- Some important aspects of SCI rehabilitation were avoided or missed in the makeshift spinal centers, including sexual rehabilitation, realistic counseling about patients' prognosis regarding complete lesions, and vocational counseling and job placement. Moreover, unregulated philanthropic monetary support hampered and unnecessarily delayed the discharge of many patients who did not want to part with a ready source of income.<sup>5</sup>
- Once the makeshift spinal centers were closed, there was no adequate facility that could accommodate such a large number of patients with SCI. Most of them were sent home to the mountainous terrain of Kashmir. At 18 months' follow-up, our team could not find a single quadriplegic survivor of the earthquake.¹ Patients developed pressure ulcers in large numbers, and there were cases of surgical wound infections and implant failures. Four years after the disaster, we confirmed 15 deaths, mostly from large, dirty wounds (probably pressure ulcers) and malodorous urine and highgrade fevers (likely urosepsis). Results such as these clearly highlight the inadequacy of our health care system regarding long-term follow-up of patients with SCI.
- The Pakistani earthquake and other global disasters have demonstrated the effectiveness of a dedicated team of physiatrists offering early rehabilitation services in serious disabilities like SCI,<sup>9</sup> and have confirmed that medical rehabilitation is an urgent emergency service, not just a later part of the recovery process. Early physiatrist involvement in complex orthopedic and neurological trauma has shown to be of benefit in times of peace, but it is likely to be more effective in disasters.
- Experience with this earthquake has shown that SCIs in large numbers can occur. Earthquakes often happen in underdeveloped regions of the world that have little expertise to manage SCI in the best of times. Leading SCI organizations in the world such as the International Spinal Cord Society, American Spinal Injury Association, AOSpine, and the American Paraplegia Society can take the lead in improving the treatment of SCI in these regions in consultation with local governments and nongovernmental organizations.
- It is important that experiences from previous disasters be shared, valuable lessons be learned, and shortcomings that are noticed be improved,<sup>5,10,11</sup> so that we are better prepared for the next disaster.

Farooq A. Rathore, MBBS, FCPS Zaheer A. Gill, MBBS, FCPS Sohail Muzammil, FRCS(Edin), FCPS, Ortho

# REFERENCES

- Butt BA, Bhatti JA, Manzoor MS, Malik KS, Shafi MS. Experience of makeshift spinal cord injury rehabilitation center established after the 2005 earthquake in Pakistan. Disaster Med Public Health Prep. 2010;4(1):8-9.
- Rathore MFA, Rashid P, Butt AW, Malik AA, Gill ZA, Haig AJ. Epidemiology of spinal cord injuries in the 2005 Pakistan earthquake. Spinal Cord. 2007;45(10):658-663.
- Rathore MF, Farooq F, Butt AW, Gill ZA. An update on spinal cord injuries in October 2005 earthquake in Pakistan. Spinal Cord. 2008;46 (6):461-462.

- 4. Rathore MF, Hanif S, New PW, Butt AW, Aasi MH, Khan SU. The prevalence of deep vein thrombosis in a cohort of patients with spinal cord injury following the Pakistan earthquake of October 2005. *Spinal Cord.* 2008;46(7):523-526.
- Rathore FA, Farooq F, Muzammil S, New PW, Ahmad N, Haig AJ. Spinal cord injury management and rehabilitation: highlights and shortcomings from the 2005 earthquake in Pakistan. Arch Phys Med Rehabil. 2008; 89(3):579-585.
- Rathore MF, Butt AW, Aasi MH, Farooq F. Re: complications in patients with spinal cord injuries sustained in an earthquake in northern Pakistan. J Spinal Cord Med. 2008;31(1):118.
- Umer M, Rashid H, Zafar H, Majeed K. Earthquake relief experience of Aga Khan University trauma team. J Pak Med Assoc. 2006;56(8):370-374.
- Tauqir SF, Mirza S, Gul S, Ghaffar H, Zafar A. Complications in patients with spinal cord injuries sustained in an earthquake in Northern Pakistan. J Spinal Cord Med. 2007;30(4):373-377.
- 9. Gosney JE Jr. Physical medicine and rehabilitation: critical role in disaster response. Disaster Med Public Health Prep. 2010;4(2):110-112.
- Motamedi MH, Saghafinia M, Bararani AH, Panahi F. A reassessment and review of the Bam earthquake five years onward: what was done wrong? Prehosp Disaster Med. 2009;24(5):453-460.
- 11. de Ville de Goyet C. Health lessons learned from the recent earthquakes and Tsunami in Asia. *Prehosp Disaster Med.* 2007;22(1):15-21.

# OVERESTIMATING CHERNOBYL'S CONSEQUENCES: MOTIVES AND TOOLS

#### To the Editor

The article by Davis et al, "The Impact of Disasters on Populations With Health and Health Care Disparities,"1 concludes that the present literature does not capture the health care disparities in medically underserved communities before and after a disaster. The 1986 Chernobyl nuclear accident provides an example of the considerable difference in the diagnostic quality of many diseases, especially thyroid cancer, before and after the disaster. Improvements in screening and early detection of thyroid nodules after the accident were accompanied by overestimation of the incidence of thyroid cancer, which could contribute to an overestimation of radioiodine carcinogenicity.<sup>2</sup> Some publications have contributed to the misconception. I noted recently<sup>3</sup> that in some articles<sup>4-6</sup> dedicated to the Chernobyl accident, references to nonprofessional publications (eg, newspapers, Web sites of unclear affiliations often with nonworking URLs, commercial editions) were used widely to support scientific views and conclusions, thus overestimating the medical consequences of the Chernobyl accident. Yablokov and Nesterenko acknowledged that "sometimes references in the text do not correspond with those used in the list of references." They provided a quotation from the Ministry for Emergency Situations of the Republic of Belarus Web site (http: //www.chernobyl.gov.by/index.php?option=com\_content &task=view&id=665&Itemid=1, accessed on April 6, 2011): "A certain fraction of mushrooms, berries, wild flesh, and fish consumed by inhabitants was highly contaminated, ie, during the last three years about 30% of mushrooms, 15% of berries, and 40% of wild flesh." This was a misquotation. The actual quotation from the Web site, translated verbatim from Russian was "A fraction of mushrooms, berries, wild and fish, taken from

#### Letters to the Editor

inhabitants, contaminated above permissible levels, remains stably high, and during the last 3 years was 30% (mushrooms), 15% (berries), and 40% (meat of wild animals)." Nowhere on this site are found the levels that were regarded as permissible, and the Web site is not a scientific source of information.

Misquoting a source contributes to the overestimation of the consequences of the accident at Chernobyl. I have interviewed pathologists and other physicians in the hospitals, clinics, and oncologic dispensaries (cancer prevention and treatment centers) of the formerly contaminated areas of Belarus, Russia, and Ukraine who have diagnosed many of the post-Chernobyl tumors. Most of them agreed that Chernobyl's consequences have been overestimated, <sup>2,8</sup> and they point to exaggeration of the Chernobyl theme facilitating scientific research and international help as motives. Moreover, it is believed that the Chernobyl accident has been exploited to strangle development worldwide of atomic energy, <sup>9</sup> thus contributing to the enhanced consumption of nonrenewable fossil fuels.

Sergei V. Jargin

### REFERENCES

- Davis JR, Wilson S, Brock-Martin A, Glover S, Svendsen ER. The impact of disasters on populations with health and health care disparities. *Disaster Med Public Health Prep.* 2010;4(1):30-38.
- Jargin SV. Chernobyl-related cancer: re-evaluation needed. Turk J Pathol. 2010;26:177-181.
- Jargin SV. Overestimation of Chernobyl consequences: poorly substantiated information published. *Radiat Environ Biophys.* 2010;49(4):743-745, author reply 747-748.
- Yablokov AV. 3. General morbidity, impairment, and disability after the Chernobyl catastrophe. Ann NY Acad Sci. 2009;1181:42-54.
- Yablokov AV. 5. Nonmalignant diseases after the Chernobyl catastrophe. Ann NY Acad Sci. 2009;1181:58-160.
- Yablokov AV. 7. Mortality after the Chernobyl catastrophe. Ann NY Acad Sci. 2009;1181:192-216.
- Yablokov A, Nesterenko A. Reply to letter by Jargin on "Overestimation of Chernobyl consequences: poorly substantiated information published." Radiat Environ Biophys. 2010;49(4):747-748.
- 8. Jargin SV. Thyroid cancer after Chernobyl: obfuscated truth. *Dose Response*. 2011; DOI:10.2203/dose-response.11-001.Jargin.
- Jaworowski Z. Observations on the Chernobyl disaster and LNT. DoseResponse. 2010;8(2):148-171.

# TRAUMA CENTER ASSOCIATION OF AMERICA (TCAA) ENDORSES THE MODEL UNIFORM CORE CRITERIA FOR MASS CASUALTY TRIAGE

## To the Editor

The Model Uniform Core Criteria for Mass Casualty Triage, proposed by Lerner et al,<sup>1</sup> are a useful and vital component of our national preparedness. We commend Dr Lerner and her colleagues for their thorough research and thoughtful analysis.

Our nation's trauma system is the backbone of its response to a mass-casualty incident. The trauma system has the ability to mobilize the multidisciplinary medical providers necessary to respond to any disaster, regardless of etiology. The trauma system, made up of a network of prehospital providers and designated trauma centers, will be the first line of response to any incident. To provide rapid assessment, treatment, and transfer of injured victims, responders from multiple ambulance services and hospitals must be able to communicate consistently, and these national criteria promote this ability.

The Trauma Center Association of America is a nonprofit trade association representing several hundred trauma centers and trauma systems dedicated to fostering the development of a national system of trauma care so that proximate access to the appropriate level of trauma care for seriously injured individuals is ensured. The Trauma Center Association of America joins in endorsing the Model Uniform Core Criteria and will work with its membership to implement the criteria in mass-casualty response plans.

Daniel L. Gross, DNSc Connie J. Potter, RN, MBA Susan M. Briggs, MD, FACS John B. Osborn, MSc

#### REFERENCE

Lerner EB, Cone DC, Weinstein ES, et al; Endorsed by American Academy
of Pediatrics; American College of Emergency Physicians; American College of Surgeons-Committee on Trauma; American Trauma Society; Children's National Medical Center, Child Health Advocacy Institute, Emergency Medical S. Model uniform core criteria for mass casualty triage. Disaster
Med Public Health Prep. 2011;5(2):125-128.