

CHAPTER 2: EVENT OPERATIONAL CONSIDERATIONS

INTRODUCTION

While planning an event, it is important to consider every possible risk and hazard that may occur. This chapter covers most of the basic risks that may be encountered at an event. The responsibilities for dealing with these risks vary with each jurisdiction, and every community needs to have a plan listing who or what organization will respond to the anticipated risks or hazards. Knowing the risks ahead of time and planning for those risks are essential to successful planning. Planning for the worst may help reduce the chance of a "worst-case scenario" happening. If the responding agency knows the risks ahead of time and is alert, it can reduce its response time, ensuring the safety and security of those in attendance. Risks vary depending upon the type of event; therefore, event organizers must tailor the planning for each risk to the specific event.

The promoter is one source of information on potential risks that may be faced at the event. The promoter should be aware of the support services that are needed to respond to any incident and the availability of those services in the community. If event organizers know the possible risks that an event poses and the nature of the audience that is likely to attend the event, they can analyze the hazards and take the necessary steps to plan a safe event.

HAZARD ANALYSIS

Hazard analysis provides planners with information about the kinds of emergencies that may occur and their potential consequences. Analysis assists planners in deciding what steps to take to prevent the possible emergencies and how to respond if an incident occurs.

The best way to begin a hazard analysis is to list the possible risks present at the event. Every community's list will differ based on topographical and geographical features, weather patterns, and other factors. (Tsunami, for example, would not be identified as a hazard in an area that is far from a coastline.) Identifying hazards also includes considering the possibility of a secondary hazard (for example, a tornado may lead to power failure, loss of water, and other hazards).

The following table includes some of the more obvious risks and possible hazards that may exist. Being prepared for the worst allows planners to have responders and supplies on hand if an emergency does occur.

HAZARD ANALYSIS (CONTINUED)

Typical List of Risks and Hazards	
Abandoned vehicles	Hurricane
Airplane crash	Intentional chemical release
Airspace encroachment	Kidnapping
Assault	Landslide
Avalanche	Loss of utilities (water, sewer, telephone)
Biological incidents	Lost child
Bomb threat/suspicious package	Lost and found
Building inspection	Media relations
Cancellation of event	Motorcades
Civil disturbance with demonstrations	Mudslides
Communications	Parking
Credentials	Permitting
Crowd control	Power failure (sustained)
Cyber attacks	Radiological release
Dam failure	Security
Demonstrations	Structural collapse
Dignitary protection	Subsidence
Drought	Terrorism
Earthquake	Ticketing
Epidemic or other public health concern	Tornado
Evacuation of area	Traffic control
Explosive materials	Train derailment
Fire	Tsunami
First aid matters	Urban conflagration
Flood	Volcanic eruption
Food handling violations	Wildfire
Food waste disposal problems	Winter storm
Hazardous Materials release	
Hostage without terrorism	
Human waste disposal problems	

HAZARD ANALYSIS (CONTINUED)

Event planners must identify characteristics of each possible hazard to determine the risk and consequences. Characteristics to identify are:

- Frequency of occurrence—the frequency of occurrence (both historical and predicted) for each hazard in the particular jurisdiction.
- Magnitude and intensity—the projected severity of the hazard's occurrence.
- Location—the location of the hazard, if the hazard is associated with a facility or landscape feature.
- Spatial extent—the geographic area that may be expected to suffer the impact of the hazard (either around the known location of a hazard or as an estimate for non-localized hazards such as tornadoes).
- Duration—the length of time that the hazard may be expected to last.
- Seasonal pattern—times of the year when the hazard threat exists (based on month-by-month historical occurrence).
- Speed of onset and availability of warning—the amount of time projected between first warning (if any) and actual occurrence.

POTENTIAL CONSEQUENCES

To determine the potential consequences of a hazard, estimate the lives, property, and services at risk. Evaluate the extent of the hazard by closely examining your community in terms of:

- People (deaths, injuries, and displacement).
- Critical facilities (days of service loss, repair time).
- Community functions (disruption).
- Property (damage, destruction, cost of replacement or repair).
- Potential secondary hazards (dams, chemical processing plants).
- Loss of revenue.
- Negative public image of jurisdiction.

When evaluating hazards, remember that hazards may occur in multiples and that one hazard may cause a secondary hazard.

1. Identify the Hazards
Determine what kinds of emergencies have occurred or could occur in the jurisdiction.
2. Weigh and Compare the Risks
Determine the relative threat posed by the identified hazards, using qualitative and quantitative ratings. This information enables planners to decide which hazards merit special attention in planning and other emergency management efforts.
3. Profile Hazards and Their Potential Consequences
Compile historical and predictive information on each of the hazards and overlay this information on community data to estimate the hazard's potential impact on the community.

POTENTIAL CONSEQUENCES (CONTINUED)

4. Create and Apply Scenarios

For the top-ranked hazards (or those that rate above a certain threshold), develop scenarios that raise the hazard's development to the level of an emergency. This is a brainstorming activity that tracks the hazard from initial warning (if any) to its impact on a specific part of the jurisdiction and its generation of specific consequences.

Brainstorming provides information about what actions and resources might be required for response.

The Job Aid, Hazard Vulnerability Assessment on pages A-55 through A-58 of Appendix A: Job Aids, provides a worksheet for the planning team to use as a starting point to identify specific hazards and risks for the event. This is a vital process to bring stakeholders together to brainstorm potential hazards and begin developing comprehensive planning strategies. There are other, more comprehensive, planning tools that are available to address specific needs that the planning team may identify from the Job Aid worksheet. Consult your local/State emergency management agencies for other planning tools.

CONTINGENCY PLANS

Unfortunately, not every event runs smoothly. Often, incidents occur that are beyond the control of the planning team. Therefore, contingency plans for every event should be in place.

An emergency response plan requires a comprehensive hazard and vulnerability analysis. Consultation among all parties who may respond to an emergency situation during the event is essential.

Some important questions related to ICS planning include:

- What weather conditions may require cancellation of the event?
- What weather conditions will postpone the event?
- How will storm warnings be monitored?
- What plans are in place for sudden, severe weather conditions, such as tornadoes? Will shelters be available?
- Who has the authority to make these decisions, and at what point does he or she exercise that authority?
- How is notification made of a cancellation or postponement?
- Are additional security personnel, including police, on standby or on call if an immediate increase in these services is required?
- Have you advised ambulance services and local hospitals of the nature of the event, provided an expected spectator profile, and estimated potential medical problems?
- Have you notified fire and rescue services of the nature of the event and identified the services that might be required?
- Has the jurisdiction considered how to respond to a Chemical, Biological, Radiological, Nuclear, Explosive (CBRNE) type of man-made, intentional event?
- Has the need for mass decontamination been considered?

CONTINGENCY PLANS (CONTINUED)

- Have any “target hardening” considerations been explored to increase the deterrence factor against man-made intentionally caused events?
- Have you identified the types of heavy equipment that could be required in a catastrophe (for example, a grandstand collapse)? Have you made plans to obtain that equipment at any time, including off-business hours?
- Have you advised counseling services of the nature of the event and identified the services that might be required?
- If the event is particularly dangerous, and deaths are a real possibility (for example, at automobile or power boat races or air shows), have you formulated plans to support any required coroner’s investigation?
- To permit responders to precisely identify the location of an emergency quickly, address the following questions:
 - Will a grid-type venue plan be available, which is common to all emergency services, including access roads, pathways, major landmarks, spectator, performer and vendor areas?
 - Will vendor locations or booths be numbered and be included on the venue plan?

STRUCTURAL MATTERS

An area of great concern is the physical setup of the event. Planners need to consider what performance facilities are needed, what special structures are needed for indoor or outdoor events, and whether temporary structures can be used. These are just a few primary concerns.

STAGES, PLATFORMS, AND OTHER PERFORMANCE FACILITIES

When setting up an event, stages, platforms, and the other performance facilities are an area of major safety consideration. The type of event and its site affect the choice of performance equipment and its stability requirements. Qualified inspectors should perform some type of inspection to ensure that the structure is appropriate for the event and that the structure is safe.

The expected behavior of the crowd is one of the principal factors determining stage configuration. While classical music and ballet performances usually attract a mature and orderly audience, teenage and pre-teen fans at rock concerts have been known to storm the stage to touch their idols. Such incidents, apart from being disruptive, have caused injuries. Therefore, event planners should understand the emotional and physical character of the audience that a particular performance will attract.

STAGES, PLATFORMS, AND OTHER PERFORMANCE FACILITIES (CONTINUED)

There are three principal ways to gather information about the anticipated crowd:

- Review press reports and contact local public safety officials who were present at previous performances.
- Speak with spectators who have attended adolescent entertainment events such as rock concerts. In the past, spectators have provided valuable insights into what behavior authorities might expect from audiences for different entertainers.
- Check with the promoter to determine audience behavior at past events and the type of crowd and the behavior that can be expected.

Stages are usually elevated to provide the audience a better view of the performance, especially for spectators who are farther back. This elevation is itself a barrier to those who would rush the stage in an attempt to touch a performer. In addition, this increased height can create an area free of spectators at the base of the stage because the audience members will position themselves back from the stage so that their line of sight is not impeded.

At some venues first aid personnel are located under the stage to accept injuries occasioned at the front of the spectator area. A stage or a platform alone is usually insufficient to deter determined and agile spectators, however, and an additional physical barrier is needed in front of the stage.

INDOOR EVENTS

During concerts held indoors, an effective practice is to erect a “V” shaped barrier in front of the stage to deflect patrons away from the stage area if any surge comes from behind. The “V” shape also provides an additional barrier to prevent spectators from reaching the stage. Security staff can position themselves in this spectator-free zone or should be able to gain access to it quickly from either end of the stage.

Barrier posts must be securely anchored to the floor, not merely mounted to freestanding bases. They should also have some padded protection. Such a fence construction is usually engineered to provide a certain amount of “give” upon impact, thus reducing the potential for crush injuries as occasioned in the 2000 Denmark, Pearl Jam concert tragedy.

OUTDOOR EVENTS

Board fences similar to the “V” shaped barrier described for indoor concerts can be used in an outdoor setting. Board fences have the added benefit of providing a walk space on the spectator side of the fence as well as behind it. Because most outdoor concerts do not provide seating, spectators in the front rows seated on the ground have to take a position several yards back from the fence to permit them to see the stage over the top of the fence. This area permits emergency access to the front rows of spectators.

Any stage protection barrier must be designed to sustain a certain amount of flex in order to prevent the crushing of spectators in the front by a crowd surge from behind. At the same time, it must be sufficiently solid so that it will not collapse and cause injuries. Fences installed as stage barriers often fail to meet this two-fold requirement.

BREAK-AWAY STAGE SKIRTS

The front skirt around the base of a stage can be constructed to break away under the pressure of a crowd surge, thus allowing spectators to be pushed under the stage rather than be crushed against its base. This idea is not practical where there is less than six feet clearance beneath the stage, however, because of the potential for head injuries if a spectator collides with the leading edge of the stage.

It should be stressed that use of a breakaway stage skirt does not remove the requirement for a barrier in front of the stage and should be considered only as additional security if barriers fail.

EMERGENCY EVACUATION

There are physical structures designed for use in areas of egress that, in the event of an emergency where evacuation is required, collapse to allow for the maximum passthrough.

TEMPORARY STRUCTURES

Because of their transitory nature, many events require easily constructed temporary structures. These include the stage platform itself, as well as towers to house speakers and floodlights, temporary seating such as bleachers, dance platforms, roofs, towers and masts, viewing platforms, marquees and large tents, and decorative items such as archways, overhead signs, and even sideshows.

All such temporary structures must be designed and erected to include a margin for safety and a view to potential hazards. A local government building-codes inspector should supervise the erection of temporary structures and ensure that they conform to local government building or engineering specifications.

Temporary structures are often hurriedly erected because access to the venue may be permitted only a short time before the event opens and they are usually designed for rapid removal at the conclusion of the event. In addition, these temporary structures are frequently neither designed nor erected to withstand stresses other than from intended use and are therefore not engineered to incorporate safety features. High winds or spectators climbing for a better vantage point can overstress these structures.

Personnel should inspect temporary structures periodically during events of long duration. They should post warnings on, or close, a temporary structure whose intended purpose is being violated.

LOAD CAPACITY

All structures have load capacities, and precautions should be in place to prevent misuse through overloading. These precautions apply to any viewing platform or vantage point, such as building walkways or balconies, which can cause a major incident if the number of spectators upon these structures is not properly controlled.

The bases of temporary structures must be protected from damage by vehicular traffic through the use of designated buffer zones.

SEATING

Ideally, all seating should be reserved; however, this ideal situation may be difficult to achieve at outdoor events.

If most of the spectators are in their teenage years, provide seating to control surges and crushing at the front of the stage. A security presence to ensure that audience members do not stand on seats is also recommended. Seating should be adequately anchored to prevent its movement.

Another area of concern is the spacing of the seats, and local life-safety codes may define acceptable practices in this area. The seating should be spaced far enough apart to allow emergency crews access to patients. Often, grouping the seats and providing large walkways between the groups is a way to provide this access.

TEMPORARY SEATING AND ANCHORAGE

Seating in a community center, arena, or similar indoor location often combines fixed perimeter seating with additional foldable or stackable seating on the central floor.

Temporary seats are often not secured to the floor or to one another. While this may not present any problems with certain audiences, more enthusiastic spectators may pose the following problems:

- Persons standing on the seats for a better view are prone to injury because they may lose their balance or become jostled. In such instances, they can adversely affect other spectators, sometimes causing a “domino effect” in closely spaced chairs. The potential for a significant number of injuries exists.
- If an audience becomes hostile, portable chairs can be used as dangerous missiles. It is not uncommon for hostile fans to become aggressive and throw items. Seats that are not anchored become dangerous projectiles.

Portable, folding, or stacking chairs should be secured to the floor. Where this is not possible, attach the legs of each row of chairs to two long planks, one running under the front pairs of legs and one running under the back, as an alternative solution.

A Building Department Venue Assessment Checklist is included on pages A-44 through A-46 of Appendix A: Job Aids.

HIGH-PROFILE/CONTROVERSIAL EVENTS

Because of the nature of the event, the crowd composition, or for other reasons, certain events cause more controversy and create greater risks than others do. For example, events involving groups that hold controversial beliefs present a greater risk for criminal or terrorist behavior. Events involving high-level officials are also at a greater risk for terrorist activity because of the significance of the official and the high-profile visibility of the participants and those in attendance. On some occasions, if the date of the event coincides with the anniversary of another terrorist event, the date of the event itself may be considered controversial. Planners must consider every reason why an event may promote controversy or attract special attention.

Conflicts will exist between public safety, recovery, and criminal investigation agencies during terrorist incidents. Rescue and recovery issues and actions must be separated from criminal investigation issues and actions before the event occurs, and non-law enforcement workers should be given training on matters of evidence. Evidence teams should be created to practice and train with local emergency responders and epidemiologic investigators to promote mutual understanding of one another's roles.

PROTESTORS

If organizers anticipate that a mass gathering or special event will attract the attention of organized protest groups, they should meet, if possible, with the leaders of those groups in advance. The organizers and group leaders can discuss ground rules of acceptable behaviors and the anticipated public safety response to criminal or disruptive behavior by local law enforcement agencies. Building rapport by gaining a mutual understanding of what to expect can decrease the likelihood of disruptive behavior, or at least ensure that everyone knows what will and will not be tolerated. Many jurisdictions have a permitting process that is required for this type of activity.

Protestors who arrive spontaneously should also be planned for, and in many cases may become a law enforcement issue if the permit process has been violated. Many times, these groups hold extremist views or specific concerns about a particular issue that may be tied to the event.

SPECTATOR MANAGEMENT AND CROWD CONTROL

This chapter has discussed the hazards associated with structural design and integrity, but what about the dangers that may be created by the participants themselves? The aim of spectator management and crowd control is to maintain order, prevent deviation from desired behavior, and re-establish order if it breaks down, thereby ensuring maximum enjoyment for the assembled gathering. Event organizers are responsible for spectator management and crowd control; however, this function passes to local authorities, such as police, fire, and emergency medical services, when the situation is beyond the resources and capability of the organizers. Knowing what to expect from a given audience can lessen risks and hazards from the crowd itself. Event organizers should research lessons learned from previous events and have appropriate response plans in place before the event takes place.

Spectator management refers to planning and preparation issues, such as ticket sales and collection, admittance and inspection, ushering, seating, parking, public announcements, toilets, and washrooms.

Crowd control refers to mechanisms that are used to reinstate order, such as limited access control, admission control, and arrests.

A crowd is defined as any number of people coming together in any place for any reason. Crowds gather daily in shopping centers, airports, and stadiums, and occasionally in places that are not designed specifically for large numbers of people.

In the planning process for a forthcoming event, organizers must have an understanding of both individual and crowd dynamics and how these elements interrelate. While this is a preliminary guide to crowd control problems that organizers most frequently encounter, planners need to expand upon the particular issues for each crowd and venue. You may find additional information on crowd control in other literature and press reports; from the promoter; private security organizations; police, fire, and emergency medical authorities; and, for visiting dignitaries, from personal security services and government agencies. All of this information will assist in predicting potential problems that you can then address in the planning process.

GENERAL ISSUES FOR CONSIDERATION

Major crowd issues you should address include:

- Size—Maximum numbers permitted are often established by regulation for safety reasons.
- Demographics—Consider the composition of the audience, including the age and gender mix. If you identify in advance that young children will constitute a high proportion of the audience, consider additional facilities, such as childcare, family bathrooms, and rental strollers. Audiences made up of young children or elderly people tend to require additional medical facilities, and children and the elderly are more susceptible to crush injury than teens or adults.

Different kinds of events may attract certain types of spectators that require special attention. Consider the following:

- Rock concerts, in contrast to other types of concerts, may experience a higher incidence of problems with drug and alcohol abuse, underage drinking, and possession of weapons.
 - Religious and “faith healing” events may attract a significant number of ill and infirm people, which may increase the need for onsite medical care.
 - Events for senior citizens may also require higher levels of health services.
 - Certain sports events may attract over-reactive and violent supporters.
 - Cultural events may require special arrangements, including the provision of interpreter services, special food services, and multilingual signposting, brochures, and announcements.
- Outdoor Concerts—additional considerations:
 - Control and distribution of spectators in the field.
 - Suggested minimum space allocation of 4 to 5 square feet per person on grounds with no seats.
 - Some form of sectoring and barrier management by security is important.

ENTRANCES AND EXITS

Important considerations for the entry and exit of spectators include:

Entrances

The primary function of entrances is to provide:

- For supervision, marshaling and directing crowds.
- Access for emergency services.
- Egress and evacuation routes.
- Initial surveillance and inspection of attendees (i.e., magnetometers).

ENTRANCES AND EXITS (CONTINUED)

Entrances should also:

- Be clearly signposted.
- Be in working order.
- Be compliant with the Americans With Disabilities Act (ADA); and
- Provide for separation of pedestrian and vehicular traffic.

Entrance Management—Event organizers should:

- Permit flexible opening and closing times. (Advertised times are recommended, however.)
- Stagger entry times by providing supporting activities.
- Keep entrances clear of all other activities.
- Keep lines away from entrances.
- Ensure there are sufficient numbers of suitable barriers, fences, gates, and turnstiles.
- Locate ticket sales and pick-up points in line with, but separate from entrances.
- Arrange to have a public address system or alternative communications system to provide information and entertainment to the crowd waiting at the entrance.
- Consider the potential need for medical and security personnel presence.
- Provide sufficient numbers of personnel who are appropriately trained.
- Ensure that control points for searches to detect prohibited items, such as alcohol, social drugs, glass, metal containers, and weapons, are in place and do not affect movement.
- Provide a secure area for the storage of confiscated goods.
- Provide toilets, if lines are expected to be long.
- Apply metering techniques as appropriate.

Exit Management—Event organizers should:

- Ensure that exit doors are not locked. If personnel are concerned about illegal entry, then doors could be fitted with alarms.
- Ensure that exit doors open in the direction of escape and are confirmed as operational.
- Check the placement, function, and signposting of exits.
- Ensure that doors that do not lead to an exit are so marked, preventing “dead end” entrapment and the potential for panic.
- Ensure that all exit corridors are free of all impediments to crowd movement.
- Ensure that turnstiles are freewheeling or can operate in reverse.
- Ensure that cords, which can create trip hazards, do not cross exit corridors. (If this precaution is unavoidable, the cord should be marked, insulated, and secured to the floor to prevent damage and potential electrical risks.)

Escalator Management—Event organizers should provide for:

- Staff control at the top and bottom, including an emergency stop button.
- Metering of the flow at both ends.

ENTRANCES AND EXITS (CONTINUED)

Stairway/Corridor Management—Event organizers should provide for:

- Control of both ends if the crowd is large.
- Metering that may be required for safety.

CREDENTIALING

The mission of special events credentialing is to design and produce badge identification to ensure the greatest possible level of security for personnel and property, and to enhance the ability of law enforcement personnel to control access to secure areas, facilities, and events.

A credential identifies specific individuals who require access to a venue(s) to perform an operational role or function, whereas a ticket is issued to spectators or other members of the general public who do not perform an operational role or function.

In essence, a credential is equivalent to an "Incident Badge." A "ticket" is NOT a "credential."

Credentialing provides sufficient information to verify the identity of the bearer and his or her level of access, and should include security features to prevent counterfeiting and assist in credential verification.

Event planners tasked with credentialing may wish to consider the following:

- Who will be credentialed?
- Will credentialed personnel require police record checks?
- Who will conduct the record checks?
- What criteria will be used for various levels of access?
- Who will have the final decision on who will or will not be credentialed?
- Who will be responsible for credential production?
- Who will authorize credential production?
- What is the format for the receipt of the information necessary to produce the credential (e.g., electronic, paper)?
- Will a photograph be needed?
- Where will the credentialing center be located? (The credentialing center should be located outside of the secure zone and accessible to those requiring credentials.)
- Who will secure this location and provide security for personnel and equipment?
- How will the security of the credentialing database be maintained?
- How, and to whom, will credentials be distributed?

TICKETING

Ticketing is the first means of achieving crowd control. Essential matters to address include the following:

- If advance ticketing is possible, it is preferred because it allows organizers to anticipate audience numbers and plan accordingly. It also enables them to pass on information about needed services (for example, parking, traffic patterns, first aid, water sources, toilets, and personal needs) to ticket-holders before the event.
- When multiple entrances to the venue are provided, directing spectators to arrive via specific entrances can reduce congestion.
- If it is feasible, stagger crowd arrival by specifying entry times. Again, this plan reduces congestion at entrances.

BARRIERS

Effective use of barriers can prevent many problems, including congestion in thoroughfares and walkways. Questions that you should consider in the planning phase include the following:

- What types of barriers are required? Is a solid physical barrier required, or would a psychological barrier, such as barrier tape, suffice? The use of psychological barriers is suitable only for orderly crowds. Any physical barrier must be able to withstand crowd surges.
- How will personnel respond if the barrier is breached?
- Can barriers be used to section the crowd and create passages for emergency personnel to evacuate ill or injured spectators?
- Will barriers be used to create a "pit" between the crowd and the stage, which can be used to facilitate the evacuation of injured spectators?
- Can barriers be easily dismantled by the crowd and used for other purposes?

There are physical structures designed for use in areas of egress that, in the event of an emergency where evacuation is required, collapse to allow for the maximum passthrough.

A Public Works Department Checklist is included on pages A-42 and A-43 of Appendix A: Job Aids.

DEFUSING CROWD TENSION

The tedium that is created by an extended wait in line for tickets or admission can be a precursor for crowd control problems. Such boredom can create or magnify tempers, particularly if, with little distraction, those in line perceive other doors being opened first or other patrons getting in at the head of the line.

The following means of defusing anger have been used with success in different venues:

- Up-tempo music (of a type consistent with the age group of the crowd) played over the public address system.
- Humorous, animal-costumed individual, such as a mascot, walking up and down the line giving handshakes, pats, and waves.
- Large inflated beach ball, which is lobbed back and forth over, and by, the spectators;
- Food and beverage sellers moving through the group.
- Cheerful security staff, passing up and down the line, talking to people.

Introducing some of these same distractions inside the event can calm a potentially agitated crowd.

In addition, a mascot conducting a spectator sing-along to up-tempo music or a ticket or program number draw on the field for the last ball used at a sporting event can alleviate tension in a crowd.

Whenever possible, spectators should be informed before an event of any special conditions or arrangements for the event, such as parking, clothing, food and drink, sunscreen, shelter, and alcohol restrictions. Notice of special conditions or arrangements may be distributed via advertisements or in leaflets accompanying tickets.

Outdoor events, sometimes spread over large areas, require further considerations, such as:

- Toilet facilities located outside gates and between disembarkation points and the venue.
- Shelter.
- Telephone facilities.

The venue should allow adequate regulation of crowd movement, such as adequate exiting from ticketed seating areas and sectoring and flow barriers, including barriers to separate vehicles from pedestrians.

Spectator overflow areas should be available to prevent crushing. Contingency plans are required in case spectator turnout significantly exceeds expectations. This phenomenon is common at rock concerts. This may be more of an issue for outside venues, as life safety codes for inside venues may help address maximum crowd attendance.

RESTRICTED VIEWING LOCATIONS

Clear lines of vision for spectators are important to reduce the likelihood that crowds will move to get a better view of the stage. Also, a wide angle of view helps to reduce crowd densities in front of the stage. If restricted viewing is unavoidable, tickets for spectators in those sections should note this fact.

VIDEO SCREENS

Video or projection screens aid in crowd management because they can provide:

- Entertainment before and between acts.
- Information concerning facilities and important messages including public safety and traffic messages for both inside and outside the venue.
- Close-up vision of on-stage action for spectators as a means of reducing crowd movement toward the stage.

TRAFFIC AND TRANSPORTATION

Transportation presents one of the first impressions that attendees will have about an event's organization, command, and control. Sitting in a line of cars for hours on the highway to gain access to an event will undoubtedly create a negative impression. The traffic from the event may not merely affect the local traffic but the traffic in the entire region. Planners should ensure that the surrounding communities are aware of the event and the potential impact on traffic in their area.

Depending on the scope and size of the event, traffic may be a routine issue. For example, many sports stadiums hire professional traffic planners to provide guidance on the most efficient ways to facilitate access and egress to various parking lots, and have procedures in place that adequately handle traffic flow on a regular basis.

The promoter is responsible for any traffic disruption that is associated with the event and should be held accountable by the permitting authority. The permitting authority can require the promoter to work with local public safety and traffic service providers to create contingency plans to minimize negative traffic impacts on the community at large.

At a minimum, local law enforcement, departments of transportation and public works, the local media, any existing public transportation authorities, and the promoter should comprise a traffic management group who must begin traffic planning well in advance of the event. The group should use the local media to inform residents in advance of the expected impact that the event will have on their mobility.

Being straightforward with the local community about anticipated problems or congestion areas will minimize the negative impact on local traffic service agencies. Many residents, when advised in advance to do so, will avoid certain areas or take alternate routes so that their movement is not impeded or prolonged.

TRAFFIC AND TRANSPORTATION (CONTINUED)

Traffic and transportation concerns that traffic management must address include:

- Does the site have adequate access and staging areas for large numbers of emergency vehicles in the event of a major incident?
- What impact will weather conditions have on transportation?
- What type of road leads to the event? Paved? Gravel? Dirt?
- Is access to, and the road network within, the site adequate to prevent emergency responders from having to walk significant distances to the principal spectator areas(s)?
- Is there sufficient room on the site (that is, for staging, manoeuvring) to permit repositioning or redeployment of emergency vehicles as dictated by the incident?
- Because of the nature of road access, would early arriving vehicles, such as ambulances, be prevented from leaving by gridlock produced by subsequently arriving equipment?
- Is the site served by an access road or street that could be closed to the public and used only for expeditious emergency and service vehicle ingress and egress?
- If access roads are unpaved, would emergency vehicles become bogged down if heavy rains occurred during, or just prior to, the event?
- Is the surrounding road network able to handle the anticipated spectator vehicular traffic?
- If spectator-parking areas are filled, will the road network allow continued vehicle flow, thus preventing gridlock?
- Is signposting, including gate numbering, clearly established inside and outside the venue?
- Are communications systems inside and outside the venue capable of providing public announcements, marshaling instructions, and evacuation orders?
- Is a system in place to monitor crowd flow (as through the use of spotters or aviation resources)?
- Does the organization have additional towing vehicles available?

Where there may be health and safety implications, efficient management of crowd movement includes:

- Awareness of public transport congestion at road, rail, and water interchanges and, in some cases, at airports.
- Use of coaches and buses to reduce private vehicle traffic and any potential problems that large vehicles may present (for example access difficulties, parking requirements, potential road blockages).
- Alterations to normal traffic and road use.
- Traffic control.
- Adequacy of the surrounding road network to handle the anticipated spectator vehicular traffic before, during, and after the event.
- Communication between traffic management groups and other services, including the local media.
- Access and egress routes including:
 - Arrangements for people with disabilities.
 - Pedestrian access, including considerations of distance, terrain, surface, and lighting.
 - Designated pick-up and set-down points.

VEHICLE ACCESS AND EGRESS ROUTES

Consider the environmental hazards that may result if access and egress routes are not established for:

- Portable toilet pump-out.
- Garbage removal.
- Water tankers.
- Car parking.
- Ambulances.
- Law enforcement vehicles.
- Fire vehicles.
- EMS vehicles.
- Public works and utility vehicles.
- Other essential service vehicles.

SIGNAGE AND USE OF THE MEDIA

If organizers anticipate that event traffic will have a major impact on community surface streets, they should consider requiring the promoter to hire a professional traffic planner to work in conjunction with law enforcement and public works personnel to create alternate routing or special signage to and from the event. Strategically placed, variable-message signs on the highway that allow text messages to be changed by remote control are very useful devices to inform the motoring public. Temporary fixed signage can also be considered. The additional signs must adhere to the current industry standard and be easily understood by the public.

Additionally, using a local AM radio station or a specially designated frequency to broadcast travel information and instructions from the Public Safety Incident Command Post to arriving or departing patrons on the day of the event can help to lower their frustration. Broadcasting is also a means for event command and control staff to provide patrons with useful guidance and safety messages prior to their arrival. Much useful information, such as traffic routing and identification of the AM radio station channel that will carry event traffic information, can be included in advance ticket-sales packets so that spectators are informed before they even leave their homes.

TRAFFIC MONITORING

Traffic monitoring should be carried out by periodic radio contact with ground personnel in the field of the event footprint and by surveillance from aerial observation platforms. Fixed-wing aircraft can stay airborne for extended periods of time to obtain the full view of traffic flow. Helicopters can be used to view both the full area and specific problem areas that may warrant closer attention than can be provided by fixed-wing aircraft. Stationary, closed-circuit TV cameras can also be considered for use in areas prone to congestion.

PUBLIC TRANSPORTATION

If public transportation is to be used by patrons for access to the event, a separate ticketing and admitting area can be established to permit smooth drop-off and pick-up. If available, public transportation should be encouraged by event organizers because it tends to lessen the negative impact on local community street traffic. It also decreases the number of parking attendants required at the event site. Another facet of public transportation for consideration is event-only transportation. At many large-scale events that require off-venue parking, promoters lease school or private buses to provide transportation from specific pick-up sites within the community and from remote event-specific parking areas. If public transportation is offered, planners must coordinate with law enforcement and public works personnel for assistance. Public works and law enforcement agencies may choose to close lanes or streets for use only by the public transportation vehicles.

TOWING AND DISABLED VEHICLES

Promoters should be required to hire towing companies to facilitate the removal of disabled or illegally parked vehicles. Tow trucks should be available and readily observable as private vehicles arrive at venue parking lots. The mere presence and active use of tow trucks can act as a deterrent for those motorists who may consider parking illegally. As a general rule, one tow truck for every 2,500 anticipated vehicles can be considered adequate for planning purposes. The size, type, and location of the event may change the needs.

Abandoned vehicles should be towed immediately, because these could be an indicator of a vehicle-borne improvised explosive device (VBIED), a current common tactic of terrorists.

Towing companies should establish a standard procedure for impounding and owner retrieval and should set maximum fees per impounded/towed vehicle in advance of the event. Also, a mechanism (database) for tracking where vehicles from certain areas have been towed and a mechanism for informing motorists of how to find their cars should be in place. (For example, establish a toll-free telephone number). This information should be shared with the appropriate authority and the command post, in case owners of towed vehicles arrive there to ask about their vehicles.

A consideration is for the promoter to be held accountable for any costs associated with towing that are not covered by towing fees. Public safety agencies should handle the regulation and oversight of any towing arrangements that are made during the planning process.

EVENT VEHICLE PRE-SCREENING

Some jurisdictions now screen vehicles at an event site days or weeks in advance of the event. For instance, it is common practice now for some State Fair venues to screen vendors and carnival vehicles upon their arrival.

PARKING

With the crowd and the traffic risks also come the inevitable parking problems. A basic formula for estimating parking requirements is to anticipate one vehicle for every three persons in attendance. Areas of specific concern are:

- Public parking arrangements—Have you made arrangements for overflow parking, signposting, and segregation of pedestrian and vehicular traffic? If spectator-parking areas overflow, will congestion on surrounding roads result?
- Parking control—If anticipated spectator parking areas become full, are there nearby areas for overflow parking? Are shuttle buses desirable, feasible, or necessary?
- Towing—Are towing policies established to determine where stalled or disabled vehicles will be towed, or how the owners can find their vehicles, and who bears the cost of towing and storage?

If parking is allowed adjacent to, or inside, the facility itself, vehicle screening should also be considered. Pre-event parking bans should also be considered to ensure the integrity of the footprint surrounding the event site. Sufficient posting of no-parking signs should be done in advance of the event and strictly enforced.

AUXILIARY PARKING LOTS/SHUTTLES

If the event venue does not have established parking lots available, then temporary, auxiliary lots need to be established. Considerations for these lots include:

- Lighting for hours of darkness
- Compliance with the ADA
- Publication of the location of the parking lots and the shuttles
- Provision of toilet facilities
- Use of public transportation (shuttle busses) to and from the event site

Assigning specific buses to specific lots helps the attendees as they go to and from the event. These lots should be clearly distinguished from one another and adequately marked. (Color-coding is one effective method of distinguishing buses. For example, Red Line buses, marked with a red dot in the window, go only to and from the red lot.) The location, of these lots need to be determined well in advance so that traffic management can evaluate them in relation to the overall incident traffic management plan. If the lots need to be rented or leased, the promoter should be held accountable by the permitting authority for any costs associated with their establishment.

Parking attendants in charge of the auxiliary lots are required to direct event spectators to park their cars in the configuration recommended by the traffic planner. If event spectators park their own cars, they may park in such a way that greatly diminishes the capacity of the parking lot, and control of traffic in and out of the lot can be lost. Parking attendants may be trained volunteers, paid promoter staff, or public safety personnel. A consideration is for the promoter to be held accountable for any costs associated with providing parking attendants.

PUBLIC HEALTH

Public health interventions are designed to prevent or minimize injury or ill health. Mass gatherings present particular challenges for preventing or at least minimizing, harm to participants, spectators, and event staff, especially when the event is held at a temporary venue. Familiarity of the financial stakeholders of the event with each other's roles and responsibilities, and knowledge of the potential and actual public health issues, present a common challenge.

This section provides guidance on the primary public health issues likely to arise during the planning phase of a mass gathering event. If State or local legislation is in place, that legislation takes precedence over advice contained in this manual.

PRE-EVENT PUBLIC HEALTH SURVEY

Event organizers should conduct a pre-event public health assessment for any venue intended for a mass spectator event. A Public Health Department Venue Assessment Checklist is included on pages A-47 and A-48 of Appendix A: Job Aids.

Organizers should consult appropriate health authorities to ascertain the availability of:

- Running water (particularly for hand washing by food service and medical personnel).
- Sufficient public toilets and hand washing stations in or adjacent to toilets (with provision for pump-out of portables and servicing as necessary during the event).
- Adequate refrigeration for perishable foodstuffs.
- Recognized, approved vendors of bulk food items delivered to the site's food providers.
- Sufficient number of covered containers for the storage of food and solid waste, including removal during the event.
- Appropriate storage and removal of liquid waste.

Public health inspectors should be available onsite during the event to monitor public health compliance.

Public health authorities onsite should have legislated authority to enforce "cease operation" orders on onsite food providers who are in contravention of standards or are otherwise operating contrary to the public interest.

PUBLIC HEALTH CONTINGENCY ARRANGEMENTS

The arrangements outlined in this chapter are designed to prevent an adverse event or minimize the risk that an adverse event will occur. However, unforeseen circumstances that may create a public health risk always exist. Some thought must be given to making contingency arrangements and documenting these arrangements in the public health emergency management plan. The plan should include the following details, as a minimum:

- Contact details, including after-hour information, for principal event personnel (for example, event organizers, environmental health officers, trades persons, and emergency service personnel, including health services personnel).
- Contact details for additional staff.
- Details for 24-hour contact of the food proprietors.
- Arrangements for alternative suppliers of equipment and utilities in the event of a failure or loss of water or power.
- Arrangements to replace food handlers who become ill.
- Arrangements in case of product recall.
- Epidemiological tracking procedures.
- Procedures for handling complaints.
- A debriefing procedure.

MONITORING HEALTH RISKS

First aid posts and security personnel can provide information to help assess health and safety risks. First aid posts can provide data by collecting gastrointestinal illness surveillance information. A Gastrointestinal Illness Questionnaire is included on pages A-60 and A-61 of Appendix A: Job Aids. First aid posts can also maintain records of injuries, incidents involving watercourses, and alcohol and drug issues. Security agencies can provide information on safety hazards and alcohol and drug issues.

FOOD SAFETY

Food safety is a vital element of public health planning for public events. Unless personnel apply proper sanitary practices to food storage, preparation, and distribution at mass gatherings, food may become contaminated and present a danger to public health. Special one-of-a-kind outdoor events that are held during warm weather pose additional risks because they tend to have less than ideal facilities for food handling, transport, and storage.

To ensure that adequate food safety standards are met and maintained, an environmental health officer should initially assess food service proposals, including the authorization of vendors, as part of the pre-event planning outlined in Chapter 1. The health officer should base any assessment on current local and State food hygiene legislation and food safety codes. The officer should follow this assessment with a pre-event audit as well as periodic monitoring of food safety throughout the event.

FOOD SAFETY (CONTINUED)

This assessment should form part of a comprehensive food safety plan for the event, including:

- Licensing/permit procedures and authorization of vendors
- Quantities and types of food
- Lines of supply
- Premises where food is stored
- Preparation techniques
- Disposal of foods
- Means of distribution
- Food safety documentation, approved approaches, and surveillance

Food vendors must meet appropriate licensing and registration requirements of the responsible health authority, including an off-premises food-catering license, as appropriate. During the event, onsite environmental health officers must have the authority to close down any vendor who is contravening food hygiene legislation and public health requirements. In some cases, this action may necessitate passing particular local laws or ordinances.

Appendix A includes a Food Vendor Information Sheet on pages A-33 through A-35. A Catering Inspection Checklist for Food Vendors is included on pages A-36 through A-39.

FOOD PREMISES

Setup and construction of the food premises must be in accordance with State and local regulations and codes of practice. The premises or areas to be used for food storage, preparation, and service must be easily cleaned and promote neither the harboring of rodents and insects nor the buildup of dirt and food particles.

EQUIPMENT

Equipment used in food preparation, distribution, and storage must be in safe working order and easily cleaned. Ensure that an appropriate number of the correct kind/type of fire extinguishers (e.g., effective for use with deep fryers, propane tanks, etc.) is available at food provider sites.

PERSONAL SAFETY

The safety of both staff and the public is always an important consideration, and you must meet occupational health and safety standards. Some of the hazards to avoid include loose power leads, trip hazards, inadequate refuse disposal, inappropriate positioning of equipment (especially hot equipment), poor ventilation and extreme temperatures in the work environment, badly stacked supplies, and unguarded equipment.

WASTE DISPOSAL

An effective disposal system should be put into place. Improper disposal of perishable goods, in particular, can cause problems arising from odor, insects or rodents, or other animals. Adequate disposal facilities must be easily accessible to food handlers and removal contractors.

Organize a separate refuse collection for food premises and continually monitor it to ensure that the frequency of collection is appropriate.

Where possible, encourage the separation of refuse into dry, wet, and hazardous disposal units. For more information on refuse disposal, refer to the discussion under Waste Management on page 2-31 of this chapter.

WATER SUPPLY

Provision of a supply of potable water for sinks is essential. Those operators who use water that is stored in their own tanks must have access to facilities to refill diminished supplies. Ensure that this access is established before the event. If possible, at outdoor concerts in extreme heat conditions, all potable water supply lines should be buried to avoid breakage and contamination by concert attendees. Having a NO GLASS policy is wise to prevent hazards caused by broken glass. For more specific details on water supply, refer to the section on Water on page 2-28 of this chapter.

HAND WASHING

Hand-washing facilities must be provided for the exclusive use of food handlers. Potable, running water must be used for hand washing, and, where possible, hot water should be available. Soap and disposable hand towels should be provided in the hand-washing area.

SINKS

Potable water must be supplied to all sink areas. Hot water should be used where possible. An appropriate detergent and sanitizer should be used to clean all sinks adequately.

FOOD SUPPLIES

Food should come only from registered outlets and should not be prepared in domestic kitchens. Food proprietors must ensure that food supplies have been prepared and transported in accordance with relevant standards.

TRANSPORTING FOOD

The time required for food transportation should be kept to a minimum. Temperature requirements should be maintained, and the food should be protected from contamination at all times.

Food transport vehicles should be clearly identified and subject to surveillance and monitoring.

FOOD HANDLING

Essential matters to address include the following:

Cross-Contamination—The following points apply:

- Every effort should be made to minimize the risk of cross-contamination during the food-handling process. Utensils and surfaces that are used for the preparation of either raw or ready-to-eat food should be clearly distinguished. In cramped circumstances, this distinction becomes more difficult to observe. Adequate cleaning and sanitizing of food utensils and surfaces between use plays an important role in reducing problems arising from cross-contamination.
- Disposable plastic gloves should be worn and changed frequently. The temptation to continue to wear the same gloves exists, even after the work being undertaken has changed. Encourage frequent hand washing.
- Appropriate food storage is critical to ensure that there is no contamination between raw and cooked or ready-to-eat foods. Raw foods should be stored separately if possible, or at a minimum, stored below cooked or ready-to-eat foods.
- Equipment must be adequately cleaned and sanitized after each separate process. This is particularly critical where equipment is used for preparing different types of food.

Thawing, Cooking, Heating, and Cooling—The goal in monitoring temperature control is to minimize the length of time during which potentially hazardous foods are held in temperatures between 41°F and 140°F. This is the temperature range in which most foodborne microorganisms can grow. This range is referred to as the danger zone. Key points to remember include:

- Thaw food under refrigeration or in cold, running water.
- Cook food thoroughly to applicable standards.
- Minimize the reheating of food. When reheating is required, heat the food thoroughly and store it appropriately.
- Cool food quickly under refrigeration.
- Apportion food into appropriately sized trays.

Cleaning and Sanitizing—The following points apply:

- Regardless of the type of facility in which the food is prepared, regularly clean and sanitize all food contact surfaces, using an appropriate sanitizer.
- Clean all other surfaces to minimize the risk of contamination of food products. Also be aware of pest infestation and occupational hazards, such as slippery floor surfaces. Adequate signage should be posted in these areas.
- Consider the provision of a designated wash-up area for food outlets to reduce sillage waste storage and pump out at each food outlet.

Chemical Storage—Store chemicals in areas separate from foods and clearly mark the contents on chemical storage containers. **Never use food containers to store chemicals.**

Food Storage

Essential matters to address include:

- Storage Facilities—Provide facilities of adequate size and appropriateness for the purpose.
- All foodstuffs must be stored off the floor or ground using shelving or pallets in accordance with State and local health regulations.
- Temperature Control—The following points apply:
 - Refrigerated or heated storage areas require a continuous power supply. You must store potentially hazardous food at appropriate temperatures at all times.
 - Refrigeration can pose a problem particularly in hot weather when refrigeration units struggle to cope. In case of refrigeration failure, all proprietors should indicate alternative refrigeration suppliers, or the organizer or authority could identify alternative suppliers in the public health emergency management plan.
- Cross-Contamination—The following problems must be overcome:
 - The less-than-ideal conditions that confront food handlers working in temporary facilities may lead to compromising appropriate food handling practices.
 - Space is often a major problem. Ensure that, at a minimum, raw and cooked or ready-to-eat-foods are stored appropriately. Food handling staff must be aware of the requirements for strict hand-washing procedures and for the cleaning and sanitizing of equipment between handling raw and ready-to-eat foods.
- Dry Goods—Appropriate and sufficient storage conditions should be available to ensure adequate protection of food from the elements and pests.
- Food Protection—Protect exposed food available on display from insect pests, dust, and human contact.

Food Handling Staff Considerations

Important matters to address include:

- Training—Encourage proprietors to select staff with food handler training to work in temporary facilities.
- Personal Hygiene—Selection of staff should include factors such as high personal hygiene standards. Food proprietors should ensure that a non-smoking policy is implemented in the workplace if permitted by local code.
- Communications—Proprietors should be able to demonstrate that they have an efficient reporting and communication system so that staff can identify public health problems and deal with them promptly.
- Supervision—Encourage proprietors to provide appropriate supervision to ensure a team approach to the provision of a safe food supply.
- Dress—Food handlers' dress should be appropriate to the tasks that they are performing and include some form of hair covering.
- Infectious Diseases—
 - Proprietors should be reminded that food handlers must not work while they are in an acute stage of any gastrointestinal illness or the common cold.
 - Proprietors should remind food handlers who have open wounds to dress all wounds with a waterproof dressing and to change the dressing regularly.
 - Provide segregated toilet facilities exclusively for food handlers.
 - Monitor these facilities for any signs of pest or rodent infestation.
 - Proprietors should keep a register of any complaints that they may receive from food purchasers.

HEALTH PROMOTION

Consider the opportunities to promote health messages at public events and to encourage event organizers and service providers, such as food vendors, to participate. Examples include:

Sunsmart—Encourage the provision and use of shade areas. Encourage the use of sunscreen creams and hats, and make them available for purchase by spectators. Organizers should consider advising spectators that alcohol consumption in the sun greatly increases the risk of dehydration. Additionally, organizers may want to consider providing “misting tents” which are used by attendees to reduce core body temperatures in excessive heat environments.

No Smoking—Encourage the provision of non-smoking areas and ban the sale of cigarettes at the event.

Alcohol—Consider the designation of alcohol-free areas or restrictions on the sale of alcohol. Also consider glass-free policies. Alcohol-free events will minimize aggressive behavior of spectators and also minimize the use of restrooms and water supply needs.

WATER

An adequate supply of safe drinking water must be available. One guideline suggests making available 21 quarts of potable water per person per day, of which 5 quarts comprise the drinking water component. Consider event duration and location and the anticipated ambient temperature in determining the quantity of potable water required.

All water provided must be tested to ensure its potability. In areas where non-reticulated water is the only source for personal use, then consider the clarification and disinfecting of the water supply to achieve a level greater than 1 ppm residual chlorine.

Some consideration must be made to ensure that the water is safe from deliberate contamination. Placing the water supply in a secure area or having someone guard the water supply are two options available.

Appropriate access to drinking water must be available for spectators in a field or outdoor venue or at events such as "raves," where the activity produces an extreme-heat environment.

Water pressure must be adequate to provide for all normal use and for use during peak demands. Any use of fire-suppression water systems (i.e., fire hydrants) should be discouraged, or alternate water supplies must be made available in case existing supplies fail to meet demand or if the supply is rendered unsafe or unusable.

TOILETS

Where existing toilet facilities are judged inadequate, you must make available additional portable units.

Toilet locations should be:

- Well marked.
- Near hand-washing stations.
- Well lit (including the surrounding area) if night use is anticipated.
- Serviced (including pump-out of portables) on a 24-hour schedule during the event (Vehicle access is obviously necessary).
- Located away from food storage and food service areas.
- Secured to prevent tipping.

The following considerations will determine the number of toilets to be provided for particular events:

- Duration of the event
- Type of crowd
- Weather conditions
- Whether the event is pre-ticketed with the numbers of attendees known, or unticketed
- Whether finishing times are staggered if the event has multi-functions
- Whether alcohol will be consumed

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TOILETS (CONTINUED)

Calculating the number of toilets required for an event can be a particular challenge. Where local laws or regulations do not exist, the following guidelines can be applied. Better management of events can be achieved by providing additional facilities. Assume a 50/50 male/female split unless otherwise advised. The following tables should be used only as a guide.

Toilet facilities for events where alcohol is not available

	Males			Females	
Patrons	Toilets	Urinals	Sinks	Toilets	Sinks
<500	1	2	2	6	2
<1,000	2	4	4	9	4
<2,000	4	8	6	12	6
<3,000	6	15	10	18	10
<5,000	8	25	17	30	17

Toilet facilities for events where alcohol is available

	Males			Females	
Patrons	Toilets	Urinals	Sinks	Toilets	Sinks
<500	3	8	2	13	2
<1,000	5	10	4	16	4
<2,000	9	15	7	18	7
<3,000	10	20	14	22	14
<5,000	12	30	20	40	20

These figures may be reduced for shorter duration events as follows:

Duration of event	Quantity required
More than 8 hours	100%
6-8 hours	80%
4-6 hours	75%
Less than 4 hours	70%

Toilets for the Disabled

At least one unisex toilet for the disabled is required. Check with your local ADA office for further guidance.

Food Vendors' Toilets

Separate toilet and hand-washing facilities should be made available for food handlers.

General Considerations

In an outdoor setting, it is a relatively simple matter to provide additional toilets by contracting for temporary portable toilets. This solution may not be suitable for indoor settings, for which provision of additional toilets may be more difficult. One possible solution is to convert some men's washrooms to women's facilities for events where you anticipate a predominantly female audience, or vice versa.

To avoid long lines, particularly at female toilets, organizers may identify some toilet facilities as unisex toilets.

The maintenance and cleaning schedule for toilets and sinks should ensure:

- An adequate supply of toilet paper and soap.
- Clean toilets throughout the duration of the event.
- Provision for disposal and removal of sanitary napkins.
- Availability of a plumber or appropriate maintenance person to repair or remove blockages.

Organizers should ensure that adequate cleaning supplies are available for use by the cleaning staff.

SHOWERS

At an extended event, promoters and planners may decide to provide showers. If they do provide showers, they must consider the additional demands for potable water and drainage. If municipal water supplies and wastewater treatment plants cannot service the shower facilities, providing shower facilities could prove to be a very costly and formidable task. Vendors are available that will contract to provide self-contained shower units. Ensure that showers are located on high ground so that muddy areas are not created.

SOLID AND LIQUID WASTE MANAGEMENT

Major considerations are as follows:

FOOD WASTE

- Deposit food waste in covered containers placed strategically around the venue. Covers are essential, especially in outdoor settings or if high temperatures are expected.
- Spectator density may prohibit access by garbage removal vehicles. To prevent containers from overflowing, empty containers regularly and move waste to a temporary, properly prepared holding area until bulk removal can be accomplished at designated times or after the event. Removing food waste often and in a timely manner prevents disease and pests.

EMPTY CONTAINERS

Make arrangements for the appropriate storage or disposal of empty containers, such as cardboard boxes.

HAZARDOUS WASTES

Special arrangements must be established for the collection and disposal of various forms of hazardous waste, including waste from food preparation areas, medical sharps, and other hazardous materials.

CLINICAL WASTE

Ensure there is provision for the storage, collection, and disposal of clinical waste generated from onsite medical and first aid facilities.

SEWAGE AND SULLAGE

Provide and maintain adequate facilities for the ongoing storage and disposal of sewage and sullage. As with all other wastes, these must be removed in a timely manner and on a frequent basis.

RECYCLING

Where possible, consider providing specific containers for recyclable materials. Vendors should be encouraged to use recyclable packaging of foodstuffs. A sufficient number of dedicated containers should be placed near the vendor area to further encourage recycling.

ANIMALS, RODENTS, AND VEGETATION

In outdoor settings, the control of rodents, spiders, mosquitoes, and insects of significance to public health must be addressed. Venue sites should also be inspected for pests, snakes, gopher holes, etc., in advance. If particular hazardous species are known to inhabit the area, or if carriers of particular diseases are prevalent in the area, alert the attending first aid and medical personnel.

Alert medical and first aid personnel to the presence of potentially poisonous and noxious plants and trees in the area.

If domestic animals are permitted into the venue, establish rules for the control of animals and their waste. Check with your local animal control agency or shelter for more guidance concerning animal regulations.

Also consider the potential effect of the event on nearby domestic or farm animals and native fauna.

SWIMMING AND WATER SAFETY

Purpose-built swimming areas must comply with State requirements for water quality and meet other local requirements, such as fencing. Assess the suitability of other watercourses in the vicinity of the venue if spectators may use those watercourses for water recreation or washing. If these watercourses do not meet requirements, fence them off and erect warning signs against their use.

Address water quality in both designated swimming areas and areas that could be used for swimming in hot weather. Experience has shown that where audiences attend an outdoor concert in hot weather, particularly in overnight events without adequate or convenient washing facilities, they will employ any nearby water area as a makeshift swimming, bathing, or washing area.

Consider making available some form of trained supervision for:

- Families with small children.
- Spectator groups for which alcohol consumption, with subsequent judgment impairment, is anticipated.
- Areas of water that pose additional hazards such as steep, slippery sides; submerged snags; or unusually variable depths.

INFECTION CONTROL AND PERSONAL HYGIENE CONCERNS

Infectious disease transmission through unsafe sexual practices or drug use may be a health risk at some events, particularly for those at which spectators are camping at the venue overnight. To reduce these risks, consider providing or making available condoms and a properly licensed needle exchange/disposal mechanism. While these are sensitive and controversial issues, and political issues in some areas, they are nevertheless important public health concerns in contemporary society, and you should address them.

At events where the duration extends overnight or longer, provide hygienic washing facilities. Suggested minimum requirements for facilities at campgrounds, based on two to three nights' camping, are as follows:

Sex	Toilets	Urinal	Sinks	Shower
M	1 per 50	1 per 100	1 per 75	1 per 100
F	1 per 25	N/A	1 per 75	1 per 100

TATTOOING AND BODY PIERCING

With a return in popularity of tattoos, body piercing, and branding, mobile operators have begun to appear at certain types of public gatherings, such as carnivals, motorcycle races, and auto swap meets. Where this activity is likely to occur, check the need for proper licensing or registration of such service providers and their compliance with any health legislation.

Because of the potential of cross-infection, particularly of blood-borne diseases, inspect any such operations to ensure, as a minimum, the use of:

- Disposable, single-use skin penetration items.
- Proper sterilization equipment and techniques.
- Clinical sharps containers for used needle disposal.
- Sharps containers safely located away from children.
- Safe disposal of used sharps containers.

If the service providers do not use these minimum infection control procedures, do not allow them to perform any skin penetration procedures.

POST-EVENT PUBLIC HEALTH SURVEY

Conduct a post-event survey to ensure that personnel have conducted a proper cleanup, particularly from a public health perspective. For example, check that all scrap foodstuffs and discarded needles are properly disposed of. All involved in planning the event should return the venue to its pre-event condition.

As an additional precaution, retain appropriate records of all service providers at the event so that they may be traced if a subsequent outbreak of a reportable disease occurs or if a claim is made for an injury or illness.

Health personnel should also be conscious of the need to introduce a monitoring or surveillance system if they subsequently become aware of any particular health problem arising from an event.

A formal public health debriefing should follow the event, and a public health representative should participate in all agency debriefings.

MEDICAL CARE

Spectators and participants at mass gatherings may require medical attention in the event of illness or injury. The incidence of illness will be greater at an event for spectators than that expected to occur naturally in a population of comparable size.

The number of spectators who require, or avail themselves of, onsite medical care, and the types of problems that they present, will vary significantly depending on the nature of the event. Generally, between 0.3 percent to 1.3 percent¹ of event attendees will require some form of medical assistance, regardless of the character, locale, physical layout, and size of the event.

Alcohol and drug use is common at most festivals and is the primary diagnosis in more than 10 per cent of the persons seeking medical care. Other common complaints include lacerations, fractures and sprains, burns, sunburn, heat stroke, seizures, asthma, and exposure.

MEDICAL CARE PROVISION

Planning for the provision of medical care for both spectators and participants is essential, for both humanitarian and legal reasons. The permitting process should ensure that medical care at the venue is equal to or greater than the standard of care currently provided in the community. In addition, providing onsite first aid or medical care will significantly reduce the demand on EMS and the emergency departments at local hospitals in the area of the event.

¹ Leonard, Ralph B., PhD, MD, FACEP & Moreland, Kimberly M., MD, *"EMS for the Masses, Preplanning Your EMS Response To a Major Event,"* EMS, January 2001.

MEDICAL CARE PROVISION (CONTINUED)

Event organizers may choose to contract with a health service provider, who may not be associated with the usual local service provider. Check to ensure that the service provider is appropriately licensed and regulated. The provider must coordinate with the local health and emergency services to plan a response to any emergency or significant medical problems requiring further assistance. Notify local health authorities of the details of the event and provide them with emergency plans for a major incident. Additionally, local hospitals should be notified of the event in writing at least 30 days in advance and given the estimated number of attendees.

MAIN CONCERNS IN PLANNING MEDICAL CARE

Main issues to address in medical care planning include:

LOGISTICS

Some medical logistics questions to consider in planning an event include:

- How many medical stations will be required onsite?
- Will medical personnel operate in a facility to which the injured must make their way, or will clearly identified medical teams patrol spectator areas?
- How will spectators identify medical personnel on the site (uniforms, vests, etc.)?
- Will vehicles be available to transport spectators to the medical facility?
- Will medical vehicles be appropriate to the terrain? Four-wheel-drive vehicles may be required for off-road areas and golf carts or similar vehicles required for high-density spectator areas.
- Where an ambulance is not required, will a "chauffeur system" be provided to transport persons from the onsite medical facility to their own transport vehicle?
- How will medical personnel be notified of, or summoned to, spectators requiring assistance in vast spectator areas?
- What means of communication will be available to permit attending medical personnel to communicate with offsite medical personnel, event organizers, security, and other support personnel?
- Are there any sponsorship conflicts between the event sponsor and any medical service operators?
- What level of onsite medical care, if any, do you expect to be required, given the nature of the event?
- What mix of medical personnel (first aid providers, paramedics, nurses, doctors) will you require onsite?
- Who will provide the personnel? How will the cost for their services be funded?
- Are the health service providers from the local area? If not, how will their services be integrated with the local services?
- How will security concerns for health care personnel onsite be addressed?
- Are the selected personnel appropriately skilled to respond to anticipated medical problems at the event? They may require additional training.
- Will medical personnel or vehicles need special credentials to allow them access to all parts of the venue, especially to any restricted areas?
- Are medical personnel assigned for public safety workers at the event?

LOGISTICS (CONTINUED)

- Are aero-medical services and landing zones available?
- Where is the closest trauma center?
- Have primary and secondary receiving hospitals been identified?
- Does the area hospital have adequate bed and personnel capacity to respond to the emergency requirements of an event of the size that is being planned?

Management and Planning

- Determine which other organizations will be involved. Who will be the lead agency?
- Conduct planning meetings involving health personnel, emergency services personnel, and event organizers.
- Determine what is expected of each organization involved in the provision of medical care.
- Determine likely levels of care that will be required.
- Determine any local laws, rules, or regulations governing emergency first aid.
- Determine the budget for the provision of medical care services.
- Establish liaison with other emergency services (police, fire, and security).
- Identify the equipment required and potential suppliers. Will the equipment be purchased, hired, or borrowed?
- Will volunteers be used? What accreditation will they be required to possess? What benefits will they be offered?
- Ensure the security of medical stations and the safety of the staff.
- Establish a patient information management system for patients who are treated, including patient care reporting, etc.
- Determine in advance the disposition of patient records after the event.

An Emergency Medical Services Venue Assessment Checklist is included on pages A-53 and A-54 of Appendix A: Job Aids.

PLANNING INFORMATION

Obtain background information to assist with medical care planning that may be available from:

- Reports from previous similar events (medical and other specialist literature).
- Lay literature (press).
- Medical literature that has information on the risks and types of injury that were sustained at similar events in the past.

Consider the effects of weather conditions on the spectators, such as hypothermia and heat stroke.

Consult medical literature for information on the numbers of casualties from similar events in the past. See the table below for anticipated percentages of patients against triage categories. Consider variables that affect numbers (for example, alcohol consumption, psychosocial behavior, and type of event).

PLANNING INFORMATION (CONTINUED)

Expected percentages of patients in triage categories

Categories ¹	Description	Vital Signs	Mental State	Percentage²
1	Critical	Unstable	Abnormal	0.02
2	Serious	Potentially Unstable	Potentially Abnormal	1.1
3	Moderate	Usually Stable	Normal	12
4	Minor	Stable	Normal	87

Notes: ¹ Categories modified from disaster triage guidelines.

² Percentages aggregated from events listed in the references.

CASUALTIES

Experience from other events has shown that most casualties are from:

- Heat stroke, dehydration.
- Cuts from broken glass and drink can ring pulls.
- Injuries from missiles, usually bottles and cans.
- Fainting and exhaustion from a combination of hysteria, heat and alcohol. At concerts, this often occurs at or near the stage barrier.
- Trampling or crushing from crowd pressure.
- Crowd "surfing" and stage diving.
- Illicit drug and alcohol abuse.
- Respiratory problems (asthma and emphysema).
- Epilepsy attacks brought about from strobe lighting.
- Age-related illness.

MEDICAL ACCESS TO VENUE

Consider the risks associated with venue (for example, water in the vicinity).

Agreements must be reached among medical service providers on the following:

- Medical teams must be able to locate individuals in need of attention easily. You should agree on the use of a common reference map or grid system.
- How will medical teams reach or rescue individuals in distress (for example, in crowded areas or through fixed seating)?
- How will patients be transported onsite?
- Will you provide a dedicated access route, or emergency service lane, to allow rapid access to and from the venue for ambulances and other emergency vehicles?
- Will the event itself pose a barrier to medical teams (for example, community runs or a parade)?
- Will you need aero-medical services/landing zones, and if so, what are the associated regulations regarding their operation?

MEDICAL REQUIREMENTS

- Prepare for the most critical injury or illness foreseeable, such as cardiac arrest.
- Is there a need for a mobile team? This team may require pre-packed medical kits.
- Determine who will provide care for the audience, any VIPs, and performers.
- Define boundaries of care (for example, inside the venue and in the parking areas).

LEVEL OF CARE

Levels of care can be categorized as follows:

- Basic—first aid.
- Intermediate—first aid plus IV therapy and oxygen.
- Advanced—Care and life support and early management of severe trauma.
- Site Hospital—full monitoring, ventilation, and resuscitation capability.

Other level-of-care concerns include:

- Consulting medical personnel with experience in similar events to determine the appropriate levels of care to provide.
- Considering the distance to, and accessibility of, the nearest hospital and its capability.
- Pre-establishing the coordination between venue medical services and those of the local community emergency medical service responders (that is, establish how they will provide mutual aid if required).
- Preparing to treat patients after a release of a chemical, biological, radiological or other CBRNE material.

Further guidance on the establishment of medical care facilities and their equipment requirements is available in the references and from local or regional disaster and health plans.

MEDICAL TEAMS

When deploying medical teams, consider the following:

- What will be the size of the event?
- What is the location of the venue with regard to medical infrastructure?
- What is the extent of available medical resources?
- How do local and State ordinances and regulations apply, including those that may address minimum staffing levels? Average numbers of expected patients generally range from .3 percent to 1.3 percent of the total number of patrons in attendance².
- Who can see, treat, and discharge patients?
- Will there be peak periods or special circumstances requiring additional staff?
- How will medical staff be fed, watered, rested, and protected from the elements?
- Are work safety regulations established that cover occupational health and safety (for example, protection from violence and crowd crushes)?
- Have medical teams been provided with maps of the venue?
- What arrangements are in place for movement of medical teams onto and off the site?
- Are medical team members appropriately dressed for the conditions?
- Is the dress of medical team members easily identifiable?
- Are interpreters required?
- Do medical teams understand the command structure and their role within it, and the emergency activation system?
- Have medical personnel been trained and equipped with PPE for use in response to a CBRNE incident.

MOBILE TEAMS

In tightly packed areas, particularly near the stage, first aid personnel on foot, bicycles, or golf carts may have the only access. Experience has shown that uniformed first aid personnel on foot circulating in dense spectator areas are quite effective, and patrons will readily summon them in an emergency, even if the person requiring care is a stranger to them. Even if a clearly marked field hospital is visible, spectators are often unwilling to make the sometimes long trek to request assistance (because they may lose their seating position), particularly for a fellow spectator whom they may not know or if they fail to appreciate the seriousness of the patient's condition.

Identification of mobile teams, where ambulance or clinical uniforms are unsuitable, can be successfully accomplished by special event uniforms. Mobile teams need to have communications equipment to keep EMS supervisors and the Incident Command Post informed at all times.

(NOTE: The Red Cross symbol is registered by the International Red Cross and its National Societies. It should not be used as part of an event uniform.)

² Leonard, Ralph B., PhD, MD, FACEP & Moreland, Kimberly M., MD, "EMS for the Masses, Preplanning Your EMS Response To a Major Event," EMS, January 2001.

MEDICAL AID POSTS

Important considerations in the establishment of medical aid posts require that they should:

- Provide easy ambulance access and egress.
- Be located within 5 minutes of all sections of the crowd.
- Have available a mode of transport to them.
- Be clearly marked.
- Have adequate signage for direction to the aid post.
- Be clearly identified.
- Be clearly marked on maps of the venue layout.
- Be in a position known by security and other event personnel.
- Be stocked and staffed for the duration of the event and for spectator arrival and departure periods.
- Provide facilities for injured or sick patients to lie down.
- Ensure privacy in clinical areas.
- Provide some means of communication with the primary medical control point, venue control, and with mobile medical teams in the venue.
- Be located in as quiet a place as possible.
- Ensure that post security staff considerations are addressed.
- Include dedicated disposal containers for ablutions, hazardous wastes, and sharps.

GUIDE TO THE PROVISION OF MEDICAL AID

The number of medical aid personnel and posts will vary with the type of event. As a guide, use the following formulation:

Patrons	Medical Aid Personnel	Medical Aid Posts
500	2	1
1,000	4	1
2,000	6	1
5,000	8	2
10,000	12	2
20,000	22+	4

The number of medical aid posts required would depend on what medical aid room facilities are available. Every venue should have at least one climate-controlled facility with electrical service and running potable water.

Medical aid providers are generally not required for events that are smaller than 500 patrons and are held in close proximity to central ambulance/hospital services.

SITE HOSPITAL

Depending on the nature of the event, a site or field hospital may be needed to provide resuscitation or care for the number of casualties anticipated. You should also make contingency plans in case of a major incident, for which the resources of the field hospital may not be sufficient. Failure to plan for large numbers of casualties or severely injured patrons can result in long delays in providing medical treatment. It is important to provide a communication link between the site hospital and local hospitals.

Site hospitals will require:

- Clean water.
- Electricity for medical appliances and adequate lighting in tent hospitals at night. (This installation should, if possible, include a backup power system.)
- Washroom/rest facilities for the exclusive use of staff and patients.
- Provisions for patient modesty/privacy issues.
- Meals for medical staff.
- Tents for hospital use that have flooring as part of the structure to contain the service and to prevent ingress of water or insects.
- A landline telephone service for ordering additional staff or supplies and for notifying hospitals of patient transfers. (Note that cellular telephones should be used as backup devices only).
- Reserved access roads for emergency vehicle use.
- Dedicated disposal containers for ablutions, hazardous wastes, and sharps.

DOCUMENTATION

Documentation should facilitate:

- Post-event review of medical assistance activities.
- Tracking of biological, chemical, and infectious disease exposures, if they occur.

Medical and legal issues, which must be addressed prior to the preparation of any documents, are as follows:

- Who has access to records?
- Who keeps the data and for how long?
- Who can give consent for treatment?
- Health Insurance Portability and Accountability Act (HIPAA) considerations (i.e., privacy).

AMBULANCE VEHICLES

Organizers should consult ambulance services to determine ambulance requirements for the event. Some considerations include:

- Will ambulances be pre-positioned onsite or be called to the venue on an as-required basis?
- Has the security of the vehicles when parked been addressed?
- Are there provisions for a mix of Advanced and Basic Life Saving ambulances at the event?
- If ambulances are onsite specifically for athletes, race car drivers, etc., are these ambulances exclusively for taking care of their needs or emergencies, or will they be available for injured spectators as well?
- Is there a need for dedicated ambulances/medical staff for the event staff itself?
- Are aero-medical services/landing zones available? Who will pay for the service? Can the promoter be required to provide the service?

While conventional ambulances are appropriate for patient transfers to offsite medical facilities over good roads, such vehicles may be unsuitable for off-road use. Ad hoc roadways and cross-country terrain may require four-wheel-drive vehicles, particularly if grounds are saturated by recent rainfall. Because four-wheel-drive ambulances are not available in most areas, other four-wheel-drive vehicles, equipped with appropriate medical equipment (including, but not limited to, resuscitation equipment, trauma kit, and spinal board) can serve as ambulances over the short distances between spectator areas and medical care facilities.

In denser spectator areas, any vehicle can have access problems. You should consider using golf carts, either designed or modified to accommodate a litter or stretcher.

For these reasons the ambulance network may have to consist of a mix of first aid personnel on foot, golf-carts, four-wheel-drive vehicles, ambulance buses, and conventional ambulances, to facilitate patient transport requirements. You should provide a magnetic-based beacon, portable radio, and appropriate marking for these vehicles.

A communications network, designed to provide a coordinated response to requests for assistance, is essential. You may base the network on existing service networks, or event organizers may need to provide the network.

MEDICAL EQUIPMENT

The requirement for basic or advanced life support equipment depends on the type of event and the assessed risk of illness or injury. While standard lists of equipment will cover most requirements, you should review literature, previous experiences, and current practices.

Further equipment considerations include:

- Mobile versus fixed requirements.
- Arrangements to re-supply aid posts as required.
- Compatibility of onsite equipment with equipment used by ambulance and other health care providers (e.g., IV tubing/administration sets).
- Ambulance providers may want to consider carrying extra supplies beyond their normal supply.
- Provisions for the rapid movement of reserve supplies in a mass casualty incident should also be considered.

OTHER MEDICAL CONSIDERATIONS

Further considerations include:

- Providing considerations for interviewing and treating of sexual assault victims and the collection of evidence.
 - Ensuring sufficient water supplies.
 - Providing sprinkler systems or misting tents for crowds in hot, open areas, if they are suitable for the event.
 - Providing welfare and information services (the helping and caring role).
 - Assisting with forgotten medications.
 - Providing a baby diaper-changing and caring facility.
 - Containing and disposing of clinical waste.
 - Determining how, and by whom, medical supplies will be obtained, including secure onsite storage of drugs.
 - Planning for the deployment or availability of chemical antidote supplies (i.e., Mark 1 Kits, atropine, pediatric auto injectors) for a CBRNE event.
-

ENVIRONMENTAL CONCERNS

WEATHER

Weather is a variable that takes on a different significance depending on the event and its location. For a major indoor event in a southern United States city, weather is seldom a major concern, unless a natural disaster, such as a hurricane, is anticipated. If you were to move that same event to a northern United States climate in February, you would be faced with additional concerns, sometimes even for a predicted "normal" winter storm. Slow-moving traffic patterns, snow removal in parking areas, and safe movement of spectators from parking areas to the venue are a few concerns. Extreme high and low temperatures must be part of the contingency planning for an event. These extremes present hazards and risks that are not normally present but must be considered in the event that they do occur.

For outdoor events, many additional concerns may become apparent regardless of location. Lightning strikes, severe thunderstorms and hail, high winds, and other undesirable weather pose threats to event patrons. The influx of patrons may have a severe negative impact on the jurisdiction's mass evacuation and sheltering plan for local residents. Contingency plans drawn up for the jurisdiction may not provide for a transient population (as in the case of some rock concerts with numbers of patrons in the hundreds of thousands) that will negatively impact that community's ability to protect residents and visitors.

During the planning phase, event organizers must adequately consider all potential weather conditions. For example, if event infrastructure (i.e., stages, speaker towers, etc.) are to be erected at the event, special consideration should be given to their composition (i.e., steel versus wood, etc.), height, location, and protection of their surrounding areas. Electrical professionals can be consulted regarding the impact of a lightning strike scenario to this type of infrastructure by a swift-moving thunderstorm. Worst-case scenarios can then be developed to consider the effect of infrastructure energized by a lightning strike. Not only could anyone on the stage or scaffolding be prone to electrocution, but many spectators on the ground around the infrastructure could be in danger, depending on the location of the strike with the scaffolding, any grounding mechanisms in place, and the severity of the storm.

Some planning considerations involving weather awareness are:

- Monitoring the weather using a computer, radio, NOAA weather radio, or television.
- Establishing a dedicated phone line that is linked with the closest office of the National Weather Service.
- Ensuring that ICS team consults with the Weather Service on a regular basis and that consultation information is included in each Operational Period's Incident Action Plan.
- Distributing weather information to the participants.
- Contracting or partnering with a private-sector meteorological prediction service.
- Establishing agreements with the promoter to interrupt a performance and use the festival sound equipment as a public-address system to give information to patrons on protective actions to take if severe weather becomes imminent.
- Coordinating with the Red Cross and concert organizers to designate specific buildings as evacuation shelters if the visiting public requires sheltering.
- Leasing and installing a lightning detection system similar to those used at major golfing events to forewarn of impending storms.

WEATHER (CONTINUED)

Developing severe-weather contingency plans to ensure the safety of event attendees can require a significant amount of time, equipment, planning, and Multiagency participation.

SITE HAZARDS

In selecting a site, especially for an outdoor event, the planning team should identify the potential hazards in the area, which include:

- Power lines that could be brought down by a severe storm.
- Structures and equipment that could be prone to lightning strikes.
- Waterways that may be prone to flooding.
- Brushfires.
- High winds.
- Areas of high ground that require management (i.e., security from snipers, etc.).
- Extremes of temperature.
- Pests and large animals, including:
 - Rodents
 - Insects—ants, caterpillars, wasps, bees, mosquitoes, flies
 - Snakes
 - Spiders
- Pollens and poisonous plants, including noxious weeds.
- Marshes or swamps.
- Quarries, pits.
- Scrap piles.
- Cliffs and steep inclines.
- Watercourses, including their depth of water, water currents, water temperature, water clarity.
- Pollution—dust, noise (including the potential need for hearing protection).
- Water quality (bacteriological), blue-green algae.
- Darkness.
- Hazardous chemicals or underground tanks.
- Use of lasers.
- Alcohol, drugs, weapons, or potential weapons (for example, broken glass).
- Ultraviolet (UV) radiation.
- Neighboring land use.

ENVIRONMENTAL IMPACT CONCERNS/MAINTAINING COMPLIANCE

To ensure compliance with public health requirements, carry out a public health audit just prior to the commencement of the event. Also undertake subsequent periodic surveillance during the event. These procedures are particularly important for outdoor events in hot weather with transient food vendors who may not have sufficient sanitary or refrigeration mechanisms available to meet established public health or safety protocols.

Environmental health officers should have access to resources to assist in early intervention and problem correction and resolution when any problem is noted (for example, toilet servicing, unsafe areas, fencing repairs, water testing) rather than using their authority to stop the event or particular operation.

AIRCRAFT

If helicopter flights will be available for spectators or members of the media to view the event from the air, the following concerns should be addressed:

- Will flights be prohibited directly over the event and spectators and confined, instead, to circular paths around the perimeter?
 - Will helispots be confined to the periphery of the event, to avoid flights directly above spectators during take-offs and landings?
 - Do the proposed helispots comply with Federal regulations governing such use?
 - Which public safety agency working the event will be designated as responsible for interacting with the Federal Aviation Administration (FAA) if required?
-

CAMPING

If camping is permitted at the event, you should consider the following:

- Providing for the safety of the campers and their belongings.
- Disposing of solid and liquid waste.
- Clearly marking temporary streets.
- Clearly defining avenues of access for ambulances, law enforcement personnel, and other emergency vehicles.
- Controlling the building of fires.
- Removing fire hazards ahead of time.
- Installing a public address system to communicate emergencies to campers.

Survey proposed camping areas to ascertain their safety, paying particular attention to:

- Low-lying areas subject to flooding.
 - Areas adjacent to creeks or rivers.
 - Areas near utility lines.
 - Trees that may drop branches, especially during a severe storm.
-

HAZARDOUS MATERIALS (HAZMAT)

The nature of some events causes concerns about hazardous materials (e.g., propane gas cylinders used for cooking, pyrotechnic lighting areas, oxygen tanks used by EMS, etc.) and the ability of local officials to handle HazMat incidents. In most communities, the fire department is the agency that responds to calls. The best way to plan for the handling of hazardous materials is to inform the fire department ahead of time about potential hazards and their locations. Providing fire officials with an event footprint grid map with a description of the possible hazards reduces the response time and allows the responding agency to be prepared. If the local fire company is not adequately trained or equipped to handle the hazardous material, planners must identify in advance the closest department that is equipped and consider staging them nearby during the event.

CYLINDER ANCHORAGE

At many public events, portable pressurized gas cylinders are used to inflate children's balloons, to carbonate beverages, or to provide cooking fuel. Frequently, such cylinders are not secured, or are merely fastened to two-wheeled hand trolleys designed to transport them, which are themselves not independently secured.

If such cylinders topple and the cylinder neck or valve cracks, the uncontrolled release of the stored pressurized gas can turn the cylinder into a deadly projectile. For this reason, all portable gas cylinders must be secured.

Used incorrectly, propane can be deadly. Propane is a flammable material that is heavier than air that is used for cooking at many large events. Tanks must be properly secured. Qualified inspectors, usually from the fire service, should also make periodic inspections of the tanks to ensure that the location is a safe distance away from heat sources or other possible sources of danger.

CHEMICAL, BIOLOGICAL, RADIOLOGICAL, NUCLEAR, EXPLOSIVE (CBRNE)

The CBRNE threat of weapons of mass destruction (WMD) is currently a much-discussed topic in this country. The Federal Government is prepared to assist communities in the event of a terrorist attack. The local community's first responders will be the first line of defense, but if the attack is beyond their capability, they may seek assistance from the State or Federal Government.

The Department of Defense has created WMD Civil Support Teams (CST) to assist the FBI and local communities facing a terrorist attack. These teams are made up of National Guard members who assist in the detection and identification of WMDs. Because these teams are composed of National Guard personnel, State Governors also may deploy these teams to assist communities.

A HazMat/CBRNE Data Collection Report is included on pages A-82 through A-84 of Appendix A: Job Aids.

A Weapon of Mass Destruction (WMD) is defined as:

- Any weapon that is designed or intended to cause death or serious bodily injury through the release, dissemination, or impact of toxic or poisonous chemicals, or their precursors.
- Any weapons involving a disease organism.
- Any weapon that is designed to release radiation or radioactivity at a level dangerous to human life.

Other terms associated with WMDs are:

SECONDARY DEVICE

A secondary device is usually explosive and designed to injure first responders when they arrive at an incident. Following the arrival of the first responders, a second device explodes in the responder area. A secondary device was recently used at an abortion clinic explosion.

ANTI-PERSONNEL DEVICES

Anti-personnel devices are used to injure people and may or may not be considered secondary devices that target responders.

SPECIFIC THREAT

A specific threat explains what will occur, for example, "A bomb will go off in one hour in the parking garage."

NON-SPECIFIC THREAT

A non-specific threat does not explain what may occur, for example, "Everyone in the building is going to die."

CAPABILITY

Capability refers to credible information that a specific group possesses the requisite training, skills, financial means, and access to the resources that are necessary to develop, produce, or acquire a particular type of WMD in a quantity or potency sufficient to produce mass casualties, combined with information substantiating the group's ability to safely store, test, and deliver the weapon.

CHEMICAL

Chemicals may be used as weapons or to deliver an attack. Originally, the military designed chemical weapons to use in wartime. The results of chemicals used as weapons were so devastating in warfare that many countries rejected their future use and created treaties to forbid their future use and manufacture. In 1995, terrorists attacked a Tokyo subway. Twelve persons died, 4,500 were injured, and more than 700 required extended hospital stays. The ease of access to chemical agents and the amount of damage they cause make chemical warfare very appealing to radical groups. Directions for the creation and use of chemical weapons can be found on the Internet.

Chemical agents include nerve agents, blood agents, choking agents, and blister agents. These agents create a credible threat for use by terrorists, and there is a high probability that chemical agents are likely to be encountered by this country in the future.

Responders must be prepared to manage a terrorist attack involving a chemical agent. To prepare, they should become knowledgeable of the range of chemical agents used by terrorists in the recent past. Knowledge of chemicals and their effects assists in the first stages of treatment. Each community should establish chemical weapons attack response plans and review them regularly. There is Federal training available to train responders in chemical agent response.

BIOLOGICAL

Biological terrorism is not a new type of warfare. Biological agents are by far the most dangerous of the three types of weapons of mass destruction. Agents include bacteria, fungi, viruses, and toxins that induce disease or death in any living thing.

The difficulty in countering biological terrorism begins with identifying it. Another serious concern arising from the use of all biological agents is the time that can elapse before their use by terrorists is discovered. Biological attacks can be slow acting, with the symptoms not appearing until as many as 21 days after exposure. The further contamination of additional population by those initially exposed multiplies exponentially as the time from the initial exposure increases. The best defense against the spread of the biological element is accurate documentation and tracking of this kind of WMD by medical personnel to contain the exposure.

With many countries facing economic difficulties at the end of the Cold War, experts fear that they may have sold their biological weapons to the highest bidder. However, the lack of an effective delivery system to deploy a biological agent currently limits the ability for widespread impact upon the population.

RADIOLOGICAL

Radiological agents are materials that emit ionizing radiation that could be dispersed into the environment using devices such as an explosive or other dispersal device.

A radiation threat, commonly referred to as a "dirty bomb" or "radiological dispersion device (RDD)", is the use of common explosives to spread radioactive materials over a targeted area. It is not a nuclear blast. The force of the explosion and radioactive contamination will be more localized. While the blast will be immediately obvious, the presence of radiation will not be clearly defined until trained personnel with specialized radiation detection equipment are on the scene. Having onsite radiological detection capability could reduce the negative impact of radiation exposure to event attendees.

NUCLEAR

Nuclear terrorism involves the detonation or threatened detonation of a nuclear bomb or the compromise of an existing nuclear facility, and refers to the use of nuclear materials as weapons.

Although the use of a crude nuclear weapon makes the threat of nuclear terrorism possible, FBI intelligence suggests that it would be difficult for a group to construct such a weapon without weapons-grade uranium or plutonium.

EXPLOSIVES

Explosives are defined as materials that are capable of violent decomposition. This decomposition often takes the form of extremely rapid oxidation (burning). Explosions are the result of a sudden and violent release of gas during the decomposition of explosive substances. High temperature, strong shock, and a loud noise follow this release. Explosives are classified according to the speed of their decomposition.

Because they are readily available, explosives are the most common weapons of mass destruction. When you plan an event, find out:

- Who is the local responder for possible explosives or suspicious packages?
- Does your community have a bomb squad?
- Do you have dogs that are trained to identify explosives?
- What is the community policy on explosive devices?

Explosives seem to be the weapon of choice for terrorists. Less than 5 percent of actual or attempted bombings are preceded by a threat. The lack of prior notification makes casualties more likely than if a notice is given. The explosives can deliver various levels of destruction and can provide a vehicle for the dispersal of chemical, biological, incendiary, and nuclear agents.

The job aids, Bomb Threat Checklist and Bomb Threat Standoff, are included on pages A-85 and A-86, respectively, of Appendix A: Job Aids.

Explosives produce four effects when detonated:

- Blast pressure
- Fragmentation
- Thermal effect
- Ground shock

INCENDIARY DEVICES

As a subset of explosives, incendiary devices have been used by terrorists for many years, because they are flexible tools capable of causing property damage, loss of life, and panic. Incendiary devices continue to spread until fuel is gone or the device is extinguished.

Incendiary devices can be classified as:

- Chemical reaction (including burning fuse)
- Electronic ignition
- Mechanical ignition

The type and construction is limited only to the creativity of the builder.

Incendiary devices may be stationary (placed), hand-thrown (Molotov cocktail), or self-propelled, such as rockets or rifle grenades.

INCENDIARY DEVICES (CONTINUED)

The components of an incendiary device are the ignition source, combustible filler material, and housing or container.

DETECTION

To detect an incendiary device, combustible gas meters, flame ionization detectors, trained dogs, photoionization detectors, and colorimetric tubes may be used.

The clues are similar to detection clues for arson. The clues should be a signal for the responder to take appropriate actions to safeguard him- or herself and the public and treat the area as a potential crime scene. The signs include:

- Prior warning (phone calls)
- Multiple fire locations
- Signs of accelerants
- Containers from flammable liquids
- Splatter patterns indicating a thrown device
- Fusing residue
- Signs of forced entry to the area
- Common appliances out of place for the environment

Incendiary devices may be made with:

- Roadway flares
- Gasoline and motor oil
- Light bulbs
- Common electrical components and devices
- Matches and other household chemicals
- Fireworks
- Propane and butane cylinders
- Plastic pipes, bottles, and cans

MITIGATING ACTIONS

Unattended Packages

At every event, people will leave some items unattended. Public safety officials must decide beforehand how to handle these items. Who will respond? Does the community have dogs trained to identify explosives? Will the area be evacuated? Decide these issues ahead of time and have a written plan for all public safety personnel to follow.

Concealment Areas

Concealment areas are areas where persons may hide or conceal packages or other weapons. The best way to avoid problems in these areas is to map the event grounds and identify the areas that could be used as hiding places. The venue staff could assist police in this matter.

Security Sweeps

How often is security going to go through the event site? What are they looking for? How do they handle incidents? Who is going to do the sweep? Venue personnel and security personnel should work together. These are a few areas to address in advance. After a sweep of the area has been completed, the area must be secured.

SUICIDE BOMBERS

Another terrorist tactic currently used frequently in foreign countries involves suicide bombers who carry the explosives concealed on their persons, and detonate them in crowded areas such as restaurants, nightclubs, public transit buses, or areas of mass gatherings.

Because suicide bombers are unconcerned with capture, they are difficult to plan for and to respond to. Emergency response planning should carefully consider how to deal with this type of threat at a special event. Additionally, planners cannot discount the potential for terrorists to employ multiple suicide bombers in which the first attack is designed to cause casualties and draw emergency responders to the scene specifically to expose them to a second suicide bomber attack.

RESPONSE PROCEDURES

Local WMD/CBRNE response protocols should be in place in public safety emergency response agencies at this time. As part of the planning process, these procedures should be reviewed, and created or modified as necessary. If a WMD/CBRNE incident occurs during the special event, local response agency protocols should be followed.

ELECTRICAL UTILITY COORDINATION REQUIREMENTS

Participants, spectators, and event staff are all affected by lighting, which is needed to set up, tear down, and ensure the safety of the event. Make certain that lighting is adequate and that the power supply to provide the lighting for the event, campgrounds, and parking areas is adequate.

Even in venues that are darkened for performances, lighting should always be in use to identify exits as well as the corridors and aisles leading to them. All temporary electrical facilities should be inspected and approved by a local government inspector to ensure the safety of all.

Install auxiliary battery power or generators to provide light and to power the public-address system during power outage. You must be able to give information and directions to spectators during a power failure to alleviate panic.

Because many concerts are performed with only stage lighting, event staff access to the main lighting board or house lights console is essential in case of an emergency. Onsite personnel responsible for dealing with emergencies must know the location of the controls for these lights and how to operate them.

A Utilities Department Venue Assessment Checklist is included on pages A-40 and A-41 of Appendix A: Job Aids.

FIRE SAFETY

All States and territories have legislation governing fire safety. The local fire authority should monitor fire prevention and preparedness plans to ensure that the measures taken meet relevant standards and comply with State/local life safety codes. Fire safety officials should conduct an onsite inspection in advance of the event, and ensure that any deficiencies noted are corrected prior to the event.

Organizers and health personnel should consider potential fire hazards in the planning process and discuss with the fire authority any concerns they may have. Concerns should include designating smoking areas and providing proper cigarette disposal receptacles.

Fire and law enforcement agencies should determine in advance how they will handle a civil disturbance or riot involving fire-setting behavior and have contingency plans in place. For example, a team of police officers may be assigned to accompany each engine sent out to quell a fire set by rioters.

Site design should be such as to mitigate fire hazards. For example, clear storage areas, timeliness in picking up trash, construction of metal rather than wood, no open flames, and control of pyrotechnics, assist in fire mitigation.

FIRE SAFETY (CONTINUED)

When the event includes fireworks, fire service personnel should conduct a diligent search for any unexploded fireworks. Before you allow public access to the area, safely collect and remove any unexploded fireworks.

A Fire Services Venue Assessment Checklist is included on pages A-49 and A-50 of Appendix A: Job Aids.

COMMUNICATIONS SYSTEMS

A means of communicating with the crowd is essential at all events. Ideally, you should establish multiple communications systems to enable messages to be directed at different sections of the crowd, including crowds massed outside the venue. The Incident Command Post should have access to the central communications system, and interoperability and communications with the jurisdiction's Emergency Operations Center (EOC) if it is activated during the event.

Before the event begins, establish appropriate arrangements for communications if an emergency arises. If emergency personnel will use a separate sound system, they need some means of muting or silencing the stage sound system. Also, consider the use of signboards throughout the venue as an enhancement to the public-address system.

Because public announcements are an important element of the safety plan for an event, consider the style and content of announcements, as follows:

- At what volume level can announcements be heard over spectator noise?
- Will the audience easily understand announcements?
- Are multiple-language announcements required?
- What wording will lend credibility to the instructions?

If public-address systems cannot be put in place outside the venue, personnel can use the public-address systems that form part of the electronic siren system in most emergency vehicles.

Closed-circuit television is another option available for organizers to provide visual information to the public.

INTEROPERABLE COMMUNICATIONS

While it goes without saying that the various emergency services (police, health, fire) must be able to communicate with their own staffs, experience has shown that different services must be able to:

- Communicate with each other.
- Communicate between staff outside and inside the venue to obtain a proper understanding of the nature or scope of an emergency.
- Communicate with senior event organizers, including security personnel, who may be the first to identify an incipient problem.

INTEROPERABLE COMMUNICATIONS (CONTINUED)

Consider the following suggestions:

- Do not rely on cellular telephones.
- Ensure there is an integrated, Multiagency frequency for communications.
- Consider laying land lines for telephone service.
- Include the use of amateur radio operators for communications.

A central communications area (for example, a room or a trailer dedicated to this use) at the Incident Command Post with a representative from each major agency may facilitate the dissemination of vital information through the centralized monitoring of relevant radio communications.

Because a single system can fail, the communications system should be multi-modal. It should also be supplied with its own backup power source.

ATTENDEES' PERSONAL EMERGENCIES

Some means should be established to contact spectators and for spectators to call outside the venue if necessary. Some events provide small booths staffed with volunteers to assist in message passing. Other events use the public address system. Still others provide event brochures with emergency information inside. Select the most effective way to send messages at your event. If invited to, many phone companies often will provide a temporary bank of pay or credit card phones at the venue.

EVENT PUBLIC ADDRESS SYSTEM

Do not rely on the sound system used by the performers to serve internal requirements and release information to the public. Sometimes those responsible for performers' sound systems have refused to authorize their use except during a change of performers. So, an alternate venue-wide PA system is necessary to prevent delays in relaying messages. Informing the public of information reduces the pressures on event staff. Reducing uncertainty among spectators defuses tension. A public-address system is important at any event.

EVENT EMERGENCY WARNING SYSTEM

Some means to inform everyone of an emergency or dangerous weather condition should be in place for every event, no matter the size. This emergency warning system must be able to operate without benefit of the main power source and must be operational at all times. Ensure that the system can be heard clearly in all areas of the event. One person should be in charge of emergency communications. The Incident Commander should authorize the release of emergency messages. All involved agencies should be advised, in advance if possible, of the anticipated release of an emergency message and allowed to inform their personnel to prepare for the public's response. Part of the planning process should be drafting sample pre-scripted messages for use in an emergency. While drafting these messages, consider using a code word or phrase to identify authentic emergency messages and to ensure that emergency personnel respond only to true emergencies.

RUMOR CONTROL

Rumor Control is another area that is difficult to plan for but one that you must address. Most communities have plans for rumor control during emergencies. You can respond in a similar manner to rumors during an incident at an event. As discussed in Chapter 3, the lead agency should designate a Public Information Officer (PIO). Upon designation, the lead agency must determine in advance both what is going to be said and who is authorized to release information. For accuracy and to promote efficiency in rumor control, designate one source of authority.

Internal rumor control is also needed. Personnel working the event need to be kept informed through an official chain of communication, especially if an unanticipated incident occurs. Information is best disseminated through daily shift briefings that include the sharing of operational objectives for the Operational Period.

OCCUPATIONAL HEALTH AND SAFETY

Because the promoter and authorities are obligated to provide for the safety of the audience, as well as appropriate care, safety, and training of all personnel working at the event, they should be familiar with State and local occupational health and safety legislation.

Many events rely on staff volunteers. While most public safety agencies are not permitted to use volunteers because the agencies may be liable for them, the promoter will probably use volunteers extensively and is liable for their safety. Emergency Medical Services (EMS) may use volunteers, provided that they are adequately trained and certified. If the public-sector agencies use volunteers, they must protect the volunteers as they would protect the occupational health and safety of any other employee.

At events where noise levels are high, such as rock concerts, air shows, and motor racing events, adequate hearing protection must be provided to employees who will be exposed to high noise levels for prolonged periods.

Noise pollution from events probably causes the majority of complaints to authorities from the surrounding community, and some means of monitoring and reducing noise levels should be implemented, if possible. The permitting agency should mandate that the promoter advise the community of what to expect well in advance of the event.

ALCOHOL, DRUGS, AND WEAPONS

Alcohol, drugs, and weapons are potential hazards that members of the crowd might bring to any event. They can be catalysts for, and can exacerbate, unruly behavior in a crowd. Every community has its own laws and regulations regarding alcohol, drugs, and weapons. The following suggestions are merely guidelines.

A number of strategies that have been implemented, with varying degrees of success, in reducing the problem include:

- Consider the prohibition of the sale and use of alcoholic beverages at events where unruly audiences are expected, or where a significant number of the patrons will be under the legal drinking age.
- If alcohol is to be sold, then low-alcohol-content beverages can be made available. Alcohol sale times can be controlled and beverages dispensed only in disposable cups.
- Establish an early "last call" for alcohol. For example, during major-league baseball games, alcohol is not sold after the seventh inning, and during professional basketball games, it is not sold after the third quarter.
- If alcohol, weapons, and fireworks are lawful within the State, advance tickets and display advertising should contain the message that they will not be permitted into the event. Tickets and advertising should also state that the purchase of tickets is deemed to constitute the patron's consent to be searched for prohibited material prior to admission.
- Searches of personal belongings (such as jackets, purses, or bags) and confiscation of any alcohol, drugs-and weapons further reduces the risk of unruly behavior.
- Signs in event parking areas and at admission gates should also display a warning to discourage patrons from bringing alcohol, drugs, or weapons into the event. There are, however, possible negative consequences to such signage. Some patrons may attempt to consume a quantity of alcohol intended for the entire event prior to entry, ultimately causing problems for the event medical staff. Alternatively, signage could also have the effect of causing spectators to leave alcohol in their cars, only to consume it in the parking lot at the end of the event prior to departure. The most desirable action is to discourage patrons from bringing prohibited materials to the event in the first place.

Three strategies that may be applied to handling all prohibited material include:

- Give the spectator the option of returning the material to his or her car, with a subsequent loss of place in line.
 - If you decide to confiscate prohibited goods, you must make arrangements for the storage and disposal of these materials.
 - Tag it with peel-and-stick numbered stickers for return to the patron following the event. If, for any reason, you deem confiscation inappropriate, you can apply such a solution to any weapons, or materials that are potential weapons.
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SECURITY

Event organizers must decide what type of security to provide and the scope of the security services' jurisdiction. Providing security services and the stewarding function are vital to public safety, particularly within the venue. There are essentially three types of security that you can provide at large public events. These are:

- Peer security
- Private uniformed security guards
- Uniformed police officers

PEER SECURITY

Experience has shown that, in general, you can promote security for events that attract youth audiences better and more simply through the use of "peer security"—security personnel of the approximate age of the spectators who can relate to and be accepted by the youthful patron. Peer security personnel usually wear brightly colored T-shirts plainly marked SECURITY. They provide a less confrontational security presence by avoiding the posture of rigid authority and the force that often accompanies it. As one concert organizer commented on his experience with peer security:

"They do not carry weapons and do not attempt to fill a police function. They serve as crowd monitors, people movers, and troubleshooters. Such personnel are not there to reform or catch the alcohol or drug user. . . . They concentrate on maintaining orderly crowd flow for the safety of the patrons."

"You should provide appropriate guidelines for peer security personnel and stipulate limits to their authority, such as: keeping the peace, helping people in distress, assisting the staff of doctors and nurses, clearing paths for ambulances, seeing that areas were cleared for helicopter take-offs and landings, and guarding the stage, and the performers."

PRIVATE UNIFORMED SECURITY GUARDS

Private uniformed security guards are probably better suited to events that attract more docile spectators, such as religious rallies, charitable dinners, and art shows, and they usually will be less costly than a police presence. At events attracting crowds of more youthful exuberance, or volatile sports spectators, private uniformed security guards are probably more appropriately utilized in non-confrontational roles, such as taking tickets and parking cars.

Care needs to be taken to ensure that private uniformed security personnel are recruited only from reputable sources with competent and suitably trained personnel. You should discuss any special requirements for the event with the security firm.

In certain circumstances, the use of private uniformed security guards can lead to problems. A uniform gives an authoritative appearance that is often not supported either by adequate training or authority in law. As a result, private uniformed security personnel provide neither the power of police nor the rapport achieved by peer security.

UNIFORMED POLICE OFFICERS

At many events, uniformed police officers perform functions such as traffic control, and leave internal event security to private personnel employed by the organizers.

A typical crowd composed mainly of families needs one police officer per 1,000 spectators. In a more active crowd (for example, at a sporting event where alcoholic beverages are sold), two police officers are commonly employed for every 1,000 spectators.

Certain spectator groups may not, however, be amenable to either peer or private uniformed security, such as crowds who historically have experienced violence as part of the event "culture." While various diffusing techniques are available and should be employed, often nothing less than a contingent of uniformed police will dissuade a spectator group that enters with the expectation and intent of violence. These groups are in marked contrast to rock concert audiences who enter in a peaceful frame of mind, but may be induced to rowdiness by alcohol, shortcomings in the event, or other catalysts.

The composition of security services will vary according to the event; one or a combination of the three types may better serve different events.

SECURITY ROLES AND RESPONSIBILITIES

Clearly establish the roles and responsibilities of security personnel prior to the event. Decisions and actions taken by security personnel may affect the way emergency services and health personnel respond to a crisis. In planning, and throughout all stages of the event, maintain a close working relationship among:

- Security personnel
- The promoter
- Health and medical services
- Other police and emergency services
- Other security services (for example, those who are responsible for the performers' personal safety)

Special security considerations include:

- Will the event organizers or promoters use police officers for onsite security, or will they hire private security officers?
- If you use private security officers, what will their role and functions be, and how will their services be integrated with those of the police? Are they permitted to work outside of the venue?
- What policies will security personnel enforce for minor offenses onsite to assure that established policy is enforced consistently during the event and throughout the venue?
- Will there be areas onsite for the collection and storage of significant sums of money, and what security will be established to protect these areas, as well as offsite transfer or banking? Are these areas positioned near road access to avoid the risks associated with carrying large sums of money on foot through spectator areas?
- How will security personnel move high-profile persons through crowded areas?

SECURITY ROLES AND RESPONSIBILITIES (CONTINUED)

- How will security personnel handle lost or stolen property?
- How will security personnel detect forged credentials?
- How will security personnel deal with lost children and missing persons?
- Ensure that equal patron assessment and treatment occurs at entrances and security checkpoints. All attendees must be treated as “equal risks” from a security standpoint.

You should clearly define the responsibilities and roles of security personnel before the event. These may include:

- Crowd management, including measures taken to prevent crushing.
- Control of access to stage or performance areas.
- Security control at entrances and exits.
- Area patrol to minimize the risk of fire.
- Control of vehicle traffic and marshaling.
- Searches for alcohol, drugs, and weapons.
- Security of large sums of money and confiscated goods.
- Assistance to emergency services, if necessary.

PRE-EVENT BRIEFING OF SECURITY PERSONNEL

To enable security personnel to perform their duties effectively, you must brief them appropriately prior to the event. This briefing should provide security personnel with:

- Details of the venue footprint and grid map, including entrances, exits, medical aid posts, and any potential hazards.
- Clear direction on the management of unacceptable behavior.
- Basic information about the event, such as the locations of medical aid posts and lost-person stations, information, parking, transportation matters, and other pertinent spectator information.
- Details of emergency and evacuation plans, such as procedures for raising alarms, protocols for requesting assistance, and evacuation procedures.
- Instructions for the operation, deactivation, and isolation of any onsite machinery and utility supply in case of emergency.
- Details of the incident communications plan and the equipment to be used.

The attitude of security personnel has a major influence on crowd compliance. Security personnel are charged with not only controlling a crowd, but also with making them feel welcome. Every individual staff member who comes into contact with the spectators plays a role in crowd control. The dress, demeanor, and actions of staff may set behavioral expectation levels, and you should consider this fact in planning and pre-event briefing of staff.

DEPLOYMENT

You should consider strategic deployment of security staff. All venues will have areas that are particularly suited to crowd monitoring and problem areas where particular attention is required. The type and size of the venue may control what method of transportation the security personnel use. Using bicycles or golf carts may be more practical than deploying in vehicles or on foot. Indoor events are usually patrolled on foot, while a large outdoor area may be patrolled using bicycles, golf carts, or automobiles. The amount of time during which the personnel must patrol also may be a factor. Deployment considerations include:

- Identification of strategic deployment points, such as entrances and exits, barriers, and general thoroughfares.
- Establishment of strategic observation points to monitor crowd movements and behavior (A central control room with video surveillance may be required.)
- Use of video pole cameras in densely populated areas.

DIGNITARIES AND CELEBRITY GUESTS

Events with invited dignitaries or in which dignitaries participate create an entirely new group of hazards and difficulties. A dignitary presence may change the level of jurisdiction and the type of security needed at the event. The planning team may not know in advance if a dignitary or celebrity is coming. Therefore, it is important to have contingency plans involving local agencies such as law enforcement, fire, and others to coordinate with the State and Federal agencies if a special guest arrives. Many dignitaries have their own security service that travels with them. Providing special seating for dignitaries may be necessary. Discuss the possible difficulties and hazards before allowing the promoter or sponsor to extend invitations to dignitaries.

A Law Enforcement Venue Assessment Checklist is included on pages A-51 and A-52 of Appendix A: Job Aids.

LOST-CHILD AND "MEET ME" LOCATIONS

Because of the size of an event and the number of spectators at the venue, children will inevitably be separated from their adult supervisors. Planners must designate a place for lost children to be reunited with their parents or guardians and have a checklist to allow information to be disseminated quickly and accurately. Issues regarding legal custody of minor children may be a consideration, and would probably be best dealt with by law enforcement agencies onsite.

Other useful areas include "meet me" locations. These are designated locations throughout the site, which are well marked and easily spotted. Patrons can plan to meet at these locations at a predetermined time, or they may use these locations if they become separated.

INFORMATION CENTER

A well-identified, well-publicized information center onsite, staffed with knowledgeable personnel, can reduce pressures on security, medical, and other event staff, by providing a full range of informational services to patrons. Reduction of uncertainty among spectators defuses the kind of tension that can lead to behavioural problems. To ease the burden on the public sector, the promoter should be required in the permit application process to provide this service.

PLAN FOR "MURPHY'S LAW"

As the title for this section suggests, organizers cannot plan for or anticipate every crisis. You can, however, take certain measures to ensure personnel safety. For example, if a stand collapses, the fire department routinely uses an established, practiced procedure to remove the injured and to cordon off the area. This procedure will not change simply because the stand collapses at a spontaneous event. Contingency plans, modeled on established procedures, need to be in place for demonstrations, protests, or picketing that may occur during a planned event. Train for the worst and respond to your training. Plan for the worst, and you can handle even the unexpected events in an orderly manner. Designate specific incident resources in advance to respond to spontaneous events as they may occur. During event planning, brainstorm a list of the potential spontaneous events that are most likely to occur.
