

## HEALTH POLICY

## Terrorism's Psychologic Effects and Their Implications for Primary Care Policy, Research, and Education

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This paper examines primary care physicians' (PCP) roles in helping the nation prepare for, respond to, and recover from the psychologic consequences of chemical, biologic, radiologic, or nuclear (CBRN) terrorism. First, we discuss the psychologic consequences of a CBRN attack and PCPs' roles in responding to these consequences. Second, we analyze these roles in light of the known barriers to delivering high-quality, primary care-based, mental health care. Third, we offer recommendations for mitigating these barriers and preparing PCPs to respond to the psychosocial consequences of a CBRN weapon. Importantly, our recommendations provide dual-use benefits to PCPs faced with the daily concerns of primary care mental health, including improved linkages and electronic connectivity with mental health, information technology, and decision support for providers, and needed education and research.

**KEY WORDS:** terrorism; bioterrorism; mental health; primary care.

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Since the September 11, 2001, and subsequent anthrax attacks, substantial federal funds have been devoted to improving the health care system's capacity to detect and respond to a chemical, biologic, radiologic, or nuclear (CBRN) weapon attack. These events highlighted primary care physicians' (PCPs) contributions to addressing the psychologic consequences of terrorism.<sup>1-5</sup> After the attacks, PCPs reported a willingness to deliver CBRN-related mental health care, especially if education, links with mental health care, and improved reimbursement were available.<sup>5,6</sup>

PCPs should ensure that their interests are represented in the mental health care planning for a CBRN event. Mental health experts and disaster planners recognize that primary care, already the major component of the "de facto mental health care system,"<sup>7</sup> will have to respond to the emotional and behavioral consequences of the event.<sup>5,8,9</sup> Estimates of psychologic to physical casualties range from 5 to 1 to 50 to 1 and will likely be widespread and enduring.<sup>9-11</sup> Primary care may be a central location for triaging patients into primary care-based mental health interventions.<sup>12</sup> Appropriate preparation and planning by administrators, PCPs (and PCPs' families) will

likely reduce their work burden<sup>13</sup> and the risk of stress, trauma, and burnout.<sup>14,15</sup> Importantly, such planning for primary mental health care after a CBRN event serves a "dual-use" function as an opportunity for improving the quality of mental health care for routine mental health problems that occur in daily clinical care.<sup>6</sup> A similar dual-use revamping of the public health system is occurring with federal funds for bioterrorism preparedness.<sup>16</sup>

The quality of primary mental health care, already hampered by barriers at the conceptual, patient, provider, and system levels,<sup>17</sup> will face new additions to these barriers after an attack. After discussing the psychologic consequences of a CBRN attack and PCPs' anticipated roles in response, we examine what these barriers imply for primary mental health care. Next, we offer recommendations for mitigating these barriers and preparing PCPs to respond to the psychosocial consequences of a CBRN weapon.

### PSYCHOLOGIC CONSEQUENCES AND PCPS' ROLES

A CBRN attack may lead to or exacerbate depression,<sup>18</sup> anxiety disorders,<sup>19</sup> posttraumatic stress disorder (PTSD),<sup>20</sup> somatization disorders, and substance use<sup>21</sup> even among persons distant from the attack.<sup>2,22-28</sup> The triaging of distressed patients<sup>29</sup> may allow PCPs to counsel patients to help them manage their anxieties about exposure, infection, contagion, illness severity, and access to therapeutic and prophylactic measures. Grief counseling, already variably performed by PCPs,<sup>30</sup> may also be needed for individuals who have lost friends or loved ones.<sup>31</sup>

Nonspecific symptoms, coupled with the absence of rapid, definitive diagnostic testing, and uncertainty about how to assess exposure and the optimal prophylaxis regimen (as occurred in the 2001 anthrax event), may exacerbate anxieties and lead to noncompliance with public health recommendations.<sup>32</sup> Common physical complaints may stimulate demands for medical intervention in the absence of evidence of exposure. For example, over 30,000 individuals were offered prophylactic antibiotics during the relatively small 2001 anthrax attack<sup>33</sup> in which only 22 people were infected,<sup>34</sup> and many more individuals, some far from the attack, sought antibiotics

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outside of official channels.<sup>35</sup> Unexposed patients may present with somatic symptoms mimicking exposure symptoms.<sup>36</sup> For example, when a radioactive substance in Brazil contaminated 250 persons in 1987, 5,000 of the first 60,000 persons screened had symptoms of acute radiation sickness (e.g., vomiting, diarrhea, and neck/ facial rash), but none were contaminated. Disaster Somatization Reaction (DSR), a disaster psychiatry term for unexposed individuals who interpret their anxiety symptoms as evidence of exposure or infection or exhibit symptoms similar to the disease, replaces the stigmatized terms “hysteria” and “psychogenic illness,”<sup>37</sup> which have little triage value.

Some agents can linger in the environment for weeks to years (e.g., anthrax<sup>38</sup> and radiologic isotopes), sustaining exposure risk and prolonging stress. Unexplained, persistent neuropsychologic problems can be an effect of CBRN agents.<sup>21,39</sup> One year after the anthrax attacks, survivors reported memory difficulties, poor concentration,<sup>40,41</sup> and psychological distress.<sup>42</sup> PCPs with patients experiencing “multiple unexplained physical symptoms” (MUPS)<sup>12,43</sup> may have difficulty in determining whether such symptoms are because of a medical condition or are psychological in origin.<sup>40</sup>

Managing PCPs’ own emotional and behavioral responses will also be important. In the aftermath of the Toronto SARS epidemic where 40% of the 20,000 quarantined persons were health care workers, high rates of PTSD and depression symptoms among surviving health care workers were described<sup>44,45</sup> and the value of psychosocial support for quarantined workers was demonstrated.<sup>14,15</sup> In a CBRN event, demands for unnecessary testing and prescriptions may further stress already strained PCPs whose fears and angers may be exacerbated by those of their patients.<sup>46</sup> These providers will be at risk for burnout, stress disorders, anxiety, and depression.<sup>47,48</sup>

## BARRIERS TO PCP DELIVERY OF MENTAL HEALTH CARE IN A CBRN EVENT

Existing barriers to delivering high-quality primary mental health care are relevant to PCPs’ abilities to deliver psychosocial care after a CBRN event.

### Conceptual Barriers

Mental health providers linked to different systems from PCPs (e.g., social workers in social service systems) may have scant understanding of primary care. Conversely, PCPs view the DSM-IV-R as too complex and specialty focused.<sup>49,50</sup> Existing treatment guidelines for primary care focus on major disorders and little guidance is provided about sub-threshold forms of PTSD,<sup>51,52</sup> panic,<sup>53</sup> somatization,<sup>54,55</sup> and substance abuse,<sup>56</sup> although all may affect functioning. The burgeoning field of disaster mental health<sup>57</sup> and its evolving terminology may add an additional communication barrier in the event of a CBRN event.

### Provider- and Patient-Level Barriers

Most Americans will likely turn first to their physicians for information about a bioterrorist event,<sup>58</sup> but studies performed before September 11 reported that physicians are reluctant to inquire about personal traumas.<sup>59-61</sup> Risk communication with patients may reduce their emotional distress<sup>62</sup> but this is not a skill mastered by all physicians,<sup>63</sup> as demonstrated

during the anthrax attacks.<sup>32</sup> In addition, labeling individuals presenting with somatic symptoms without an apparent physical etiology as “worried well” will create an obstacle between patient and provider.<sup>13,36</sup> Somatic presentations of emotional distress can act as a barrier to its detection and response. Nonspecific symptoms coupled with providers’ reluctance to repeatedly test for exposure or infection may exacerbate patients’ anxieties.

## System Barriers

Mental health providers are isolated from PCPs in the health care system and payment structures provide disincentives to PCPs treating mental health problems.<sup>64</sup> These barriers may be exacerbated after a CBRN attack because of the confusing array of organizations that will be involved and the lack of clarity about payment mechanisms.<sup>29</sup> Most primary care practices have little experience with the Substance Abuse and Mental Health Services Administration (SAMHSA), the lead federal agency for disaster mental health response. Public mental health systems charged with delivering disaster mental health care usually do not incorporate PCPs into their postdisaster treatment policies, trainings, and reimbursements.<sup>65</sup> Differentiating long-term organic mental disorders from psychologic distress and formulating an appropriate treatment plan will require guidance in distinguishing and referring patients and linkage between primary care and disaster response agencies.<sup>66</sup> Existing collaborative care models do not incorporate the public health and disaster experts so additional linkages are needed if patients are to be triaged into proposed interventions<sup>12</sup> for reducing development of chronic medically unexplained syndromes (e.g., Gulf War syndrome).<sup>9</sup>

## RECOMMENDATIONS

Primary care physicians can play important roles in policy, education, and research that will contribute to overcoming these barriers and preparing them to respond to the psychosocial consequences of a CBRN weapon (see Table 1).

1. *Leaders in primary care should improve linkages with local, state, and federal mental health and public health agencies:* Medical associations should support federal legislation, like the National Resilience Development Act, calling for federal coordination and resources to improve the nation’s response to the mental health consequences of terrorism.<sup>67</sup> National organizations, including the Society for General Internal Medicine, should meet with officials from the U.S. Department of Health and Human Services (DHHS) and SAMHSA to address system-level barriers to care, such as lack of reimbursement and linkage with disaster mental health services. SAMSHA could ensure that PCPs are prepared to address CBRN-related concerns in patients, including being able to provide relevant recommendations, education, testing, and referrals.<sup>9</sup> SGIM should suggest that the Federal Disaster Response Plan, which guides the coordinated delivery of federal assistance and resources in the event of a major disaster, should address the complex and ambiguous long-term mental health disorders that do not fit traditional diagnostic categories but are likely to be treated by PCPs.<sup>66</sup> Such activities would likely

benefit the public mental health system, as enhancing PCP capacity to address these issues will reduce financial and workforce strain among mental health providers.<sup>65-68</sup> Administrators and primary care leaders of managed health care organizations, health plans, and other health organizations should begin by meeting with state and local medical societies and bioterrorism coordinators to learn about how existing disaster mental health plans incorporate primary care services, and to acquaint themselves with model linkages that they can implement after a CBRN event. (The job of bioterrorism coordinators, located in public health agencies and often funded by CDC and DHHS grants, includes working with the private sector.)<sup>69</sup> For example, the Department of Defense implemented a novel program after September 11 in which PCPs were assigned to a trained care manager to help treat terrorism-related problems.<sup>70</sup> A proposed stepped system of evidence-based rehabilitative care for military personnel that links primary care, mental health, and public health and disaster experts in the prevention and treatment of disaster-related somatic symptoms could be adapted for civilian populations.<sup>71,72</sup> Health plans can develop 2-way communication systems between primary care and behavioral health call centers and case

managers,<sup>16</sup> supported by funding from DHHS's Bioterrorism and Cooperative Agreement Program, which is intended for improving communications.<sup>73</sup> Information technologies (e.g., telemedicine, electronic linkages) planned for front-line clinicians should include links to mental health services and decision support programs. Also, PCPs can have input into disaster response plans by participating in local municipal and hospital disaster management exercises. Lastly, PCPs working in hospital-based practices and managed care organizations should ensure that they are represented in their hospital's or organization's incident command structure, which is responsible for managing and coordinating the response to a disaster.

2. *Disaster planning should include training PCPs about the emotional and behavioral responses:* Standard educational curriculums can do more to emphasize training in grief and bereavement and the science-based approach to risk communication. They should include simple interventions such as psychologic first aid, a set of skills believed to limit distress, and negative health behaviors.<sup>9,10</sup> Training should also address PCP's own responses to a CBRN attack by developing family and practice disaster plans,<sup>29</sup> including prevention of PCPs' adverse psychologic reactions.<sup>46,74</sup> Training should address the psychologic impacts of isolation and quarantine and formal skills in risk communication that will help them access and use risk information when it is disseminated. PCPs should learn about DSR and MUPS and establish guidelines of care to both inform that education and guide the management and referral of these patients. Training modules and curriculum can build on existing ones (e.g., [www.med.nyu.edu/chip](http://www.med.nyu.edu/chip)), be prepared and tested in advance, and disseminated as "just-in-time" packages with information on referrals.
3. *PCPs should research critical knowledge gaps:* PCPs need to develop and study models of mental health linkages between primary care and the different service sectors that will operate in a CBRN event. More information is needed about PCPs' roles in addressing sub-threshold mental health disorders and somatization symptoms resulting from a disaster. Research into the long-term psychologic consequences of the anthrax attacks and SARS epidemic is required to ameliorate any potential future public health problems.<sup>36,72</sup> Finally, additional research is needed on what aspects of PCPs' knowledge and skills in addressing traumatic issues occurring in everyday practice (e.g., interpersonal violence) are most relevant for addressing psychologic issues in the aftermath of a CBRN event.

**Table 1. How Primary Care Physicians Can Prepare for the Psychosocial Consequences of a CBRN Attack**

Response planning (national level)
Leadership to meet with DHS, DHHS, SAMHSA
Leadership to address reimbursement issues
Support legislation
Partner with disaster agencies
Participation in disaster response exercises
Develop guidelines regarding management and referral of patients with DSR, MUPS
Response planning (state/local level)
Meet with local/state bioterrorism coordinators and public mental health
Partner with public health using Bioterrorism and Cooperative Agreement Program funds
Support legislation
Participation in disaster response exercises
Develop guidelines regarding management and referral of patients with DSR, MUPS
Response planning (institutional level)
Develop family, practice, and institution-level disaster plans
Develop psychosocial support plans for staff
Ensure representation in Incident Command Structure
Link information technologies and decision support programs to mental health
Two-way communication systems with behavioral health call centers
Adapt best practices models to local environment (e.g., Operation Solace, Engels, and Katon model)
Develop guidelines regarding management and referral of patients with DSR, MUPS
Research and education
Test triage algorithms, screening tools, brief psychologic interventions
Develop information technologies and decision support programs
Curriculum development (e.g., developing family and practice disaster plans; psychologic impacts of isolation and quarantine; formal skills in risk communication)
Develop guidelines regarding management and referral of patients with DSR, MUPS

CBRN, chemical, biologic, radiologic, or nuclear; DHHS, Department of Health and Human Services; SAMHSA, Substance Abuse and Mental Health Services Administration; DSR, Disaster Somatization Reaction; MUPS, multiple unexplained physical symptoms.

## CONCLUSIONS

CBRN response planning could help spur improvements in the daily management of routine mental health problems in primary care settings, similar to the way federal bioterrorism funds are improving the public health infrastructure. Efforts to address the primary care-based treatment of these mental health consequences<sup>6</sup> should be sustained and increased as recommended.

## REFERENCES

1. Barbera J, Macintyre AG. The reality of the modern bioterrorism response. *Lancet*. 2004;360(1 suppl):33.

2. **Boscarino JA, Galea S, Ahern J, Resnick H, Vlahov D.** Mental health service and medication use in New York City after the September 11, 2001, terrorist attack. *Psychiatr Serv.* 2002;55:274-83.
3. **McCarter L, Goldman W.** Use of psychotropics in two employee groups directly affected by the events of September 11. *Psychiatr Serv.* 2002; 53:1366-8.
4. **Adams ML, Ford JD, Dailey WF.** Predictors of help seeking among Connecticut adults after September 11, 2001. *Am J Public Health.* 2004;94: 1596-602.
5. Facing fear together: mental health and primary care in a time of terrorism. Blueprint Report, America's Health Together; 2003.
6. **Laraque D, Boscarino JA, Battista A, et al.** Reactions and needs of tristate-area pediatricians after the events of September 11th: implications for children's mental health services. *Pediatrics.* 2004;113: 1357-66.
7. **Regier DA, Narrow WE, Rae DS, Manderscheid RW, Locke BZ, Goodwin FK.** The de facto US mental and addictive disorder service system: epidemiologic catchment area prospective one-year prevalence rates of disorders and services. *Arch Gen Psychiatry.* 1993;50:85-94.
8. **Tanielian T, Stein B, Eisenman D, Keyser D, Olmstead S, Pincus H.** Understanding and Preparing for the Mental Health Consequences of Bioterrorism. Report No. DRR-2919-RC. Santa Monica, Calif: The RAND Corporation; 2003.
9. **Institute of Medicine.** Preparing for the Psychological Consequences of Terrorism: A Public Health Strategy. Washington, DC: The National Academies Press; 2003.
10. **Hall MJ, Norwood AE, Ursano RJ, Fullerton CS.** The psychological impacts of bioterrorism. *Biosecurity Bioterrorism: Biodefense Strategy Pract Sci.* 2003;1:139-44.
11. **Demartino RM.** Bioterrorism: what are we afraid of and what should we do? Paper presented at Biosecurity 2002 Conference, November 2002, Las Vegas, Nev.
12. **Clauw D, Engel C, Aronowitz R, et al.** Unexplained symptoms after terrorism and war: an expert consensus statement. *J Occup Environ Med.* 2003;45:1040-8.
13. **Lacy TJ, Benedek DM.** Terrorism and weapons of mass destruction: managing the behavioral reaction in primary care. *South Med J.* 2003;96:394-9.
14. **Hawryluck L, Gold WL, Robinson S, Pogorski S, Galea S, Styra R.** SARS control and psychological effects of quarantine, Toronto, Canada. *Emerg Infect Dis.* 2004;10:1206-12.
15. **Maunder R, Hunter J, Vincent L, et al.** The immediate psychological and occupational impact of the 2003 SARS outbreak in a teaching hospital. *CMAJ.* 2003;168:1245-51.
16. **Burstin H.** Bioterrorism and health system preparedness: emerging tools, methods, and strategies. Web Conference, broadcast on April 29, 30, and May 1, 2002. Rockville, Md: Agency of Healthcare Research and Quality. Available at: <http://www.ahrq.gov/news/ulp/bioteleconf/>.
17. **Pincus HA, Pechura CM, Elinson L, Pettit AR.** Depression in primary care: linking clinical and systems strategies. *Gen Hosp Psychiatry.* 2001;23:311-8.
18. **Havenaar J, Rumyantzeva G, Van Den Brink W, et al.** Long-term mental health effects of the Chernobyl disaster: an epidemiologic survey in two former Soviet regions. *Am J Psychiatry.* 1997;154:1605-7.
19. **Bowler R, Mergler D, Huel G, Cone JE.** Psychological, psychosocial, and psychophysiological sequelae in a community affected by a railroad chemical disaster. *J Traumatic Stress.* 1994;7:601-24.
20. **Kawana N, Ishimatsu S, Kanda K.** Psycho-physiological effects of the terrorist Sarin attack on the Tokyo subway system. *Mil Med.* 2001;166(12 suppl):23-6.
21. **Kovalchick DF, Burgess JL, Kyes KB, et al.** Psychological effects of hazardous materials exposure. *Psychosom Med.* 2002;64:841-6.
22. **Schuster MA, Stein BD, Jaycox L, et al.** A national survey of stress reactions after the September 11, 2001, terrorist attacks. *N Engl J Med.* 2001;345:1507-12.
23. **Boscarino JA, Galea S, Ahern J, Resnick H, Vlahov D.** Psychiatric medication use among Manhattan residents following the World. *J Traum Stress.* 2003;16:301-6.
24. **Terr LC, Bloch DA, Michel BA, Shi H, Reinhardt JA, Metayer S.** Children's symptoms in the wake of Challenger: a field study of distant-traumatic effects and an outline of related conditions. *Am J Psychiatry.* 1999;156:1536-44.
25. **Pfefferbaum B, Seale TW, McDonald NB, et al.** Posttraumatic stress two years after the Oklahoma City bombing in youths geographically distant from the explosion. *Psychiatry.* 2000;63:358-70.
26. **Smith DW, Christiansen EH, Vincent R, Hann NE.** Population effects of the bombing of Oklahoma City. *J Okla State Med Assoc.* 1999;92:193-8.
27. **Schlenger WE, Caddell JM, Ebert L, et al.** Psychological reactions to terrorist attacks: findings from the national study of Americans' reactions to September 11. *JAMA.* 2002;288:581-8.
28. **Silver RC, Holman EA, McIntosh DN, Poulin M, Gil-Rivas V.** Nationwide longitudinal study of psychological responses to September 11. *JAMA.* 2002;288:1235-44.
29. **Rippen HE, Gursky E, Stoto MA.** Importance of bioterrorism preparedness for family physicians. *Am Fam Physician.* 2003;67:1877-8.
30. **Lemkau JP, Mann B, Little D, Whitecar P, Hershberger P, Schumm JA.** A questionnaire survey of family practice physicians' perceptions of bereavement care. *Arch Fam Med.* 2000;9:822-9.
31. **Wunsch-Hitzig R, Plapinger J, Draper J, del Campo E.** Calls for help after September 11: a community mental health hot line. *J Urban Health.* 2002;79:417-28.
32. **Stein BD, Tanielian TL, Ryan GW, Rhodes HJ, Young SD, Blanchard JC.** A bitter pill to swallow: nonadherence with prophylactic antibiotics during the anthrax attacks and the role of private physicians. *Biosecurity Bioterrorism.* 2004;2:175-85.
33. **Gerberding JL, Hughes JM, Koplan JP.** Bioterrorism preparedness and response: clinicians and public health agencies as essential partners. *JAMA.* 2002;287:898-900.
34. **Bioterrorism: Public Health Response to Anthrax Incidents of 2001.** Washington, DC: US General Accounting Office October; 2003. GAO-04-152.
35. **Shaffer D, Armstrong G, Higgins K, et al.** Increased US prescription trends associated with the CDC *Bacillus anthracis* antimicrobial postexposure prophylaxis campaign. *Pharmacoepidemiol Drug Saf.* 2003;12: 177-82.
36. **Pastel RH.** Collective behaviors: mass panic and outbreaks of multiple unexplained symptoms. *Mil Med.* 2001;166(12 suppl):44-6.
37. **Diamond D, Schreiber M.** Terrorism Agent Information and Treatment Guidelines for Clinicians and Hospitals. Los Angeles: County of Los Angeles Department of Health Services; 2003.
38. **Inglesby TV, Henderson DA, Bartlett JG, et al.** Anthrax as a biological weapon: medical and public health management. Working Group on Civilian Biodefense. *JAMA.* 1999;281:1735-45.
39. **DiGiovanni C Jr.** Domestic terrorism with chemical or biological agents: psychiatric aspects. *Am J Psychiatry.* 1999;156:1500-5.
40. **Cymet TC, Kerkvliet GJ.** Inhalational anthrax: the natural history of a treatable disease. *J Am Osteopath Assoc.* 2003;103:390.
41. **Shane S.** Anthrax survivors find life a struggle. *Baltimore Sun*; September 18, 2003.
42. **Reissman DB, Whitney EA, Taylor TH Jr, et al.** One-year health assessment of adult survivors of *Bacillus anthracis* infection. *JAMA.* 2004; 291:1994-8.
43. **Hassett AL, Sigal LH.** Unforeseen consequences of terrorism: medically unexplained symptoms in a time of fear. *Arch Intern Med.* 2002;162: 1809-13.
44. **Styra R, Gold W, Robinson S.** Post-traumatic stress disorder and quality of life in patients diagnosed with SARS. Paper presented at 43rd International Conference on Antimicrobial Agents and Chemotherapy, Chicago, Ill; September 14-17, 2003.
45. **Caulford P.** SARS: aftermath of an outbreak. *Lancet.* 2003;362(1 suppl): 2-3.
46. **Fain RM, Schreier RA.** Disaster, stress and the doctor. *Med Educ.* 1989;23:91-6.
47. **Holtz TH, Salama P, Lopes Cardozo B, Gotway CA.** Mental health status of human rights workers. *Kosovo J Trauma Stress.* 2002;15:389-5.
48. **Grieger TA, Fullerton CS, Ursano RJ.** Posttraumatic stress disorder, alcohol use, and perceived safety after the terrorist attack on the Pentagon. *Psychiatr Serv.* 2003;54:1380-2.
49. **Coyne J, Thompson R, Klinkman M, Nease D.** Emotional disorders in primary care. *J Consult Clin Psychol.* 2002;70:798-809.
50. **Goldberg D.** A classification of psychological distress for use in primary care settings. *Soc Sci Med.* 1992;35:189-3.
51. **Schnurr PP, Friedman MJ, Sengupta A, Jankowski MK, Holmes T.** PTSD and utilization of medical treatment services among male Vietnam veterans. *J Nerv Ment Dis.* 2000;188:496-504.
52. **Schnurr PP, Spiro A III, Paris AH.** Physician-diagnosed medical disorders in relation to PTSD symptoms in older male military veterans. *Health Psychol.* 2000;19:91-7.
53. **Klerman GLWM, Ouellette R, Johnson J, Greenwald S.** Panic attacks in the community. Social morbidity and health care utilization. *JAMA.* 1991;265:742-6.

54. **Escobar JI, Canino G, Rubio Stipek M, Bravo M.** Somatic symptoms after a natural disaster: a prospective study. *Am J Psychiatry.* 1992;149:965-7.
55. **Escobar J, Burnam MA, Karno M, Forsythe A, Golding JM.** Somatization in the community. *Arch Gen Psychiatry.* 1987;44:713-8.
56. **Webb G, Hennrikus DJ, Kelman GR, Gibberd RW, Sanson-Fisher R.** The relationships between high-risk and problem drinking and the occurrence of work injuries and related absences. *J Stud Alcohol.* 1994;55:434-6.
57. **Becker SM.** Meeting the threat of weapons of mass destruction terrorism: toward a broader conception of consequence management. *Mil Med.* 2001;166(12 suppl):13-6.
58. **Blendon RJ, Benson JM, DesRoches CM, Pollard WE, Parvanta C, Herrmann MJ.** The impact of anthrax attacks on the American public. *Med Gen Med.* 2002;4:1.
59. **McCauley J, Yurk RA, Jenckes MW, Ford DE.** Inside "Pandora's box": abused women's experiences with clinicians and health services. *J Gen Intern Med.* 1998;13:549-55.
60. **Sugg N, Inui T.** Primary care physicians' response to domestic violence. Opening Pandora's box. *JAMA.* 1992;3157-60.
61. **Parsons LH, Zaccaro D, Wells B, Stovall TG.** Methods of and attitudes toward screening obstetrics and gynecology patients for domestic violence. *Am J Obstet Gynecol.* 1995;173:381-7.
62. **DiGiovanni C Jr, Reynolds B, Harwell R, Stonecipher EB, Burkle FM Jr.** Community reaction to bioterrorism: prospective study of simulated outbreak. *Emerg Infect Dis.* 2003;9:708-12.
63. **Haq C, Steele DJ, Marchand L, Seibert C, Brody D.** Integrating the art and science of medical practice: innovations in teaching medical communication skills. *Fam Med.* 2004;36(suppl):S43-50.
64. **Olsen CG.** Good grief. *Arch Fam Med.* 2000;9:833-4.
65. **Jack K, Glied S.** The public costs of mental health response: lessons from the New York City post-9/11 needs assessment. *J Urban Health.* 2002;79:332-9.
66. **Becker SM.** Are the psychosocial aspects of weapons of mass destruction incidents addressed in the Federal Response Plan: summary of an expert panel. *Mil Med.* 2001;166(12 suppl):66-8.
67. **National Resilience Development Act of 2003** H.R. 2370. 1st Session; 2003.
68. **Siegel C, Wanderling J, Laska E.** Coping with disasters: estimation of additional capacity of the mental health sector to meet extended service demands. *J Ment Health Policy Econ.* 2004;7:29-35.
69. **Beitsch L.** Bioterrorism and health system preparedness: emerging tools, methods, and strategies. Web Conference, Broadcast on April 29, 30, and May 1, 2002. Rockville, Md: Agency for Healthcare Research and Quality. Available at: <http://www.ahrq.gov/news/ulp/bioteleconf/>.
70. **Hoge CW, Orman DT, Robichaux RJ, et al.** Operation solace: overview of the mental health intervention following the September 11, 2001 Pentagon attack. *Mil Med.* 2002;167(9 suppl):44-7.
71. **Engel CC, Katon W.** Population and Need-Based Prevention of Unexplained Symptoms in the Community. Strategies to Protect the Health of Deployed U.S. Forces: Medical Surveillance, Record Keeping, and Risk Reduction. Washington, DC: National Academy Press; 1999:173-212.
72. **Engel CC Jr.** Outbreaks of medically unexplained physical symptoms after military action, terrorist threat, or technological disaster. *Mil Med.* 2001;166(12 suppl):47-8.
73. **Meehan PJ.** Bioterrorism and health system preparedness: emerging tools, methods, and strategies. Web Conference, Broadcast on April 29, 30, and May 1, 2002. Rockville, Md: Agency for Healthcare Research and Quality. Available at: <http://www.ahrq.gov/news/ulp/bioteleconf/>.
74. **Bradford R, John AM.** The psychological effects of disaster work: implications for disaster planning. *J R Soc Health.* 1991;111:107-10.