arrangements are made by event organisers to complement existing practice.

This is reflected in 7 of the 8 SAG documents which mention major incident planning, although with differing levels of detail (43 to 48, 50). Three mainly mention that SAGs would advise event organisers on emergency and contingency plans (43, 44, 46), whilst others provide more detailed information on how event management plans should include contingency arrangements and that the statutory ambulance service should be informed of these emergency plans (n=3) (45, 48, 50). One only includes the need to consider whether the plan details the duties and responsibilities of individuals in the event of an emergency (47). Interestingly, only one of the SAG documents specifies that the event organiser is responsible for managing an incident until the emergency services arrive (50).

Nine of the remaining 12 guidance documents, including the Purple Guide and Green Guide, recommend that plans should be in place for dealing with major incidents or emergencies (5, 37 to 40, 51 to 53, 55), of which 5 refer to engaging with emergency services and or the SAGs as part of emergency planning (5, 39, 40, 51, 52). Three of the 12 guidance documents provide detailed recommendations (5, 37, 38). For instance, the Green Guide recommends having a plan for all possible incidents (such as dealing with multiple casualties, access and exit routes, and a meeting point for emergency service vehicles), that integrates event contingency and medical plans with emergency or major incident plans prepared by local emergency services. Guidance from ambulance trust 1 (which is aimed at ambulance service management) recommends that the event plan includes the method of informing ambulance services of a major incident (38). The Purple Guide states that the event medical provider's capacity to undertake Ten Second Triage and immediate lifesaving interventions should be specified in the medical plan (new in the 2024 update of Chapter 5) (37).

In terms of managing a major incident, the Purple Guide states that the event organiser should ensure that the event medical provider is equipped and staffed to provide an initial response until the statutory services arrive, after which the provider may be required to provide resources to support the incident, whilst maintaining an adequate service to the rest of the site (37). The Green Guide states that in the event of a major incident, all medical staff will be under the command of the senior ambulance service NHS trust officer (5). It also recommends having a protocol in place for handover to statutory services but does not provide details (5). Guidance from ambulance trust 1 (which is aimed at ambulance service management), states that for events where the statutory ambulance service are in attendance, the initial command and control in the event of a major incident is provided by the on-site statutory ambulance service

clinicians or event commanders. For events without an on-site statutory ambulance service, the initial management should be implemented by the on-site medical teams who hand over control to the statutory ambulance service on their arrival (38).

In summary, 7 of the 8 guidance documents from SAGs recommend engaging with SAGs as part of planning for major incidents. Of the remaining 12 guidance, 9 mention having contingency plans for emergencies but the level of detail varies between documents. Only 3 documents state that event organisers are responsible for managing incidents with the on-site medical team until emergency services arrive to take over control and only one document mentions having a handover process but does not go into detail.

### Healthcare staff – training and qualifications

Nine of the 20 guidance documents recommend that healthcare professionals (doctors, paramedics and nurses) should be registered with the corresponding professional regulatory body (5, 37 to 42, 51, 52). Of these, 4 documents (including the Purple Guide and the Green Guide) provide detailed recommendations on additional training and experience for healthcare professionals providing medical care at events (5, 37, 39, 40). For example, the Purple Guide recommends that doctors should have qualifications in pre-hospital, acute or emergency care, and that nurses should have experience in pre-hospital care, emergency and urgent care (37). The guidance from ambulance trust 1 (which is aimed at ambulance service management), specifies additional training required for event commanders from the statutory ambulance service (38), but refers to the Purple Guide for other healthcare professionals.

Of note, the 2024 update of Chapter 5 of the Purple Guide advises mapping staff qualifications to the Royal College of Surgeons of Edinburgh Faculty of Prehospital Care Pre-Hospital Emergency Medicine (PHEM) competency framework, specifying that the minimum qualification for licensed events is a nationally recognised Level 3 PHEM-D qualification in pre-hospital care (for example First Response in Emergency Care 3) (37).

In terms of training for first aiders, 9 of the 20 guidance documents provide specific recommendations for required first aid qualifications, including the Purple Guide and the Green Guide (5, 37, 39, 41, 42, 46, 51, 53, 54). However, there is variation in the type of training recommended for first aiders between documents. For example, the Purple Guide (which is primarily for licensed events), and guidance from ambulance trusts 2 and 5 recommend a minimum of First Response Emergency Care Level 3 qualification (a PHEM-D qualification in the 2024 revision of the Purple Guide) (37, 39, 42), whereas the Green Guide and ambulance trust 4 recommend that a certificate in first aid from an organisation meeting the requirements of the Health and Safety Executive and competency in basic life support, use of defibrillators and manual handling is sufficient (5, 41). The other 4 make varying recommendations, including a first aid certificate from a voluntary first aid society (46), emergency first aid or first aid at work (53, 54), or appropriately trained (including child and infant resuscitation and competency in using a defibrillator) without providing specific details (51).

Of the remaining 11 documents that do not recommend specific qualifications, one refers to the Purple Guide for recommendations on first aid qualifications (38), 2 mention having appropriately trained first aiders without providing further details (48, 52), one only mentions qualifications that are not considered suitable (such as a health and safety at work, or first aid at work course) (40), which is also mentioned in another 5 documents including the Purple Guide (37, 39, 42, 46, 51). Seven guidance documents do not mention qualifications or training for first aiders (43 to 45, 47, 49, 50, 55).

In summary, 9 of the 20 guidance documents recommend that healthcare professionals (doctors, nurses, paramedics) should be registered with professional regulatory bodies. Of these, 4 also provide recommendations for additional training or experience in pre-hospital care for healthcare professionals working at events. The Purple Guide advises mapping staff qualifications to the Royal College of Surgeons of Edinburgh Faculty of Prehospital Care Pre-Hospital Emergency Medicine (PHEM) competency framework. Nine of the 20 documents provide specific recommended training for first aiders but there is heterogeneity in the specific qualifications required. Seven do not make recommendations for either healthcare professionals or first aiders.

### Healthcare staff – number and types

Six of the 20 guidance documents provide detailed recommendations for the number and type of healthcare staff that should be present at an event (including doctors, nurses, paramedics, crewed ambulances and first aiders), based on several event factors (5, 38, 40, 41, 51, 52). However, the precise number of recommended staff varies because different documents use different criteria. For example, the Green Guide makes specific recommendations on both number and type of healthcare staff based on number of attendees and whether the crowd is seated or standing. Conversely, the Purple Guide provides recommendations on the type of healthcare staff for 5 different tiers of event (based on number of attendees, event duration, drug and alcohol use, risk of illness or injury from activities and likelihood of hospital referrals), but is not prescriptive on their numbers (in the previous version of the Purple Guide, a table of indicative numbers of healthcare staff was provided for each tier of event, but this was removed in the most recent revision) (37). Four of the 6 guidance documents provide recommended numbers of different types of healthcare staff based on a risk score from the same tool described in the risk assessment section of this report (40, 41, 51, 52) and in one other (38) the recommendations seem to be based on a previous version of the Purple Guide.

Of the remaining 14 guidance documents, one recommends that adequate provision be based on the Purple Guide or the Green Guide (46); 6 documents (43, 45, 47, 50, 51, 55) recommend that the ambulance service can provide advice regarding the number and type of healthcare staff required (3 from SAGs as described in the ‘Roles and Responsibilities’ section of this report (43, 45, 50)); 2 either specify the numbers of first aiders required at events with different numbers of attendees (n=1) (39), or recommend providing first aid proportionate to the type of event and number of attendees but without specifying numbers (n=1) (48); the other 5 documents do not mention the number and type of healthcare staff (42, 44, 49, 53, 54).

In summary, 6 of the 20 guidance documents provide detailed recommendations for the number and type of healthcare staff (including healthcare professionals, first aiders and ambulance provision), and 9 provide some guidance although less detailed. However, there is inconsistency across documents in the criteria used to determine the number of staff needed. Of note, a table of indicative numbers of healthcare staff for each tier of event present in the previous version of the Chapter 5 of the Purple Guide was removed from the 2024 update, suggesting a move away from providing specific recommendations for the number of healthcare staff.

### Medical equipment and set-up of medical areas

Fourteen of the 20 guidance documents mention medical equipment for event healthcare provision. Three of the 14 provide detailed recommendations on the type of medical equipment, including medication, life support equipment, and extraction equipment (for example, stretchers) (5, 39, 40), including the Green Guide which provides a detailed checklist of equipment required in medical rooms (5). Seven other documents, including the Purple Guide, provide more limited details, such as having a first aid kit and or a defibrillator (37, 38, 41, 42, 48, 51, 52) and 4 do not make specific recommendations but state that the ambulance service can advise on the requirements for first aid equipment or ambulance provision (n=3) (43, 47, 50) or that first aiders need to be equipped to perform their role (n=1) (46). Six of the 20 documents do not mention medical equipment (44, 45, 49, 53 to 55).

Four of the 20 documents (including the Purple Guide and the Green Guide) provide detailed guidance on how medical areas should be set up at events (5, 37, 39, 40). For example, the Purple Guide recommends that the medical facility should contain partitioned areas to treat patients, a covered waiting area and should have good lighting, running water, heating and cooling, and electricity. It also recommends that it should be in a suitable location to ensure it is easily accessible and co-located with welfare services, with clear referral processes between welfare and medical services.

Ten other documents provide limited guidance about the set-up of medical areas (38, 41, 43, 46 to 48, 50 to 52, 55). Of these, 5 mention that the first aid point should be clearly signposted (38, 46, 51, 52, 55), 5 refer to accessibility of the first aid point in terms of access for emergency vehicles, wheelchairs or people arriving on foot (5, 37, 39, 40, 47), and 3 mention not using an ambulance as a first aid point (38, 41, 51). Other general recommendations include planning the structure of medical facilities based on the expected number and severity of illness and injuries (41), while others only specify providing a facility where first aiders can work that considers patient confidentiality and dignity (46). Guidance from local authority SAGs 1 and 5 recommends that the ambulance service should advise on the set-up of medical areas (43, 47). The remaining 6 guidance documents do not mention set-up of medical areas (42, 44, 45, 49, 53, 54).

In summary, 14 of 20 guidance mention medical equipment for event healthcare provision although only 3 of these provide a detailed list of recommended medical equipment. Similarly,

although 14 of the guidance mention set-up of medical areas, only 4 of these provide detailed recommendations.

### Communication methods on the day of the event

Ten of the 20 documents, including the Green Guide, recommend the use of radios for onsite communication between healthcare staff and other event staff (n=9) (5, 38 to 40, 48, 52 to 55) or between specified individuals and staff involved in activating emergency or contingency plans (n=1) (51), of which 6 (including the Green Guide) specify having a dedicated radio channel for healthcare (5, 38 to 40, 53, 54). In addition, the Purple guide recommends having a dedicated channel for healthcare if radio communication is being used but does not specifically recommend the use of radio communication (37). Of these 11 documents, 6 also recommend having an external means of communication for contacting emergency services (5, 39, 40, 51, 52, 55). Two additional documents either specify that the event organiser is responsible for arranging for a communication system to be in place (n=1) (45) or recommend considering communication equipment (47) without providing further details. The remaining 7 do not mention communication methods on the day of the event (41 to 44, 46, 49, 50).

In summary, 11 of the 20 guidance make specific recommendations for communication methods and are generally in agreement about using radio communication with a dedicated medical channel for onsite communication. However, there is a lack of detail on external communication methods for requesting emergency services assistance.

### Recording medical usage

Seven of the 20 documents make recommendations for medical usage. Of these, 4 (including the Purple Guide and the Green Guide) provide detailed recommendations for recording medical encounters, including personal details of patients treated, the type of treatment given, and onward destination of the patients (5, 37, 39, 40). Three of the 4 documents (including the Purple Guide) also refer to having an event log to record requests for medical assistance and or operational decisions taken (37, 39, 42). Three other documents make generic recommendations to record accidents and or injuries but with no further details (46, 50, 55).

Irrespective of whether the guidance advises recording medical usage and or accidents or injuries, 5 of the 20 guidance documents refer to the need to report certain types of injuries or accidents according to the Reporting of Injuries, Diseases and Dangerous Occurrences Regulations (RIDDOR) (5, 37, 39, 40, 51).

In summary, 7 of the 20 documents make recommendations on medical usage, which vary in content and detail. Four provide detailed recommendations for recording medical encounters (3 of which also advise recording medical assistance requests and operational decisions), while another 3 only advise to record accidents and or injuries. Five documents refer to RIDDOR in relation to reporting certain types of injuries of accidents.

### Post-event assessment

Ten documents provide recommendations for conducting post-event assessments, including the Purple Guide and the Green Guide, but were all quite limited in detail (5, 37, 38, 43, 45 to 47,

49, 51, 55). The Purple Guide recommends that the medical provider share a report with the event organiser that includes any issues in the medical plan and recommendations for similar events in the future (37). The Purple Guide also advises that the event log of requests for medical assistance and operational decisions (described in the previous 'recording medical usage' section) may be required for scrutiny after the event (37). The Green Guide recommends that a debrief is organised between the event doctor (and or medical coordinator) and other healthcare staff (5).

The remaining 8 that mentioned post-event assessment were local guidance, of which 5 were from SAGs: 4 recommend conducting a debrief (specified in 3 to be between the event organiser and SAG) to inform future events (43, 46, 47, 49), while the other guidance mentions performing a debrief in the event of an accident or serious incident to prevent incidents from occurring in the future (45).

Two local council guidance (not produced by SAGs) provide some recommendations on post-event assessment: one advises that events that go through SAG review must have a debrief involving all relevant organisers and contractors (51), and another states a post-event evaluation should be conducted without providing further details (55).

Guidance from ambulance trust 1 (which is aimed at ambulance service management) also mentions conducting a debrief between the ambulance trust event commander and medical coordinator and that learning should be fed back to the SAG (38).

In summary, 10 of the 20 documents mention having a debrief after the event to inform planning at future events but do not go into detail about how to carry out post-event assessments.

### Health equity

Across the 20 guidance documents, there is very limited consideration of event healthcare provision for groups deemed to be at risk of experiencing health inequalities in relation to this review question. Eight of the 20 guidance documents (5, 37, 41, 43, 45, 50, 53, 54) mention safeguarding of vulnerable groups (including children and vulnerable adults), and 7 guidance documents (5 of which are different from the documents that mention safeguarding) make recommendations for groups deemed to be at risk of experiencing further health inequalities in relation to healthcare provision at events (5, 37, 39, 40, 46, 51):

- people from protected characteristics groups related to age (children and older adults): local authority SAG 4 (46) recommends that organisers consider whether children and elderly will attend the event when planning healthcare provision and local council 3 recommends that first aiders be trained in performing child and infant resuscitation (51)
- people with pre-existing health conditions: ambulance trust 2 (39) recommend that people with long-term conditions may need to be considered for some events when planning healthcare provision

- people with disabilities (including learning disabilities): local authority SAG 4 (46) recommend that organisers consider whether particular groups such as disabled people will attend the event when planning healthcare provision. Four guidance refer to accessibility of the medical or first aid point to wheelchairs (5, 37, 39, 40)

No guidance documents make recommendations in relation to event healthcare provision for other groups deemed to be at risk of experiencing health inequalities in relation to this review question:

- people from protected characteristics groups related to pregnancy and maternity
- people who don't speak English
- people from protected characteristics groups related to gender reassignment

### Guidance for generic events - summary

Twenty guidance documents for generic events (not specific to sporting events) were included in this scoping review. These were the Purple Guide, the Green Guide, 8 documents from local authority SAGs, 5 from local councils (but not SAGs) and 5 from ambulance trusts.

Fourteen of the 20 documents specify who is responsible for ensuring safety at events. However, only 9 recommend having a dedicated event safety officer, 9 specify that the event organiser is responsible for appointing an appropriate medical provider, and 6 recommend having a medical coordinator to oversee the delivery of healthcare.

Nineteen of the 20 documents refer to notifying or engaging with SAGs, but with variation in the level of detail provided and the content of the advice. In particular, there are differences in which events need to be notified to SAGs, which would then need to undergo SAG review, as well as in associated timelines, although they tend to recommend that the SAG reviews larger events or those posing greater risks.

All 20 guidance documents recommend conducting a risk assessment in the planning stage of an event, although only 11 specifically mention medical risk assessment (or equivalent). In terms of a medical plan, 11 recommend having a dedicated medical plan and 7 others recommend having an overall event management plan which includes healthcare provision. Nine of the 20 guidance state that the overall aim of the event healthcare provision is to minimise the impact of the event on local NHS provision.

Coordination between the different actors involved in healthcare provision, including the role of the ambulance service, is usually overseen by the SAGs. Fifteen of the 20 documents refer to the role of the ambulance service in providing advice regarding medical provision at events. Of the 12 non-SAG guidance, the 2024 update of Chapter 5 of the Purple Guide also recommends liaising with the Director of Public Health and Local Health Protection teams when organising large events, and 5 recommend having an overall medical coordinator of healthcare staff during the event, although the level of detail is limited. However, while 12 of the 20 guidance refer to agreed access and egress routes for emergency services, there is a lack of guidance on

procedures for liaising with emergency services and handover of care for patients requiring transfer for further medical provision.

Planning for major incidents is mentioned in 16 of the 20 documents but the level of detail varies across documents; only 3 documents specify that the event organiser and on-site medical team are responsible for managing the incident until the statutory services arrive.

In relation to training and qualifications of healthcare staff, 9 of the 20 guidance recommend that healthcare professionals providing healthcare at events should be registered with professional regulatory bodies, of which 4 provide recommendations regarding further training required to deliver healthcare at events. However, there is variation in the recommended training required for first aiders across documents. There is also a lack of consensus for how to determine the required number of healthcare staff to provide healthcare at events, although the 2024 version of the Chapter 5 of the Purple Guide suggests a move away from providing specific recommendations for the number of healthcare staff.

Medical equipment for event healthcare provision is mentioned in 14 of the 20 guidance but only 3 documents provide comprehensive details about the specific equipment required. Similarly, although 14 of the guidance mention set-up of medical areas, only 4 of these documents provide detailed guidance.

The 11 documents that make specific recommendations for communication methods are generally in agreement about using radio communication with a dedicated medical channel for on-site communication. However, there is a lack of detail on external communication methods for requesting emergency services assistance.

Only 7 of the 20 documents mention recording medical usage or accidents and or injuries that occur during events; detailed recommendations on recording clinical encounters are provided in 4, of which 3 also refer to event logs. Five documents also refer to RIDDOR in relation to reporting certain types of injuries of accidents.

Ten of the 20 guidance mention conducting an event debrief but guidance on the process for evaluating event healthcare is lacking.

# Guidance for sporting events

## Overview of the guidance identified

Twenty-nine of the 50 guidance documents included for stage 2 data extraction provide guidance for healthcare provision at sporting events (8 to 36).

Of the 29 guidance documents, there were:

- 7 for equestrian events (12, 13, 15, 25, 28, 30, 32)

- 7 for pitch sports (football, American football, rugby, cricket and hockey) (19, 22, 26, 27, 29, 31, 33)
- 5 for running and athletics events (8, 16, 17, 34, 35)
- 4 for motorsport events (9, 20, 23, 24)
- 2 for cycling events (10, 11)
- 2 for boxing events (18, 21)
- one for all paddle sports (36)
- one for orienteering (14)

Twenty-two of the 29 guidance documents are from sports governing bodies such as Motorsport UK (9 to 14, 16 to 19, 21 to 23, 26, 27, 29 to 34, 36) (2 of which are co-authored by sporting organisations (17, 33)), 6 others are from organisations for specific sports (such as the Pony Club) (8, 15, 24, 25, 28, 35), and one is from the Health and Safety Executive (20).

The full data extraction of these 29 guidance documents can be found in supplementary material 2. To note that in the following, recommendations specific to certain types of sports are not summarised, although they are extracted in the corresponding data extraction tables. It should also be noted that whilst we refer to them as 'guidance' in this report, only 11 of the 29 documents are named guidance or guidelines (8, 10, 16, 17, 19, 20, 25, 28, 33, 35, 36); the others are called regulations (n=7) (9, 11, 15, 23, 24, 27, 29), rules (n=5) (12, 18, 21, 26, 31), both rules and regulations (n=1) (32), licence standards (n=1) (34), general instructions (n=1) (13), mandatory procedures (n=1) (30), medical standards (n=1) (22), and minimum requirements (n=1) (14).

The intended user of the guidance is those organising the sporting event in 24 of 29 documents (such as clubs and management) (8 to 20, 22 to 28, 33 to 36). The intended user is not clearly stated in 4 guidance documents (but they also seem to be aimed at those organising the sporting event (29 to 32)), and not reported in the remaining one (21).

In terms of who the provision of healthcare is for, it is often not clearly specified in the guidance for sporting events whether the recommendations are for spectators, participants, and or staff. Although most seem mainly aimed at participants at sporting events, we included guidance making specific recommendations on healthcare provision relevant to this review as per our eligibility criteria (see Table B.1, Annexe B for inclusion and exclusion criteria).
A number of the documents included in this section refer to The Purple Guide (37) and or Green Guide (5):

- 5 of the 29 guidance for sporting events refer to the Green Guide (12, 13, 20, 25, 27), one of which is intended to supplement the Green Guide to guide risk assessment for safety measures at the specific sporting venue (25); in the other 4 documents, guidance on some specific aspects of event healthcare provision is based on the Green Guide (12, 13, 20, 27)
- 5 of the 29 guidance for sporting events refer to the Purple Guide (8, 17, 25, 34, 35), 3 of which only mention or signpost to the Guide generally (8, 17, 35); the other 2

refer to the Purple Guide in relation to undertaking a risk assessment (25, 34), one of which also specifically refers to the Purple Guide for organising non-sporting events held at the sporting venue (25)

Both the Purple Guide (37) and the Green Guide (5) are summarised in the earlier section on guidance for generic events. Indeed, although the Green Guide (5) is specific to events taking place at sports grounds, its scope is wider than sporting events and was therefore included within the guidance for generic events.

### Roles and responsibilities

Twenty-six of the 29 guidance documents refer to roles and responsibilities in terms of healthcare provision at events, but the level of detail and content varies between documents (8-10, 12 to 23, 25 to 31, 33 to 36).

Nineteen guidance documents specify that those organising the event have overall responsibility for healthcare provision (9, 10, 13, 14, 16, 17, 19, 21 to 23, 26 to 31, 33, 35, 36). Fourteen guidance documents refer to having a designated person responsible for some aspects of medical provision or safety (9, 10, 12, 13, 16, 19, 20, 22, 23, 26, 30, 31, 33, 36) (variously named in some, including Chief Medical Officer (9, 22, 23), event doctor (12), or safety lead or officer (10, 19, 30, 33, 36). The amount of detail included in guidance documents on the designated person's responsibilities varies but includes the following elements: having overall responsibility for medical matters day to day or on the event day; providing first aid and calling for emergency services; reporting incidents and accidents; ensuring adequate medical cover and equipment; allocating qualified and suitably trained professionals; allocating duties; training for medical providers (10, 13, 20, 23, 26, 30, 31, 33). In 8 of the 14 guidance documents, responsibility for appointing the designated person is allocated to event organisers (n=1) (12), or to the club, event officials or organising committee (n=6) (13, 19, 30, 31, 33, 36) or to the host member (n=1) (22); the remaining 6 do not state who is responsible for the appointment (9, 10, 16, 20, 23, 26).

Independently of whether guidance refers to a designated person, 12 guidance documents, specify responsibilities of other members of the healthcare team, such as ringside doctor (boxing), match day doctor (international cricket), or qualified first aiders (cycling) (9, 10, 12, 17, 18, 21, 22, 25, 28, 29, 34, 35).

In summary, 19 of the 29 documents state that those organising the event are responsible for providing healthcare at sporting events. Fourteen of the 29 guidance documents refer to having a designated person responsible for some aspects of this provision, however, only 8 of these advise on whom should appoint the designated person. Varying detail is provided on the designated person's responsibilities.

### Planning healthcare provision – engaging with SAGs

In relation to engaging with SAGs, only 4 of the 29 documents note that, for some events, the event organiser may need to consult with or notify the local SAG (17, 34 to 36). A fifth document

notes that it may be advisable to establish a MAG to oversee medical provision for larger or more complex racecourses, which reports to the racecourse SAG (referring to the Green Guide for roles and responsibilities and relationship with the SAG) (25).

In addition to these 5 documents, another 5 signpost to either the Purple Guide or Green Guide in relation to planning events (both guides advise on engaging with SAGs) (8, 12, 13, 20, 27). It should be noted that, the aim of the SAG being to advise on public safety at an event, guidance aimed at participants to sporting events would not necessarily be expected to mention SAGs.

### Planning healthcare provision – medical risk assessment and medical plan

Twenty of the 29 guidance documents recommend conducting a risk assessment in the planning phase of events (8 to 11,13 to 17, 19, 20, 25, 26, 28, 30, 31, 33 to 36), of which 14 specifically refer to a medical risk or needs assessment to determine the level of healthcare provision required (8, 13, 14, 16, 17, 19, 20, 25, 26, 28, 31, 33 to 35). One of the 20 guidance documents refers to the Green Guide for guidance on risk evaluation and medical cover for spectators (20), and another 2 refer to the Purple Guide in relation to medical risk assessment (25, 34).

Twelve of the 29 documents refer to having a dedicated medical plan, medical emergency plan or standing order setting out the details of the required healthcare provision (13, 16 to 18, 21, 22, 25 to 27, 29, 33, 35). Only 3 of the 12 documents provide details on the content of a medical plan, for example: location and contact details of medical providers, access routes, procedure for reporting casualties, assessment of casualties, arrangements for the finish area, patient confidentiality, contingency plans, emergency procedures for serious injuries or fatalities, and adverse weather plans (13, 17, 29). Nine of the 12 documents only provide limited details such as advice to prepare the medical plan in collaboration with the medical provider (n=1) (35) (which is also mentioned in another document (17)), or that it should include a communication plan (n=1) (16), or the guidance only mentions the need for medical plans without providing detail of what they should include (18, 21, 22, 25 to 27, 33).

Ten documents list what to consider when planning first aid provision (10, 15 to 17, 19, 20, 28, 33 to 35), including factors common to all types of sporting event, such as participant age and numbers, types of activity, proximity to an emergency department. Factors that reflect the type of sporting activity occurring at the event include: accident risk (motorsport) (20); course layout (cycling, running and equestrian events (10, 15, 17, 28, 35); location of play, previous injury and illness records, and time of year (running and triathlon events) (16, 17, 19, 33 to 35).

Four documents do not mention risk assessments, having a medical plan or planning first aid provision (12, 23, 24, 32).

In summary, 20 of the 29 documents recommend conducting a risk assessment to plan events, 14 of which refer explicitly to healthcare. In relation to healthcare risk assessment, factors to consider include those common to all sporting types such as participant age and numbers, and

also factors that reflect the type of sporting activity. Twelve of the 29 documents refer to having a medical plan, 2 of which advise that the plan should be developed collaboratively between the event organiser and medical provider. Four documents do not mention risk assessments, having a medical plan or planning first aid provision.

### Planning healthcare provision – coordination between teams

Twenty-two of the 29 documents include some guidance on coordination between different teams as part of the planning for healthcare provision (9 to 13, 15 to 18, 20 to 23, 25, 27 to 29, 31 to 35).

In relation to coordinating with local NHS provision, 9 guidance documents advise that local hospitals or ambulance services (and air ambulance in one instance (15)) should be informed of an event taking place (9 to 11, 15, 17, 18, 23, 32, 34). Another 3 documents specify that arrangements should be in place with local hospitals to receive injured participants (n=1) (21), or that the first aid provider should know of the local A&E units (n=1) (28), or that the medical plan should include details of the local hospitals' locations and specialties and procedures for transferring patients to hospital (n=1) (13).

Ten documents specify the need for a pre-event medical briefing to be held (13, 16, 17, 21, 22, 27 to 29, 34, 35), and 2 additional documents refer to knowing the arrangements in place on the day of an event without specifying that a pre-event briefing should take place (15, 25). In addition, 2 documents specify that the medical preparedness of the event should be confirmed to the referee, managing executives or organising committee before the event starts (13, 31).

In summary, 22 of the 29 documents provide some guidance on coordination between teams as part of the planning for healthcare provision, such as holding a pre-event briefing or knowing or confirming that medical preparations are in place before an event starts (13 guidance) and notifying local hospitals or ambulance services that an event is taking place (9 guidance).

### Planning healthcare provision – major incidents and emergencies

Eleven guidance documents make recommendations on planning in relation to major incidents or emergencies (13, 15, 17, 18, 20, 25, 26, 28, 33, 34, 36) only one of which mentions involving the SAG (and MAG if required) in developing the contingency plan (25). Eighteen documents do not cover planning in relation to major incidents or emergencies (8 to 12, 14, 16, 19, 21 to 24, 27, 29 to 32, 35).

Two of the guidance documents provide the most detail on emergency plans (20, 34). One on motorsports events recommends that, generally, emergency plans should be discussed with the local authority, emergency services, and venue operators (for permanent venues); that they should include response to serious emergencies (including major incidents requiring emergency services and implementation of their regional emergency plans); and that the organiser, venue operator, and emergency services should be clear on roles and responsibilities in an emergency or major incident (20). The second more detailed guidance document (on cross country running events) provides guidance on the content of the emergency plan, including access for

emergency services vehicles, instructions for medical providers such as emergency telephone numbers, medical provision sites at the venue, nearest A&E, precise directions to venue, a course map, communication methods and procedures, and volunteer briefings (34).

Four of the 11 documents only mention including emergency vehicle access in the emergency plan (17, 20, 26, 34). Other recommendations made in only one guidance document each are: having an annual 'table-top' rehearsal for major incidents (guidance on horseracing) (13); and conducting a counter-terrorism risk assessment as part of the emergency plan (and that for mass participation events, a security coordinator assigned by the police would provide advice on counter-terrorism measures) in guidance on running events (17).

In summary, 11 of the 29 documents make recommendations on planning for major incidents or emergencies but the level of detail on their content varies. Only one guidance document advises involving the SAG (and MAG if required) in the planning, and the need to coordinate the planning with other actors and be clear on roles and responsibilities in the event of a major incident is only mentioned in 2 other documents.

### Healthcare staff – training and qualifications

Twenty-four documents provide recommendations with varying detail on training, experience or qualifications for healthcare staff providing medical care at events (9, 12 to 18, 21 to 36), one of which refers to the Green Guide on these requirements (25). Sport-specific training courses or qualifications are mentioned in 5 guidance documents (14, 26, 27, 33, 34), and another 3 specify required sport-related experience or training relevant to the sport (17, 21, 22) (refer to supplementary material 2 for information about specific sport-related recommendations). One guidance document does not make recommendations on training, qualifications or registration with the professional regulatory body for healthcare professionals (10).

Eight of the 24 guidance documents provide specific experience, training, skills and qualifications for doctors and medical directors, such as training or a qualification in pre-hospital emergency or immediate care, life support training, cardiorespiratory resuscitation, managing airways, trauma and managing acute injuries (12, 16, 22, 25, 27 to 29, 34).

Training or qualifications recommended for healthcare professionals or healthcare staff other than doctors or medical directors are included in 8 guidance documents (13, 15, 21, 27, 29 to 31, 33), and 5 guidance documents refer to training, qualifications or skills of ambulance staff (9, 12, 13, 16, 21). Finally, 2 guidance documents provide recommendations on eligibility of healthcare staff to provide care at events in terms of a minimum period post-qualification (n=2) (15, 23) and one other specifies the limits of their role (n=1) (16).

Thirteen of the 29 guidance documents recommend that healthcare professionals (doctors, paramedics, or nurses) should be registered with the corresponding professional regulatory body (9, 12, 13, 18, 22, 23, 26 to 28, 30 to 32, 35). Of these, 2 additionally specify that the healthcare professional should be registered with the sport's regulatory body (13, 18).

In terms of first aid provision, 21 guidance documents mention qualifications or training with varying levels of details (8, 9, 11, 13, 14, 16, 17, 19, 20, 23 to 28, 30 to 33, 35, 36), one of which refers to the Green Guide on these requirements (25). Different qualifications are recommended across the guidance, including first aid at work or qualifications from voluntary organisations (8, 13, 20, 26, 28, 32, 33, 35, 36). A minimum level 3 qualification or equivalent is specified in 4 documents (24, 27, 31, 33). One other guidance document specifies that the training should include paediatric basic life support and injury (28). Six of the 21 guidance documents only specify having suitably trained first aiders or an unspecified first aid certificate or qualification (9, 11, 16, 17, 19, 23). Two documents advise that the first aid provider should be registered with relevant regulating bodies (such as the Care Quality Commission) (14, 35).

Whilst first aid at work is recommended in some guidance documents (described above), another notes that Health and Safety at work or first aid at work courses are not sufficient for first aid competency (16).

Of note, 2 guidance documents (both on running events) advise on limitations of provision based on first aid qualifications: one advises that first aiders with general or workplace training must not be the main medical provider but may be used to supplement (17), and the other specifies the circumstances in which volunteer first aiders (appropriately qualified) may be considered (35).

In summary, 24 of the 29 guidance make recommendations on training, experience or qualifications for healthcare staff providing medical care at events and 21 refer to qualifications or training of first aiders. Thirteen recommend that healthcare professionals should be registered with professional regulatory bodies. The recommendations on training vary in content and level of detail, with some referring to sport-specific courses. Only one guidance document does not make any recommendation on training, qualifications or registration with the professional regulatory body of either healthcare professional or first aiders.

### Healthcare staff – number and types

Fourteen of the 29 guidance documents provide detailed recommendations for the number and type of healthcare staff (including doctors, nurses, paramedics, crewed ambulances and first aiders) (9, 12 to 14, 16, 21 to 23, 27, 29 to 31, 33, 35). The remaining 15 guidance documents were less detailed with recommendations including minimum overall number of healthcare staff or providing adequate first aid cover without specifying numbers (8, 10, 11, 15, 17 to 20, 24 to 26, 28, 32, 34, 36). In 12 of the 29 documents the number and type of staff advised is based on the type of sporting event (9, 12, 13, 21 to 23, 27, 28, 30, 31, 33, 35).

In summary, detailed recommendations on number and type of healthcare staff are provided in 14 of the 29 guidance documents, which is mostly based on the type of sporting event. The other 15 guidance documents provide less detailed recommendations.

### Medical equipment and set-up of medical areas

Twenty seven of the 29 documents provide some guidance on medical equipment (9 to 31, 33 to 36). Of these 27 documents, 10 guidance documents provide general recommendations such

as specifying a minimum number of ambulances (11, 15, 20, 24, 25, 28), the need to consider an ambulance (17), that equipment such as a first aid kit must be available without providing details of contents (10, 19, 20, 24, 28), or refer to having defibrillators (18, 19). The other 17 documents include detailed recommendations on the type of equipment, including the contents of a first aid kit, or the medical equipment that should be provided in an ambulance, medical room, at pitch side, or by healthcare professionals, such as medication, life support equipment, and extraction equipment (for example, stretchers) (9, 12 to 14, 16, 21 to 23, 26, 27, 29 to 31, 33 to 36).

Three of the guidance documents refer to other guidelines on equipment: 2 (12, 25) to the Green Guide (5) and one (9) to the Resuscitation Council Guidelines (56).

Twenty-two of the 29 guidance documents provide recommendations on set-up of medical areas. Ten of the 29 documents, provide detailed guidance on aspects of the medical room such as having heating and lighting, the number and types of rooms and their functions, including private areas, and access to hot and cold water (9, 13, 16, 22, 23, 27, 31, 33 to 35). Eleven of the 29 guidance documents provide limited guidance about the set-up of medical areas (10, 11, 14, 17, 18, 20, 21, 26, 28, 29, 36), such as considering setting up a suitably equipped medical room or headquarters (20). An additional guidance document only refers to the Green Guide for first aid room requirements (25).

Twelve guidance documents refer to where medical provision should be located (medical area or first aiders) (9 to 11, 16, 17, 22, 26 to 28, 34 to 36) with some making specific recommendations, for example at the start and finish areas (9, 10, 17, 35) or close to dressing rooms (22, 27). The need for the medical facility to be accessible is referred to in 10 documents (13, 16, 20, 22, 23, 29, 33 to 36), a few specifically noting that this is in terms of access for ambulances or stretchers (13, 22, 23) or for helicopters (16, 23).

Clear signposting of the medical facility is recommended in 4 guidance documents (16, 18, 33, 36). Four others refer to identifying or sharing the location of medical facilities, ambulance and or venue access points (11, 13, 29, 35).

In summary, 27 of the 29 documents provide some guidance on medical equipment, with 17 including detailed recommendations, such as on ambulances, equipment, and medication. Guidance on medical area set-up is provided in 22 documents, 10 of which include detailed recommendations. Twelve documents refer to locating the medical area and 10 refer to its accessibility. Signposting of the medical area is advised in 4 documents.

### Communication methods on the day of the event

Recommendations on communication methods on the day of the event are made in 23 of the 29 guidance documents (9, 11 to 13, 15 to 17, 20 to 28, 30 to 36).

Radio communication is advised for communication between medical providers and others such as the event organiser in 9 documents (9, 11 to 13, 15, 23, 27, 30, 34), or in the event of a

major incident in one other (25). Mobile phones are recommended as the method of communication in one guidance document (26), and are mentioned in another 3 (9, 30, 34). Three other guidance documents advise either radio or mobile communication (16, 17, 35) (one of the 3 advises mobile phones for smaller events) (17). When using radio communication, 3 recommend having a dedicated channel for healthcare (16, 17, 27). Other guidance specifies using a system available on a racecourse (25), or is not prescriptive about which method of communication to use (20, 22, 36). Three only state the need to have a method of communication to contact emergency services (28, 31, 33).

The use of communication signals for medical attention is recommended in 3 guidance documents, such as umpire waving a stick above their head (polo) (32), or waving a flag (motorsports) (21, 24).

In summary, 23 of the 29 guidance documents refer to communication on the day of the event but not all are specific on the method of communication. Where the method is specified, radio communication is most frequently recommended followed by mobile phone.

### Recording medical usage

Twenty-two of the 29 guidance documents advise that medical encounters, incidents or injuries should be recorded or reported (8, 10 to 13, 15 to 23, 26 to 28, 30, 32, 33, 35, 36). However details of what to document are limited; only 2 of the 22 specify the clinical medical information that should be recorded (including patient details, details of the incident or reason for presentation, injury and treatment given, and onward destination) (16, 26), and another 3 specify that medication or fluid usage, or medical and first aid treatment given should be documented (10, 11, 23).

Twelve of the guidance documents advise that injuries or hospitalisations and fatalities should be notified to the sport's governing body (10, 11, 13, 15, 16, 18, 19, 26, 27, 33, 35, 36). Nine documents refer to RIDDOR for reporting accidents and incidents (13, 16, 17, 20, 23, 26, 28, 33, 35). Eight documents specify that the medical records or a medical report for the event should be submitted to the sport's governing body (n=6) (10, 11, 13, 17, 21, 22) or to the event organiser (n=2) (16, 35).

In summary, 22 of the 29 guidance documents recommend recording or reporting medical care, injuries and or accidents, but the level of detail on what to record or report is limited. Twelve of these documents recommend reporting injuries or hospitalisations and fatalities to the sport's governing body.

### Post-event assessment

Recommendations on post-event assessment are made in 5 guidance documents (16, 17, 22, 26, 35). Two of the 5 recommend a debrief between the event organiser and the medical team as soon as possible after the event (17, 35). The other 3 either state that a post-event medical report or review should be used to either inform recommendations for future events (n=2) (16,

22) or that the injury records should be reviewed regularly to inform the risk assessment for future events (n=1) (26).

In summary, only 5 of the 29 guidance documents make recommendations about post-event assessments.

### Health equity

Across the 29 guidance documents, there is very limited consideration of event healthcare provision for groups deemed to be at risk of experiencing health inequalities in relation to this review question. Sixteen of the guidance documents mention safeguarding (such as training and policies) (12, 14, 17 to 19, 23, 25 to 28, 30, 32 to 36). One of the 16 refers to the Green Guide for guidance on safeguarding (25).

Only 2 guidance documents (one of the 16 that refers to safeguarding and an additional document) make recommendations for groups deemed to be at risk of experiencing further health inequalities in relation to healthcare provision at events, in both cases, people from protected characteristics groups related to age (children and older adults) (16, 35). These 2 guidance documents, on triathlon and road races, both advise that medical providers at events involving participants aged under 16 years should have training and experience in paediatric care (16, 35). Both guidance also refer to consent from a parent or guardian for treatment of this age group (16, 35), and one of the 2 also states that the parent or guardian must be present during treatment (16).

No guidance documents make recommendations in relation to event healthcare provision for other groups deemed to be at risk of experiencing health inequalities in relation to this review question:

- people with pre-existing health conditions
- people with disabilities (including learning disabilities)
- people from protected characteristics groups related to pregnancy and maternity
- people who don’t speak English
- people from protected characteristics groups related to gender reassignment

### Guidance from sporting events - summary

Twenty-nine documents that provide guidance for healthcare provision at sporting events were included in this narrative summary, which cover a range of different types of sport (22 documents from sports governing bodies such as Motorsport UK of which 2 are co-authored by sporting organisations, 6 from organisations for specific sports such as the Pony Club, and one from the Health and Safety Executive). Five documents signpost to the Purple Guide and 5 refer to the Green Guide for advice on event healthcare planning (one guidance document refers to both guides).

Of the 29 guidance documents on sporting events, 19 specify that those organising the event have overall responsibility for healthcare provision at sporting events. Irrespective of whether

guidance advises who has overall responsibility for healthcare provision, 14 advise having a designated person responsible for aspects of this provision.

Twenty of the 29 guidance documents recommend conducting a risk assessment to plan events, 14 of which refer explicitly to healthcare. Only 12 of the 29 documents refer to having a dedicated medical plan, of which 2 advise that this should be developed collaboratively between the event organiser and medical provider.

In terms of coordination between teams as part of the planning for healthcare provision, 9 guidance documents recommend notifying local hospitals or ambulance services of events, although only 4 advise on engaging with SAGs.

Recommendations on planning for major incidents or emergencies are made in 11 of the documents with varying but mostly limited content, and only 3 guidance documents recommend coordinating the planning with other actors (of which one specifically mentioned involving a SAG).

In relation to training and qualifications of healthcare staff, 24 of the 29 guidance documents recommend training, experience or qualifications for healthcare staff and 21 refer to qualifications or training of first aiders. The recommendations on training vary in content and level of detail and which healthcare professional they were for; some refer to sport-specific courses. Thirteen recommend that healthcare professionals should be registered with professional regulatory bodies.

Specific recommendations on number and type of healthcare staff are provided in 14 of the guidance documents, which is mostly based on the type of sporting event.

Twenty-seven guidance documents mention medical equipment for event healthcare provision, with 17 including detailed recommendations about the specific equipment required. Some guidance on medical area set-up is provided in 22 of the documents, but only 10 of these provide detailed recommendations.

Twenty-two of the guidance documents recommend recording or reporting medical care, injuries and or accidents that occur during events, although with limited detail of what to record. Twelve of these documents recommend reporting certain types of injury to the sport’s governing body. Nine documents refer to RIDDOR for reporting accidents and incidents.

In terms of the method of communication on the day of the event, radio communication is most frequently recommended followed by mobile phone.

Only 5 of the guidance documents make recommendations on conducting post-event assessments.

## Guidance included at stage 1 only

Twenty-one guidance documents (57 to 78) were included in the review but only extracted at stage 1 because, although they mentioned healthcare provision, they do not make specific recommendations relevant to this review and all referred to more comprehensive guidance (including the Purple Guide (37) and the Green Guide (5)), which we identified and included at stage 2 data extraction (therefore, described and summarised in the previous sections).

Of the 21 guidance documents only included at stage 1 data extraction:

- 8 were deemed to be for generic events (62, 64, 67 to 69, 74, 75, 78) (one specifically for outdoor events (64))
- 6 were for sporting events (59 to 61, 66, 72, 76)
- one for sporting and community events (71)
- 6 were for specific types of event:
  - 2 for fireworks displays (57, 58)
  - one for production-type events (such as concerts and performances) at arenas (77)
  - one at fairground and amusement parks (70)
  - one for public events on Ministry of Defence property (73)
  - one for flying displays (63)

# Limitations

This rapid scoping review is a review of grey literature and although we followed a systematic process to identify and screen the evidence, due to the nature of the grey literature sources searched it was not possible to be as systematic as in a review involving peer reviewed evidence from standard databases like Medline or Embase. Most of the records were identified by Google searches, and based on a previously developed method (6), we screened the first 100 hits for each Google search string. Although Google uses a ranking system to display the results in order of relevance, it is possible that some relevant guidance may not have been identified. Changes to the Google ranking system over time also means that different search results may be returned for the same search string run on different days, which reduces the reproducibility of the searches. In addition, while we did conduct extensive searches of databases, no guidance was identified from these sources, reflecting the fact that guidance documents do not tend to be indexed in databases. To mitigate these limitations, we screened lists of references of included guidance and of compilations of guidance identified by the searches, we conducted targeted searches in Google (see Annexe B) and we consulted with experts.

In addition, as we were looking for UK guidance, we used the advanced options in Google to refine the search results to pages published in the UK, which may have missed relevant documents if they weren't indexed as being from the UK by Google.

We included any local guidance that made specific recommendations on healthcare provision relevant to this review. However, applying this decision occasionally required subjective judgement, which may have led to inconsistencies. To mitigate this risk, we piloted the search strategies and carried out the screening in duplicate for a subsample of records, resolving disagreements by discussion between reviewers. Similarly, applying this eligibility criterion for local authority SAG guidance or terms of reference was challenging and occasionally required subjective judgement as the type of documents provided by the local authority SAGs differed, and not all had their terms of reference publicly available. Although we searched for terms of reference on local authority websites in each case, it is possible that some may have been missed. Indeed, as there are no legal requirements for how a SAG should operate, there can be important variation in their own ways of working, procedures and documentation. The local authority SAG guidance usually provided generic recommendations in relation to health and safety planning and coordination, although they may have had some specific information about healthcare provision (for instance, in relation to coordination with ambulance services). As it was not possible to include all local guidance on SAGs, we included those that provided an overview of the range of recommendations available to show the variability between these. This is not an unusual approach for scoping reviews which tend to be more exploratory than other evidence synthesis outputs such as systematic reviews or mapping reviews (79), especially when relying on grey literature (6).

Subjective judgement was also required to determine whether guidance for sporting events met the eligibility criterion of who at the event the guidance for healthcare provision applied to (that is, whether recommendations for healthcare provision were for participants playing sport only or if they also applied to spectators in the audience). To ensure that we did not exclude any relevant guidance, we included guidance where this wasn't clearly specified. It is also important to note that the search strategy used did not search for specific sports. Instead, we searched for generic sporting terms ('sports event', 'league', 'tournament') or venues ('sports grounds', 'arena', 'track event') (see Annexe E). Therefore, this was not intended as a comprehensive search to identify guidance for all types of sport.

To the best of our knowledge the guidance included is up to date and in current use. For records identified through grey literature searching, we checked websites returned by the searches for the most up to date version of the guidance. However, it is possible that more recent guidance has been published since our searches were completed.

# Conclusions

In this rapid scoping review of UK guidance for provision of healthcare at events, 49 guidance documents were narratively summarised (search dates: October 2024). Of these, 20 were guidance for generic events, and 29 were guidance for a range of different types of sporting events.

In terms of geographic coverage, 22 of the 49 documents applied to the whole of the UK or Great Britain, 19 were specific to England, 3 to Scotland, one to Northern Ireland and one to Wales. The remaining 3 were international guidance applicable to the whole of the UK.

Authors of the 49 guidance documents included sports governing bodies, sporting associations, local authorities (some specifically by SAGs, others by the local councils) and ambulance trusts as well as the Events Industry Forum (Purple Guide), the Sports Grounds Safety Authority (Green Guide) and the Health and Safety Executive. Across all identified documents, the Purple Guide (which is applicable to all events) and the Green Guide (for all types of events occurring at sports grounds), which both apply to the whole of the UK, are widely used sources of guidance for planning healthcare provision at events. This is reflected by the fact that many of the other guidance included in this review refer to one or both of these guides.

Of the 20 guidance documents for generic events, 19 mention notifying or engaging with SAGs when planning an event, with variation in the level of detail provided and the content of the advice, although larger events or those posing greater risks tended to be the ones requiring full SAG review. Only 4 of the 29 guidance documents for sporting events mention engaging with SAGs, although as the aim of the SAG is to advise on public safety at an event, guidance on healthcare provision for participants at sporting events would not necessarily be expected to mention SAGs.

Only 25 guidance documents specifically mention conducting a medical risk assessment or equivalent (11 of the 20 guidance for generic events and 14 of the 29 for sporting events). Similarly, only 23 recommend having a dedicated medical plan (11 of the 20 guidance for generic events and 12 of the 29 for sporting events).

Planning for major incidents is mentioned in 16 of the 20 guidance documents for generic events, but the level of detail varies across documents; only 3 documents specify that the event organiser and on-site medical team are responsible for managing the incident until the statutory services arrive. Only 3 documents refer to engaging with EPRR teams, all from ambulance trusts. The information provided in the guidance for sporting events is even more limited (mentioned in 11 of the 29 guidance, with mostly limited content).

The role of, and coordination with, ambulance services is covered in 15 of the 20 guidance documents for generic events (including 6 from SAGs and 5 from ambulance trusts). However, while 12 of the 20 documents refer to agreed access and egress routes for emergency services,

there is a lack of guidance on procedures for liaising with local NHS provision and handover of care for patients requiring transfer for further medical provision. In the guidance for sporting events, advice on coordinating with the ambulance service is more limited with 9 of the 29 documents recommending that local hospitals or ambulance services should be notified of events taking place. To note that 9 of the 20 guidance documents for generic events state that the overall aim of the event healthcare provision is to minimise the impact of the event on local NHS provision.

For on-site medical provision, both generic and sporting event guidance make a range of recommendations regarding the number of healthcare staff, qualifications for healthcare staff, medical equipment requirements and set-up of medical areas, all of which vary in content and detail. There are differences across the guidance in how to determine the number of healthcare staff required (guidance for sporting events mostly base staff numbers on the type of sport). Similarly, recommendations on training and qualifications of healthcare staff are heterogenous, especially for first aiders. Interestingly, the December 2024 update to Chapter 5 (Medical) of the Purple Guide suggests a move away from specifying qualifications and instead mapping staff qualifications to a competency framework.

Guidance on recording or reporting medical usage is included in 22 of the 29 guidance documents for sporting events, although with limited detail of what to record. The information is even more limited in the guidance for generic events, with only 7 of the 20 documents mentioning it. In total, 14 of the 49 guidance documents refer to RIDDOR in relation to reporting certain types of injuries or accidents (5 guidance documents for generic events and 9 for sporting events) and 12 of the 29 documents for sporting events also recommend reporting certain types of injury to the sport’s governing body.

Guidance on post-event assessment of healthcare provision is also limited and is only mentioned in 15 of the 49 guidance (10 of the 20 guidance for generic events and 5 of the 29 guidance for sporting events).

There is a lack of consideration of health equity in the guidance on healthcare provision at events with only limited guidance in 7 of the 20 documents for generic events and 2 of the 29 documents for sporting events.

Overall, the guidance included in this review for provision of healthcare at events differs in the level of detail provided and in content, strengthening the need for the Event Healthcare Standard. In particular, there is a need for clear and consistent guidance in how to engage with SAGs as there are variations across local authorities, probably due to the lack of legislation around SAGs. There is also a need for more detailed and consistent guidance to support event organisers in planning for major incidents, including engaging with EPRR teams, as well as in relation to recording medical usage and post-event assessments. Finally, there is a need for more guidance on medical risk assessments (or equivalent), medical plans, and procedures for liaising with local NHS provision and patient handover.

# Commissioning and funding

Commissioned on behalf of the Department of Health and Social Care (DHSC), which is overseeing the development of an Event Healthcare Standard. The Event Healthcare Standard is being written by a group of experts in emergency preparedness and response and event healthcare provision (the 'authorship group'), convened by NHS England, and reviewed by a different group of experts (the 'review panel').

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The authorship group has had access to an early draft of this report and members have commented on the draft report from a topic expert perspective. NHS England and DHSC also had access to an early draft of this report but have not provided comments and have not been involved in the drafting of the report.

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# Disclaimer

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19. England Hockey. 'Planning safe hockey' 2020 (viewed on 24 October 2024)
20. Health and Safety Executive (HSE). 'Managing health and safety at motorsports events' 2016 (viewed on 24 October 2024)

21. International Boxing Association (AIBA). 'AIBA 2020 medical rules for ringside doctors' 2020 (viewed on 21 October 2024)
22. International Cricket Council. 'International Cricket Council (ICC) minimum medical standards for major ICC events' 2023 (viewed on 24 October 2024)
23. Motorsport UK. 'Motorsport UK Yearbook (Blue Book) - Section F: Emergency and Medical Services' 2024 (viewed on 24 October 2024)
24. Nora Motocross. 'Nora Motorsport, Motocross regulations' 2023 (viewed on 24 October 2024)
25. Racecourse Association. 'Racecourse Association (RCA) guide to safety at racecourses' 2019
26. Rugby Football League (RFL). 'Rugby football league first aid standards' 2022 (viewed on 24 October 2024)
27. Rugby Football League (RFL). 'Rugby football league medical standards' 2024 (viewed on 24 October 2024)
28. The Pony Club. 'The Pony Club Rulebook, health and safety, safeguarding and horse welfare' 2024 (viewed on 24 October 2024)
29. UEFA. 'UEFA Medical Regulations' 2024 (viewed on 21 October 2024)
30. United Kingdom Polocrosse Association. 'UKPA handbook 2024' 2024 (viewed on 21 October 2024)
31. British American Football Association. 'Medical guidance - questions and answers on medical personnel and facilities (2022), and British American Football Association playing rules - Rule 13: standards for game management, section 1 medical provision (2024)' (viewed on 16 January 2025)
32. Hurlingham Polo Association. 'Hurlingham polo association arena polo yearbook 2023/2024 (2023) and Hurlingham polo association yearbook (2024)' (viewed on 16 January 2025)
33. RugbySafe. 'RugbySafe toolkits: Being RugbySafe 2023 to 2024 (2023) and RugbySafe toolkits: RugbySafe essential guides and templates, 2023 to 2024 (2023)' (viewed on 16 January 2025)
34. UK Athletics. 'Cross country event organisation guide (2012) and UKA Licence standards for cross country events (2022)' (viewed on 21 October 2024)
35. Runbritain Medical Advisory Group and UK Athletics. 'Road race medical services. A good practice guide for the provision of first aid and medical services at UK Athletics licensed road races (2013) and Summary for smaller road races of under 500 competitors (2013)'
36. Paddle UK. 'Paddlesafer (2024) and Events toolkit (2024)' (viewed on 16 January 2025)
37. Events Industry Forum. 'The Purple Guide. Chapter 5: Medical' 2024
38. Guidance from ambulance trust 1. 2022
39. Guidance from ambulance trust 2. 2023
40. Guidance from ambulance trust 3. 2020
41. Guidance from ambulance trust 4. 2022
42. Guidance from ambulance trust 5. 2022

43. Guidance from local authority SAG 1. 2019
44. Guidance from local authority SAG 2. 2023
45. Guidance from local authority SAG 3. 2023
46. Guidance from local authority SAG 4. 2023
47. Guidance from local authority SAG 5. 2016
48. Guidance from local authority SAG 6. 2020
49. Guidance from local authority SAG 7. 2019
50. Guidance from local authority SAG 8. 2014
51. Guidance from local council 1. 2016
52. Guidance from local council 2. 2024
53. Guidance from local council 3. 2019
54. Guidance from local council 4. 2019
55. Guidance from local council 5. 2023
56. Resuscitation Council UK. '2021 Resuscitation Guidelines' 2021 (viewed on 28 January 2025)
57. Explosive Industry Group. 'Giving your own firework display. How to run and fire it safely' 2023 (viewed on 24 October 2024)
58. Explosive Industry Group. 'Working together on firework displays' 2023 (viewed on 24 October 2024)
59. United Kingdom Athletics. 'Rules for competition incorporating world athletics rules' 2020
60. Badminton England. 'Badminton England guide to running a tournament' 2022 (viewed on 24 October 2024)
61. British Rowing. 'RowSafe safety advice for rowers, clubs, and competitions' 2024 (viewed on 24 October 2024)
62. Cabinet Office. 'Organising a voluntary event: a 'can do' guide' 2019 (viewed on 24 October 2024)
63. Civil Aviation Authority. 'Flying displays and special events. Guidance and approvals' 2024 (viewed on 24 October 2024)
64. National Fire Chief's Council. 'Event safety documentation' 2021 (viewed on 24 October 2024)
65. Department of Culture Arts and Leisure. 'The Northern Ireland Guide to Safety at Sports Grounds' 2013 (viewed on 24 October 2024)
66. England Athletics. 'Organising an event' 2024 (viewed on 24 October 2024)
67. Eventbrite. 'A starting guide to health and safety management for events' 2022 (viewed on 24 October 2024)
68. EventScotland. 'Event planning advice and materials' 2024 (viewed on 25 October 2024)
69. Health and Safety Executive (HSE). 'Managing an event' (viewed on 24 October 2024)
70. Health and Safety Executive (HSE). 'Fairgrounds and amusement parks: guidance on safe practice' 2017 (viewed on 24 October 2024)
71. Home Office. 'The Good Practice Safety Guide: for small and sporting events taking place on the highway, roads and public places' 2006 (viewed on 24 October 2024)

72. Medical Equestrian Association. 'Medical Equestrian Association guidance for medical support to events' Publication year not reported (viewed on 24 October 2024)
73. Ministry of Defence. 'Ministry of Defence: JSP 375 Vol 1 Chapter 37 Public events' 2012
74. National Ambulance Resilience Unit. 'National Ambulance Service Guidance for Preparing an Emergency Plan' (viewed on 24 October 2024)
75. Guidance from ambulance trust 6. Publication year not reported
76. Royal Yachting Association. 'Race management guide 2021-2024' 2020 (viewed on 24 October 2024)
77. The National Arenas Association. 'NAA A-Guide' (viewed on 24 October 2024)
78. Guidance from local authority SAG 9. 2021
79. Campbell F and others. 'Mapping reviews, scoping reviews, and evidence and gap maps (EGMs): the same but different—the “Big Picture” review family' Systematic Reviews 2023: volume 12, issue 1, page 45
80. Events Industry Forum. 'About the EIF' (viewed on 16 January 2025)
81. NHS England. 'NHS Emergency Preparedness, Resilience and Response Framework' 2022
82. Sports Grounds Safety Authority. 'Regulatory support' (viewed on 16 January 2024)
83. Borissov N and others. 'Reducing systematic review burden using Deduklick: a novel, automated, reliable, and explainable deduplication algorithm to foster medical research' Systematic Reviews 2022: volume 11, issue 1, page 172
84. NHS England. 'Core20PLUS5 (adults) – an approach to reducing healthcare inequalities'(viewed on 24 October 2024)

# Annexe A. Glossary and abbreviations

## Glossary

**Emergency Planning College (EPC)**: national UK centre for learning and development in resilience, operated for and on behalf of the UK Government (4).

**Event**: no consensus definition; for this review, 'event' was used to cover a gathering of people to observe or participate in an activity (including, but not limited to, sport, music and other cultural gatherings, community gatherings, political gatherings and religious gatherings) which was organised with a reasonable period of notice to allow for pre-planning.

**Event attendees**: the terminology was not used consistently between guidance. Where possible, we used the terminology used in the guidance in the data extraction tables but for this report we used the following terminology for consistency:

- attendees to refer to anyone attending an event, either as a participant or spectator but not as an employee or volunteer
- employees to refer to event staff who are working at the event but who are not participating in activities (such as sport or performances)
- officials to refer to persons appointed to carry out specific duties (in guidance on sporting events); no consensus definition in the guidance but term used to refer to individuals including club official, match official, pitch official, tournament official, event official
- participants to refer to those taking part in the event, including competitors at sporting events and performers at other types of events (such as music concerts)
- spectators to refer to people at the event who are in the audience or crowd, observing the event but not actively participating in any activities
- volunteer: no consensus definition. For this review we quoted the term as used in the original guidance

**Event doctor**: no consensus definition (term used in 4 of the 52 guidance documents but only defined in the Green Guide, in which it is used to refer to a registered medical practitioner who has participated in major incident training and testing the [sports ground] management's contingency plans, and is trained to undertake major incident triage).

**Events Industry Forum**: a not-for-profit organisation composed of event industry representative organisations and trade associations, that represents the UK outdoor events industry and publishes the Purple Guide (80).

**Event safety officer**: a designated member of event staff who is responsible for overall health and safety at events.

**Health and Safety Executive (HSE)**: national regulator for workplace health and safety. In terms of healthcare planning at events, SAG and or event organisers may ask HSE inspectors for advice and guidance on occupational health and safety matters (3).

**Healthcare professionals**: healthcare staff with protected titles who must be registered with the relevant professional regulatory organisation such as the General Medical Council for doctors, the Health and Care Professions Council for paramedics, and the Nursing and Midwifery Council for nurses.

**Healthcare provision**: no consensus definition; for this review, we use this term to refer to all aspects of medical and first aid arrangements at events.

**Medical coordinator**: a designated person who is responsible for overseeing operational matters and coordination of event medical staff. The Green Guide specifies that the coordinator should be one of the following: a registered health care professional such as a medical practitioner, a registered nurse, a registered paramedic or a healthcare manager or member of the Institute of Healthcare Management (who has the relevant competency – not defined), and that they report to the ground management.

**NHS Emergency Preparedness Resilience and Response (EPRR) framework**: a strategic national framework for NHS-funded organisations in England containing principles for health emergency preparedness, resilience and response to support these organisations to meet legislative requirements (Health and Care Act 2022, NHS Act 2006, Civil Contingencies Act 2004, NHS Standard Contract) (81).

**Sports Grounds Safety Authority (SGSA)**: Advisor to the UK Government on safety at sports grounds. Licenses the Premier League, EFL and international football grounds, and oversees local authorities in safety certification. The SGSA is not a formal member of a SAG, but SGSA Inspectors can be invited to attend SAG meetings of football grounds in an advisory capacity (82). SGSA publishes the Guide to Safety at Sports Grounds (the Green Guide).

# Abbreviations

| Abbreviation | Meaning |
|---|---|
| EPC | Emergency Planning College |
| EPRR | Emergency Preparedness Resilience and Response |
| MAG | Medical Advisory Group |
| RIDDOR | Reporting of Injuries, Diseases and Dangerous Occurrences Regulations |
| SAG | Safety Advisory Group |
| SGSA | Sports Ground Safety Authority |

# Annexe B. Methods

A rapid scoping review was conducted in order to address the review question ‘What does existing guidance recommend about healthcare provision at events (including planning and minimum standards)?’.

## Protocol

A protocol was produced before the literature search began, specifying the review question and the inclusion and exclusion criteria. The protocol is available on request.
Modifications made to the protocol after the review started are reported below, where relevant.

## Inclusion and exclusion criteria

Article eligibility criteria are summarised in Table B.1.

**Table B.1. Inclusion and exclusion criteria**

| Included | Excluded |
|---|---|
| Guidance on planning and logistics of healthcare provision at sporting and cultural events (including community events, political events, and religious events) | Guidance focused on areas other than healthcare provision (for instance, guidance on how healthcare should be delivered for specific injury, or on surveillance) |
| Guidance aimed at provision of healthcare for audience attending the event; guidance aimed at audience, staff and volunteers will also be considered for inclusion | Guidance aimed solely at provision of healthcare for participants (for instance, at sporting events), without consideration of healthcare provision to the audience will not be included [note 1] |
| Guidance produced at national level (including by governing bodies) | Guidance produced at local level [note 1] |
| Most recent version of the guidance | Previous versions that have been updated or replaced |
| Country: UK | Guidance for any country other than UK |
| Language: English | Not in English |

Note 1: Guidance making specific recommendations relevant to this review may be considered for inclusion.

### Modifications made to the protocol

Guidance from France, Belgium, USA, Canada, Australia and New Zealand were also eligible for inclusion in the original protocol. However, following consultation with experts, we decided not to search for guidance for these countries because it is unlikely to be generalisable to healthcare provision at events in the UK due to differences in how the healthcare systems are set up and differences in environmental conditions between countries.

## Health equity considerations

In line with UKHSA's commitment to achieve equitable outcomes, the UKHSA Evidence Network health equity checklist for non-equity focused review was used to inform this protocol (see Annexe C). The following groups were deemed to be at risk of experiencing health inequalities in relation to this review question:

- people from protected characteristics groups related to age (children and older adults)
- people from protected characteristics groups related to pregnancy and maternity
- people with pre-existing health conditions
- people with disabilities (including learning disabilities)
- people who don't speak English
- people from protected characteristics groups related to gender reassignment

## Sources searched

1. Database searches: Google Scholar (first 100 hits sorted by relevance for each search; that is, the first 10 pages), King's Fund Library Catalogue, Policy Commons.
2. Google (first 100 hits for each search with UK filter; that is the first 10 pages, excluding sponsored links).
3. Reference lists of included guidance documents and compilations of guidance identified by searches.
4. Consultation with experts from the NHS authorship group.
5. Targeted Google searches on handover of patients who required further treatment.

### Modifications made to the protocol

Databases listed in our protocol also included Nuffield Trust, Open Grey and National Grey Literature Collection. However, these 3 databases were not searched as informal scoping conducted by a senior information scientist returned no guidance documents from these databases.

Policy Commons was added as a source of evidence after the protocol was completed, as we did not have access to this database prior to this. Initial scoping by a senior information scientist suggested that this database may be relevant to this review.

Additional Google searches were done in areas where a lack of guidance had been identified (for instance, on handover of patients) to ensure no relevant guidance had been missed. These, referred to as 'targeted Google searches', were not done in the systematic way that the other Google searches were performed, and were therefore not recorded in Annexe E.

# Search strategies

Database searches were conducted on 30 July 2024.The search strategy was drafted by an Information Scientist.

The search strategy for the database searches is presented in Annexe D. The 77 search strings used for the Google searches are presented in Annexe E. No date limits were used for the database searches or the Google searches.

# Screening

Results of the database searches were downloaded into Endnote, then duplicates removed using Deduklick (an automated AI deduplication tool) (83). The 'find duplicates' function in Endnote was also used, excluding publishing year from the field search in Endnote in order to remove older versions of a document.

Screening of the database results was conducted in Rayyan. Of the 558 records, 154 (28%) were screened in duplicate by 2 reviewers. The remainder were screened by one reviewer. For the results of the Google searches, potentially relevant hits were screened by one reviewer following a piloting phase. Two reviewers (ZS and MB) did 10 different Google search strings in duplicate, and 2 reviewers (DD and MB) did 4 Google searches in duplicate and compared the records they had identified for each of the searches. Disagreements were resolved by consensus between the 3 reviewers involved in the process.

Screening of records identified by expert recommendation was done by one reviewer and checked by a second.

The PRISMA diagram showing the flow of citations is provided in Figure B.1.

## Modifications made to the protocol

In the protocol it was stated that screening would be done in 2 stages: first on abstracts or summaries and contents pages (where available). However, after screening an initial 10% (n=56) of articles from the database search in duplicate by 2 reviewers in a piloting phase, it became clear that many of the documents did not have these sections and, even for those that did, it was difficult to identify potentially relevant articles using this method because relevant information was often distributed throughout the document and not in a dedicated section. Therefore, screening was done in one stage by checking the full text of the article if it did not

have an abstract or summary section, or if it was not possible to determine eligibility for inclusion based on this information alone. As an additional quality assurance stage, a second reviewer performed additional screening of the database search in duplicate (n=98 records). Therefore, a total of 154 records (28%) were screened in duplicate.

# Data extraction

Summary information was extracted and reported in tabular form. The data extraction was conducted in 2 stages. As the purpose of this work was to inform the development of the Event Healthcare Standard rather than inspect or evaluate current practice, local documents were anonymised as local authority SAG 1 to 8, local council 1 to 5, and ambulance trust 1 to 5 during data extraction. In addition, to preserve the anonymity of local guidance documents some details are not included in the published supplementary material files 1 and 2, as indicated below.

In the first stage, information was extracted on:

- country (information on country not included in published supplementary material 1 and 2)
- publication year
- organisation that published the guidance (anonymised for local guidance)
- type of event
- who at the event the guidance for healthcare provision applies to (such as audience, participants or competitors, and or staff)
- consideration of health equity and vulnerable groups, not just those identified as vulnerable in this review protocol (binary: yes or no)
- whether the guidance makes specific recommendations about healthcare provision at events or if it just provides generic recommendations with reference to more comprehensive guidance (such as The Purple Guide)
- whether the document should proceed to the second stage of extraction

Only guidance providing specific recommendations relevant to this review was moved to the second stage of data extraction (that is, those that provided information about the data to extract in stage 2, described below). At this stage, information about specific recommendations for healthcare provision was extracted including:

- roles and responsibilities, planning and coordination:
  - roles and responsibilities
  - medical risk assessment and medical plan
  - engaging with SAGs and coordination between teams
  - planning for major incidents and emergencies

- on-site healthcare provision:

  - training and qualifications of healthcare staff
  - number and type of healthcare staff
  - medical equipment
  - set-up of medical areas
  - communication methods
  - recording medical usage

- post-event:
  - post-event assessment

Also at this stage, details about which vulnerable populations the guidance recommends considering, in the context of providing healthcare, was extracted. This included all vulnerable groups according to the CORE20PLUS framework (84) (not just those identified as vulnerable in this protocol).

Data extraction at stage 1 and at stage 2 was undertaken by one reviewer and checked by a second.

# Critical appraisal

This is a rapid scoping review of guidance and critical appraisal was not conducted.

# Synthesis

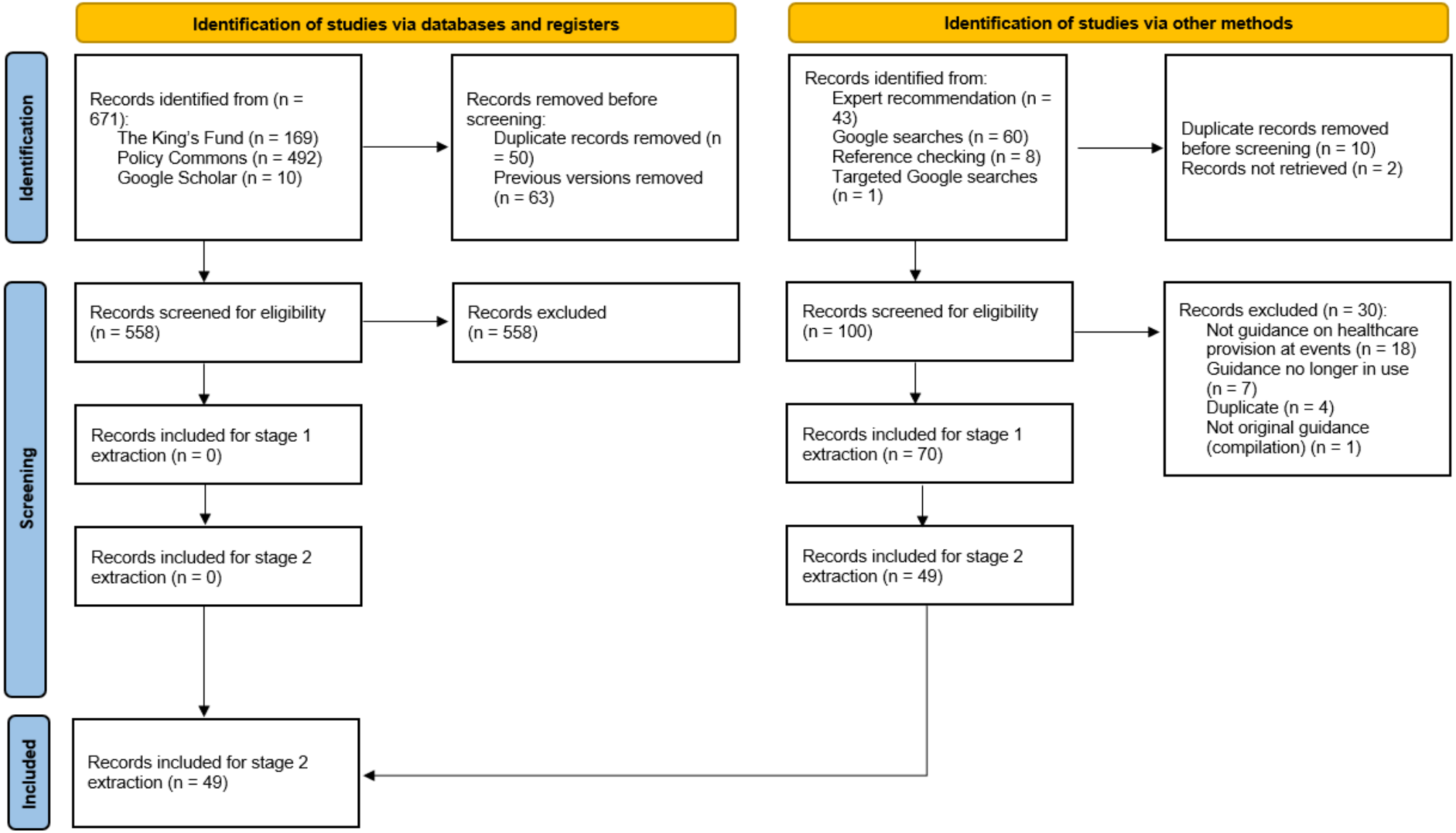
A narrative summary was provided to give an overview of the different types of guidance identified, highlighting where guidance was similar across documents, where there were differences in the recommendations made, and areas where guidance was lacking. The general approach taken in the narrative summary was to discuss guidance produced at national level first followed by guidance produced at local level.

Results of the 2 stages of data extraction were reported in tabular form, with separate tables for different types of events.

## Modifications made to the protocol

Narrative synthesis was not included in the protocol but, due to the amount of guidance identified, it was agreed that a narrative synthesis would provide useful insight.

**Figure B.1. PRISMA diagram**



### Text equivalent of PRISMA diagram showing the flow of studies through this review

From identification of studies via databases and registers, n=671 records were identified from databases:

- The King's Fund: n=169
- Policy Commons: n=492
- Google Scholar: n=10

From these, 113 records were removed before screening (50 duplicate records and 63 previous versions of guidance).

After removal of duplicates and previous versions of guidance, n=558 records were screened for eligibility, of which n=558 were excluded, leaving n=0 records included for stage 1 and stage 2 extraction.

112 records were identified through additional sources:

- records identified by expert recommendation: n=43
- records identified from Google searches: n=60
- records identified from reference checking: n=8
- records identified from targeted Google searches: n=1

From these, 10 duplicate records were removed before screening, and 2 records were not retrieved.

After removal of duplicates and records not retrieved, n=100 records were screened for eligibility, of which n=30 were excluded:

- not guidance on healthcare provision at events: n=18
- guidance no longer in use: n=7
- duplicate reference: n=4
- not original guidance (complication): n=1

Seventy records were included for stage 1 extraction and 49 records were included for stage 2 extraction.

In total, 49 records were included.

# Annexe C. Health equity checklist

The UKHSA Evidence Network, comprising evidence review specialists from the All Hazards Public Health Response and Science evidence review teams at UKHSA, has developed 2 health equity checklists to ensure systematic consideration of health equities from the start of the review process: one checklist for equity focused reviews, and one checklist for non-equity focused reviews. The checklists are based on the CORE20PLUS framework (84) which defines the populations and communities most at risk of health inequalities, including people living in the 20% most deprived places, populations and communities defined by protected characteristics, and inclusion health groups.

The UKHSA Evidence Network health equity checklist for non-equity focused reviews was used because this review did not focus on a CORE20PLUS population. The checklist is presented in Table C.1.

**Table C.1. UKHSA Evidence Network health equity checklist for non-equity focused reviews**

| Checklist step | Criterion questions |
|---|---|
| 1. Equity framing and population groups | Q1. Have you considered which CORE20PLUS population groups, if any, may be at risk of experiencing health inequalities in relation to the review question, and how these inequalities might impact the results? |
| 2. Publication type (eligibility criteria) and information sources (search strategy) | Q2.1 Have you considered including grey literature such as government reports, working papers and community-based organisation publications (in addition to peer-reviewed publications)?<br>Q2.2 Have you considered including any grey literature sources or equity-focused databases to ensure adequate coverage of health equity considerations? |
| 3. Data extraction | Q3. Is the data extraction template designed to collect information on sociodemographic categories (for example, socioeconomic status, sex, race or ethnicity) and data relevant to the CORE20PLUS population groups identified at step 1? |
| 4. Evidence synthesis, including applicability of findings and identification of evidence gaps | Q4.1 Has evidence pertaining to the CORE20PLUS populations groups identified at step 1 been summarised in a dedicated section of the report, when available?<br>Q4.2 Where relevant, have you identified evidence gaps and discussed their implications, for instance in terms of research recommendations? |
| 5.Conclusions | Q5.1 Have you summarised the evidence related to the CORE20PLUS population groups identified at step 1 within the conclusions, including evidence gaps?<br>Q5.2 Have you provided appropriate research recommendations? |

# Annexe D. Search strategy for database searches

### The King's Fund

(healthcare OR medical OR "first aid" OR ambulance) AND (Event OR "mass gathering" OR concert OR festival OR parade OR carnival OR firework OR sports OR league OR competition OR tournament OR championship OR Stadium OR arena OR track) AND (guidance OR guideline OR guide OR planning OR requirements)

### Google Scholar

(healthcare OR medical OR "first aid" OR ambulance) AND (Event OR "mass gathering" OR concert OR festival OR parade OR carnival OR firework OR sports OR league OR competition OR tournament OR championship OR Stadium OR arena OR track) AND (guidance OR guideline OR guide OR planning OR requirements)

### Policy Commons

1. title:event AND title:guidance
2. title:planning AND title:Event AND title:guide
3. title:guide AND "mass gathering"
4. title:guidance AND title:sports AND event
5. title:guideline AND title:event AND health

# Annexe E. Google searches

The searches were undertaken combining terms from 3 main groups:

- one group with a term related to ‘healthcare’ (healthcare, medical, first aid or ambulance)
- one group with a terms related to ‘guidance’ (guidance, guideline, guide, planning, or requirements)
- one group with a term related to ‘event’ (list them all)

The exception was the search with the term ‘safety advisory group’ which only combined ‘safety advisory group’, event and acronyms for safety advisory group.

In total, 77 individual searches were conducted in Google to identify relevant UK guidance using the UK search filter in the advanced search options to only include results that were published in the UK (see corresponding search strings in Table E.1).

**Table E.1. List of the 77 search strings used to identify UK guidance through Google searches**

| Search string | Search date |
|---|---|
| healthcare event guidance OR guideline OR guide OR planning OR requirements | 19 July 2024 |
| medical event guidance OR guideline OR guide OR planning OR requirements | 19 July 2024 |
| "first aid" event guidance OR guideline OR guide OR planning OR requirements | 24 July 2024 |
| ambulance event guidance OR guideline OR guide OR planning OR requirements | 25 July 2024 |
| healthcare "mass gathering" guidance OR guideline OR guide OR planning OR requirements | 26 July 2024 |
| medical "mass gathering" guidance OR guideline OR guide OR planning OR requirements | 26 July 2024 |
| "first aid" "mass gathering" guidance OR guideline OR guide OR planning OR requirements | 31 July 2024 |
| ambulance "mass gathering" guidance OR guideline OR guide OR planning OR requirements | 31 July 2024 |

| Search string | Search date |
|---|---|
| healthcare "sports event" guidance OR guideline OR guide OR planning OR requirements | 31 July 2024 |
| medical "sports event" guidance OR guideline OR guide OR planning OR requirements | 1 August 2024 |
| "first aid" "sports event" guidance OR guideline OR guide OR planning OR requirements | 1 August 2024 |
| ambulance "sports event" guidance OR guideline OR guide OR planning OR requirements | 1 August 2024 |
| healthcare league guidance OR guideline OR guide OR planning OR requirements | 1 August 2024 |
| medical league guidance OR guideline OR guide OR planning OR requirements | 1 August 2024 |
| "first aid" league guidance OR guideline OR guide OR planning OR requirements | 1 August 2024 |
| ambulance league guidance OR guideline OR guide OR planning OR requirements | 1 August 2024 |
| healthcare concert guidance OR guideline OR guide OR planning OR requirements | 1 August 2024 |
| medical concert guidance OR guideline OR guide OR planning OR requirements | 1 August 2024 |
| "first aid" concert guidance OR guideline OR guide OR planning OR requirements | 1 August 2024 |
| ambulance concert guidance OR guideline OR guide OR planning OR requirements | 1 August 2024 |
| healthcare festival guidance OR guideline OR guide OR planning OR requirements | 1 August 2024 |
| medical festival guidance OR guideline OR guide OR planning OR requirements | 1 August 2024 |
| "first aid" festival guidance OR guideline OR guide OR planning OR requirements | 1 August 2024 |
| ambulance festival guidance OR guideline OR guide OR planning OR requirements | 1 August 2024 |
| healthcare carnival guidance OR guideline OR guide OR planning OR requirements | 1 August 2024 |
| medical carnival guidance OR guideline OR guide OR planning OR requirements | 1 August 2024 |
| "first aid" carnival guidance OR guideline OR guide OR planning OR requirements | 1 August 2024 |
| ambulance carnival guidance OR guideline OR guide OR planning OR requirements | 1 August 2024 |
| healthcare tournament guidance OR guideline OR guide OR planning OR requirements | 2 August 2024 |

| Search string | Search date |
|---|---|
| medical tournament guidance OR guideline OR guide OR planning OR requirements | 2 August 2024 |
| "first aid" tournament guidance OR guideline OR guide OR planning OR requirements | 2 August 2024 |
| ambulance tournament guidance OR guideline OR guide OR planning OR requirements | 2 August 2024 |
| healthcare stadium guidance OR guideline OR guide OR planning OR requirements | 2 August 2024 |
| medical stadium guidance OR guideline OR guide OR planning OR requirements | 2 August 2024 |
| "first aid" stadium guidance OR guideline OR guide OR planning OR requirements | 2 August 2024 |
| ambulance stadium guidance OR guideline OR guide OR planning OR requirements | 2 August 2024 |
| healthcare "sports grounds" guidance OR guideline OR guide OR planning OR requirements | 2 August 2024 |
| medical "sports grounds" guidance OR guideline OR guide OR planning OR requirements | 2 August 2024 |
| "first aid" "sports grounds" guidance OR guideline OR guide OR planning OR requirements | 2 August 2024 |
| ambulance "sports grounds" guidance OR guideline OR guide OR planning OR requirements | 2 August 2024 |
| healthcare arena guidance OR guideline OR guide OR planning OR requirements | 5 August 2024 |
| medical arena guidance OR guideline OR guide OR planning OR requirements | 5 August 2024 |
| "first aid" arena guidance OR guideline OR guide OR planning OR requirements | 5 August 2024 |
| ambulance arena guidance OR guideline OR guide OR planning OR requirements | 5 August 2024 |
| healthcare "track event" guidance OR guideline OR guide OR planning OR requirements | 5 August 2024 |
| medical "track event" guidance OR guideline OR guide OR planning OR requirements | 5 August 2024 |
| "first aid" "track event" guidance OR guideline OR guide OR planning OR requirements | 5 August 2024 |
| ambulance "track event" guidance OR guideline OR guide OR planning OR requirements | 5 August 2024 |
| healthcare "cultural event" guidance OR guideline OR guide OR planning OR requirements | 5 August 2024 |
| medical "cultural event" guidance OR guideline OR guide OR planning OR requirements | 5 August 2024 |

| Search string | Search date |
|---|---|
| "first aid" "cultural event" guidance OR guideline OR guide OR planning OR requirements | 5 August 2024 |
| ambulance "cultural event" guidance OR guideline OR guide OR planning OR requirements | 5 August 2024 |
| healthcare "religious event" guidance OR guideline OR guide OR planning OR requirements | 5 August 2024 |
| medical "religious event" guidance OR guideline OR guide OR planning OR requirements | 5 August 2024 |
| "first aid" "religious event" guidance OR guideline OR guide OR planning OR requirements | 5 August 2024 |
| ambulance "religious event" guidance OR guideline OR guide OR planning OR requirements | 5 August 2024 |
| healthcare "firework displays" guidance OR guideline OR guide OR planning OR requirements | 5 August 2024 |
| medical "firework displays" guidance OR guideline OR guide OR planning OR requirements | 5 August 2024 |
| "first aid" "firework displays" guidance OR guideline OR guide OR planning OR requirements | 5 August 2024 |
| ambulance "firework displays" guidance OR guideline OR guide OR planning OR requirements | 5 August 2024 |
| healthcare parade guidance OR guideline OR guide OR planning OR requirements | 5 August 2024 |
| medical parade guidance OR guideline OR guide OR planning OR requirements | 5 August 2024 |
| "first aid" parade guidance OR guideline OR guide OR planning OR requirements | 5 August 2024 |
| ambulance parade guidance OR guideline OR guide OR planning OR requirements | 5 August 2024 |
| healthcare "music event" guidance OR guideline OR guide OR planning OR requirements | 5 August 2024 |
| medical "music event" guidance OR guideline OR guide OR planning OR requirements | 5 August 2024 |
| "first aid" "music event" guidance OR guideline OR guide OR planning OR requirements | 5 August 2024 |
| ambulance "music event" guidance OR guideline OR guide OR planning OR requirements | 5 August 2024 |
| healthcare "street event" guidance OR guideline OR guide OR planning OR requirements | 5 August 2024 |
| medical "street event" guidance OR guideline OR guide OR planning OR requirements | 5 August 2024 |
| "first aid" "street event" guidance OR guideline OR guide OR planning OR requirements | 5 August 2024 |

| Search string | Search date |
|---|---|
| ambulance "street event" guidance OR guideline OR guide OR planning OR requirements | 6 August 2024 |
| healthcare "community event" guidance OR guideline OR guide OR planning OR requirements | 26 August 2024 |
| medical "community event" guidance OR guideline OR guide OR planning OR requirements | 26 September 2024 |
| "first aid" "community event" guidance OR guideline OR guide OR planning OR requirements | 26 September 2024 |
| ambulance "community event" guidance OR guideline OR guide OR planning OR requirements | 1 October 2024 |
| event “safety advisory group” SAG OR SAGE OR ESAG | 21 October 2024 |

# Annexe F. List of excluded guidance documents

**Table F.1. Exclusion reason: not guidance on healthcare provision at events (n=18)**

| Author (year) | Title |
|---|---|
| Association of British Insurers (year not reported) | Celebrate! An ABI guide to planning an event |
| Brady, WJ (2024) | Mass Gathering Medicine: A Guide to the Medical Management of Large Events |
| British Team Chasing (year not reported) | British Team Chasing rider guidance |
| Council of Europe (year not reported) | St Denis Convention toolkits |
| CTC Medical Services (year not reported) | Event calculator |
| Durham County Council (year not reported) | Events safety information for organisers |
| Emergency Planning College (2019) | The UK good practice guide to working in safety advisory groups |
| Event Medical Services (year not reported) | Event Medical Services Risk Calculator |
| Fenland District Council (year not reported) | Safety Advisory Group (SAG) |
| International Federation of Sports Medicine (2011) | FIMS Sports Medicine Manual: Event Planning and Emergency Care |
| London Borough of Merton (year not reported) | Submit an event to a safety advisory group |
| London Borough of Merton (2020 | Template event management plan |
| MK Medical Group | Get Your Free Guide to Medical Needs and Provisions for UK Events |
| National Ambulance Resilience Unit (year not reported) | National Ambulance Service guidance for preparing an emergency plan |
| NHS Tayside (2017) | Recommendations for event medical providers |
| Resuscitation Council UK (2023) | Resuscitation on the field of play |
| St John Ambulance (year not reported) | Calculate first aid and health and safety requirements |
| UEFA EURO (2024) | Tournament requirements |

**Table F.2. Exclusion reason: guidance no longer in use (n=7)**

| Author (year) | Title |
|---|---|
| British Medical Association (2014) | An information resource for doctors providing medical care at sporting events |
| Cumbria County Council (year not reported) | Cumbria Sports Grounds Safety Advisory Group: Guidance notes for applicants of special events at sports grounds within Cumbria |
| Department of Culture, Arts and Leisure (year not reported) | The Northern Ireland guide to safety at sports grounds. Chapter 18 on Medical and First Aid provision for spectators. |
| Health and Safety Executive (1999) | The Event Safety guide (Second edition). HSE Books |
| Rugby Football Union (2009 to 2010) | Guidance on first aid and immediate care provision to players in RFU community clubs |
| UK Athletics (2017) | Approved code of practice for the safe conduct of track and field training |
| West Dorset District Council Safety Advisory Group (2011) | Guidance for organisers of large events |

**Table F.3. Exclusion reason: duplicate (n=4)**

| Author (year) | Title |
|---|---|
| Athletics Unified (2023) | Event first aid guidance |
| Auto-Cycle Union (2021) | Minimum standards for the operation and management of off road motorcycle facilities |
| Auto-Cycle Union (2023) | Track racing standing regulations |
| British Cycling (year not reported) | Resources for event organisers |

**Table F.4. Exclusion reason: Not original guidance (compilation) (n=1)**

| Author (year) | Title |
|---|---|
| St John Ambulance (year not reported) | The Right First Aid Cover For Your Event |

# About the UK Health Security Agency

UK Health Security Agency (UKHSA) prevents, prepares for and responds to infectious diseases, and environmental hazards, to keep all our communities safe, save lives and protect livelihoods. We provide scientific and operational leadership, working with local, national and international partners to protect the public's health and build the nation's health security capability.

UKHSA is an executive agency, sponsored by the Department of Health and Social Care.



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