

### Dutch Guidelines to Assess Risks of Mass Gatherings and Public-Health and Safety Measures

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**Study/Objective:** Dutch guidelines to assess risks of mass gatherings and public-health and safety measures.

**Background:** As mass gatherings in the Netherlands are growing in number, scale and complexity, guidelines on risk assessment and public-health measures should be evaluated and adapted accordingly. Lessons learned from incidents, such as the Monster Truck crash (2015) and the Marches of Nijmegen (2016), illustrate the necessity for improvements. The inspectorates (IGZ, IVenJ 2016) still concludes a lack of attention for public health and safety measures. This strengthens the demand from the emergency medical services and municipal health organizations involved, for renewed guidelines for public health experts, event organizers and decision makers. The current threat of possible terroristic attacks enhances the urgency. The National Office of Public Health and Safety (GGD GHOR Netherland) and the Academic Network of Public Health and Emergency Management (ANAPHEM) started a project to improve the quality of the advice of the Director of Public Health (DPG) that concerns public health care and safety issues including major incident medical planning and coordination.

**Methods:** Lessons learned and documents such as the WHO guideline, have been used to improve the current approach.

- The current guideline (GHOR NL 2011) has been evaluated by field-experts.
- Insights of the World Congress on Disaster and Emergency Medicine (WCDEM) 2015 formed the basis for:
  - o A new administrative framework.
  - o A new guideline for recognition and assessment of risks and public health measures needed.
  - o Improvement skills, related to the advisory roles.
  - o Uniform definitions, registration process, resilience, operations and building, an (international) knowledge platform.
- In collaboration with ANAPHEM, several workshops have been organized to develop a shared understanding and support for the improved approach.

**Results:** A new guideline for risk assessment of mass gatherings and required public health and safety measures.

**Conclusion:** The new guideline includes the current knowledge that support an improved and solid basis for the advisory role of the DPG.

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### Factors Influencing Patron Egress from Nightclubs During Emergency Events

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**Study/Objective:** In an emergency situation, movement within a mass gathering is governed by a variety of influences. We will review the mechanics concerning the motion of bodies under the action of forces, that come about when an event of an unexpected nature occurs. This presentation will provide the basis for the actions of the individuals, small groups and the mass as a whole within the group. Also considered are the group dynamics that can hinder or facilitate the evacuation of a venue. The impact may be caused by either biomedical, psychosocial or environmental factors.

**Background:** Evacuation studies reveal that patrons are often unaware of the environment, and therefore exit strategies are made quickly but may be confounded by incomplete knowledge of evacuation routes, or by chemical intoxication. Additionally, staff may not have been trained in emergency procedures and safety overall. Among the characteristics that impact egress in an emergency are the ages of those attending the event, substance use/abuse, the density of the crowd and the infrastructure of the venue itself.

**Methods:** The methods include a comprehensive review of current and past literature.

**Results:** The nightclub scene has consistently shown to more likely be fatal in a fire than similar situations in other venues. The causes of this difference will be revealed to provide a basis for future changes in prevention, regulations and enforcement.

**Conclusion:** At the conclusion of this presentation the audience will understand the psychosocial elements that may impede or promote movement within crowds. This is a continuation of previous research, and will specifically be investigated in populations who attend night clubs.

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### Altered Mental Status at Music Festivals: A Case Study Examining Clinical Concepts and Controversies

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**Study/Objective:** To describe patients with altered mental status at an electronic dance music event.

**Background:** Music festivals are a subset of mass gatherings that have predictable medical needs for attendees. Altered