Another Way

Marvin L. Birnbaum, MD, PhD

This world has been harsh and strange;
Something is wrong; there needeth change.

Robert Browning
Holy-Cross Day

It has become increasingly clear worldwide that there never will be enough physicians, nurses, and other health professionals to meet the health needs of the world's growing population. This fact holds true not only for the resource-poor countries, but for the more affluent countries as well. Even in the relatively prosperous US state of Wisconsin (the location of one of the WADEM offices), there is a glaring lack of health personnel to effectively and efficiently provide minimal primary health care to its residents, especially to those in its more rural areas. Furthermore, access to primary health care is not equitably distributed—generally, rural areas are more poorly served than are the metropolitan areas.

The lack of adequate access to primary healthcare services has rendered those without it more vulnerable to emergencies and disasters. The lower the health status of the members of a population before an event, the more likely that they will succumb to the forces exerted by an event. Therefore, optimizing the pre-event health status of a population will lessen the impact of an event.[1] But, achievement of improved health is unlikely unless we conceive and implement additional ways to protect the population's health other than by the current dependence on physicians and nurses.

In recent issues of *Prehospital and Disaster Medicine*, several mechanisms have been reported to enhance the health status of the population, and thus, mitigate the human pain and suffering of a population caused by a catastrophic event.[2–5] It has been demonstrated that non-physician/non-nurse professionals can be educated and trained to assume some of the tasks currently within the practice domains of physicians and nurses, and when adequately prepared and supervised by physicians/nurses, such persons can perform many primary care tasks. Even the provision of emergency surgery of trauma victims and the delivery of anesthesia have been shifted successfully to well-prepared persons.[3] The process of preparing and supervising such individuals to provide some of the services traditionally belonging to physicians/nurses is called "task-sharing".[6]

If such *task-sharing* is possible for individuals without a medical or nursing degree, it could be possible to provide some basic primary care services in a relatively short period of time, at relatively low costs, and fill the gaps in health care with available, competent personnel. This already has been demonstrated by the provision of some primary healthcare services by community health workers in many resource-poor countries.[7]

In a landmark project implemented in Red River, New Mexico [USA] a decade ago, it was shown that the scope of practice of some paramedics could be expanded to include the provision of some of the elements of primary health care.[8] The project, initiated by the EMS Academy of the University of New Mexico, was implemented in a rural area 3–4 hours distant from any medical facilities. The paramedic graduates of the program demonstrated their ability to provide mid-level primary health care.

> *Though little outcome measurement was conducted in the project, the information collected shows a valued community benefit. The usual ambulance transports of three to four hours to the nearest accepting hospital in Taos was reduced from 78 percent to only 11 percent of call volume. This reduction in out-of-town transports enables the limited EMS resource to remain in the community for life-saving response. During the first eight months of service, the project recorded two-thirds of all calls for the Community Health Specialist and only one-third of call volume for EMS. This project gave the community what it really needed and more. As suspected in many rural communities, the majority of medical requests are for minor or preventive interventions such as wound care, immunization, and routine follow-up assessments.*[8]

Similar programs have been implemented by the military, and the results have been successful in the delivery of some aspects of primary health care.[9]

Currently, in response to the unmet or inadequately met needs for primary health care, several similar projects have been initiated, or are being planned, in the US and in Australia. These programs are being directed toward experienced paramedics who already have expertise in patient assessment and in the provision of emergency medical services. Some of the primary care competencies for which these "community paramedics" will be prepared include: (1) Adjust medications for persons with chronic diseases with special emphasis on patients with diabetes, congestive heart failure, hypertension, chronic obstructive lung disease, asthma; (2) Triage patients in need of a higher level of care and arrange for the provision of such care; (3) Diagnose and treat persons with common, non-severe, non-life- or limb-threatening illness, i.e., upper respiratory infections, urinary tract infections, influenza, ear infections, common cold; (4) Provide wound care (surgical, spontaneous); (5) Provide common immunizations; (6) Provide well-baby evaluations; (7) Provide psychosocial support and identify and refer persons with mental health problems; (8) Provide follow-up evaluations of the progress of care provided by health professionals with a higher level of expertise, i.e., post-surgery, medical interventions, discharge from hospital, emergency department, clinics, med-

https://doi.org/10.1017/S1049023X00008633 Published online by Cambridge University Press

ical offices, health centers/posts; (9) Recognize and report possibilities for a public health threat; (10) Maintain/care of feeding tubes, tracheotomies, peripherally inserted central catheter lines, catheters, antibiotic infusions, and/or serial infusions; (11) Refer patients to community outreach programs, as applicable; (12) Perform home safety checks; and/or (13) Assist individuals, families, and/or employers with the development of emergency response plans.

It must be recognized that the *sharing* of such tasks will remain the prerogative and responsibility of a qualified physician or nurse. As adjunct personnel, these prepared individuals must be under the control of higher-level health professionals; they will not operate independently. But, clearly they can absorb some of the burdens from the physicians and nurses and their activities can fill some of the gaps that currently exist in the provision of primary health care.

Such educational and training programs can be adapted anywhere in the world; not only in the purview of well-resourced countries. Given the culture and the status of primary care, the use of lesser trained personnel with whom some of the tasks can be shared should help to enhance the health status of a community, and hence, decrease the vulnerability of populations-at-risk to a potentially catastrophic event.

However, the implementation of such programs will require the acceptance of this novel concept by the current medical community and the community served, regardless of its stage of development, and that the shifting of some tasks to non-physicians/nurses will be of benefit to the health status of the community. Task-sharing will require changes in responsibilities. Whether such a program will help to meet the primary healthcare needs of a specific area or whether another iteration of the concept seems better suited to a particular situation, is not the issue; It is the need for us to consider that there may be other ways to accomplish the goal of enhancing the health status and resilience of a community. This will require thinking outside of our current parochialism; our current roles will change, but we must remain in control of how, why, and when our respective roles and responsibilities will change. At the very least, it is time to start the discussions about another way of assuring a health and prepared population.

There is danger in reckless change;
But greater danger in blind conservatism.

Henry George
Social Problems

Today is not yesterday: we ourselves change; how can our works and thoughts if they are always to be the fittest, continue always the same? Change, indeed, is painful; yet ever needful; and if memory has its force and worth, so also is Hope.

Carlyle
Essays: Characteristics

References
1. Redwood-Campbell LJ, Riddez L: Post-tsunami medical care: Health problems encountered in the International Committee of the Red Cross hospital in Banda Aceh, Indonesia. *Prehosp Disaster Med* 2006;21(1):s1–s7.
2. Heng YV, Davoung C, Husum H: Non-doctors as trauma surgeons? A controlled study of trauma training for non-graduate surgeons in rural Cambodia. *Prehosp Disaster Med* 2008;23(6):483–489.
3. Janneck L, Cooper N, Frehywot S, Mowafi H, Hein K: Human resources in humanitarian health: Humanitarian Action Summit 2009 Working Group report. *Prehosp Disaster Med* 2009;24(4):s184–s193.
4. Lin JY, Bhalla N, King RA: Training medical students in bag-valve-mask techniqe as an alternative to mechanical ventilation in a disaster setting. *Prehosp Disaster Med* 2009;24(5):402–406.
5. Sundnes KO: Non-doctors as trauma surgeons? *Prehosp Disaster Med* 2008;23(6):490–491.
6. Birnbaum ML: EMS and beyond. *Prehosp Disaster Med* 2008;23(6):490–491.
7. Birnbaum ML, Kohl PA, Daily EK, Ofrin R: *Smong: The Sea Coming onto Land: Health Aspects of the 2004 Earthquake and Tsunami.* SEARO/WHO: Dehli, India. In press.
8. Red River Project of the TAOS Health Outreach Program: Models for Practice: Focus Area: Access (Emergency Medical Services). Available at http://www.srph.tamhsc.edu/centers/rhp2010/html/access/ems/redriver.htm. Accessed 08 November 2010.
9. US Air Force: The Air Force independent duty medical technician medical and dental treatment protocols. *Air Force Manual* 1999, pp 44–158.

STATEMENT OF OWNERSHIP

Statement of Ownership—Management and Circulation—Required by 39 U.S.C. 3685
1. Publication title: Prehospital and Disaster Medicine
2. Publication number 1049-023X
3. Filing date: October 20, 2010
4. Issue frequency: Bi-Monthly
5. Number published annually: 6
6. Annual subscription price: $135.00 Individual/$430.00 Institution
7. Mailing address of known office of publications: 3330 University Avenue, Suite 130 (Dane County) Madison, WI 53705-2167 USA
8. Mailing address of the headquarters of the general business office of the publisher: Same.
9. Publisher: World Association for Disaster and Emergency Medicine, 3330 University Avenue, Suite 130 (Dane County) Madison, WI 53705-2167 USA
10. Owner: World Association for Disaster and Emergency Medicine, 3330 University Avenue, Suite 130 (Dane County) Madison, WI 53705-2167 USA
11. Known: bondholders, mortgages, and other security holders owning or holding 1 percent or more of total amounts of bonds, mortgages or other securities: None.
12. The purpose and function and nonprofit status of this organization and the exempt status for federal income tax purposes have not changed during the preceding 12 months.

Extent and Nature of Circulation:
1. Total copies: 800-aveg. per issue during proceeding 12 months/800 last issue.
2. Paid/Requested Circulation: Outside country mail subscriptions 376
3. Others mailed through USPS 2
4. Free distribution outside the mail 10
5. Copies not immediately distributed 74 (used for education and promotion)

I certify that all information furnished is true and complete.
Marvin L. Birnbaum, MD PhD, Editor-in-Chief and Director of the WADEM Business Office

https://doi.org/10.1017/S1049023X00008633 Published online by Cambridge University Press