

Mass gathering events

Health considerations



 www.MassGatherings.com.au
 facebook.com/MassGathCollab
 twitter.com/MassGathCollab
 linkedin.com/company/MassGathCollab

Dr Jamie Ranse RN PhD
Associate Professor
Griffith University

 twitter.com/JamieRanse
 linkedin.com/in/JamieRanse

MASS GATHERING
COLLABORATION



MassGatherings.com.au







Definitions

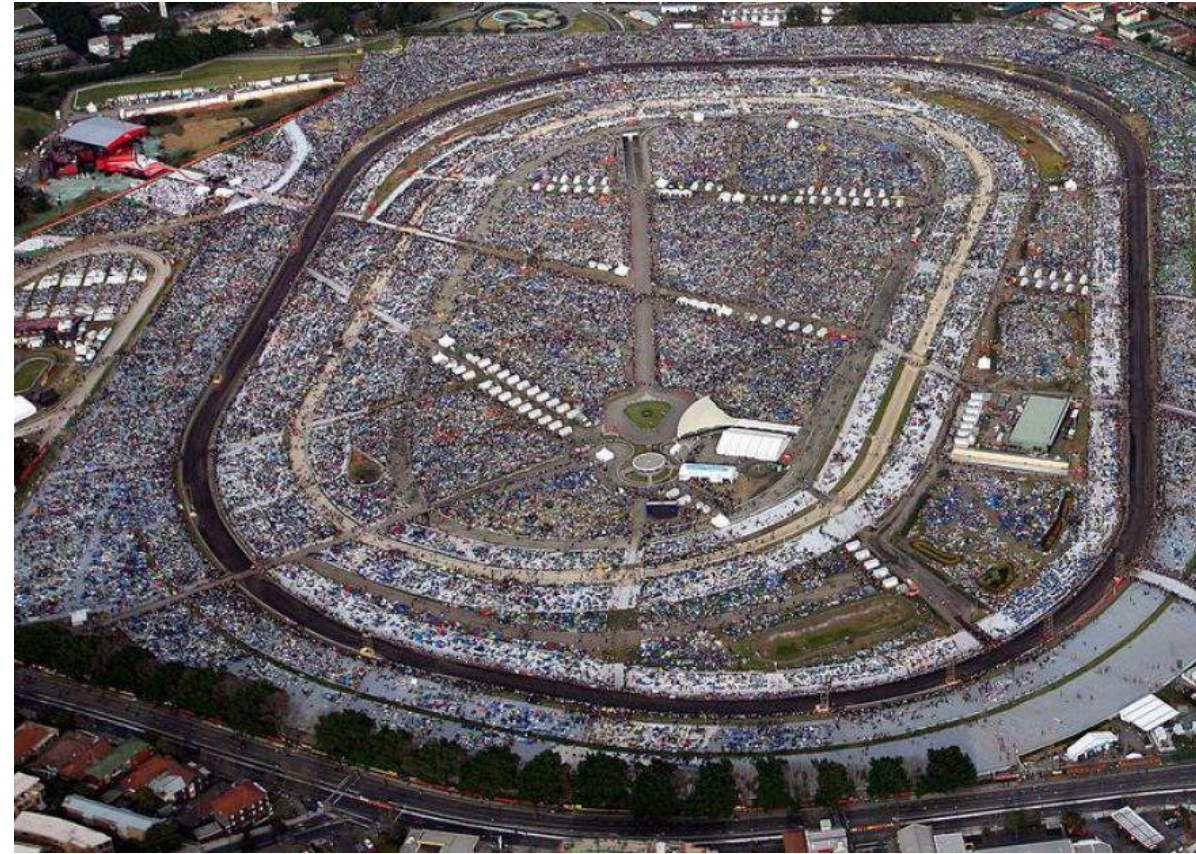
Class	Subclass	Persons	Resources	Example
Mass gathering	Small	200 – 1,500	Local area	Local fair
	Medium	1,500 – 10,000	Local area	Local sports game
	Large	10,000 – 100,000	Local +/- State	Concert
Major mass gathering		100,000 – 250,000	State +/- Interstate	Music festival Agricultural show
Super mass gathering		250,000 – 500,000	State and Interstate	Motor sports event
Extreme mass gathering		500,000 – 1,000,00	National +/- international	Religious festival
Mega mass gathering		1,000,000+	National and International	Olympics

Definitions

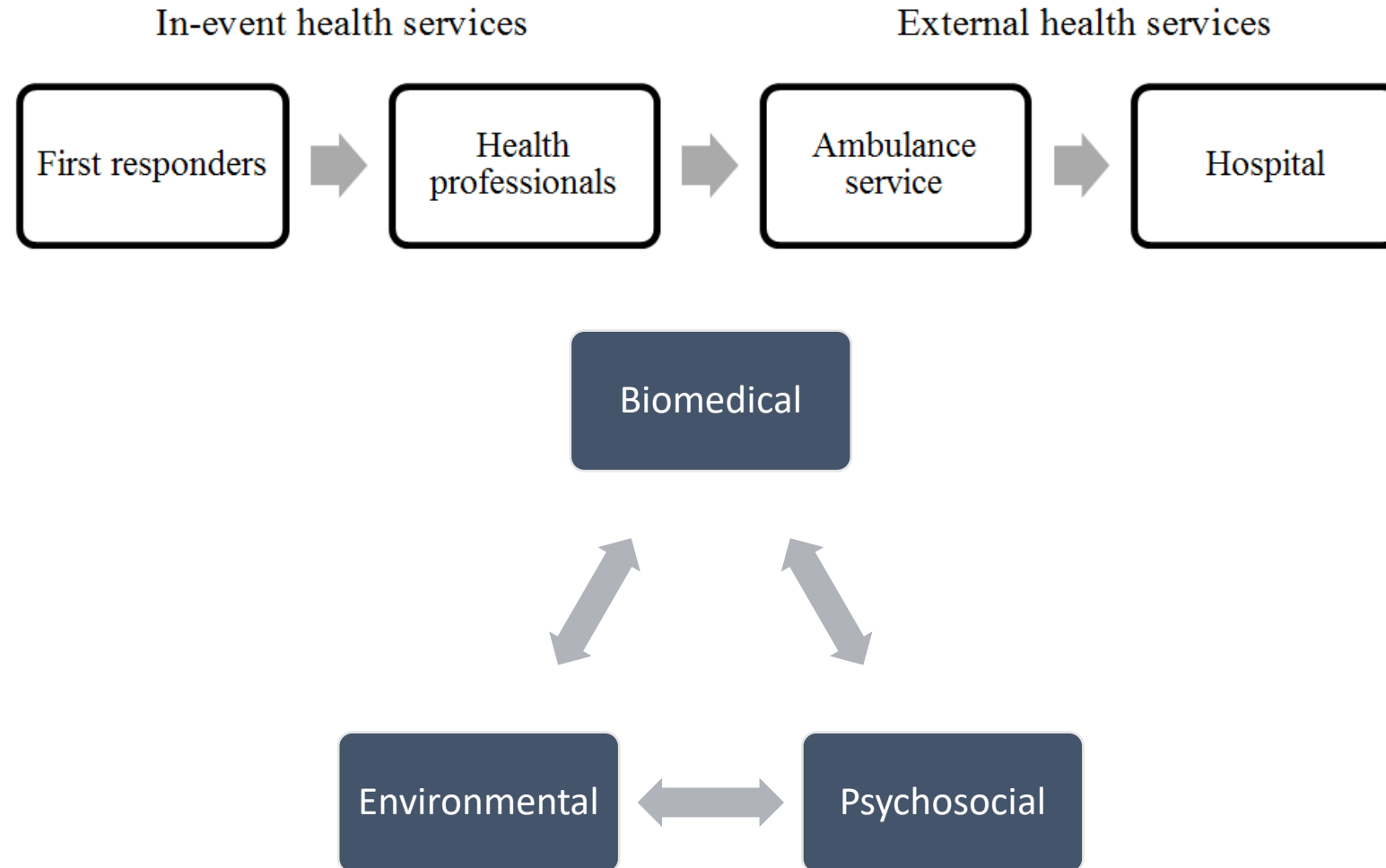
An event where a group of people come together for a common purpose within a particular space or venue.

Where there is the potential for a delayed response to health emergencies.

This could be due to a number of challenges, primarily related to the environment and patient egress.



health preparedness consideration



In-event health services





Coroner Court of Queensland, Findings of Inquest

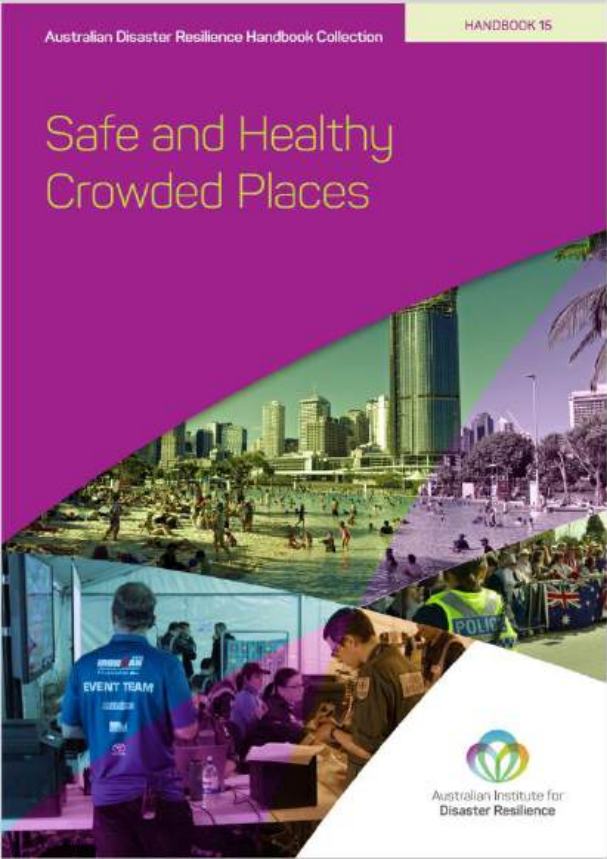
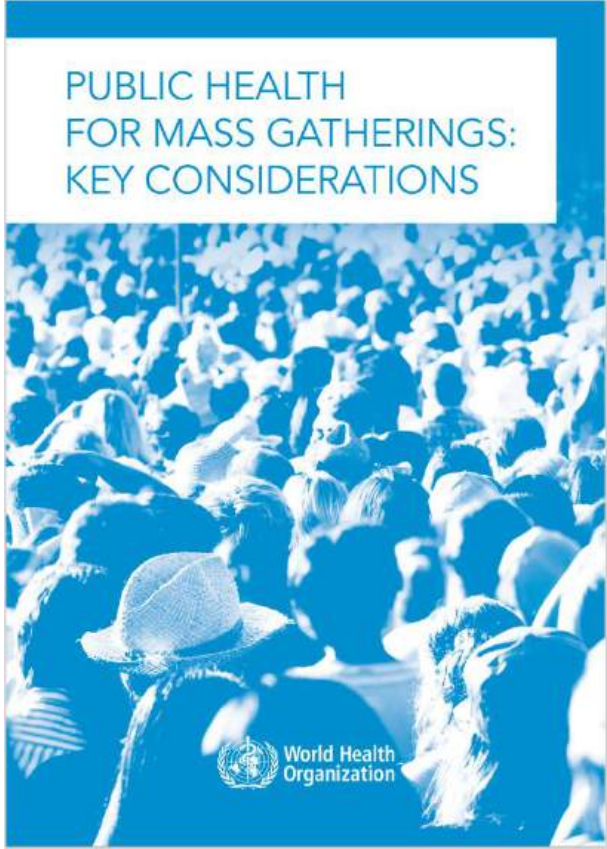
Inquest into the death of Holly Winta Brown (aged 17) died at Laura Rodeo and Races in 2015



Coroners Court of New South Wales

Inquest into the death of six patrons of NSW music festivals in 2018/2019

Hoang Nathan Tran, Diana Nguyen, Joseph Pham, Callum Brosnan, Joshua Tam, Alexandra Ross-King.



Two die after attending Sydney music festival as 10 others taken to hospital

Police have not ruled out possible drug overdoses but say they are looking at 'all avenues' of investigation

- Get our [morning and afternoon news emails](#), [free app](#) or [daily news podcast](#)



Two men were treated by paramedics but died in hospitals after attending a music festival at Sydney's Olympic Park. Police are investigating the cause. Photograph: Dan Himbrechts/AAP

Australian Associated Press

Sun 1 Oct 2023 16:15 AEDT



Share

Two men have died and 10 other people have been taken to hospital after attending Sydney music festivals in the stifling heat amid a series of drug arrests.

NSW Health confirmed the two men died after leaving the Knockout Outdoor festival at the Sydney Showground in Olympic Park on Saturday. Police said they were waiting for autopsy reports amid speculation the men died after taking illicit drugs.

Paramedics tried to revive a 26-year-old man outside the venue on Sydney Olympic Boulevard before he was taken to Concord hospital, where he died.

Victoria

● This article is more than 5 months old

MDMA overdose: nine people hospitalised after Melbourne music festival had severe hyperthermia

Authorities believe extreme heat and physical activity, rather than a single bad batch, exacerbated drug's impact at Hardmission

- Get our [morning and afternoon news emails](#), [free app](#) or [daily news podcast](#)



All nine people taken to hospital following an MDMA overdose at a Melbourne music festival suffered severe hyperthermia. Photograph: Asanka Ratnayake/Getty Images

Henry Belot

Sat 13 Jan 2024 10:11 AEDT



Share

All nine people hospitalised after a mass drug overdose at an electronic music festival in [Melbourne](#) last weekend suffered severe hyperthermia, with three people remaining in a critical condition.

Another woman in her 30s was hospitalised on Friday after a suspected drug overdose at a separate music festival in the Melbourne suburb of Flemington. She remains in a critical condition.

Victorian health authorities believe the overdoses at last weekend's Hardmission festival were not caused by a single bad batch of the drug MDMA as originally feared and that extreme heat and physical activity exacerbated the drug's impact.

"We can confirm that everyone hospitalised from Saturday's incident



International Journal of Drug Policy
Volume 123, January 2024, 104274

Research Paper

Drug-related deaths at Australian music festivals

R. Santamarina ^a, D. Caldicott ^b, J. Fitzgerald ^d, J.L. Schumann ^{a, e, f}  

Show more 

+ Add to Mendeley  Share  Cite

<https://doi.org/10.1016/j.drugpo.2023.104274> 

Under a Creative Commons license 

Get rights and content 

 open access

Abstract

Background

Illicit drug use is overrepresented in music festival attendees compared with the general population. Drug use often involves a wide range of substances with the potential to cause drug toxicity. Law enforcement-centred strategies intended to deter drug use and supply at these mass gatherings have been implemented throughout Australia. However, many have been criticised for their lack of effectiveness, with evidence suggesting that they can inadvertently increase the risk of drug harm. Drug deaths are often multifactorial, providing added challenges in the development of prevention strategies. This study aimed to determine the frequency of deaths involving alcohol and other drugs at music festivals in Australia and to identify potential risk factors that may inform future harm reduction strategies.

Methods

A descriptive case series study was conducted using the National Coronial Information System (NCIS) to investigate drug-related deaths at music festivals throughout Australia between 1 July 2000 (Queensland from 1 January 2001) and 31 December 2019, using a list of keywords comprising music festival names and terms.

Results

There were 64 deaths

health preparedness consideration

Stuff/Supplies	Staff	Systems	Space
<i>Assessment:</i>	Allied health	Health support	Existing
- Clinical assessment	Ambulance / EMS personnel	Procedure	Mobile
- Imaging	First aid / first responder	Process	Temporary
- Monitoring	Medical doctors	Other support	
- Pathology	Nurses		
- Point of care testing	Radiography		
<i>Interventions:</i>	Other medical/health		
- Consumables	Other non-medical/non-health		
- Intravenous fluids			
- Medications			
- Procedural intervention			
- Self-care items			

External / community services



9NEWS

**EMERGENCY
DEPARTMENTS
RECORD DEMAND**



External / community services

Author/s	Nation	Event Type	In-event Health Services		External Health Services	
			PPR (Per 1,000)	In-event Health Professionals	TTHR (Per 1,000)	RTHR (Per 1,000)
Grissom et al [11] 2006	USA	Winter Olympic Games 2002	2.6	Yes	6 ^b	26 ^b
Hiltunen et al [12] 2007	Finland	World Championship Games in Athletics	1.6	- ^a	0.052	25 ^b
Yazawa et al [13] 2007	Japan	Suwa Onbashira Festival	0.013	Yes	0.0035	- ^a
Dutch et al [14] 2008	Australia	2006 Commonwealth Games	0.86	Yes	0.2	- ^a
Nguyen et al [15] 2008	USA	Marathon	252 ^b	Yes	17 ^b	- ^a
Tang et al [16] 2008	USA	Baltimore Marathon: 2002-2005	1,144 ^b	Yes	16 ^b	- ^a
Agar et al [17] 2009	United Kingdom	Outdoor endurance challenge	251 ^b	Yes	9 ^b	- ^a
Boeke et al [18] 2010	USA	Cycling event	419 ^b	Yes	190 ^b	- ^a
Grant et al [19] 2010	USA	Fair	0.48	Yes	0.27	- ^a
Nguyen et al [15] 2010	USA	Marathon	- ^a	- ^a	15 ^b	- ^a
Wood et al [20] 2010	United Kingdom	Festival events	227 ^b	Yes	24 ^b	- ^a
Gutman et al [21] 2011	Canada	World Police and Fire Games	109.4	Yes	0.52	13 ^b
Jennings et al [22] 2011	Australia	Australian Formula 1 Grand Prix 2011	69 ^b	Yes	1 ^b	- ^a
Lyons et al [23] 2011	United Kingdom	Cricket matches	2.4	Yes	7 ^b	Unclear
Blank et al [24] 2012	Austria	Winter Youth Olympic Games 2012	267 ^b	Yes	89 ^b	- ^a
Bledsoe et al [25] 2012	USA	Burning Man 2011: Outdoor arts festival	2,307 ^b	Yes	33 ^b	- ^a
Krul et al [26] 2012	The Netherlands	Rave parties	0.5-2.0	Yes	7 ^b	22 ^b
Bortolin et al [27] 2013	Italy	Holy Shroud Exhibition 2010	0.27	Yes	0.039	- ^a
Locoh-Donou et al [28] 2013	United States	Various University events	0.79	Yes	27 †	- ^a
McGrath et al [29] 2013	USA	Mountain bike race	30 ^b	Yes	1 ^b	1 ^b
Pakravan et al [30] 2013	UK	County show	2.0	Yes	0.1	- ^a
Williamson et al [31] 2013	United Kingdom	2009 Special Olympics – Great Britain	581 ^b	Yes	12 ^b	20 ^b
Lund et al [32] 2014	Canada	Cycling event	125.66-198.93	Yes	0.69-0.99	1.38-1.99
Sabra et al [33] 2014	USA	Formula One USA Grand Prix	2.13	Yes	22 ^b	22 ^b

AUSTRALASIAN JOURNAL OF
PARAMEDICINE



PARAMEDICS
AUSTRALASIA

EMA
Emergency Medicine Australasia
Emergency Medicine Australasia (2018)

ORIGINAL RESEARCH
Impacts

IMPACTS ON IN-EVENT, AMBULANCE AND EMERGENCY
DEPARTMENT SERVICES FROM PATIENTS PRESENTING FROM A
MASS GATHERING EVENT: A RETROSPECTIVE ANALYSIS

JAMIE RANSE^{1,2} SHANE LENSEN,³ TOBY KEENE,⁴ MATT LUTHER⁵ AND ALISON HUTTON,⁶ AMY NB JOHNSTON⁹ AND JULIA CRILL¹⁰

¹Menzies Health Institute Queensland, Griffith University
²Health, Gold Coast, Queensland, Australia
³Capital Territory, Australia
⁴Department of Health, Queensland, Australia
⁵Department of Health, Queensland, Australia
⁶Department of Health, Queensland, Australia
⁷Department of Health, Queensland, Australia
⁸Department of Health, Queensland, Australia
⁹Department of Health, Queensland, Australia
¹⁰Department of Health, Queensland, Australia

doi: 10.1111/1742-6

Jamie RANSE^{1,2}, Shane LENSEN,³ Toby KEENE,⁴ Matt LUTHER,⁵ Brandon BURKE,^{6,7}
 Alison HUTTON,⁸ Amy NB JOHNSTON⁹ and Julia CRILLY^{1,2}

¹Menzies Health Institute Queensland, Griffith University, Gold Coast, Queensland, Australia;
²Health, Gold Coast, Queensland, Australia; ³School of Nursing, Midwifery, and
⁴Capital Territory, Australia; ⁴Australian Capital Territory Ambulance Service, Canberra,
⁵Department, Calvary Public Hospital Bruce, Calvary Health Care, Sydney, New South
⁶Christchurch, New Zealand; ⁷Department of Obstetrics and Gynaecology, Auckland
⁸and Midwifery, New Zealand; ⁹Department of Obstetrics and Gynaecology, Auckland

Objective: The aim of this study was to describe the in-event, ambulance and ED impacts of patient presentations from an Australian mass gathering event (MGE) including demographics, provision of patient

referred patients (62.5% [95% CI 42.71–78.84]) returned to the MGE following administration of intravenous fluids ($n = 13$) and/or emetics ($n = 11$). Six

Key findings

gathering events increases, so too does the reliance on ambulance services, which may present to a local emergency department for clinical care. The purpose of this study is to

EMA
Emergency Medicine Australasia
Emergency Medicine Australasia (2019)

EMA
Emergency Medicine Australasia (2019)

ORIGINAL RESEARCH

... health

ORIGINAL RESEARCH

Emergency healthcare delivery for young adults during a planned mass gathering: A retrospective observational study

13 Jamie RANSE,^{1,2} Nerolie BOST,¹ Tonya DONNELLY,¹ Jo TIMMS,¹ Kate GILMOUR,¹ JOHNSTON^{2,3}

¹Coast, Queensland, Australia, ²School of Nursing and Midwifery, Menzies H, ³Department of Emergency Medicine, Princess Alexandra

Julia CRILLY^{1,2}, Jamie RANSE,^{1,2} Nerolie B...
Michael AITKEN¹ and Amy JOHNSTON^{2,3}

Abstract

Abstract

Objective: To describe patient presentation characteristics and outcomes for people aged 16–18 years pre, during and post a planned youth mass gathering event (MGE): 'hoolies week' on the Gold Coast, Australia.

MGE attendees, 420 (1.72% [95% confidence interval 1.57-1.89], 17.2/1000) presented for in-event care. Most patients were allocated an Australasian Triage Scale category of 4 ($n = 162$, 65.6%), with toxicology related presentations ($n = 169$, 44.9%). Transportation to hospital was undertaken for seven MGE attendees (0.03% [95% confidence interval 0.01-0.06], 0.3/1000). Establishment of an

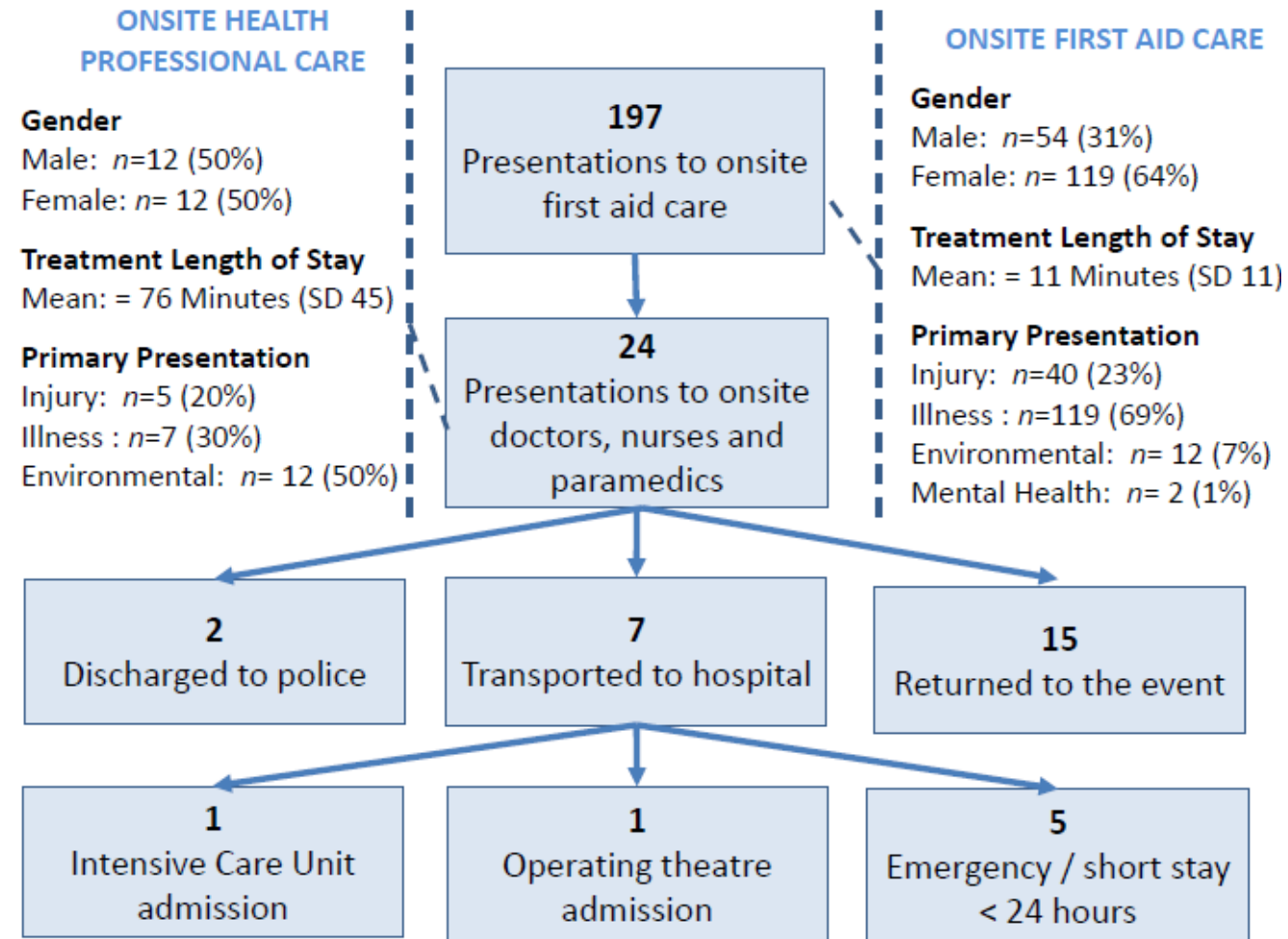
Key findings

- ### Key findings
- A small proportion of attending an organised gathering event reported healthcare on-site or in the vicinity (45%)
 - Almost one in two (45%) attendees to the on-site health facility were toxicologists
 - The presence of a health facility at the gathering event likely had a positive impact on the local community

External / community services



External / community services



Emerging challenges



Crowd mood



Spontaneous events

- Civil unrest
- Riots
- State funerals
- Protests



Climate driven challenges





Burning Man 2023 (Nevada, USA)

Hajj 2024 (Saudi Arabia)

Disasters

- [Bradford City Fire, 1985](#)
- [Hillsborough crowd crush, 1989](#)
- [Hajj crowd crush, 2015](#)



56/265



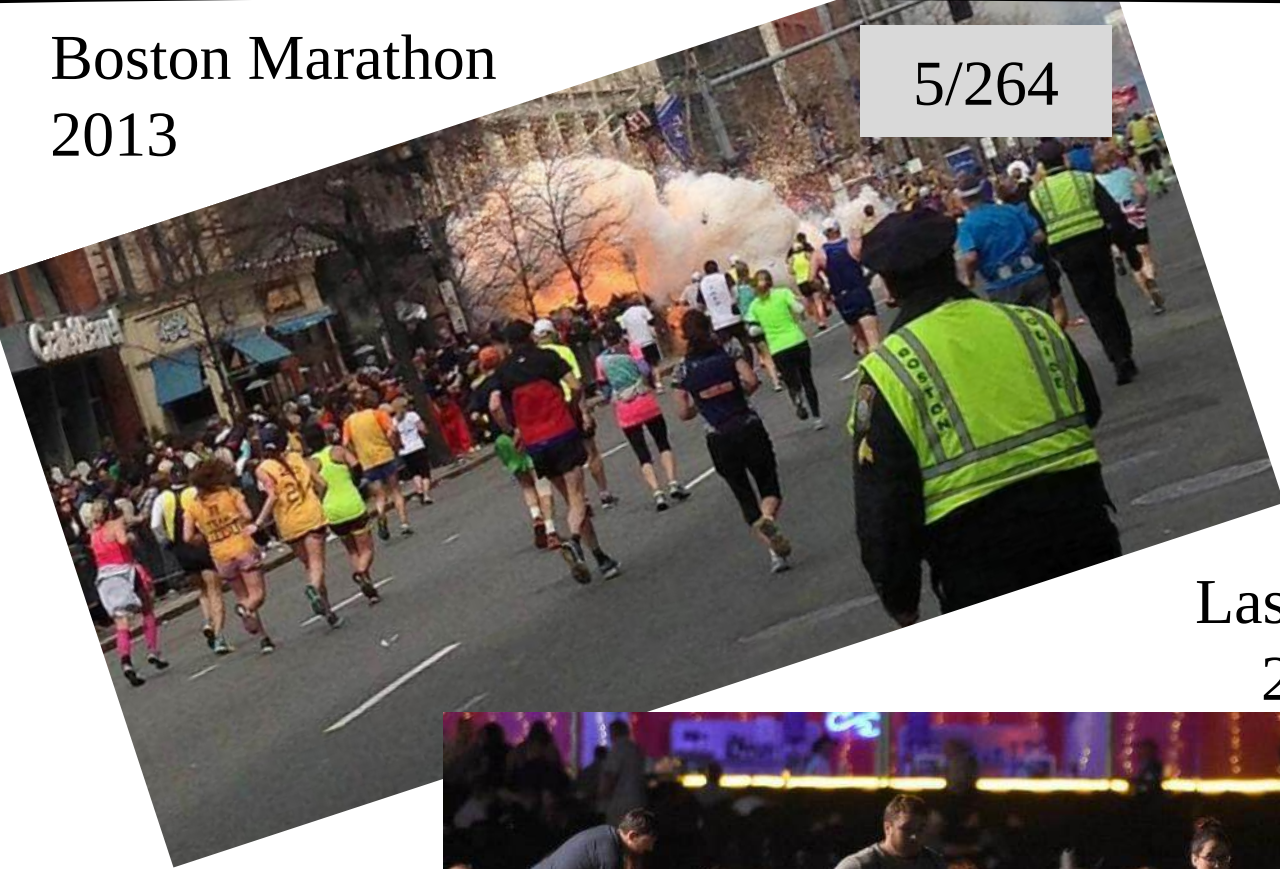
769/934



96/766

Deliberate acts of harm

Boston Marathon
2013



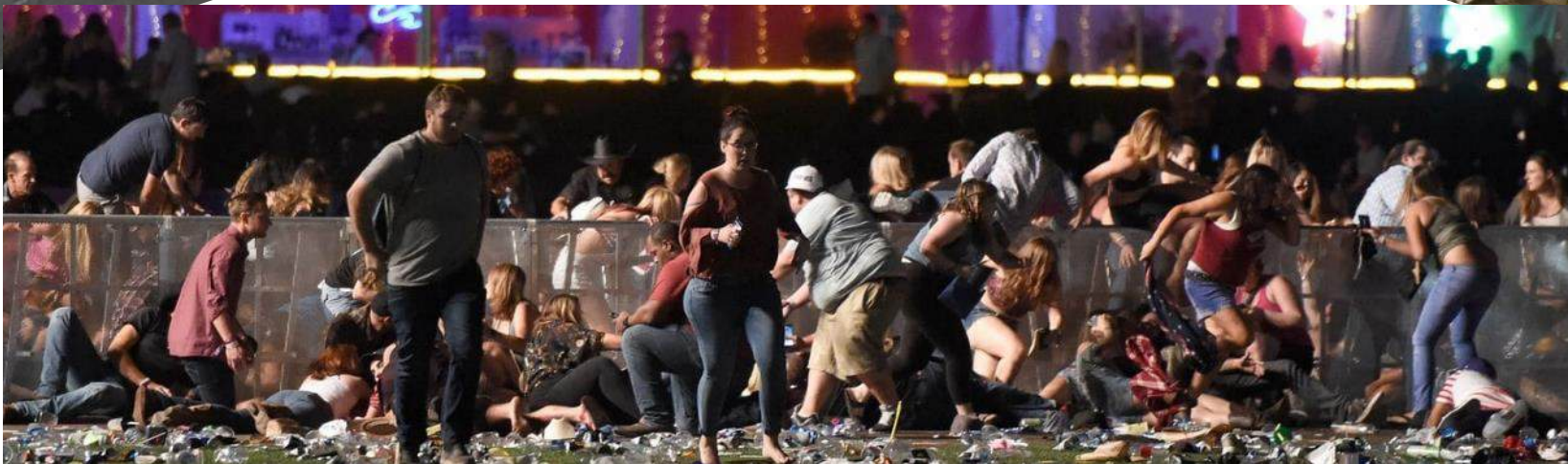
5/264

Nice attack
2016

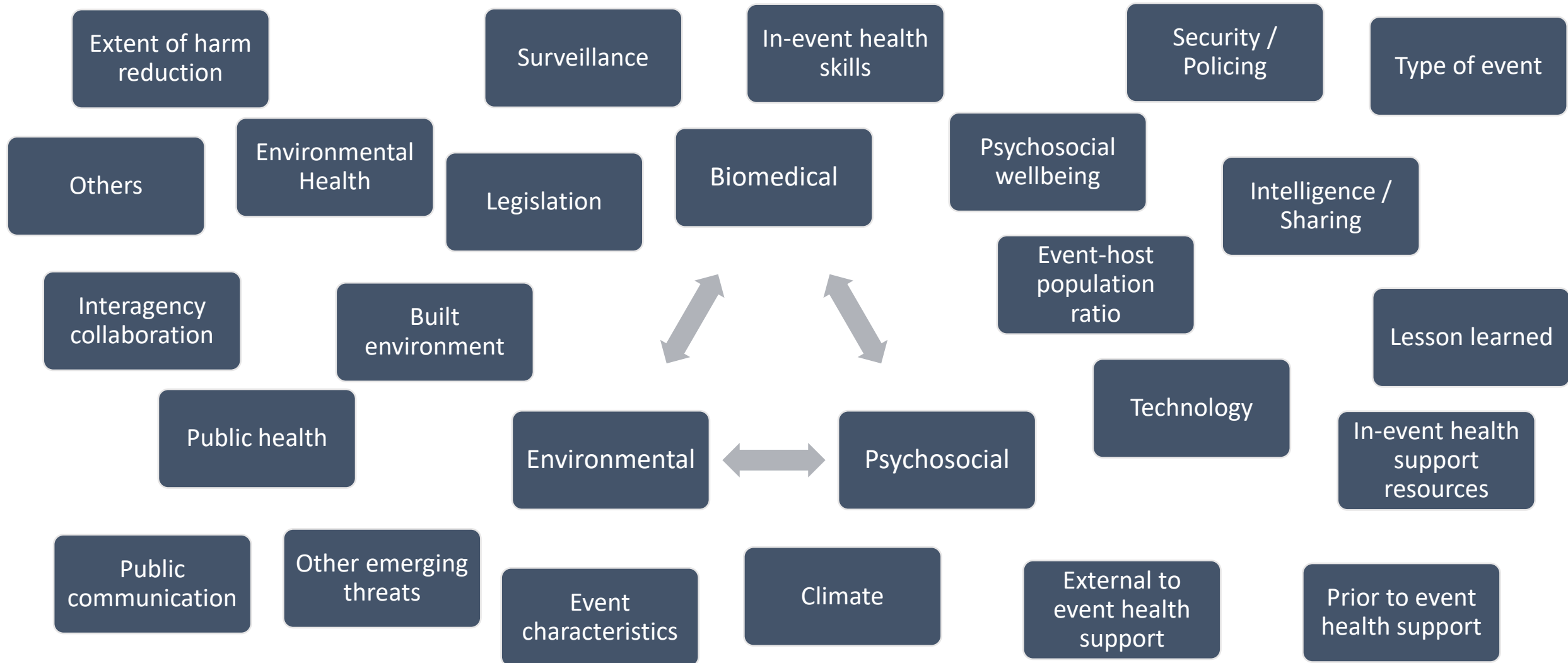


87/434

Las Vegas
2017



health preparedness consideration



Mass gathering events

Health considerations



 www.MassGatherings.com.au
 facebook.com/MassGathCollab
 twitter.com/MassGathCollab
 linkedin.com/company/MassGathCollab

Dr Jamie Ranse RN PhD
Associate Professor
Griffith University

 twitter.com/JamieRanse
 linkedin.com/in/JamieRanse

MASS GATHERING
COLLABORATION



MassGatherings.com.au