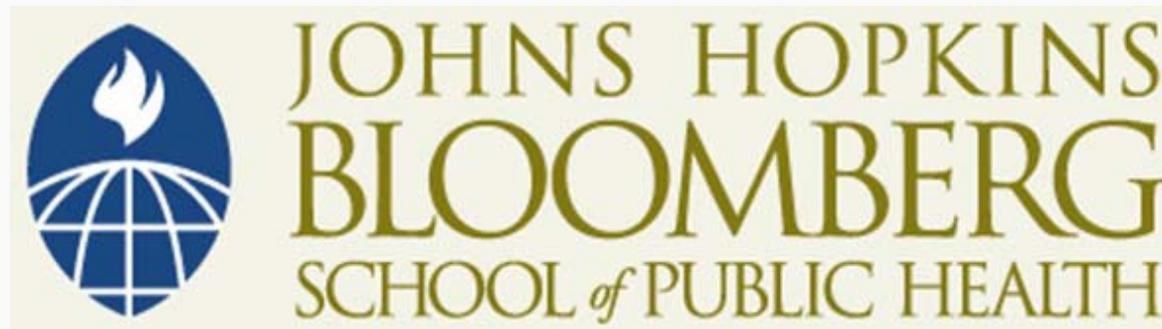


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Emergency Responders: Take Home Stress (Up From Zero)

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Section A

Emergency Workers: Who Are They?

Emergency Workers: Who Are They?

- Public safety
 - Fire fighters, police officers, emergency medical service, local, state, and federal agencies
- Other rescue and recovery workers
 - Disaster relief
- At 9/11 Ground Zero
 - Fire fighters, police, emergency service workers, urban search and rescue, construction workers, utility workers, health care workers
- Professional training vs. volunteers

Case Study: World Trade Center

- WTC physical injuries: n = 5,222
- Prevalence
 - Musculoskeletal: 19%
 - Respiratory symptoms: 16%
 - Eye disorders: 13%
- Rates
 - Eye disorders: 60 per 100 workers per usual working year
 - Headache: 47 per 100 workers
- Total injury rate
 - Overall: 390 per 100 workers per 200,000 hours worked
 - Varied by rescuer type
 - ▶ Construction: 794, rescue and recovery: 24
 - ▶ FDNY: 494, NYPD: 390

Case Study: World Trade Center

- Disaster created a “community of affected individuals”
 - Survivors
 - Families of those lost
 - Rescue-recovery workers
 - Their families, friends
- Individual responses related to ...
 - Elements of exposure itself—lost friends, family, saw deaths, recovered bodies
 - Prior mental health history and experience
 - Extent of mental health support services provided
- Outcomes of concern
 - Substance abuse
 - Panic disorder
 - Social functioning
 - Depression and anxiety
 - Post traumatic stress disorder (PTSD)

PTSD Symptoms

- Recurrent memories, images
- Recurrent dreams
- Flashbacks—happening again
- Very upset when reminded
- Physical reactions when reminded
- Avoiding related thinking, talking, feelings
- Avoiding similar activities
- Trouble remembering event
- Loss of interest in activities
- Feeling cut off from others
- Feeling emotionally numb
- Sense of no future
- Trouble sleeping
- Irritable, angry outbursts
- Difficulty concentrating
- Super-alert, on guard
- Jumpy, easily startled

WTC Medical Monitoring and Treatment Program (MMTP)

- Self-administered survey of 10,132 WTC workers
- 10 to 61 months later
- Prevalence of probable PTSD, major depression, and panic disorder
- Psychiatric comorbidity
- Degree to which probable psychiatric disorders, comorbid psychiatric disorders, and substantial stress reactions were related to ...
 - Problems with alcohol and disrupted social functioning at work and with friends and family
 - Workers' beliefs about behavioral symptoms in their children

Methods

- PTSD symptom checklist (PCL)
- Patient health questionnaire (PHQ) for assessing depression, anxiety, and panic
- CAGE questionnaire for alcohol abuse
- Sheehan Disability Scale—extent to which emotional problems disrupted work, social life, and family and home responsibilities
- Referred on same day if above threshold scores

Experience of Children

- Child symptom checklist
 - Asked the responder to state whether his or her children exhibited any of 12 symptoms for the period during which the responder worked on the WTC site and in the month before the examination

Findings

- 11.1% met criteria for probable post-traumatic stress disorder (PTSD)
- 8.8% met criteria for probable depression
- 5.0% met criteria for probable panic disorder
- 62% met criteria for substantial stress reaction

Comorbidity

- Comorbidity—extensive and significantly associated with loss of family members and friends
 - Approximately half with probable PTSD also had probable panic disorder, depression, or both
- Probable PTSD is associated with ...
 - More than double the risk for an alcohol problem
 - More than 17-fold risk for reported social disability (family, work, and social life)
 - Higher rates of behavioral symptoms in children of workers

Child Symptoms During and After WTC

■ Child Symptoms During and After WTC by Responders' PTSD Status

| Child symptom | While on site N (%) | | | Month before visit N (%) | | |
|---------------------|------------------------|------------|---------------|-----------------------------|------------|---------------|
| | No PTSD | PTSD | OR (95% CI) | No PTSD | PTSD | OR (95% CI) |
| More fearful | 2,126 (52.1) | 329 (70.4) | 2.2 (1.8-2.7) | 730 (20.0) | 162 (39.0) | 2.6 (2.1-3.2) |
| More clingy | 1,509 (37.9) | 261 (60.4) | 2.5 (2.0-3.1) | 773 (21.7) | 178 (45.1) | 3.0 (2.4-3.7) |
| More withdrawn | 256 (6.5) | 110 (25.3) | 4.9 (3.8-6.3) | 266 (7.5) | 76 (19.10) | 2.9 (2.2-3.8) |
| More aggressive | 260 (6.5) | 121 (27.8) | 5.5 (4.3-7.0) | 333 (9.4) | 96 (24.4) | 3.1 (2.4-4.0) |
| Trouble with sleep | 608 (15.2) | 158 (36.2) | 3.2 (2.6-3.9) | 360 (10.1) | 102 (26.0) | 3.1 (2.4-4.0) |
| Frequent nightmares | 355 (9.0) | 140 (32.5) | 4.9 (3.9-6.2) | 270 (7.6) | 80 (20.9) | 3.2 (2.4-4.2) |
| Physical complaints | 135 (3.4) | 68 (15.7) | 5.3 (3.9-7.3) | 250 (7.0) | 60 (15.4) | 2.4 (1.8-3.2) |
| Change in appetite | 202 (5.1) | 97 (22.4) | 5.4 (4.1-7.0) | 276 (7.7) | 79 (20.1) | 3.0 (2.3-3.9) |

Note: ORs (95% CIs) represent the comparison of those with probable PTSD compared to those who responded and did not have a probable PTSD diagnosis



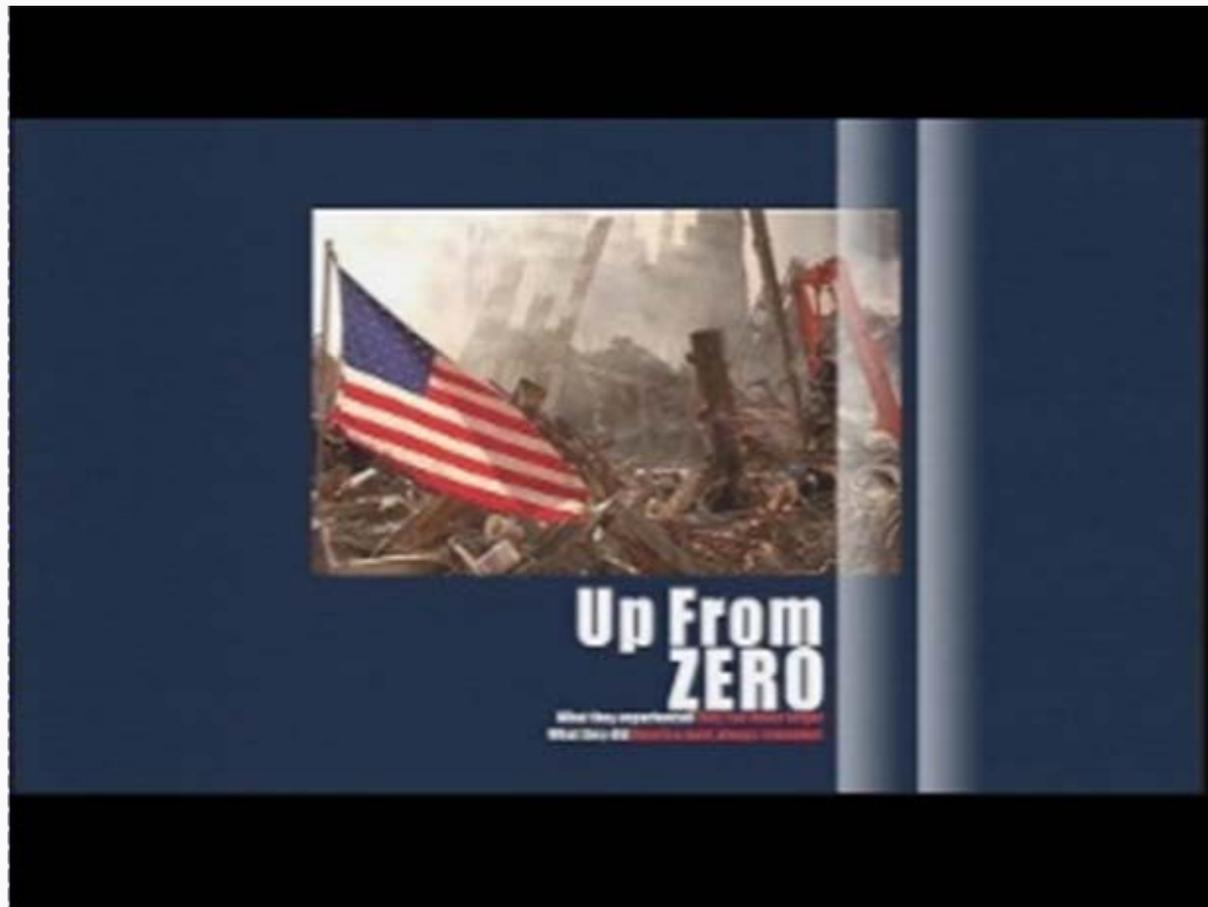
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Section B

Up From Zero

View "Up From Zero"

- Produced by the Department of Labor to recognize those in the building trades who responded to the World Trade Center disaster





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Section C

Post-event Considerations

Studies of Utilization of Mental Health Services

- Findings of separate studies
 - Less than half of 174 who were referred attended psychotherapy sessions
 - 48% of utility workers accepted referrals
 - More likely if PTSD symptoms, depressive symptoms, previous mental health treatment
 - 16% of transit workers agreed supportive counseling would be useful
 - Use of mental health services among Red Cross workers declined!
 - Not related to previous mental health treatment

Important to Remember

- Persistent post-disaster mental health problems up to five years later underscores the need for long-term mental health screening and treatment programs targeting this population
- Important to screen for comorbid conditions because of greater risk for alcohol problems and social dysfunction

Recommendations

- Need more research on how to mitigate adverse responses
- Ensure availability of interpersonal support
- Training and organization
- Access to mental health services
- Monitor exposures, including length of time on job
- Look not just at PTSD but components

Programs

- FDNY counseling services, “Stay Connected,” for retired and families
- FEMA—“Project Liberty”
- Free crisis counseling
- Peer involvement and intensive community outreach, i.e., social events, wellness activities, and classes, were integral to the success of the intervention
- Promotion of positive coping strategies