Counter Terrorism Medicine: Emerging Subspecialty

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Wednesday November 9, 2005 20:52

- Three simultaneous coordinated bomb attacks in three hotels in the capital Amman
- Four attackers: 3 men and 1 woman
- Explosive belt denoted in 3 different sites
- Claimed by Al-Qaida – Iraqi terrorist group
<table>
<thead>
<tr>
<th>Place</th>
<th>Deaths</th>
<th>Injured</th>
</tr>
</thead>
<tbody>
<tr>
<td>Radisson SAS blast</td>
<td>36</td>
<td>N/A</td>
</tr>
<tr>
<td>Grand Hyatt blast</td>
<td>9</td>
<td>N/A</td>
</tr>
<tr>
<td>Days Inn blast</td>
<td>3</td>
<td>N/A</td>
</tr>
<tr>
<td>In hospitals</td>
<td>12</td>
<td>N/A</td>
</tr>
<tr>
<td>Total</td>
<td>60*</td>
<td>115</td>
</tr>
</tbody>
</table>

*Excludes the 3 suicide bombers

<table>
<thead>
<tr>
<th>Country</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>United States</td>
<td>4</td>
</tr>
<tr>
<td>Syria</td>
<td>2</td>
</tr>
<tr>
<td>Saudi Arabia</td>
<td>1</td>
</tr>
<tr>
<td>Palestine</td>
<td>5</td>
</tr>
<tr>
<td>Jordan</td>
<td>36</td>
</tr>
<tr>
<td>Israel</td>
<td>2</td>
</tr>
<tr>
<td>Iraq</td>
<td>6</td>
</tr>
<tr>
<td>Indonesia</td>
<td>1</td>
</tr>
<tr>
<td>China</td>
<td>3</td>
</tr>
<tr>
<td>Bahrain</td>
<td>2</td>
</tr>
</tbody>
</table>
Deaths from terrorism, 2020
Confirmed deaths, including all victims and attackers who died as a result of the incident.

Source: Global Terrorism Database (2022)
Deaths from terrorism, 1970 to 2020
Confirmed deaths, including all victims and attackers who died as a result of the incident.

Source: Global Terrorism Database (2022)
OurWorldInData.org/terrorism • CC BY
Complex Multi-Modal Attacks
Injury patterns and severity:

- Blast injuries
- Chemical attacks
- Crush injuries
Terror injuries have more severe injuries

- ISS 1-8 (minor)
- ISS 9-14 (moderate)
- ISS 16-24 (severe)
- ISS 25-75 (critical)
Hospital Resources Utilization

- **Terror injuries**
- **Other trauma**

<table>
<thead>
<tr>
<th>Service</th>
<th>Terror Injuries</th>
<th>Other Trauma</th>
</tr>
</thead>
<tbody>
<tr>
<td>ICU</td>
<td>24.3%</td>
<td>6.7%</td>
</tr>
<tr>
<td>CT SCAN</td>
<td>35.7%</td>
<td>25.0%</td>
</tr>
<tr>
<td>LOS &gt; 2 WK</td>
<td>18.6%</td>
<td>7.9%</td>
</tr>
<tr>
<td>Surgery</td>
<td>55.6%</td>
<td>38.3%</td>
</tr>
</tbody>
</table>
Toxidrome Recognition in Chemical-Weapons Attacks

Gregory R. Ciottone, M.D.
Counter-Terrorism Medicine: Creating a Medical Initiative Mandated by Escalating Asymmetric Attacks

Michael Court, MBChB, MSc, MRCGP; Brydie Edwards, MBBS, FACEM; Fadi Issa, MD, MSc; Amalia Voskanyan; Gregory Ciottone, MD, FACEP
Education and Research

Didactic and Hands-on training:
1. Simulation-based training
2. Scenario-based training
3. Lectures and seminars
4. Field training
5. Online learning
WADEM SIG Group

COUNTER-TERRORISM MEDICINE

The Counter-Terrorism Medicine Special Interest Group (CTM-SIG) enables WADEM members with an interest in this new area to find a place to exchange ideas, share experiences, and collaborate on research. The CTM-SIG strives to be on the cutting edge of this ever-changing new field and set the standard for global mitigation, preparedness, and response to asymmetric terrorist attacks.
WADEM 2023
Latest developments in Counter Terrorism Medicine

Beth Israel Deaconess Medical Center
Harvard Medical School

2023
Global Terrorism Index 2022 report

- Sub-Saharan Africa: 48% of global terrorism deaths.

- 119 countries recorded no deaths, the best result since 2007.

- Terrorist activity concentrated in South Asia and sub-Saharan Africa with both regions having recorded more terrorism deaths than MENA since 2018.
Key Trends in Global Terrorism Index 2022 report

- In the West, politically motivated attacks overtook religious attacks, which declined by 82%. There were five times more political attacks than religious attacks.

- Terrorists are using more advanced technologies including drones, GPS systems and encrypted messaging services.
PubMed Trends: Terror
Pubmed and Terror Events
Figure 3: U.S. Terrorist Attacks and Plots and Fatalities, 1994–2021

Number

Source: Data compiled by CSIS Transnational Threats Project.
Note: Fatality data exclude perpetrators. Data from 1995 include the Oklahoma City bombing, in which 168 victims died. Data from 2001 include the 9/11 attacks, in which 2,977 victims died.
Figure 5: U.S. Terrorist Attacks and Plots by Perpetrator Orientation, 1994–2021

Source: Data compiled by CSIS Transnational Threats Project.
Latest development in CTM

- Homegrown terror
- Potentially high level of expertise training
- Exploit healthcare vulnerabilities
Tactical Emergency Casualty Care
Improving global prehospital and emergency medicine, public health, and disaster health care and preparedness

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WADEM 2023

The Future of Counter Terrorism Medicine

March 6, 2023
Ryan Hata, MD
Regions and Motivations

Number of attacks in Sub-Saharan Africa (Percent of worldwide total)

Percentage of U.S. terrorist attacks and plots related to demonstrations 1994-2021

Figure 1: Percentage of U.S. Terrorist Attacks and Plots Related to Demonstrations, 1994–2021

Source Data compiled by CSIS Transnational Threats Project.
Technology: Internet and the Dark Web

• Access to information
• Rapid expansion of knowledge
• Ease of access to materials
Technology: Drones

- Novel delivery systems
- Anonymity and precision
- Swarm technology
Technology: AI and NLP

• Enhancing cyber capabilities
• Enabling physical attacks
• Providing financial means
• Spreading propaganda and disinformation

UN Office of counter terrorism and UN Interregional crime and justice research institute 2021 report: Algorithms and Terrorism: The malicious use of artificial intelligence for terrorist purposes.
Cybersecurity

- Disable Systems
- Steal Information
- Alter Data
- Compromise Devices
Healthcare Cyberthreats: Who and Why?

- External Threats (61%)
- Internal Threats (39%)
- Financial (95%)
- Espionage (4%)
- Convenience (1%)
- Grudge (1%)

Cyber-disaster Medicine

Research, Education, Collaboration
WADEM Congress on Disaster and Emergency Medicine 2023