

STRATEGIES IN DISASTER PREPAREDNESS FOR THE NEXT GENERATION OF HEALTHCARE PROVIDERS

To the Editor:

It was with great interest that we studied the excellent paper by Kaiser et al, and we accept their invitation to engage in a dialogue about policy issues with regard to the utilization of medical students as an additional resource in surge capacity.¹ In 2009, the authors at The University of Toledo College of Medicine (UT) were assigned the organization and development of a campus H1N1 Immunization Outdoor Drive-Through within 2 weeks.² That challenge was successfully met with the assistance of UT students, faculty, and Emergency Medicine residents. The 6-hour outdoor event—during which 700-plus vaccinations were administered—included 72 student volunteers (10 medical students, 10 physician assistant students, 50 nursing students, and 2 occupational therapy students).

The objectives included the provision of incident command and disaster management concepts to the students and the reinforcement of an interdisciplinary disaster response system. Because of time constraints, there was no opportunity for formal pre-event briefings. The students' disaster education was divided into two segments: 1) safety and nutritional e-mail advisories; and, 2) just-in-time training at the event. That briefing included command personnel introductions, vaccination strategies, communications, and student roles and responsibilities. The intent was to provide the students a fuller appreciation of the entire experience. Therefore, with supervision, they were involved with registration, documentation, traffic control, patient surveillance/education, and immunizations. They were rotated through these varied assignments in order to enrich their total experience.

At the debriefing, the students' consensus was that the experience was worthwhile. Similarly, their turnout for UT's 2011 full-scale Mass Casualty Incident exercise was excellent. Here, their education was augmented by:

1. Supervised critical decision making as "patient" cases changed.
2. "Patient" resuscitation drills using high-tech patient simulators.
3. Tactical requirements for the vertical evacuation of patients.

At this debriefing, the students appreciated their exposure to novel educational opportunities and the opportunity to function as an interdisciplinary team.

These two events have led us to share the following observations and recommendations:

1. All health care professions students should be vital components of an institution's surge capacity strategy and should be specifically incorporated into its disaster plan.
2. Any approach to building capacity with health care students should be an all-hazards approach.

3. Recruiting, maintaining, and retaining students for a high-impact, low-probability event is problematic given more immediate responsibilities and obligations.

4. The strategy should be interdisciplinary in planning, education, and response. Both faculty and students of these disciplines should train and respond together when feasible.

5. Service should remain voluntary, and students' well-being should remain primary.

6. Disaster education for these students should not be dependent upon the Medical Reserve Corps or the American Red Cross. The students' faculty, with its deeper knowledge of the needs of both the students and the institution, should develop the educational criteria. External organizations may supplement that training.

7. The institution should determine the exact roles that students would have in the event of an incident. Possible mission assignments should be fundamental, specific, and relevant to their specific disciplines (patient assessment, patient transport, medical outreach, etc).

8. Formal education in disaster medicine and management for students, while ideal, is difficult to achieve given financial and time constraints. Nevertheless, now is the time to develop efficacious multiple-platform-based courses.

9. Standardized content with regard to command and control, communications, personal safety issues, job action sheets, registration, and documentation requirements should be developed and posted on the institution's Web site for the general disaster management education of the students. Anything beyond that may be provided as just-in-time training once the threat has been recognized and a needs assessment has been addressed.

10. With evolving technology, developing apps for handheld devices should also be considered.

11. While an emphasis upon just-in-time training may not be ideal, its application highlights exactly what each student's job is at the time, emphasizes health and safety issues, and minimizes extraneous information that may not be immediately applicable.

In summary, it is incumbent upon the institution to identify, recruit, and support the necessary internal leadership to develop a methodology that embraces its health care students as important assets in disaster management in a feasible cost-effective manner. Appropriate actions taken now will pay huge dividends for the next generation's crisis management.

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REFERENCES

1. Kaiser HE, Barnett DJ, Hayanga AJ, Brown ME, Filak AT. Medical Students' Participation in the 2009 Novel H1N1 Influenza Vaccination Administration: Policy Alternatives for Effective Student Utilization to Enhance Surge Capacity in Disasters. *Disaster Med Public Health Prep.* 2011;5(2):150-153.
2. Rega P, Bork C, Chen Y, Woodson D, Hogue P, Batten S. Using an H1N1 vaccination drive-through to introduce healthcare students and their faculty to disaster medicine. *Am J Disaster Med.* 2010;5(2):129-136.