

Bibliographical Note

Attack on the Pentagon: The Medical Response to 9/11 is based largely on oral histories of medical responders obtained by Defense Department oral history teams and myself; primary documents mainly from the Surgeon General's Medical History Office; and e-mail exchanges between me and individual responders. Chapter references reveal the extent and variety of those sources.

Primary documents helped me to understand the sequence of events, the consequences of the attack, the decision-making process, the actions of responders, and the recommendations and plans for future crises. Some of the more significant ones were the after-action reports of hospitals and the Armed Forces Institute of Pathology, and those written by Roser, Wallace, and Gum; the North Atlantic Regional Command's historical summary; the US Army Center for Health Promotion and Preventive Medicine's health assessment surveys and 2001 annual report; updates to the surgeon general (daily briefings on the medical response to 9/11); Embrey's environmental health response to the attack; the Environmental Protection Agency's summary of environmental monitoring operations at the Pentagon; Army Medical Command emergency management planning documents; Peake's plan for enhancing medical nuclear, biological, and chemical readiness; and Army Medical Command memoranda for the record. A different kind of primary document, Nelson-Firing's essay on therapy dogs, enhanced the mental health story.

Published sources also contributed to my knowledge of the military medical response. In highlighting the community's response, Titan Systems Corporation's *Arlington County After-Action Report on the Response to the September 11 Terrorist Attack on the Pentagon* helped me appreciate the views and actions of participating organizations and of individuals at different levels of command. *The 9/11 Commission Report* provided invaluable background reading for the causes of the attack, a reliable timeline, data, and statistics. Another account, Goldberg et al's *Pentagon 9/11* (Defense Studies Series; Historical Office, Office of the Secretary of Defense, Washington, DC; 2007), was published after my manuscript

was completed. Although not focused on the medical response, this publication is a broad and well-researched study of what happened at the Pentagon on 9/11 and for days afterward. It enabled me to compare facts among sources. Many articles enriched the narrative; noteworthy were those from the *Washington Post*; *Defense Link News*; *Washingtonian*; *Time*; *The Pulse Tricare Northeast*; *Journal of Burn Care Rehabilitation*; *American Journal of Preventive Medicine*; *Navy Medicine*; *US Medicine, An Independent Newspaper for Physicians*; and *Military Medicine*. *Military Medicine's* September 2002 issue consisted of 30 articles written by Department of Defense psychiatrists, psychologists, social workers, family assistance experts, and mental health administrators. Their experiences and insights increased my awareness and comprehension of mental health issues resulting from the attack.

While I was in the process of writing this book, the Medical History Office brought out *Soldiers to the Rescue: The Medical Response to the Pentagon Attack*. This book of quotations from transcripts of interviews with Army Medical Department responders was published in house to honor the brave men and women who responded to 9/11.

Copies of unpublished sources, transcripts of interviews, reports, summaries, surveys, and essays used in this book can be found at the Office of the Surgeon General Medical History Office, Fort Sam Houston, Texas.

Abbreviations and Acronyms

AAR	after-action report
ABA	American Burn Association
AFIP	Armed Forces Institute of Pathology
AFME	Armed Forces Medical Examiner
AMEDD	Army Medical Department
BDU	battle dress uniform
CB	citizens' band
CHPPM	Army Center for Health Promotion and Preventive Medicine
CIA	Central Intelligence Agency
CISD	critical incident stress debriefing
CMHS	Center for Mental Health Services
CONUS	continental United States
CPR	cardiac pulmonary resuscitation
CTT	common task training
DAC	Department of the Army civilian
DASG	Department of the Army Surgeon General
DCE	defense coordinating element
DoD	Department of Defense
DOEHS	Defense Occupational and Environmental Health Reporting System
DOMS	Director of Military Service
DPS	Defense Protective Service
DSCA	Defense Support of Civil Authorities
DTHC	DiLorenzo Tricare Health Clinic
EMT	emergency medical technician
EMS	emergency medical services
EPA	Environmental Protection Agency

EOC	emergency operation center
ER	emergency room
ERMC	European Regional Medical Command
FBI	Federal Bureau of Investigation
FEMA	Federal Emergency Management Agency
FDC	Fife & Drum Corps
FDNY	Fire Department of New York
FD	fire department
G-2	intelligence directorate [US Army]
GRMC	Great Plains Regional Medical Command
HAZMAT	hazardous materials
HCO	Health Care Operations
HHC	headquarters headquarters company
HQ	headquarters
HVAC	heat, ventilation and air conditioning
ICU	intensive care unit
ID	identification
IM/IT	information management/information technology
IMO	Information Management Officer
INOVA	In Northern Virginia
IV	intravenous
J-4	Joint Chiefs of Staff—Logistics
LBJ	Lyndon Baines Johnson
LCWS	low-cost work-station
LNO	liaison officer
MASCAL	mass casualty
MC	Medical Corps
MEDCOM	Medical Command
MC, FS	Medical Corps, Flight Surgeon
MEDCOM MSC	Medical Command, Major Subordinate Command
MEDCOM RMC	Medical Command, Regional Medical Command
MEDEVAC	medical evacuation
MedSTAR	Medical Star
MOS	military occupational specialty
MTF	medical treatment facility
NARMC	North Atlantic Regional Medical Command
NBC	nuclear, biological, chemical
NCO	noncommissioned officer
NCOIC	noncommissioned officer in charge
NDMS	national disaster medical system
NRMC	Northern Regional Medical Command
NTSB	National Transportation Safety Board
NVHA	Northern Virginia Hospital Alliance
NYARNG	New York Army National Guard
NYC	New York City

NYPD	New York Police Department
OAFME	Office of the Armed Forces Medical Examiner
ODCSPER	Office of the Deputy Chief of Staff for Personnel
OEM	Office of Emergency Management
OHMIS	Occupational Health Management Information System
OPSCENTER	operations center
ORI	operations readiness inspection
OTSG	Office of the Surgeon General
PAAR	psychological after-action reviews
PAM	pamphlet
PCB	polychlorinated biphenyls
PERS	Casualty Assistance/Prisoner of War and Missing in Action/Retired Activities Branch
PERSCOM	Personnel Command
PGI	Portland Group Incorporated [surveillance software program]
PPE	personal protective equipment
PRMC	Pacific Regional Medical Command
PROFIS	professional officer filler information system
RDML	rear admiral
RMC	regional medical commander
S-3	operations division
SAR	search and rescue
SERMC	South East Regional Medical Command
SMART	special medical augmentation response team
SMART-SM	special medical augmentation response team–stress management
SRMC	Southern Regional Medical Command
SUV	sports utility vehicle
TDI	Therapy Dogs, International
TOE	Table of Organization and Equipment
TRICARE	triple care [Army, Navy, Air Force]
TSG	the Surgeon General
USACHPPM	US Army Center for Health Promotion and Preventive Medicine
USAF	US Air Force
USANC	US Army Nurse Corps
USN	US Navy
USNS	US Navy Ship
USPHS	US Public Health Service
VA	Department of Veterans Affairs
WHS	Washington Headquarters Services
WMD	weapons of mass destruction
WRAMC	Walter Reed Army Medical Center

WRMC
WTC
WTCHAS

Western Regional Medical Command
World Trade Center
World Trade Center Health Assessment Survey

Index

A

- AFIP. *See* Armed Forces Institute of Pathology
- Air masks. *See* Personal protective equipment
- Air quality. *See* Environmental health and safety
- Alexandria, VA, fire and rescue department response, 21
- Allen, Dr. Yorke
 - emergency response working group and, 184–185
 - relief of Dr. Vafier by, 40
- AMEDD. *See* Army Medical Department
- American Burn Association, recommendation for the triage and transport of burn patients during disasters, 184
- American Psychological Association, Mental Health Community Response Coalition and, 151
- American Red Cross
 - Department of Mental Health Services, 141
 - Mental Health Community Response Coalition and, 151
 - mental health response, 130, 139, 141, 142, 150–151, 152
 - provision of food for rescue workers at ground zero in New York City, 165
 - transition to recovery period role, 36
 - workshop on mental health and mass violence and, 206–207
- Andrew Rader Army Health Clinic. *See* Rader Army Health Clinic
- Andrews Air Force Base, MD
 - environmental health and safety role, 110
 - Medical Center, mental health response and, 132
 - movement of remains to Dover Air Force Base and, 65, 68
- Anthrax contamination incident in Washington, DC, investigation of, 198–200
- Applied Environmental, Inc., role in environmental sampling, 109, 119
- Arlington County After-Action Report on the Response to the September 11 Terrorist Attack on the Pentagon*, 42, 67
- Arlington County Emergency Medical Services
 - after the all-clear and, 33

- command issues, 43
- communication issues, 40–41
- initial response efforts, 9, 18–19
- lack of coordination with DiLorenzo Tricare Health Clinic and, 28
- supply issues, 40–41
- Arlington County Fire Department
 - after the all-clear and, 31
 - environmental health and safety role, 110, 122, 123
 - initial response efforts, 18–19, 21
 - mass casualty planning and, 8
 - mental health response and, 130
 - recovery operations and, 65
 - safety issue meetings, 124–125
 - transition to recovery period and, 35–36
- Arlington Emergency Communications Center
 - evacuation helicopters and, 42
 - initial response to the attack and, 21
 - notification of area hospitals about the attack on the Pentagon, 81
 - shortcomings in disaster preparedness, 101
- Arlington Navy Annex clinic, 3
- Arlington Urgent Care Center, number of survivors treated, 96
- Armed Forces Institute of Pathology, role in the identification of remains, 68–76, 77
- Army Center for Health Promotion and Preventive Medicine
 - anthrax contamination incident in Washington, DC, and, 198–200
 - antiterrorism policy and procedure development, 197
 - chemical and biological warfare agent inspection, 121
 - coordination/command and control/communications issues, 122–123
 - decontamination efforts, 124
 - Deployment Environmental Surveillance Program, 200
 - drinking water issues, 121, 197
 - environmental health and safety role, 109–121
 - “Fact Sheet on Countering Terrorism of Water Supplies,” 197
 - Field Preventive Medicine Division, 200
 - Geographic Information System, 200
 - initial response, 114–116
 - Laboratory Consultants Office, 118–119
 - Laboratory Sciences Directorate, 118–119
 - lack of protective equipment, 115
 - location, 109
 - mental health response and, 132
 - mission, 110, 114
 - numbers, types, and results of samples collected during Pentagon sampling after 9/11,
 - using direct reading instruments (table), 120
 - organizational listing (table), 111–113
 - post-9/11 revisions and improvements to emergency preparedness, 197–201
 - radiological threat concerns, 121, 197–198
 - risk communication courses, 125
 - sampling analysis and results, 118–120
 - sampling efforts, 116–118
 - sampling objectives, 117

- special medical augmentation response (SMART) teams, 110, 114, 116, 121
- summary of environmental health and safety efforts, 125–126
- types of hazardous materials found, 119–120
- Army hospital liaisons
 - Mrs. Birdwell's experience with, 98–99
 - role of, 99–100
- Army Medical Command
 - agreement with the VA to provide medical support to New York National Guard troops, 174
 - biosurveillance activities, 188
 - contingency planning workshops, 193–194, 196
 - crisis action team, 61
 - data collection, 61–62
 - Federal Response Plan and, 52
 - joint exercises with FEMA, 195
 - mental health response and, 132
 - Pamphlet 525-1: *Medical Emergency Management Planning*, 187, 194, 195
 - peacetime operations and, 62–63
 - personal protective equipment improvements, 188
 - Plans Division, 187–189
 - post-9/11 revisions and improvements to emergency preparedness, 187–190
 - Regulation 525-4, 187–188
 - response to the attack on the Pentagon, 60–64
 - responses to Col. Wallace's recommendations for improvements in emergency preparedness, 190–197
 - standardization of decontamination equipment, 187
 - stockpiling of chemical agent kits, nerve agent antidotes, and protective suits and masks, 190
 - Web-based training courses, 193
- Army Medical Department
 - coordination between installations and medical facilities and, 189–190
 - emergency preparedness planning and, 188
 - hospital liaisons, 99
 - mental health response and, 152
 - operations officials' arrival at the Pentagon, 46
 - support for the World Trade Center disaster response, 176
- Army Medical Department Center and School
 - courses on emergency preparedness, 192
 - response to the attack on the Pentagon and, 62, 64
- Army Medical Research Institute of Chemical Defense, "The Management of Chemical and Biological Casualties" course, 103
- Army Medical Research Institute of Infectious Diseases
 - anthrax contamination incident and, 200
 - "The Management of Chemical and Biological Casualties" course, 103
- Army Office of the Surgeon General
 - identification of remains and, 72
 - inspection of medical commands for systemic issues, 194–195
 - response to the attack on the Pentagon and, 60–64
- Association of the U.S. Army Medical Symposium, 191
- Attack and rescue

- after the all-clear: west and south sides, 29–34
- background, 1–3
- burns as the highest percentage of injuries, 29
- color coding for triage areas, 23
- command and control issues, 43–47
- command changes, 37–38
- communications issues, 43–47
- continuation of the response: DiLorenzo Tricare Health Clinic, 27–29
- death toll, 28
- description and personal accounts of the attack and the immediate aftermath, 4–8
- DiLorenzo Tricare Health Clinic triage areas and parking zones (map), 11
- early triage and treatment sites (map), 20
- evacuation, triage, and treatment sites after the all-clear (map), 30
- evacuation issues, 41–42
- helicopters and, 23
- incident command system and, 19–20
- initial medical response: DiLorenzo Tricare Health Clinic, 8–16
- initial medical response: west and south sides, 16–27
- last triage, treatment, and rehabilitation sites (map), 35
- needs of recovery workers and, 34
- summary, 40–47
- supply issues, 40–41
- transition to recovery period, 34–40
- treatment of rescue workers, 28

B

- Barbian, Lenore, Disaster Mortuary Operational Response Team role, 76
- Baxter, Col. John, medical response and rescue efforts, 15–16, 27
- Bechtel Corporation, commercial safety program at ground zero, 170
- Benson, Sam, medical response and rescue efforts in New York City and, 158–159
- Bents, Marcie, death of, 152
- Bessette, Todd, medical response planning and, 62
- Birdwell, Lt. Col. Brian, rescue and treatment of, 14–16, 29, 85, 90, 92
- Blecksmith, Special Agent in Charge Bob, command issues and, 46
- Block, Dr. Lisa, environmental health and safety role, 123
- Bloesch, Special Agent Tara, recovery operations and, 64
- Blunt, Capt. Edward, medical response and rescue efforts, 19, 21, 27
- Bolling Air Force Base, MD, environmental health and safety role, 110
- Bolton, Col. Larry, Walter Reed Army Medical Center’s response to the attack on the Pentagon and, 54–55
- Bonzano, Battalion Chief James, relief of Chief White, 37
- Bowers, Dr. Ron, medical response and rescue efforts, 22
- Bowman, Ramona, role in Virginia Hospital Center’s treatment of survivors, 93, 94
- Brockmann, Maj. Kent, mental health needs of recovery workers in New York City and, 172
- Brown, Dr. Martin, Inova Alexandria Hospital’s response to the attack on the Pentagon and, 95
- Brown, Maj. Lorrie
 - after the all-clear and, 32

- command issues, 43
- continuation of the response and, 27–29
- initial response to the attack and, 8–16
- issuance of blue vests to medical personnel and volunteers, 11
- news of the attack and, 4
- Budinger, Lt. Col. David, medical response and rescue efforts in New York City and, 158
- Bukartek, Maj. John, MEDCOM’s response to the attack on the Pentagon and, 61, 62
- Bureau of Alcohol, Tobacco, and Firearms, incident command system and, 19–20
- Burgher, Maj. Floyd, medical response and rescue efforts in New York City and, 162, 170
- Burney, Col. Bruce, MEDCOM’s response to the attack on the Pentagon and, 61–62, 63, 189
- Bush, First Lady Laura
 - visit to Walter Reed Army Medical Center, 85
 - visit to Washington Hospital Center Burn Center, 91
- Bush, Pres. George
 - appointment of Dr. John Howard, 175
 - opening of the Pentagon to workers on September 12 and, 115–116
 - visit to Walter Reed Army Medical Center, 85
 - visit to Washington Hospital Center Burn Center, 91
- Butler, Chief Glen, medical response and rescue efforts, 27

C

- Cahill, Michael, medical response and rescue efforts, 17
- Capital Area Crisis Response Team, Mental Health Community Response Coalition and, 151
- Cardenus, Col. Steven, Tricare operations center and, 55
- Carlton, Lt. Gen. Paul K., Jr., medical response and rescue efforts, 12–14, 16, 27, 28
- CDC. *See* Centers for Disease Control and Prevention
- Centers for Disease Control and Prevention
 - emergency preparedness planning and, 188, 197
 - medical response and rescue efforts in New York City and, 163
- Chaplains
 - medical response and rescue efforts and, 22
 - mental health response, 130, 145, 152, 172
- ChemPro 100 chemical agent detectors, 188
- Cho, Lt. Col. John, transition to recovery period and, 39
- CHPPM. *See* Army Center for Health Promotion and Preventive Medicine
- CISDs. *See* Critical incident stress debriefings
- CNN television, description of attacks on the World Trade Center, 4
- Collins, Joseph, medical response planning and, 62
- Collison, Maj. John, assistance to Birdwell after his injury, 87
- Combs, Special Agent Chris, medical response and rescue efforts, 21, 46
- Command and control issues
 - coordination with EMS, 100
 - environmental health and safety sampling and air monitoring, 122–123
 - hospitals and clinics and, 100
 - initial attack and rescue period, 43–47
- Communications issues
 - continuation of the response and, 27, 28

- environmental health and safety sampling and air monitoring, 122–123
 - hospitals and clinics and, 81, 100–101
 - identification of remains, 72
 - initial response to the attack and, 9
 - lack of a regional coordinator, 101
 - lack of ambulances and, 28, 41
 - lack of two-way radios, 31
 - poor communication between DiLorenzo Tricare Health Clinic and Arlington County EMS teams, 44–45
 - regional disaster planning and, 101
 - summary of, 43–47
 - transition to recovery period, 36
 - use of runners, 32, 101
- Compton, Dr. Alan, medical response planning and, 62
- Connors, Col. Kevin, medical response and rescue efforts in New York City and, 156, 158
- Construction workers
- medical response and rescue efforts, 32
 - removal of concrete barriers, 38
- Continuation of the response
- Army Center for Health Promotion and Preventive Medicine, 197–201
 - Army Medical Command, 187–190
 - Army Medical Department, 190–197
 - civilian hospitals, 183–184
 - hospital alliances, 184–187
 - mental health issues, 206–207
 - military hospitals, 181–183
 - Pentagon Post-Disaster Health Assessment Survey, 201–202
 - summary, 207
 - World Trade Center Support Health Assessment Survey, 202–205
- Cook, Maj. David, chaplain role in New York City, 172
- Cornwell, Battalion Chief Bob, medical response and rescue efforts, 19
- Costco, provision of food and water for workers, 36
- Cozza, Lt. Col. Steve, mental health response and, 131
- Crandall, Lt. Col. Edward, mental health response and, 131
- Critical incident stress debriefings, description, 147
- Cruz-Santiago, Juan, treatment at Washington Hospital Center, 90
- Cummings, Lt. Col. Laurie, environmental health and safety role, 116

D

- Davison Army Airfield, VA, evacuation helicopters and, 42
- Daxon, Col. Eric, medical response to the attack on the Pentagon and, 63
- DeAtley, Craig, emergency response working group and, 184–185
- Defense Protective Service
- initial response role, 10
 - mass casualty planning and, 8
- Delaney, Kevin, environmental health and safety role, 114, 123, 197
- Deltuba, Maj. Janet, communication issues and, 36
- DeWitt Army Community Hospital

- behavioral health teams, 59
- mental health response and, 67, 130, 135
- number of survivors treated at, 85
- post-9/11 revisions and improvements to preparedness, 182–183
- response to the attack on the Pentagon, 3, 42, 54, 58–59, 76, 85–86
- types of injuries treated, 85
- DiLorenzo, Anthony, 3
- DiLorenzo Tricare Health Clinic
 - Action Response Teams, 8
 - ambulatory patients and, 10
 - anthrax contamination incident and, 200
 - continuation of the response and, 27–29
 - effect of the crash on, 8
 - emergency teams, 3
 - environmental health and safety role, 110, 115, 123, 125
 - initial medical response, 8–16
 - lack of coordination with EMS units and, 28
 - location and description, 2–3, 8
 - mass casualty plan and exercise, 8, 46, 52, 103
 - mental health response and, 130, 132, 133
 - mission, 3
 - Occupational Medicine Department, 115
 - omnicel supplies and, 27
 - resumption of operations on September 12, 40
 - subclinics, 3
 - triage areas and parking zones (map), 11
- District of Columbia Hospital Association
 - disaster preparedness and, 103
 - mass casualty exercise, 182
 - monthly meetings of EMS personnel, 184
- Dorn, Capt. Alan, medical response and rescue efforts, 19, 21, 27
- Dover Air Force Base, DE
 - authorization of teams to travel to, 57
 - data transmission problems, 73–74
 - identification of remains, 68–76
 - mental health response and, 147–148
 - movement of remains to, 65, 66–67
 - shortcomings in facilities, 73
- DPS. *See* Defense Protective Service
- Dunn, Col. Michael
 - biosurveillance and, 189
 - nuclear, biological, and chemical casualty care network and, 182
 - Walter Reed Army Medical Center’s response to the attack on the Pentagon and, 54, 59, 182
- Durm, Capt. William B., medical response and rescue efforts, 14, 27, 28

E

- 8th Medical Brigade, medical response and rescue efforts, 156
- 89th Medical Group, mental health response and, 148–149

- 11th Medical Group Flight Medicine Clinic
 - initial medical response and, 15–16
 - staff and role, 3, 8
- EnviroNics, ChemPro 100 chemical agent detectors and, 188
- Environmental health and safety
 - Army Center for Health Promotion and Preventive Medicine role, 109–121, 123–124, 125, 197–201
 - background, 109–110
 - challenges for industrial health personnel, 117–118
 - chemical and biological warfare agent inspection, 121
 - coordination/command and control/communications issues, 122–123
 - decontamination efforts, 124, 187
 - drinking water concerns, 121
 - Environmental Protection Agency role, 118, 121–122, 123
 - Federal Bureau of Investigation role, 110, 116–117, 121, 122, 123
 - initial response, 114–116
 - New York City attack site and, 160–161, 163–171, 174–176, 177
 - numbers, types, and results of samples collected during Pentagon sampling after 9/11
 - by the U.S. Army Center for Health Promotion and Preventive Medicine using direct reading instruments (table), 120
 - potential dangers of the damaged Pentagon, 109
 - protective equipment needs, 115, 125
 - radiation detection, 121
 - sampling analysis and results, 118–120
 - sampling efforts, 116–118
 - site safety and security issues, 124–125
 - summary of issues, 125–126
 - Walter Reed Army Medical Center role, 110, 115, 125
 - Washington Headquarters Services role, 109–121, 125
- EPA. *See* U.S. Environmental Protection Agency
- Erkenbrack, Lt. Col. Adrian
 - medical response and rescue efforts, 25–26
 - personal account of the attack and rescue efforts, 7
- Evacuation issues
 - after the all-clear, 34
 - helicopters and, 41, 42
 - lack of ambulances and, 28, 41–42
 - relocation to the tunnel area, 23–24
 - rumors of further attacks and, 23
 - summary of, 41–42
- “Expert Consensus on Mass Violence and Intervention,” 137

F

- “Fact Sheet on Countering Terrorism of Water Supplies,” 197
- Fairfax County, VA
 - fire and rescue department response to the attack, 21
 - urban search and rescue team, 37–38, 64
- Fairfax County Emergency Medical Services, after the all-clear and, 33

- FBI. *See* Federal Bureau of Investigation
- Federal Bureau of Investigation
- Disaster Mortuary Operational Response Team, 76
 - environmental health and safety role, 110, 116–117, 121, 122, 123, 125
 - identification of remains and, 68, 71, 73, 76
 - incident command system and, 19–20
 - Joint Operations Command, 39, 40
 - mass casualty planning and, 8
 - medical response and rescue efforts in New York City and, 163
 - recovery operations and, 64–67
 - reports of further attacks and, 23
- Federal Emergency Management Agency
- assistance to civilians, 144
 - environmental health and safety role, 110
 - exit routes to remove victims, 38
 - incident command system and, 19–20
 - joint exercises with MEDCOM, 195
 - mass casualty planning and, 8
 - medical response and rescue efforts in New York City and, 156, 157, 163, 166, 170–171, 174
 - Pentagon Family Assistance Center and, 139, 142, 144
 - recovery operations and, 64–67
 - Virginia Task Force I, 38
- Federal Emergency Response Plan
- agencies involved, 52
 - attack on the Pentagon and, 52, 63
 - incident command system, 181
- Feerick, Capt. John P., medical response and rescue efforts, 25, 30, 33–34, 36–37, 38–40
- Felicio, Lt. Col. John, medical response and rescue efforts, 10, 40, 44–45, 58
- FEMA. *See* Federal Emergency Management Agency
- Fierro, Dr. Marcella, recovery operations and, 65
- 54th Quartermaster Company, recovery operations and, 64, 67
- 53d Troop Command, 204th Engineer Battalion, 161
- Flight Medicine Clinic. *See* 11th Medical Group Flight Medicine Clinic
- Force Health Protection Conference, 191
- Fort Belvoir, VA. *See* DeWitt Army Community Hospital
- Fort Belvoir Mental Health Service, mental health response and, 132
- Fort Lee, VA, Mortuary Affairs unit, recovery operations and, 65, 67
- Fort McNair clinic, 3
- Fort Monmouth, NJ
- behavioral health staff, 56
 - medical response and rescue efforts, 156
 - Patterson Army Health Clinic, 58
- Fort Myer, VA. *See also* Rader Army Health Clinic
- Fire Department rescue efforts, 7–8, 19
 - Joint Operations Center, 110, 123
- Fort Sam Houston, TX, response to the attack on the Pentagon and, 62, 64
- 42d Infantry Division
- Aviation Brigade, 161

- Joint Task Force 42, 161
- medical response and rescue efforts in New York City and, 161–162, 170
- 1st Battalion, 101st Cavalry, 161; 69th Infantry, 161
- 27th Infantry Brigade, 161
- Frost, Navy Reserve Capt. Stephen, medical response and rescue efforts, 25, 30, 33

G

- Ganci, Peter, death of, 156
- Geiling, Col. James
 - emergency preparedness teams and, 3
 - mental health response and, 133
 - re-opening of DiLorenzo Tricare Health Clinic on September 12, 38
 - transition to recovery period and, 38–39
 - work at Walter Reed's intensive care unit, 4
- Geitz, Staff Sgt. Wayne, medical response and rescue efforts in New York City and, 158
- George Washington University Hospital, treatment of casualties, 55, 96, 98
- Georgetown University Hospital, treatment of Birdwell after the attack on the Pentagon, 16, 29, 87–88
- Gerber, Col. Fred
 - Directorate of Health Care Operations role, 60
 - Walter Reed Army Medical Center's response to the attack on the Pentagon and, 58, 64
- Gibbs, Capt. Chuck, medical response and rescue efforts, 19, 23
- Gilroy, Dennis, rescue efforts, 7–8
- Glidewell, Capt. Jennifer, medical response and rescue efforts, 9, 10, 27, 28
- Goran, Col. Tim, medical response planning and, 62
- Graves Registration and Mortuary Affairs personnel, recovery operations and, 64
- Gray, Randy, transition to recovery period and, 34
- Gum, Col. Robert, medical response and rescue efforts in New York City and, 168–170, 176–177

H

- Hammer, Dr. Mike, medical response and rescue efforts, 22
- Hanfling, Dr. Daniel
 - crisis response center coordination, 95
 - Northern Virginia Hospital Alliance and, 184–186
 - Virginia Task Force I role, 38, 96
- Harrahill, Cdr. Mary, medical response and rescue efforts in New York City and, 158
- Hatton, Ronald, coordination between installations and medical facilities and, 189
- Hawkins, Staff Sgt. Charles, medical response and rescue efforts, 15–16, 28
- Headquarters response and recovery operations
 - Armed Forces Institute of Pathology, 68–76
 - Army Medical Command, 60–64
 - Army Office of the Surgeon General, 60–64
 - background, 51–52
 - DeWitt Army Community Hospital, 58–59
 - North Atlantic Regional Medical Command, 52–58

- Office of the Armed Forces Medical Examiner, 68–76
- Rader Army Health Clinic, 59–60
- recovery operations, 64–67
- Somerset, PA, operations, 76
- summary, 76–77
- Walter Reed Army Medical Center, 52–58
- Hebron, Lt. Col. Bernard, MEDCOM disaster preparedness and, 187
- Henson, Jerry, rescue of, 13–14
- Herr, David, medical response and rescue efforts, 27
- Hook, Luticia, treatment at Washington Hospital Center, 90
- Horoho, Lt. Col. Patricia
 - after the all-clear and, 30–33
 - background, 16–17
 - initial medical response and rescue efforts, 16–25
 - personal characteristics, 17
 - transition to recovery period and, 34–40, 65
- Hospitals and clinics. *See also specific institutions*
 - Army hospital liaisons, 98–100
 - civilian medical facilities, 87–98, 183–184
 - command and control issues, 100, 181–182
 - communications issues, 100–101
 - disaster plans, preparedness, and training issues, 102–104, 181–187
 - disposition of 9/11 Pentagon patients (table), 82
 - emergency operations center activation and preparation to receive casualties, 81–82
 - hospital alliances, 184–187
 - inter-institution communication, 81
 - mental health liaisons with civilian hospitals, 144
 - military medical facilities, 83–87, 181–183, 186–187
 - number of DoD personnel and civilians killed in the attack on the Pentagon, 81
 - number of injured survivors who sought treatment, 81
 - personnel and staffing issues, 101–102
 - post-9/11 revisions and improvements, 181–187
 - security issues, 102
 - supply issues, 102
- Howard, Dr. John, air mask lawsuit and, 175
- Howard University Hospital, support role, 55
- Huleatt, Col. William, mental health response and, 131, 139–144

I

- Ibanaz, Capt. Joseph, medical response and rescue efforts, 10, 44
- Inova Alexandria Hospital
 - disaster plan activation, 94–95
 - number of survivors treated, 95
 - treatment of casualties, 42, 55, 94–95
 - types of injuries, 95
- Inova Fairfax Hospital
 - disaster procedure activation, 95
 - evacuation helicopters and, 42, 96

Northern Virginia Hospital Alliance and, 185–186
number of survivors treated, 95
provision of supplies and medical equipment, 41
treatment of casualties, 21, 42, 55, 95–96
types of injuries, 95
Inova HealthPlex Emergency Care Center, treatment of survivors, 96
Integra, supply of replacement skin for Washington Hospital Center and, 90
Intrepido, Maj. Anthony, environmental health and safety role, 114–115

J

Jackson, Maj. Gen. James T.
medical response and rescue efforts, 21, 34, 46
visit to the Pentagon during recovery efforts, 124
James, Lt. Col. Larry, mental health response and, 131
Jefferies, Maj. Harry, medical response and rescue efforts in New York City and, 158
Jeng, Dr. James, treatment of burn victims, 89–90, 92
Jester, John, transition to recovery period and, 34
Johns Hopkins University Hospital, support role, 55
Johnson, Technical Sgt. Michael E., medical response and rescue efforts, 15–16
Jordan, Dr. Marion H.
proposal for the distribution of burn casualties in mass casualty situations, 184
treatment of Birdwell after the attack on the Pentagon, 87–88
treatment of burn victims, 89–90, 92

K

Kaiser, Maj. Stephen, medical response and rescue efforts in New York City and, 158
Kaminski, Col. Michael
communications issues, 44–45, 46
medical response and rescue efforts, 10
Keesler Air Force Base, MS
environmental health and safety role, 110
mental health response and, 148–149
Keller Army Community Hospital, treatment concerns, 56–57
Kelley, Racquel, treatment at Washington Hospital Center, 90
King, Maj. David, treatment at Washington Hospital Center, 90
Kozloff, Kenneth, Inova Alexandria Hospital's response to the attack on the Pentagon, 95
Kristo, Dr. David, hospital liaison role, 99
Kurtz, Louise, treatment at Washington Hospital Center, 90

L

Ladouceur, Col. Berthony, Walter Reed Army Medical Center's response to the attack on the Pentagon and, 54
Lirette, MSgt. Paul, medical response and rescue efforts, 15–16
Lucci, Lt. Col. Edward
District of Columbia Hospital Association and, 182
evacuation and stabilization of patients and, 28, 55–56, 94

views on a potential threat to the DC Metro system, 103
 Lynch, Col. Mike, mental health response and, 131

M

Malcolm Grow Air Force Medical Center, treatment of casualties, 55
 Mallon, Col. Tim
 environmental health and safety role, 114, 116, 169
 post-9/11 improvements in disaster preparedness and, 189
 Malone, Col. Eileen
 post-9/11 improvements in emergency preparedness and, 182–183
 role in DeWitt Army Community Hospital’s response to the attack on the Pentagon,
 58–59, 85–86, 99
 Martinez-Lopez, Maj. Gen. Lester, environmental health and safety role, 109–121, 169
 Maryland National Guard, supplies from, 57
 Mateczun, Rear Adm. John, medical response and rescue efforts, 14, 28, 39
 Maude, Lt. Gen. Timothy J., death of, 136
 McDonald’s, provision of food and water for workers, 36
 McGill, Capt. Daniel, Walter Reed Army Medical Center’s response to the attack on the
 Pentagon and, 54, 58
 McGovern, Lt. Col. Joanne, medical response planning and, 63
 McKinney, Kelly R., Whitman’s public announcement about the safety of the air and
 drinking water near the World Trade Center and, 167–168
 McKown, Dr. Douglas, medical response and rescue efforts in New York City and, 171
 McVeigh, Lt. Col. Bruce, Health Care Operations role, 60–61
 MEDCOM. *See* Army Medical Command
 Medical Command Regulation 525-4, 187–188
Medical Emergency Management Planning (Pamphlet 525-1), 187, 194, 195
 MedStar evacuation helicopters, 42
 Mental Health Community Response Coalition, establishment and activities of, 151
 Mental health response
 Air Force mental health teams, 129, 148–149
 “burnout” of mental health workers and, 136
 challenges, 137
 chaplains and, 130, 145
 community mental health in the National Capital Region, 150–151
 coping strategies, 148
 critical incident stress debriefings, 147
 execution of the response, 133–136
 ground zero workers in New York City and, 171–172
 group debriefings, 134
 groups involved, 129–130
 “hotline conference calls” and, 132
 initial response and planning, 130–132
 intervention techniques, 133–134
 levels of treatment, 132
 liaisons with civilian hospitals, 144
 Mental Health Community Response Coalition, 151
 mental health team deployment, 134–136
 military chaplains, 130, 145

- Navy mental health teams, 129, 149–150
- Office of the Deputy Chief of Staff of the Army for Personnel, 136–138
- Operation Solace, 129, 131, 133, 149
- Pentagon employees and, 135–136
- Pentagon Family Assistance Center, 129, 133, 139–144
- persons who handled human remains and, 145–148
- Project Heartland effort after the Oklahoma City bombing response and, 132
- recovery workers and, 135
- special medical augmentation response team–stress management (SMART-SM), 129, 130–132, 134–136
- structured debriefings, 133–134
- summary of efforts, 152
- “therapy by walking around,” 134, 206–207
- therapy dogs, 130, 142–144
- workshop on mental health and mass violence, 206–207
- Metropolitan Washington Airports Authority
 - incident command system and, 19–20
 - initial response to the attack, 21
- Military District of Washington
 - activation of, 34
 - coordination with Walter Reed Army Medical Center on gate security, 55
 - incident command system and, 19–20
 - recovery operations and, 67, 77
 - updating of radio systems, 182
- Milliken, Lt. Col. Chuck, mental health response and, 131–132
- Mitchell, Col. Glenn, MEDCOM’s response to the attack on the Pentagon and, 61, 62–63
- Molofsky, Sgt. Maj. Celia, hospital liaison role, 100
- Monette, Ted, medical response and rescue efforts, 156
- Montgomery County, MD, urban search and rescue team, 64
- Moody, Sheila, personal account of the attack and rescue efforts, 5–7
- Moore, Maj. Mike, medical response and rescue efforts, 23
- Morrow, David, environmental health and safety role, 118
- Mount Sinai Center for Occupational and Environmental Medicine, pulmonary illnesses of ground zero workers research, 175–176

N

- Nance, Malcolm, medical response and rescue efforts, 17–18, 21–22
- NARMC. *See* North Atlantic Regional Medical Command
- National Guard
 - environmental health and safety role at the Pentagon attack site, 110
 - medical aid stations for, 171, 177
 - role in New York City, 156, 161–162, 168, 169–170, 174, 176
- National Institute for Occupational Safety and Health
 - anthrax contamination incident and, 200
 - medical response and rescue efforts in New York City and, 163
- National Mass Fatalities Institute, Mental Health Community Response Coalition and, 151
- National Medical Response Team, incident command system and, 19–20
- National Naval Medical Center

- environmental health and safety role, 110
- mental health response and, 129, 132, 149–150
- treatment of casualties, 55
- Naval Medical Research Center, Biological Defense Research Directorate Operations, 121
- Navy dental clinic, description and role, 3, 8
- Nelson-Firing, Lisa, therapy dogs and, 144
- New York Army National Guard. *See* 42d Infantry Division; National Guard
- New York City
 - Army medical liaison and, 158–163, 176
 - combat stress control teams and, 171–172
 - description of the attack on and the destruction of the World Trade Center, 155
 - environmental health and safety issues, 160–162, 163–171, 177
 - food safety issues, 164, 165
 - guidelines to help doctors diagnose illnesses related to 9/11 toxic substances, 175
 - immunizations for tetanus and hepatitis B for ground zero workers, 168
 - initial response, 155–158
 - lawsuit involving air mask usage at ground zero, 174–176
 - Medical Examiner’s Office and, 170–171
 - medical treatment issues, 171–174
 - summary of issues, 176–177
 - treatment of National Guard troops and volunteers at ground zero, 171–174
 - U.S. Air Force role, 174
 - USNS *Comfort* and, 157–158, 162–163, 173, 176
 - World Trade Center Support Health Assessment Survey, 202–205
- New York City Fire Department, study of lung capacity loss among firefighters at ground zero, 175
- New York City Health Department, briefing about hazardous conditions at ground zero, 161
- New York State Environmental Protection Department, medical response and rescue efforts in New York City and, 163
- New York State Health Department, statistics on deaths of ground zero workers, 176
- Newman, David M., air mask lawsuit and, 175
- Nguyen, Col. (Ret.) Duong, medical response and rescue efforts, 22, 25, 30
- Nigro, Daniel, medical response and rescue efforts, 156
- 9/11 Commission Report*, 42
- North Atlantic Regional Medical Command
 - description and role of, 51
 - hospital liaisons, 99
 - medical response and rescue efforts in New York City and, 172, 176
 - response to the attack on the Pentagon, 52–58
 - special medical augmentation response team–stress management (SMART-SM), 129, 130–132, 134–136
- Northern Virginia Community Hospital, treatment of survivors, 96
- Northern Virginia Hospital Alliance, description and role of, 185–186
- NVHA. *See* Northern Virginia Hospital Alliance

O

OAFME. *See* Office of the Armed Forces Medical Examiner

- ODCSPER. *See* Office of the Deputy Chief of Staff for Personnel [US Army]
Office of the Armed Forces Medical Examiner
 identification of remains and, 68–76, 77
 recovery operations and, 65
Office of the Assistant Secretary of Defense for Health Affairs, mental health response and, 132, 133
Office of the Deputy Chief of Staff for Personnel [US Army]
 challenges of mental health staff, 136–137
 desensitizing tours for workers, 137–138
 loss of colleagues, 136–137
 mental health response and, 136–138
 “psychological after-action reviews,” 137
 types of mental health services offered to, 137
Office of the Surgeon General. *See* Army Office of the Surgeon General
Ogletree, Natalie, assistance to Birdwell after his injury, 87
Operation Solace, 129, 130, 133, 149
Opio, Col. (Ret.) Roger, MEDCOM’s response to the attack on the Pentagon and, 61
Orman, Col. David, mental health response and, 131
OSHA. *See* U.S. Occupational Safety and Health Administration
OTSG. *See* Army Office of the Surgeon General

P

- PAARs. *See* Psychological after-action reviews
Pamphlet 525-1: *Medical Emergency Management Planning*, 187, 194, 195
Pataki, Gov. George, mobilization of National Guard units, 156
Patterson, Col. Virgil, mental health response and, 131
Peake, Lt. Gen. James B.
 initial response to the terrorist attacks and, 51–52, 56, 58
 memorandum concerning improvements to MEDCOM’s emergency preparedness, 188
 Office of the Surgeon General’s response to the attack on the Pentagon and, 60–64
 official photograph, 53
 Operation Solace and, 131
 video teleconferences, 56, 60, 61
 visit to the attack site, 38
 visit to Washington Hospital Center Burn Center, 91–92, 98
Peetoom, Sue, therapy dogs and, 142
Pentagon. *See also* South side of the Pentagon; West side of the Pentagon
 child care center and developmental school, 10
 medical facilities serving occupants of, 2–3
 modernization program, 2
 original structure, 1
 physical description, 1–2
 resumption of operations on September 12, 40
 Site R treatment of casualties, 56, 57, 58
Pentagon Family Assistance Center
 assistance to children and adolescents, 140–141
 assistance to civilians, 141–142
 groups targeted for intervention, 140

- Mental Health Community Response Coalition and, 151
- mental health response and, 129, 133, 139–144
- Sheraton Hotel location, 139
- staffing of, 139
- therapy dogs and, 142–144
- value of, 152
- visits to the impact area for families, 142
- Pentagon Officers' Athletic Club, casualty collection point, 27–28
- Pentagon Post-Disaster Health Assessment Survey, description and results, 162, 201–202
- Pentagon Renovation Program Safety Office, role in environmental monitoring, 109
- Peoples, Lt. Col. George, transition to recovery period and, 39
- Personal protective equipment
 - air mask usage at ground zero in New York City, 160–162, 164–168, 174–176, 177
 - basic needs, 115, 125
 - difficulty of getting supplies, 169, 174
 - post-9/11 supplies of, 188
 - recovery operations at the Pentagon and, 66
- Poropatich, Dr. Ronald, hospital liaison role, 99
- Powell, Cdr. Craig, medical response and rescue efforts, 13–14
- Powers, Army Chaplain Robert, mental health response and, 145
- PPE. *See* Personal protective equipment
- Psychological after-action reviews, description, 137

R

- Rader Army Health Clinic
 - after-action report, 45
 - behavioral health teams, 60
 - location and description, 3, 59
 - number of survivors treated at, 86
 - response to the attack on the Pentagon, 22–23, 54, 59–60, 76, 86–87
 - support sent to the Pentagon, 87
- Rafey, Dr. Ernie, medical response and rescue efforts, 22
- Recovery operations
 - agencies involved, 64–65
 - anxiety of workers, 145–146
 - Armed Forces Institute of Pathology role, 68–76
 - body bags for, 64
 - body removal process, 66–67
 - cadaver identification methods, 69–70
 - command and control issues, 71–72
 - communications issues, 72
 - critical incident stress debriefings, 147
 - dental teams, 64
 - jurisdiction challenges, 65
 - media and, 76
 - mental health of workers handling remains and, 67
 - mental health services for persons handling human remains, 145–148
 - movement of remains planning, 65
 - Office of the Armed Forces Medical Examiner role, 68–76

- physicians' role, 145–146
- protective clothing for, 66
- 3d Infantry Regiment (the Old Guard) and, 34, 60, 64–67
- transition to recovery period, 34–40
- Red Cross. *See* American Red Cross
- Resource Coordinating Committee of Oklahoma City, Mental Health Community Response Coalition and, 151
- Respirators. *See* Personal protective equipment
- Reyes, Capt. Ricardo, environmental health and safety role, 121
- Ritchie, Lt. Col. Elspeth, mental health response and, 132
- Rivera, Col. Walter, medical response and rescue efforts in New York City and, 162, 168, 169
- Robichaux, Col. Rene, mental health response and, 131
- Rolon, MSgt. Roberto, environmental health and safety role, 117
- Ronald Reagan Washington National Airport Fire Department
 - incident command system and, 19–20
 - initial response to the attack, 21
- Root, CWO4 William, Thurman's attempt to rescue, 83
- Rosenberg, Sgt. Matthew, medical response and rescue efforts, 9, 10, 12–14, 27, 28
- Roser, Col. John Frederick, Jr.
 - medical response and rescue efforts, 22
 - Rader Army Health Clinic's response to the attack on the Pentagon and, 59, 60, 101
- Rumsfeld, Defense Secretary Donald
 - medical response and rescue efforts, 17
 - opening of the Pentagon to workers on September 12 and, 109, 115–116
- Ruzek, Josef I., mental health response and, 141

S

- Safety. *See* Environmental health and safety; Personal protective equipment
- Salvation Army
 - mental health response, 130
 - provision of food for rescue workers at ground zero in New York City, 165
 - role in the transition to recovery period, 36
- San Antonio, TX, MEDCOM, response to the attack on the Pentagon and, 61–64, 77
- Schaeffer, Lt. Kevin
 - treatment at Walter Reed Army Medical Center, 84
 - treatment at Washington Hospital Center, 90
- Schiek, Maj. William, Health Care Operations role, 60–61
- Schwartz, Asst. Fire Chief James
 - medical response and rescue efforts, 19, 21, 23, 25, 34, 37, 39, 100–101
 - opening of the Pentagon to workers on September 12 and, 115–116
- Security issues
 - environmental sampling and, 117, 124–125
 - hospitals and clinics, 102
- Sepulveda, MSgt. Noel
 - medical response and rescue efforts, 24–25, 34, 35, 36–37, 65
 - personal account of the attack on the Pentagon, 4–5
- Sherman, Antoinette, death of from burn injuries, 90
- Sinclair, Wayne, treatment at Washington Hospital Center, 90

- Skipper, Mark, rescue efforts, 7–8
- Skummer, Lawrence, medical response and rescue efforts, 15–16
- Sledzik, Paul, Disaster Mortuary Operational Response Team role, 76
- SMART. *See* Special medical augmentation response teams
- SMART-SM. *See* Special medical augmentation response team–stress management
- Smith, Battalion Fire Chief Jerome, medical response and rescue efforts, 9, 19
- Smith, Col. Paul, environmental health and safety role, 114, 116, 169, 189
- Smith & Nephew Corp., supply of replacement skin for Washington Hospital Center and, 90
- Smithsonian Institution, identification of remains and, 68, 72
- Social Security Administration, Pentagon Family Assistance Center and, 139
- Somerset, PA
 - crash of United Airlines Flight 93, 23
 - identification of remains and, 68, 76
- Sorenson, Pfc. Kristopher, medical response and rescue efforts, 12
- South side of the Pentagon
 - after the all-clear, 29–34
 - initial medical response and rescue efforts, 16–27
- Special medical augmentation response (SMART) teams, environmental health and safety role, 110, 114, 116, 121, 187, 188
- Special medical augmentation response team–stress management (SMART-SM), mental health role, 129, 130–132, 134–136
- Spruell, Evandra, medical response and rescue efforts, 15–16
- Staffing issues, hospitals and clinics, 101–102
- State Defense Emergency Act, 175
- Stokes, Col. James, mental health response and, 131, 132
- Strickland, Sgt. Maj. Larry L., death of, 136
- Supply issues
 - DiLorenzo Tricare Health Clinic omniceles and, 27
 - hospitals and clinics and, 102
 - morphine shortage, 27, 40
 - personal protective equipment, 169, 174, 188
 - shortage of two-way radios, 31, 40, 43
 - summary of, 40–41
 - tunnel triage area and, 25

T

- Therapy dogs, mental health response and, 130, 142–144
- Therapy Dogs International, Pentagon Family Assistance Center and, 142–144
- Thomas, Katherine A., condition updates on patients, 99
- 3d Infantry Regiment (the Old Guard)
 - mental health efforts targeting, 135
 - observation of for possible health threats, 117
 - recovery operations and, 34, 60, 64–67, 77
- 3M Corporation, provision of protective equipment for ground zero workers, 169
- 344th Combat Support Hospital Medical Brigade, medical response and rescue efforts, 156
- Thurman, Maj. John Lewis, personal account of the attack on the Pentagon and rescue efforts, 83–84

- Tilly, MSgt. Jack, recovery operations and, 64
- Timboe, Maj. Gen. Harold
- Col. Wallace's recommendations for improvements in emergency preparedness and, 190
 - hospital liaisons and, 99
 - initial response to the terrorist attacks and, 51–52
 - medical response teams for New York City, 155–156
 - official photograph, 53
 - SMART-SM team activation, 130
 - visit to the attack site, 38
 - visit to Washington Hospital Center Burn Center, 91
 - Walter Reed Army Medical Center's response to the attack on the Pentagon and, 52–58, 76
- Trainor, Gloria J., mental health needs of recovery workers in New York City and, 172
- Tricare Northeast Region One, hospital liaisons, 99
- Tubb, Col. Richard, call to Walter Reed Army Medical Center about Pres. Bush's visit, 85
- 249th Engineer Battalion, medical response and rescue efforts in New York City and, 161

U

- Uniformed Services University of the Health Sciences
- Department of Preventive Medicine and Biometrics, 118
 - environmental health and safety role, 110, 118
- Urbana, Col. Craig, medical response and rescue efforts, 34
- U.S. Air Force
- 89th Medical Group, 148–149
 - 11th Medical Group Flight Medicine Clinic, 3
 - mental health response, 129, 134–136, 148–149
 - Pentagon Family Assistance Center and, 139
 - support for the medical response and rescue efforts in New York City, 174
- U.S. Army. *See also specific entities*
- Institute of Chemical Defense Research, 188
 - mental health outreach efforts, 131, 136
 - Operation Solace, 129, 130, 133, 149
- U.S. Army Central Identification Laboratory, identification of remains and, 68
- U.S. Army Corps of Engineers, 249th Engineer Battalion, 161
- U.S. Army Reserve 8th Medical Brigade, activation of, 57
- U.S. Department of Defense. *See also* Washington Headquarters Services
- Deployment Health Clinical Center, 134
 - Federal Response Plan and, 52
 - instructions on coordination between military installations and medical facilities and, 189–190
 - MEDCOM's response and, 61
 - medical response and rescue efforts in New York City and, 156
 - Pentagon Family Assistance Center opening, 139
 - Pentagon modernization program, 2
 - Site R activation, 56
 - workshop on mental health and mass violence and, 206–207
- U.S. Department of Health and Human Services
- decontamination efforts and, 124

- national medical response team task forces, 65
- Substance Abuse and Mental Health Agency, 142
- workshop on mental health and mass violence and, 206–207
- U.S. Department of Housing and Urban Development, mold standards, 120
- U.S. Department of Justice
 - Pentagon Family Assistance Center and, 139
 - workshop on mental health and mass violence and, 206–207
- U.S. Department of the Army, hospital liaisons, 99
- U.S. Department of Veterans Affairs
 - brief education and support model, 141
 - mental health response, 130
 - National Center for Post-Traumatic Stress Disorder, 132, 141
 - Pentagon Family Assistance Center and, 139
 - screening of ground zero workers exposed to human remains, 168
 - workshop on mental health and mass violence and, 206–207
- U.S. Environmental Protection Agency
 - anthrax contamination incident and, 200
 - Chemical Emergency Planning and Preparedness Office, 200
 - environmental health and safety role at the Pentagon attack site, 110, 118, 121–122, 125
 - medical response and rescue efforts in New York City and, 163, 164
- U.S. Navy
 - Casualty Assistance/Prisoner of War and Missing in Action/Retired Activities Branch, 150
 - mental health response, 129, 134–136, 149–150
- U.S. Occupational Safety and Health Administration
 - anthrax contamination incident and, 200
 - environmental health and safety role at the Pentagon attack site, 110
 - medical response and rescue efforts in New York City and, 163, 170
- U.S. Park Police, medical evacuation helicopters and, 41, 42
- U.S. Postal Service, anthrax contamination incident, 200
- U.S. Public Health Service
 - Federal Response Plan and, 52
 - medical response and rescue efforts in New York City and, 157, 159, 163, 164
- USNS *Comfort*
 - New York City medical response and rescue efforts and, 157–158, 162–163, 173, 176
 - role in recovery efforts at the Pentagon, 58, 64

V

- VA. *See* U.S. Department of Veterans Affairs
- Vafier, Dr. Jim, medical response and rescue efforts, 23–25, 27, 30–40, 43, 46, 47, 65
- Van Alstyne, Lt. Gen. John
 - medical response and rescue efforts, 18, 34
 - Pentagon Family Assistance Center leadership, 139–144
- Viera, Lt. Col. Steven, mental health response and, 133
- Virginia Beach, VA, urban search and rescue team, 64
- Virginia Department of Emergency Management
 - environmental health and safety role, 110
 - incident command system and, 19–20

- Virginia Department of Environmental Quality, environmental health and safety role, 110, 122
- Virginia Hospital Center–Arlington
 - hospital liaisons and, 99
 - number of survivors treated, 94
 - post-9/11 improvements in emergency preparedness, 183–184
 - provision of supplies and medical equipment and, 41
 - treatment of casualties, 21, 29, 42, 55, 92–94
 - types of injuries treated, 94
- Virginia State Police, incident command system and, 19–20
- Volunteers. *See also specific organizations*
 - environmental health and safety role, 114–115
 - initial response and, 10–12, 14, 17–19, 21–22, 25, 46
 - mental health response, 130, 141, 152
 - Pentagon Family Assistance Center and, 139

W

- Wagner, Capt. Glenn N., identification of remains and, 68, 71–72, 75
- Wagner, Lt. Col. Karen, Thurman’s attempt to rescue, 83
- Waldrep, Lt. Col. Douglas, medical response and, 137
- Wallace, Alan, rescue efforts, 7–8
- Wallace, Col. Stephen C.
 - appointment by Timboe as the Army’s official medical liaison in New York City, 156
 - career and service of, 158
 - environmental health and safety issues at ground zero and, 163–170, 176
 - first impressions of the destruction of the World Trade Center, 159–160
 - health briefings to National Guard troops, 156
 - initial medical response in New York City and, 158–163, 176
 - Medical Examiner’s Office and, 170–171
 - recommendations for improvements in emergency preparedness, 190–197
- Walter Reed Army Medical Center
 - anthrax contamination incident in Washington, DC, investigation and, 200
 - Center for Health Promotion and Preventive Medicine, 57, 109–121, 123–125
 - chaplains assigned to the stress management team, 145
 - chemical-biological augmentation team, 56
 - chemical decontamination program, 182
 - civilian survivors treated at, 84
 - command issues, 181–182
 - communications issues, 81, 100
 - coordination with the Military District of Washington, 55
 - emergency planning, 52, 54
 - environmental health and safety role, 110, 115, 125
 - Federal Response Plan and, 181–182
 - “The Management of Chemical and Biological Casualties” course, 103
 - mass casualty exercise, 182
 - Mental Health Department, 99
 - mental health efforts, 57, 67, 129, 130–132, 134–136
 - multiple phone line availability, 54
 - number of survivors treated at, 84

- on-site care for firefighters and recovery and morgue personnel, 57
- Patient Administration Department, 55
- Pentagon Family Assistance Center and, 139
- post-9/11 revisions and improvements to preparedness, 181–182
- Psychiatric Consultation Liaison Service, 144
- readiness training for military and civilian healthcare workers, 182
- “Red Book” emergency management procedures handbook, 182
- response to the attack on the Pentagon, 52–58, 76, 83–85
- Social Work Department, 144
- support center for families of patients, 85
- trauma support teams, 57
- types of injuries, 84–85
- visit from Pres. George Bush and First Lady Laura Bush, 85
- Washington, DC, and Virginia Disaster Response Network, Mental Health Community Response Coalition and, 151
- Washington, DC, fire and police departments
 - adoption of emergency codes from, 182
 - incident command system and, 19–20
 - initial response to the attack, 21
- Washington Headquarters Services
 - environmental health and safety role, 109–121, 123, 125
 - mass casualty planning and, 8
 - responsibilities, 109
 - Safety and Environmental Management Branch, 109
- Washington Hospital Center
 - Burn Center, 89–91, 99, 184
 - hospital liaisons and, 99
 - Mrs. Birdwell’s experience at, 98–99
 - number of survivors treated at, 88
 - post-9/11 improvements in emergency preparedness, 184
 - replacement skin supplies and, 90, 102
 - treatment of casualties, 21, 55
 - types of injuries treated, 88
 - visit from Gen. Peake, 91, 98
 - visit from Gen. Timboe, 91
 - visit from Pres. George Bush and First Lady Laura Bush, 91
- Weathers, Maj. Kent, medical response and rescue efforts, 22
- Webster, Brig. Gen. William G., medical response and rescue efforts, 17
- Weese, Dr. Coleen, medical response and rescue efforts in New York City and, 169–170
- West side of the Pentagon
 - after the all-clear, 29–34
 - initial medical response and rescue efforts, 16–27
- Wheldon, Maj. Gen. George, medical response and rescue efforts, 21, 32, 34
- White, Arlington County Assistant Chief for Technical Support John, medical response and rescue efforts, 21, 24, 26–27, 31, 35, 37
- Whitman, Christine, public announcement about the safety of the air and drinking water near the World Trade Center, 167, 175
- WHS. *See* Washington Headquarters Services
- Williams, Dr. Michael, treatment of Birdwell after the attack on the Pentagon, 87–88
- Williams, Kenneth, environmental health and safety role, 118

- Wilson, Col. Patrick, comments on the Directorate of Health Care Operations role, 60
- World Trade Center Support Health Assessment Survey
description and results, 202–205
number of individuals at high risk for mental health concerns (table), 205
respondents' estimated intensity of exposure (table), 203
respondents' exposure to dust, chemicals/fumes, and smoke (table), 203
respondents' health problems or concerns (table), 204
respondents' identification of new or worsened health problems or concerns (table),
205
respondents' pulmonary symptoms (table), 204
- WRAMC. *See* Walter Reed Army Medical Center
- Wright-Patterson Air Force Base, OH, supply of replacement skin for Washington Hospital Center and, 90
- Wyrick, Maj. Gen. (Ret.) Michael, Northern Virginia Hospital Alliance and, 185–186

Y

- Yates, John, treatment at Washington Hospital Center, 90

Z

- Zadroga, James, death of, 175