



PROGRAM IN COUNTER- TERRORISM MEDICINE

Program Description

BIDMC Fellowship in Disaster Medicine

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Beth Israel Deaconess
Medical Center



HARVARD MEDICAL SCHOOL
TEACHING HOSPITAL

Fellowship in Disaster Medicine

BIDMC Fellowship in Disaster Medicine Program in Counter-Terrorism Medicine

Introduction

The fellowship in counter-terrorism medicine is a one-year fellowship utilizing our esteemed faculty, who collectively have over 150 years experience preparing for and responding to terrorist events at all levels of government, along with a dynamic curriculum, and rotations in Boston, Washington DC, and other training facilities across the country. Fellows will learn the unique aspects of mitigation, preparedness, and response to terrorist events, including the health service support considerations in the era of asymmetrical threats, and weapons of mass destruction. Fellows will also have access to the full curriculum of the BIDMC Fellowship in Disaster Medicine.

BIDMC Fellowship in Disaster Medicine is designed to provide qualified fellows the opportunity to develop an expertise in the related fields of Disaster Medicine (DM) and Emergency Management (EM). This is accomplished through didactic lectures, seminars, readings, goal-related research in a specific area of DM and EM, and participation in hospital-based, local, regional, national, and international Disaster Preparedness agencies and response organizations.

The Fellow will also complete fieldwork-related research resulting in a thesis or publication. Upon completion of this Fellowship, fellows will be skilled in all aspects of the disaster cycle and have the ability to assume a leadership role on the local, regional, federal, or international level in the area of Disaster Medicine and Emergency Management.

CORE CURRICULUM

COUNTER-TERRORISM MEDICINE: OPERATIONS

GENERAL COUNTER-TERRORISM MEDICINE

Introduction to Disaster Medicine and Emergency Management for Terrorist Attack

Public Health and Terrorist Attack

The Role of Emergency Medical Services in Terrorism Preparedness and Response

The Role of Hospitals in Terrorist Attack

Ethical Issues in the Provision of Emergency Medical Care in Multiple Casualty Incidents

Terrorism Response in the United States

Terrorism Response in Europe

Local Response to Terrorist Attack

State/Regional Response to Terrorist Attack

Selected Federal Disaster Response Agencies and Capabilities

Global Terrorism Response

Community Hazard Vulnerability Assessment

Informatics and Telemedicine in Disaster

Public Information Management in Terrorist Attack

Terrorism Mitigation

Terrorism Preparedness

Worker Health and Safety in the Response to Terrorist Attack

TERRORIST EVENT RESPONSE

Accidental versus Intentional Event

Crisis Leadership in Public Health Emergencies

The Incident Command System

Scene Safety in Terrorism Events

Needs Assessment in Terrorism Events

Operations and Logistics in Terrorism Events

Disaster Communications in Terrorism Events

Personal Protective Equipment

Management of Mass Fatalities from Terrorist Attack

Urban Search and Rescue in Terrorism Events

Triage in Terrorism Events

HIGH-THREAT TERRORIST EVENT RESPONSE

Lessons Learned from Recent Terrorist Attacks

The Psychology of Terrorism

Health Service Support Considerations in the Era of Asymmetric Threats

Integrated Response to Terrorist Attacks

Multimodality, Layered Attack

Active Shooter Events

Hostage Taking By Terrorists

Terrorism-Induced Civil Unrest and Rioting

Introduction to Explosions and Blasts

Suicide Bomber

Improvised Explosive Devices

Vehicle Borne Improvised Devices

Conventional Explosions at a Mass Gathering

Response to Nuclear Terrorist Attack

Dirty Bomb (Radiologic Dispersal Device) and Other Radiation Scenarios

General Approach to Chemical Attack

General Approach to Biologic Attack

Future Biologic and Chemical Weapons

Chemical, Biologic, and Nuclear Quarantine

Chemical Decontamination

Radiation Decontamination

Directed-Energy Weapons

OPERATIONAL MEDICINE IN A TERRORISM EVENT

Military Lessons Learned for Disaster Response

Integration of Law Enforcement and Military Resources with Emergency

Response to Domestic Terrorist Events

Tactical EMS applications for Terrorism

Medicine Beyond the Barricade

Operational Rescue in Terrorist Attack

Operations Security, Site Security and Incident Response in Terrorist Attack

Medical Intelligence

Preventative Medicine for Responders in High Threat Environments

COUNTER-TERRORISM MEDICINE: TREATMENT OF CASUALTIES

CBRNE: NUCLEAR/RADIATION TERRORISM EVENTS

Introduction to Nuclear/Radiologic Disasters
Nuclear Detonation
Radiation Event - Isolated Exposure
Radiation Event - Dispersed Exposure
Nuclear Power Plant Attack

CBRNE: CHEMICAL TERRORISM EVENTS

Introduction to Chemical Attacks
Nerve Agent Mass-Casualty Incidents
Vesicant Agent Attack
Respiratory Agent Attack
Cyanide Attack
Antimuscarinic Agent Attack
LSD, Other Indoles, and Phenylethylamine Derivative Attack
Opioid Agent Attack
Hydrofluoric Acid Attack
Riot-Control Agent Attack
Cholinergic Agent Attack (Nicotine, Epibatidine, and Anatoxin-A)
Anesthetic-Agent Attack

CBRNE: BIOTERRORISM EVENTS

Introduction to Biologic Agents and Bioterrorism
Bacillus Anthracis (Anthrax) Attack
Yersinia Pestis (Plague) Attack
Francisella Tularensis (Tularemia) Attack
Brucella Species (Brucellosis) Attack
Coxiella burnetii (Q Fever) Attack
Rickettsia prowazekii Attack (Typhus Fever)
Orientia tsutsugamushi (Scrub Typhus) Attack
Rickettsia rickettsii (Rocky Mountain Spotted Fever) Attack
Vibrio cholerae (Cholera) Attack
Shigella dysenteriae (Shigellosis) Attack
Salmonella Species (Salmonellosis) Attack
Salmonella typhi (Typhoid Fever) Attack

Burkholderia mallei (Glanders) Attack
 Burkholderia pseudomallei (Meliodosis) Attack
 Chlamydia psittaci (Psittacosis) Attack
 Escherichia coli O157:H7 (Hemorrhagic E. Coli) Attack
 Viral Encephalitides (Alphaviruses) Attack
 Tick-Borne Encephalitis Virus Attack
 Viral Hemorrhagic Fever Virus Attack - Arenaviruses
 Viral Hemorrhagic Fever Attack - Bunya Virus
 Viral Hemorrhagic Fever Attack - Filo Viruses
 Viral Hemorrhagic Fever Attack - Flaviviruses
 Chikungunya Virus Attack
 Variola Major Virus (Smallpox) Attack
 Influenza Virus Attack
 Monkeypox Attack
 Hantavirus Pulmonary Syndrome Attack
 Henipahvirus Attack (Hendra Virus Disease and Nipah Virus Encephalitis)
 SARS-CoV and MERS Attack (Severe Acute Respiratory Syndrome)
 Staphylococcal Enterotoxin B Attack
 Clostridium botulinum Toxin (Botulism) Attack
 Clostridium perfringens Toxin (Epsilon Toxin) Attack
 Marine Toxin Attack
 T-2 Toxin (Trichothecene Mycotoxins) Attack
 Ricin Toxin from Ricinus communis (Castor Beans) Attack
 Aflatoxin Attack (Aspergillus Species)
 Coccidioides immitis Attack (Coccidioidomycosis)
 Histoplasma capsulatum Attack (Histoplasmosis)
 Cryptosporidium parvum Attack (Cryptosporidiosis)

CBRNE: BOMB/BLAST TERRORIST ATTACK

Explosions: Conventional
 Rocket-Propelled Grenade Attack
 Conventional Explosion at a Hospital
 Conventional Explosion in a High-Rise Building
 Conventional Explosion at a Nuclear Power Plant
 Tunnel Explosion
 Liquefied Natural Gas Tanker Truck Explosion
 Petroleum Distillation/Processing Facility Explosion

CBRNE: BALLISTIC TERRORIST ATTACK

Gunshot Attack: Mass Casualties

Sniper Attack

Grenade and Pipe Bomb Attack

OTHER TERRORISM EVENTS

Aircraft Hijacking

Aircraft Crash into a High-Rise Building

Airliner Crash into a Nuclear Power Plant

Bomb Explosion at a Nuclear Waste Storage Facility

Intentional Contamination of Water Supplies

Food Supply Contamination

Attack at Mass Gatherings

Ecological Terrorism

Computer and Electronic Terrorism and EMS

VIP Care and Protective Medicine

MODULE 5: MODERN DAY THREATS / PANDEMICS

- Influenza: Preparation, Response, and Outcomes
- Ebola: Preparation, Response and Outcomes