

Public Health Aspects of Mass Gatherings: Preparations for and Lessons Learned from the 2004 Athens Olympic Games

1000 Days of Opportunity-
Building a 2010 Legacy for
Washington

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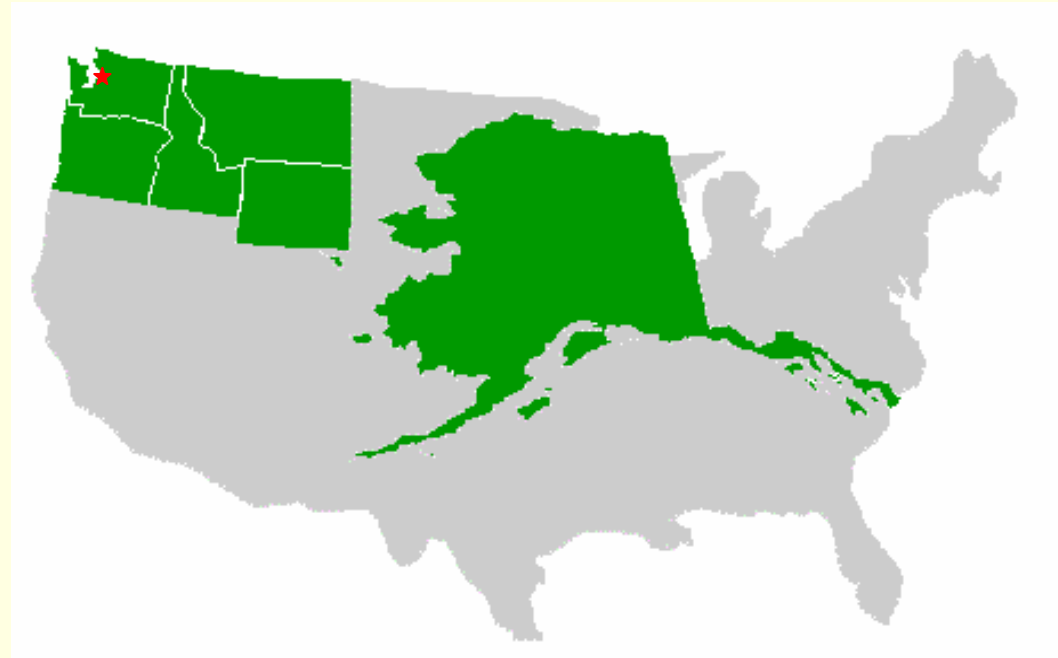




Northwest Center for Public Health Practice

at the University of Washington School of Public Health and Community Medicine

- Center for Public Health Preparedness (CDC)
- Public Health Training Center (HRSA)
- Trainings and Technical Assistance



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Roles for Public Health in Preparedness and Response

- Preparedness Planning, Policy, Readiness Assessments
- Surveillance and Epidemiologic Capacity
- Laboratory Capacity – Biological and Chemical
- Communications and Information Technology / Health Alert Network
- Risk Communication and Health Information Dissemination
- Education and Training



Mass Gatherings: Potential Health Risks

- Increased risk of disease transmission
 - Foodborne and waterborne illness
 - Communicable diseases
- Accidents and other types of injuries
- Intentional release of chemical, biological, radiological agents
- Environmental conditions
- Fluctuating Populations
- Pressure on the infrastructure & existing public health system
- Need for real-time decision-making
- Challenges for control measures
 - High potential for international spread & introduction of diseases
 - International contact tracing





- First summer Olympic Games after September 11
- First summer Olympic Games after SARS and avian influenza epidemics



6 Olympic Cities:

- Athens (all events)
- Thessaloniki
- Patras
- Volos
- Heraklion
- Ancient Olympia

22,000 athletes and
delegation staff

800,000-1,000,000
visitors

60,000 volunteers

7/19/2004 – 10/5/2004



ATHENS 2004



Potential Public Health Risks Identified for the 2004 Athens Olympic Games

Risk Category	High Risk	Low Risk
Infectious Disease	Traveller's diarrhea	Hepatitis A
	Foodborne/waterborne diseases	Brucellosis
	Airborne diseases	Non-endemic diseases
	Sexually transmitted diseases	SARS
Non-Infectious Etiology	Heat-related illness	Terrorist attack
	Motor vehicle accidents	
	Drownings, other injuries	

Hadjichristodoulou et al. Mass gathering preparedness: the experience of the Athens 2004 Olympic and Para-Olympic Games. J Environmental Health. 2005;67:52-57



Areas of Health Sector Planning: “Inside and Outside the Fence”

- Hospital Care
- Primary Health care
- Emergency Health Care
- Public Health and Hygiene
 1. Disease Surveillance and Outbreak Response
 2. Environmental and Food Safety Control
 3. Public Information and Health Promotion
- Health System Organization and Coordination



1. Disease Surveillance and Outbreak Response

- Early recognition of outbreaks -> response
- Early recognition of events related to deliberate release of biological or chemical agent -> response
- Recognition of sporadic cases that require measures to prevent further spread of infection -> response
- Evaluation of preventive measures (indirectly)



Surveillance Systems Operating in the Athens 2004 Olympic Games

- Mandatory notification system
- Laboratory reporting system
- Primary care sentinel physicians
- Syndromic surveillance
 - Hospital outpatients
 - Athletic venues
 - Cruise ships



Syndromic Surveillance

- Respiratory infection with fever
- Bloody diarrhea
- Gastroenteritis (diarrhea, vomiting), without blood
- Febrile illness with rash
- Meningitis, encephalitis, or unexplained acute encephalopathy / delirium
- Suspected viral hepatitis (acute)
- Botulism – like syndrome
- Lymphadenitis with fever
- Sepsis or unexplained shock
- Unexplained death with history of fever



Examples of Major Threats

Respiratory:

Single cases

SARS

Anthrax

Legionnaires' disease

Foodborne, waterborne:

Cholera

E.coli O157

Intentional release:

Smallpox

Tularemia

Anthrax

Cluster

Influenza

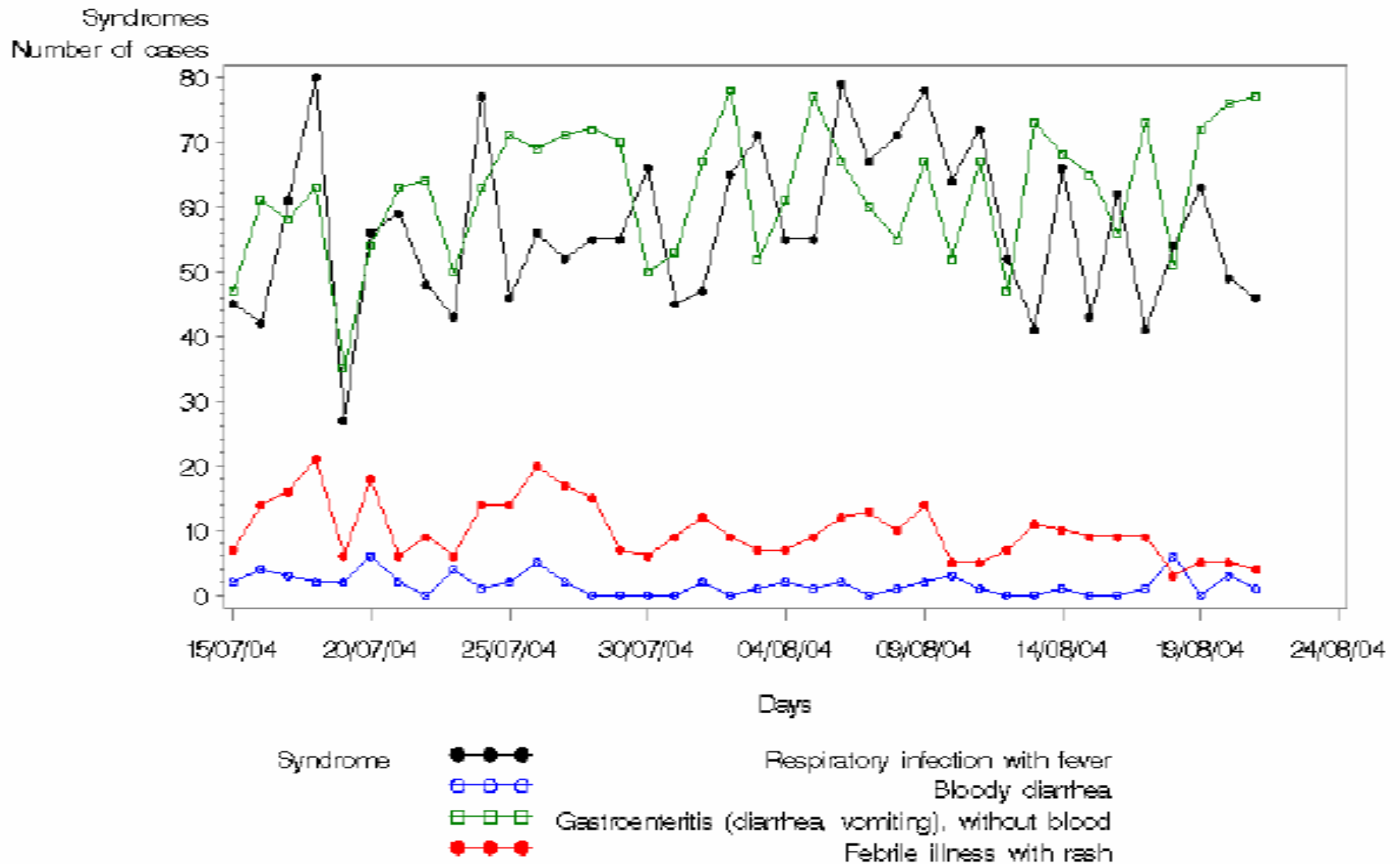
Salmonellosis

Gastroenteritis

Unexplained death



Syndromes total per day: Attiki: Adults



2. Environmental and Food Safety Control

- Air Quality/Pollution
- Heat-related illness
- Food Safety
- Water quality
- Sewage / waste
- Vector control
- Border / Ports of entry control
- Cruisers



3. Public Information and Health Promotion

- Smoke Free Olympics
- Promote physical activity
- Condom distribution
- Mediterranean diet

Soteriades ES, et al. Health promotion programs related to the Athens 2004 Olympic and Para Olympic games. BMC Public Health. 2006; 6: 47



Health System Organization and Coordination

- Cooperation and coordination
- Public Health, Medical Emergency, and CBRN Planning, Preparedness and Response
- Standard Operating Procedures
- Unified Command, e.g., SOTY the Health Sector Coordination Center



Key Partners

- **Ministry of Health and Social Solidarity**
 - Health care provision, general coordination
- **Athens Organizing Committee 2004-Medical Services**
 - Medical services inside the fence
- **Hellenic Centre for Disease Control and Prevention**
 - Surveillance, Laboratory, Bioterrorism, Training
- **Hellenic Centre for Emergency Medical Care**
 - Pre-hospital care, disaster medical care, patient transportation
- **National School of Public Health**
 - Environmental hygiene, cruise ships sanitation



International Cooperation

- Preparations and during the Games
- Expertise, intelligence, networking
- Evaluation and documentation
- 5 major exercises
 - Tabletops, field exercises
- Workshops, trainings, and educational exchanges
- Technical assistance



Lessons Learned from Mass Gatherings

- Public health officials need involvement from the onset
- Consider type and length of events, physical facilities, availability of qualified staff, weather, local capacity for routine medical care, and relations.
- Surge capacity of the EMS medical care systems within the affected community needs to be assessed.
- Surveillance systems need to be designed and implemented to provide useful information on a timely basis.
- Communication and coordination and formalized approaches to incident command should be established and tested via drills and exercises.
- Environmental health and food and water safety regulations should be reviewed and provisions should be made for consultation, inspections, and enforcement.
- Assess the treatment (and decontamination) capacities of local health services; and supplies and planning for rapidly obtaining and distributing additional resources.
- Opportunities exist to provide educational messages, including health promotion and preventive measures, consistent with public health risks and objectives.
- Costs should be estimated and funds for public health preparations secured in advance of mass gatherings.

Lessons Learned from 2004 Athens Olympic Games

- Importance of leadership
- Opportunity to promote health and improve public health systems
- Importance of exercises and trainings
- Timely investment for the country



Thank you



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