



Mass Gathering & Mass Participation Events: Maximizing Safety and Mitigating Community Impact

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Conflicts of Interest



No funding received for this presentation

A. Lund:

- Contracted Medical Director – Rockdoc Consulting, Inc. - Work & volunteer at many events since age 13, including Medical Direction



S. Gutman:

- President & Founder - Rockdoc Consulting, Inc. - Commercial provider of Event & Mass Gathering Medical Services



Declaration



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- Photo credits at end




Disclaimer




- We personally have great affinity for events
- We are proponents and advocates for events and mass gatherings broadly
- Our vision is to support participate and collaborate in safe enjoyable events


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Objectives



1. Appreciate the range of the common health & safety considerations at Mass Gatherings and events
2. Risk Strategies:
 - a) Identification
 - b) assessment
 - c) mitigation
3. Discuss importance of collaboration with local & regional Emergency Services



Take Home Message



There exists **inherent risk** at planned mass gatherings and events of all types

Thoughtful **pre-event planning** can optimize safety and medical response for all stakeholders, without sacrificing the quality of the event or the participants' experience.

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Session Outline



1. Define & Contextualize Mass Gatherings
2. Defining the Event
3. Risk Assessment
4. Medical Coverage Planning
5. Responsibilities of a Medical Director
6. Case Examples
7. Questions

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What's a Mass Gathering?



- Mass gatherings (MG) & mass participation events are special events that attract crowds of spectators and/or participants
- MG's occur in most communities year-round
- MG's **require special planning** to ensure **participant safety**, and to **mitigate impact on the host community**.

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Canadian MGM Scope

- **Mega/Compound** – 3 x Olympics hosts
 - 1976 Summer - Montreal
 - 1988 Winter - Calgary
 - 2010 Winter – Vancouver/Whistler
- **Large (50,000-500,000)**
 - Fireworks, parades, fun runs
- **Medium (5000-50,000)**
 - Festivals, concerts, air shows, adventure races
 - [2009 World Police & Fire Games](#)
- **Small (500-5000)**
 - Ubiquitous in all Canadian communities



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Come on... it's boo-boo's

- Simple first aid
- Sunburn
- A few drunks
- Blisters 'n' such
- Just call 911 if something "real" happens



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Real Stuff Does Occur



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Mass Casualty Incidents



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...even Deliberate Events



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Trauma & MCI's

- Disasters & mass casualty incidents are well documented at events world-wide
 - Recent systematic review showed 290 MCI's involving 10 or more DEATHS in last 20 yrs.
- Some events have unique risks that increase the probability of traumatic injury

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Trauma



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Many Stakeholders



- Event planners (\$)
- Municipality
- Police
- Fire
- EMS
- Bylaw & Traffic
- Local hospital
- Contractors
 - Medical
 - Security
 - Logistics
 - Power
 - Structures/Shelter
 - Vendors
 - Many others!



Canadian MGM Standards



- There are no **national, provincial (BC), or municipal** standards for medical planning for MGM events.
- The lack of a strong evidence-base for MGM threatens event safety and leaves standards to the conscience of event organizers and local permitting agencies – **event driven**.

Large degree of variability across jurisdictions

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Event Medical



- “The standard of care is whatever the event producer feels they can afford for first aid and medical services with respect to their appreciation of the level of risk.”
- Usually already have the permit

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MGs – Define your event






Define Your Event



- Size, scope, duration, onsite camping
- Participants vs attendees,
- activities a crowd behaviour
- Alcohol & drugs
- Location – permanent vs temporary, terrain, bounded vs open
- Local hazards
- Environmental stressors –heat, humidity
- Additional risks - high profile or “a target”
- Local resources (EMS, hospitals, backup)

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Concerts & Festivals



<p>Examples</p> <ul style="list-style-type: none"> • Outdoor music festivals • Concert in park series • Stadium and venues • Electronic Dance Music Events (EDME's) 	<p>Top risks</p> <ul style="list-style-type: none"> • What do you think? • What will be common? • What is uncommon, but high risk?
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Variable Distance Runs



Examples

- 5-8 km
- 10 km
- Half marathon 21.1 km
- Full Marathon 42.2 km
- Ultra Marathon 75 + km

Top risks

- What do you think?
- What will be common?
- What is uncommon, but high risk?

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Multi-sports (Bi, Tri)



Examples

- Duathlon 5-40km cycle, 10-15km run
- Triathlon 400m-2km swim
- Ironman 3.86 km swim, 112 mile bike, 42.2 km run.

Top risks

- What do you think?
- What will be common?
- What is uncommon, but high risk?

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Adventure Races




Examples

- Mud Hero
- Spartan Race
- Warrior Dash
- Tough Mudder


Top risks

- What do you think?
- What will be common?
- What is uncommon, but high risk?

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Risk Assessment & Plan



<p>Considerations</p> <ol style="list-style-type: none"> 1. Location/Geography 2. Size matters 3. Weather/Climate 4. Activities 5. Bounded vs. Unbounded 6. Camping 7. Alcohol & Drugs 8. Crowd & behaviour 	<p>Resource Assessment</p> <ul style="list-style-type: none"> • Stakeholders • Infrastructure (complex) • Personnel • Equipment • Transport (on site & EMS) • Communication • Admin & Insurance • Budget
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Impact Assessment




- Case Mix (*historical? other city?*)
- Case Volume
- Site Constraints, Access/Egress, traffic constraints
- Local EMS resources
- Local Hospital staffing and resource levels and capacity to accept surge
- General Community service levels

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Canadian MGM Providers




- Legacy committees
- Volunteer organizations (St. John's Ambulance, event specific community)
- Contracted providers (few, variable)
- Provincial, municipal ambulance services
- Or EVENT DRIVEN external standards – i.e. IOC, WPFPG, World Cup events

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Coverage Proposal



Identify appropriate level of on-site services proportional to risk of illness and injury.

- Infrastructure
- Staff mix – Decision capacity, definitive care vs triage and transfer, first aid
- Predicted PPR/MTR
- Equipment & Supplies – resupply?
- Communications requirements and strategy
- Disaster & Emergency and Contingency Planning

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Operational Considerations



- Staff recruiting, credentialing/ licensing training
- Uniforms
- Food transportation & accommodations
- Compensation & remuneration
- Policy and procedures, standing orders
- Documentation & medical records

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Responsibilities of a Medical Director



- Medical Malpractice - your own Care
- Medical Malpractice - Delegated Medical Acts by staff
- Policies and Procedures
- Errors and Omissions
- Disaster and Emergency Plan
- Stakeholder Relationships
- Your reputation


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Case Examples




Critique two event case examples presenting sub-optimal and optimal event trauma services respectively.

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Case 1 – Sub-optimal




A buddy asks:
“Would you help me out as the medical director for this really cool community event I’m helping to organize? It’s an adventure race to raise money for charity, followed by an awesome concert near the finish area”
“It’ll be awesome!”

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Case 1 – Race & Concert




- ~8000 participants
- Base of local mountain resort
- Spring conditions
- Already has a BUNCH of volunteers
- No budget, but you are welcome in the beer garden
- Discuss – What’s wrong with this so far?

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Case 2 – Major Triathlon



- Event organizer seeking medical lead for major triathlon, 1 year prior to event date.

“We are looking for an experienced team to manage the safety and medical response for a swim-bike-run event, which will include substantial road closures.”

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Case 2 – Triathlon

- Provides data from previous cities
- Requests proposed plan for event coverage
- Requires engagement of local ambulance service & hospital
- What planning is required to make this a "best practice" event?

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Limitations

- The evidence base is thin for MGM
- Much based on experience & consensus
- Minimal political will to create a minimum standard
- Transient nature of events prevents systematic scrutiny w.r.t. safety

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Mass Gathering Medicine Interest Group

4 Pillars

- Research
- Education
- Clinical
- Advocacy



<http://www.ubcmgm.ca>



The Future of MGM



UBC Mass Gathering Medicine Interest Group

- Registry Project
- TAS/DAS
- Text Messaging
- MGM – Disaster Connection
- Other

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Take Home Message



There exists inherent risk at planned mass gatherings and events of all types

Thoughtful pre-event planning can optimize safety and medical response for all stakeholders, without sacrificing the quality of the event or the participants' experience.

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Questions & Discussion



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