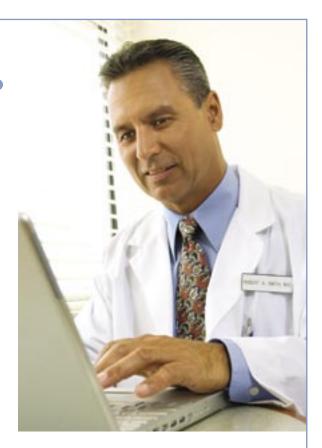
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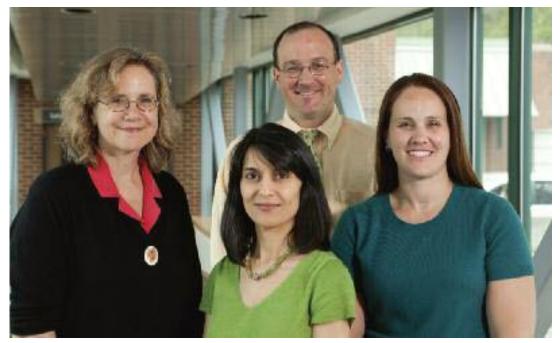
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editorial



Michael Hirsh, MD

As a Pediatric Surgeon, it is part of my training to know the famous apocryphal story of the "Birth of Pediatric Surgery" in North America. Legend has it that after a massive explosion from two colliding munitions ships in Halifax harbor (Nova Scotia) on 12/6/1917, Dr. William E. Ladd, the leader of an emergency surgery team sent from Boston to help in the relief effort, subsequently dedicated his practice to pediatric surgery to honor the courage of the kids he cared for after that terrible disaster. So it was from one of these earliest instances of a disaster medicine

team being dispatched to the scene of a disaster that my subspecialty was born.

That is why it gives me such pleasure to present the edition of Worcester Medicine that follows. Worcester as a community, with its extremely active Department of Public Health and Medical Reserve Corps and our local academic medical center, UMass Memorial Health Center, has been spearheading a laudable effort in disaster response and disaster preparedness education that rivals those of cities may times our size. In the pages that follow, you will see that we have not only designed educational programs for first responders but also have tried to establish a region-wide network of resources to bring to bear in the case of a manmade or natural disaster. With our region's recent experiences with ice storms, surprise hurricanes, and snowstorms, the public is beginning to grasp that disaster preparedness is for everyone,



not just communities in the hurricane, earthquake, or tornado belts. I hope you enjoy the submissions this month and are as grateful as I am that our community is being enveloped with additional protection from disaster.

Michael Hirsh, MD President, Worcester District Medical Society and a member of the Editorial Board, Worcester Medicine

medicine

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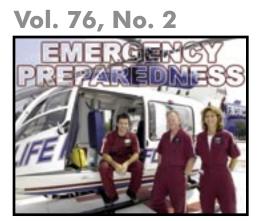
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The March Issue of Worcester Medicine is supported by a stipend given to the Worcester District Medical Society by the City of Worcester's Division of Public Health for participation in the Partnership for the Enhancement of Regional Preparedness (PERP) Grant Program.

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emergency preparedness

The Center of Excellence for Emergency Preparedness Education and Training (CEEPET) at the University of Massachusetts Medical School

Mary-Elise Manuell, MD, MA, FACEP



Mary-Elise Manuell, MD, MA, FACEP

Would you know what to do if your hospital or clinic were suddenly hit by an F5 tornado? What should you be telling your at-risk patients (elderly, dependent on special medical equipment, disabled, etc.) regarding disaster preparedness? You come across a train crash while driving to work ... which of the many injured victims should you treat first?

On May 22, 2011, the staff at St John's Hospital in Joplin,

Missouri had only a few minutes to prepare their patients and their facility before a deadly tornado made a direct hit on the hospital. Weeks before this, many of them had participated in a disaster exercise that involved evacuating the hospital ... and many admitted that they had complained about having to participate in the exercise because they were too busy. Sound familiar? These were the same people who later thanked the hospital's emergency preparedness coordinator for teaching them key response tactics that helped save many lives that day.

Central Massachusetts has experienced its fair share of disasters. What are we doing to help our healthcare providers prepare for the next disaster? In May, 2010, the Division of Disaster Medicine at the University of Massachusetts Medical applied for and was awarded federal grant funding to create one of two emergency preparedness training centers in the Commonwealth of Massachusetts. The federal funding from the Assistant Secretary for Preparedness and Response (ASPR) program is managed by the Massachusetts Department of Public Health Emergency Preparedness Bureau. The overall goal of providing this funding is to have the two training centers pro-

vide standardized, up-to-date, high level training on emergency preparedness topics to healthcare providers throughout Massachusetts. The DelValle Institute for Emergency Preparedness (in Boston) is the other training center which was also awarded this funding.

The Center of Excellence for Emergency Preparedness Education and Training (CEEPET) was developed and started offering courses in July of 2010. The mission of the center is to assess, develop, provide, coordinate and evaluate sustainable competency based emergency preparedness education and training utilizing an all-hazards approach.

The core structure of CEEPET includes a Director (Mary-Elise Manuell, MD), Associate Director (Andrew Milsten, MD), Curriculum Development Director (John Broach, MD) and Subject Matter Experts (Gina Smith, RN, Dan Meisels, MPA, EMT-P, Michael Hunter, EMT-P, and Richard Nydam, EMT-P).

The development and growth of this Center has been strengthened by collaborations with several outstanding partners. Berkshire AHEC (Area Health Education Center) provides online registration and nursing continuing education credits for our courses. The Eunice Kennedy Shriver Center, University of Massachusetts Medical School has provided expertise and course materials related to disaster planning for people with disabilities. The Partnership for the Enhancement of Regional Preparedness, Worcester Metropolitan Medical Response System, the City of Worcester, several local departments of public health, and EMS agencies have assisted with curriculum development and provided subject matter expertise.

Now ... back to those questions ... do you know the answers? Our courses help answer questions like that. We offer, or are currently developing, courses that cover the following topics: the Incident Command System, hazardous materials and decontamination procedures, risk communications (basic and ad-



vanced), development and implementation of emergency operations plans and continuity of operations plans, and planning for at-risk populations during an emergency. We also offer Basic and Advanced Disaster Life Support certification courses. Our target audiences include: staff members of hospitals, community health centers, EMS agencies, long-term care facilities, other healthcare entities and related disciplines. We offer courses in a variety of formats (traditional classroom style, online, handson, simulation, etc). Our website (CEEPET.org) maintains a calendar of our courses, links to our online courses, and online registration.

Since July of 2010, we have conducted twenty courses which were attended by a total of 519 students. In April, 2011, we offered a course on Risk Communication in which our keynote speakers were Susan Wornick (Anchor of WCVB-TVs midday newscast) and Richard Sheirer (Commissioner of Emergency Management in New York City at the time of 9/11). Another particularly successful course was the Mass Fatality Seminar we conducted on September 22nd, 2011 at the DCU Center in Worcester. This seminar was funded by the Worcester MMRS and the University of Massachusetts Medical School. Twentythree invited speakers from throughout the Commonwealth of Massachusetts, as well as two keynote national level experts, representing a variety of disciplines, shared their experiences, lessons learned, and recommendations for managing mass fatality incidents. There were 123 participants in attendance, representing several disciplines (including hospitals, EMS, hmergency management, public health, law enforcement and the American Red

Cross). A summary report of key points raised by speakers and participants was generated and will be used to help refine and strengthen future planning and training for managing mass fatality incidents.

We at CEEPET are very thankful for the federal funding we have received to make this center a reality and a success. As federal funding continues to decrease for disaster initiatives overall, however, we are exploring additional funding sources and looking at ways to become self-sustaining. We hope to be able to meet the disaster preparedness training needs of health-care providers in Central and Western Massachusetts for many years to come.

Photo from an ADLS (Advanced Disaster Life Support) course using high fidelity simulation to train course participants on the response to victims of a building collapse.

Mary-Elise Manuell, MD, MA, FACEP is Assistant Professor of Emergency Medicine, Director of the Division of Disaster Medicine and Director of the CEEPET Training Center at the University of Massachusetts Medical School. She can be reached at <u>mary-elise</u>. <u>manuell@umassmemorial</u>.





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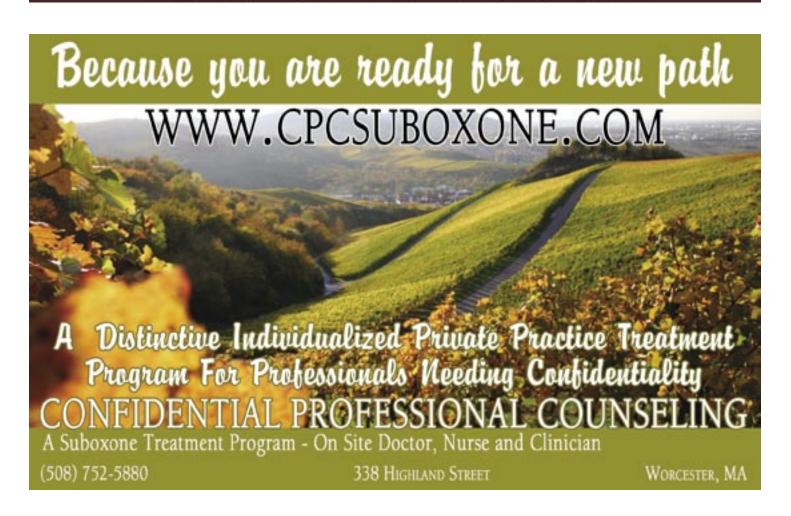
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DISASTER PREPAREDNESS Evolution and Historical Perspective

Richard V. Aghababian, MD



Richard V. Aghababian, MD

I Overview

As a celestial body with a solid surface and a molten core that orbits a distant star, the earth is in a constant state of flux. The earth's surface regularly shifts in all directions and its atmosphere is affected by several external forces.

The earliest records of human history describe floods, earthquakes, volcanic erup-

tions, devastating contagions and the impact of war. Medieval documents describe pestilence such as the plague and provide evidence that physicians had begun to understand how such diseases spread. The influenza pandemic of 1918 killed approximately 50 million people and affected one fifth of the world's population. Many public health principals practiced today were learned from that epidemic.

From World War I to the Vietnam War, the ability to care for wounded soldiers improved dramatically. Casualty rates dropped. It became clear that meticulous planning, appropriate disaster medical training, and rapid response to the needs of injured combatants saved lives. Military medical personnel returning to civilian life began to realize that their wartime skills could be used to treat victims of domestic disasters. Following the 1964 Alaskan earthquake, the federal government pondered increasing its role in disaster response. The Federal Disaster Relief Act of 1974 allowed State Governors to request federal disaster assistance. The Robert T. Stafford Disaster Relief and Emergency Assistance Act became law in 1988 and amended the earlier Disaster Relief Act of 1974. This law gave the President of the United States the authority to provide emergency assistance to the states. The National Disaster Medical System

(NDMS), originally formed in 1984 to help provide definitive care to US military personnel overseas, soon became focused on domestic disaster response. Today, NDMS is designated as the primary federal response mechanism for mass casualty events. Massachusetts is fortunate to have NDMS supported Disaster Medical Assistance Teams (DMATs) based in Boston and Worcester.

II Definitions

Medically, Disaster is a term used to describe both predicable and unpredictable events that result in human injury or illness to many victims. During a disaster, medical resources are typically overwhelmed. Initial victim management must be modified from the "routine" mode of care to "...provide the greatest good to the greatest number." Once medical responders have assessed the magnitude of a disaster, pre-designated disaster preparedness leadership must direct the transition to a "disaster mode" of care. Medical care is provided and requests for outside resources and personnel are made using pre-established disaster response plans.

The scale of a disaster is measured by the extent of the damage, the estimated number of victims, the types of injuries, and accessibility to victims. For planning purposes, disasters can be classified as local, statewide, or national in scale. Recent events such as Hurricane Katrina and the earthquake/tsunami in Japan serve as examples of national disasters.

Infectious epidemics are disasters involving the spread of viruses or bacteria between humans via food, water, or aerosolized droplets. Recent infectious pandemics have involved the international spread of influenza and the SARS virus. The spread of cholera in Haiti following the 2010 earthquake is an example of an epidemic involving a bacterium. Disasters involving the dispersal of toxic substances such as harmful chemicals or radioactive particles can evolve rapidly when such agents enter

the atmosphere. The dispersal of radioactive dust across Europe in the aftermath of the Chernobyl reactor meltdown was such a disaster.

Mass Casualty Incidents (MCIs) is a phrase used to describe distinct occurrences that leave numbers of victims either injured or dead immediately following the principle event. Often, uninjured inhabitants also suffer. While the occurrence of certain MCIs in high risk areas can be predicted, the exact time or location of the points of maximum impact cannot typically be determined. Transportation related catastrophes are examples of MCIs.

Geologic and meteorologic events are referred to as Natural Disasters. Events that result in widespread human harm because of human errors or malevolent intentions are referred to as Manmade Disasters. Examples of manmade disasters include explosions secondary to mishandling of volatile materials and the collapse of improperly constructed structures. Acts of Terrorism are another form of manmade disaster for which the need for planning and preparedness has become increasingly critical. Terrorists may use explosive devices to kill and maim victims while spreading havoc.

III Disaster Preparedness Today

Table #1 lists the agencies that are typically involved in interdisciplinary disaster planning and response.

Table 1 The Planning Team

Chief Executive (Government)

Law Enforcement

Fire/Rescue

EMS

Medical Community

Civil Planning Agencies

Hazard Control Personnel

Public Works

Social Services

Military/Coast Guard

An important disaster planning concept that has gained nearly universal acceptance is the All Hazards approach to disaster planning. The All Hazards focuses on developing teams of trained and equipped personnel who can respond to any disaster. Predetermined administrative protocols and patient care pathways are followed. These protocols and pathways are deliberately designed to be flexible and take into consideration lessons learned from previous events.

Key Components of the All Hazards approach to disaster preparedness include:

- 1. Performance of a Risk Assessment
- 2. Development of a Response Plan which includes the following elements:
 - determine when a disaster has occurred
 - begin an organized initial response
 - establish an Incidence Command Structure
 - begin victim triage and medical stabilization at the scene
 - plan to minimize further illness/injury and establish scene safety
- 3. Performance of realistic disaster simulation exercises
- 4. Initiation of Disaster Mitigation Activities
- 5. Planning for post disaster care of ambulatory victims

IV Summary

Assessments of recent disasters have confirmed that carefully developed Preparedness Plans reduce victim morbidity and mortality. Participation in community/state/federal preparedness as a responder requires a commitment to ongoing professional development. The use of patient care and management protocols leads to better results following disasters. Coordination among community, state and federal jurisdictions is essential when large scale disasters occur. All responders should have a personal response plan for themselves and their families.

Richard V. Aghababian, MD, is a Professor of Emergency Medicine, Department of Emergency Medicine, at University of Massachusetts Medical School.













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Worcester and Central Massachusetts Healthcare Emergency Preparedness Planning

Colleen Turpin and Seth Peters, MPH







Seth Peters, MPH

Beginning in August 2009, healthcare facilities in Worcester and Central Massachusetts (Region 2) decided to create a regional healthcare mutual aid plan (HMAP). This plan is a voluntary agreement between 10 hospitals, 3 major health centers and 1 acute rehabilitation hospital to share information, resources, equipment, and staff during a disaster. HMAP is similar to an existing statewide mutual aid plan for long term care facilities called the Massachusetts Long-Term Care Mutual Aid Plan (MassMAP). The region continues to add organizations to these multi-disciplinary partnerships, which enhances the capacity of disaster response. The HMAP and MassMAP groups not only support their members, but also each other during emergency situations or disasters. The degree and level of support is subjective to each incident; however, the groups have already decided to have staff from disciplines that have not been impacted to support disciplines that are disaster-struck. For instance, if the hospitals are experiencing an overwhelming surge of patients, they will find it difficult to release staff. When this happens, the long-term care facilities will send staff to the Regional Medical Coordination Center (RMCC) to assist the hospitals.

Health and medical emergency preparedness planners in Region 2 conceived the RMCC (mentioned above) as a supplement to both HMAP and MassMAP. The RMCC is essentially a Multiagency Coordination (MAC) Center providing central coordination for all Region 2 medical disciplines (e.g. hospitals, long-term care facilities, health centers, etc.). During evacuation and medical surge, the RMCC is able to arrange patient transfers, establish patient tracking, transportation, communications, medical staffing and resources for Central Massachusetts' medical facilities. Moreover, the RMCC can take on the task of critical resource allocation, such as allocating ventilators, during large disasters when available resources do not meet existing needs. The RMCC works in concert with local command centers, emergency medical services (EMS), Massachusetts Emergency Management Agency (MEMA), Massachusetts Department of Public Health (MDPH) and other local, state and federal agencies. All health and medical organizations located in Region 2 can request the RMCC to open for support during an emergency or disaster. During activation, all necessary individuals or agencies are contacted via an electronic, webbased notification system called the Health and Homeland Alert Network (HHAN), which utilizes both phone and e-mail to distribute information. Healthcare facilities may then, also by the HHAN, be asked to report their status and bed availability online. Pre-identified and trained RMCC responders will report to the RMCC location to support disaster-struck facilities.

Region 2 activated the RMCC on October 30, 2011 when Massachusetts experienced an unprecedented nor'easter. The combination of record-breaking snow, wind, and rain led to downed trees and widespread power outages throughout the Commonwealth. The storm impacted Western and Central MA, Regions 1 and 2, most severely. A long term care facility

in Region 2 debated evacuation because they lost power and were uncertain as to whether they could successfully attach a borrowed generator. With the expected evacuation, the facility requested activation of the RMCC. HHAN notification went to Region 2 Healthcare facilities and RMCC responders at approximately 3:30 pm on Sunday, October 30th. All long term care facilities were asked to complete an online emergency reporting form including facility status, open bed numbers, and availability of transportation vehicles. The Region 2 facilities submitted the requested information to the online database, which was later used by the RMCC staff.

Six RMCC responders arrived at the RMCC at approximately 4:15 pm and set up all necessary equipment. All emergency reporting data and facility contact info was projected onto a large screen for all RMCC staff to use. Within 2 hours of activation, the RMCC responders identified and confirmed approximately 300 open long term care beds and arranged the vehicles necessary for patient transport. Fortunately, the facility preparing for evacuation notified the RMCC at approximately 6:30 pm that the generator was successfully connected to their facility. They did not need to carry out the evacuation and the RMCC was able to close.

The October 29, 2011 nor'easter provided a good test for MassMAP, HMAP, and the RMCC during a real world event. Previously, Region 2 had only tested the RMCC plans through designed exercises. The response was truly multi-disciplinary as representatives from long term care facilities, hospitals, EMS, and public health all helped staff the RMCC.

Other Region 2 healthcare preparedness efforts include tools

for disaster response planning. The Region 2 Partnership for the Enhancement of Regional Preparedness (PERP) grant program completed a regional multi-disciplinary health and medical hazard vulnerability assessment (HVA). An HVA is a valuable planning tool for identifying the top natural, human, and technological hazards. Completing an HVA requires consideration of completed disaster plans, infrastructure, and the potential impact of disasters on life, property, and financial status. The HVA is useful for prioritizing disaster planning, whether in the healthcare or municipal setting, because

it exposes threats as well as gaps in preparedness efforts. In addition to the HVA, PERP has also compiled healthcare hazard binders with GIS maps showing healthcare locations and their proximity to hazards including flood plains, hazardous dams, tornado tracks, and hurricane or tropical storm tracks. The binders also have historic disaster narratives describing incidents within the Commonwealth that were particularly destructive to people or property. These binders can assist any Region 2 entity in completing its HVA. For more information on these tools and other planning efforts developed by the region, please visit the Partnership for the Enhancement of Regional Preparedness (PERP) website at http://cmemsc.org/PERP.I f you have questions regarding the planning or becoming more involved, please contact Colleen Turpin or Seth Peters at the City of Worcester Division of Public Health respectively at turpinc@worcesterma.gov or peterss@worcesterma.gov.

Colleen Turpin is Grant Coordinator for the Partnership for the Enhancement of Regional Preparedness grant program for the City of Worcester Division of Public Health.

Seth Peters, MPH is Region 2 Healthcare Preparedness Coordinator for the City of Worcester Division of Public Health.



Syndromic Surveillance Planned for Worcester and Central Massachusetts

Seth Peters, MPH



Seth Peters, MPH

Severe weather, technological failure, human violence, and even microorganisms are sources of potential disaster. An important factor in mitigating effects of these threats, including one originating from disease, is an early warning system. For instance, meteorologists have Doppler radar to identify dangerous weather systems and can subsequently warn the public. Communities throughout

the world have integrated systems to notify populations about tsunamis, tornados, radiation, and many other hazards, affording people time to prepare or evacuate. Microbes, such as bacteria, viruses, fungi, and protozoa, are a significant threat to human populations. The danger is evident historically through outbreaks of plague, influenza, tuberculosis, smallpox, cholera, and many others. Early warning systems for infectious disease are necessary to minimize the impact to the community.

In the City of Worcester, the Division of Public Health is in the preliminary stages of developing a syndromic surveillance program to provide an early detection system for outbreaks of illness. The system will be computer based and reliant on data from emergency room visits. The data, which includes complaints, diagnoses, and demographics, will be received and analyzed every 24 hours. The data will be trended over 30 days to identify aberrancies in the normal incidence of patient complaints or symptoms. Although the data will be quite subjective, the analysis will show a spike in the trend and generate an epidemiological investigation. Quick identification of a deviance in complaints in the community, along with in-depth public health follow-up, will lead to rapid confirmation of a cluster or outbreak of illness. The community as a whole will benefit from the subsequent notifications and deployment of interventions (e.g. vaccination, prophylaxis, education, and public service announcements) to slow or stop the transmission of illness.

Advantages to syndromic surveillance go beyond early identification of disease outbreak and beyond public advisories. The City of Worcester and its healthcare community will have a database of information to facilitate narrowing down the origin, or index case, of the outbreak. Furthermore, this database will be advantageous for retrospective analysis of the spread, geographic mapping, and efficacy of response of the public health

and healthcare communities. Once the system is successfully implemented in emergency departments in Worcester, it can be expanded to other healthcare facilities and communities in Central Massachusetts.

For more information on this program, please contact Seth Peters, MPH, Region 2 Health-care Preparedness Coordinator for the City of Worcester Division of Public Health, via e-mail at peterss@worcesterma.gov.





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Ten Years of Health and Medical Preparedness

Derek Brindisi, MPA and Christopher Montiverdi, MPH, NREMTP







Christopher Montiverdi, MPH, NREMTP

In 1996, the United States Department of Health and Human Services founded the Metropolitan Medical Response System (MMRS) program in response to the increased terrorist threat evidenced by the sarin nerve agent gas attack in the Tokyo Subway system in March, 1995 and the bombing of the Alfred P. Murrah Building in Oklahoma in April of 1995. The program was designed to enhance and coordinate local and regional response capabilities for highly populated areas that could be targeted by a terrorist attack. The MMRS concept, organizing principles, and resources are also applicable to the management of large scale incidents such as hazardous materials (HazMat) accidents, epidemic disease outbreaks, and natural disasters requiring specialized and carefully coordinated medical preparation and response.

Since May 2002, the City of Worcester's Metropolitan Medical Response System (WMMRS) has acted as the catalyst for the enhancement of emergency service capabilities relating to the health and medical needs of victims in the event of a Weapons of Mass Destruction (WMD) attack. This program is designed to strengthen existing emergency response plans and, when necessary, develop new ones to deal with previously unidentified threats. Worcester authorities recognize that the resources of the City and the Greater Worcester Region would be overwhelmed by the reality of mass destruction, disability, and loss

of life should a nuclear, chemical, or biological attack occur. The City of Worcester Metropolitan Medical Response System program is administered through the City of Worcester's Division of Emergency Management within the Department of Emergency Communications. The WMMRS, in cooperation with Worcester's Division of Public Health (WDPH) and the Commonwealth of Massachusetts, continues to integrate and synchronize individual agency response plans. Realizing the various federal initiatives to combat terrorism and other large scale events, WMMRS has forged several partnerships with the Centers for Disease Control's Public Health Emergency Preparedness (PHEP) Program, Partnership for the Enhancement of Regional Preparedness (PERP), and the Assistant Secretary for Preparedness and Response's (ASPR) Hospital Preparedness Program. Partnerships such as these integrate MMRS, CDC, PERP and ASPR targeting capabilities which create an increased level of awareness, unification, and communication among the major medical preparedness initiatives nationally.

Since its beginning, the WMMRS has matured into a regional initiative encompassing all 74 communities in Central Massachusetts. WMMRS meets monthly with all ten ASPR funded hospitals and three area health centers in the 74 communities to develop plans to effectively deal with a public health or medical crisis. Over the years, regional partners have collaborated on the development of a regional medical coordination center where hospitals and emergency medical services can gather to effectively manage the surge of patients should a mass casualty incident (MCI) occur. This type of collaborative planning with hospitals and first responders allows for consistent training, such as a radiation patient management and the recent Managing Mass Fatalities Seminar held this past fall at the DCU Center.

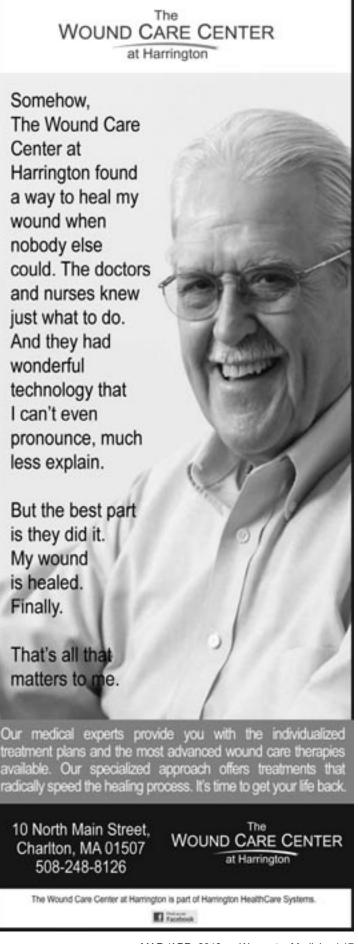
For the past nine years the CDC has funded local boards of health to support this critical need for public health preparedness. WMMRS in many respects has a similar mission with local public health but is funded through the federal Department of Homeland Security. In conjunction with the Worcester Division of Public Health, WMMRS is working to increase the state of preparedness for the Region II Public Health Coalition. A major focus for these Boards of Health is to develop a plan where, if necessary, each community would be able to deliver chemoprophylaxis to its respective population within a 48 hour time period following a highly infectious disease outbreak. For example, in the City of Worcester nine emergency dispensing sites (EDS) have been established to be used for vaccinating or prophylaxis of its 181,000 residents. These plans were tested during the 2009 influenza season of novel virus H1N1 where WDPH operated over 150 flu clinics. Part of these planning efforts has allowed the WMMRS to continue to develop its cache of pharmaceuticals with antibiotics and chemical anti-dote kits already warehoused locally.

During the past decade, health and medical professionals have instituted new approaches and have expanded upon well-established, time proven tactics in response to emergencies. With the possible use of biological agents as an arsenal of assault, the face of terrorism has brought the discipline of public health into a new arena of responsibility. The WDPH and WMMRS continue to move forward in addressing the evolution of disaster preparedness, depending heavily on effective communication, new technology and ~ above all ~ the expertise of health and medical professionals.

This is but a brief account of what has been occurring in Worcester and Worcester County since September 11th, 2001.

Derek Brindisi, MPA, is Director of Public Health, Worcester Division of Public Health.

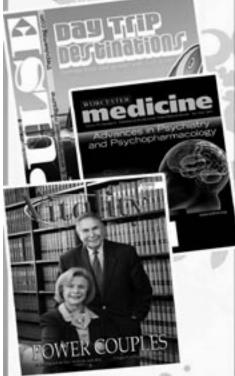
Christopher Montiverdi, MPH, NREMTP, is Deputy Director, Division of Emergency Management.



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Thoughts On Our Demographic Future

J. Barry Hanshaw, MD



J. Barry Hanshaw, MD

My grandchild, Isabel, is a joyful five-year old. With all the talk about the decline of America, what will her adult world be like? There are demographic trends that provide partial insight into the answer to this this question.

The 20th century was a time of unprecedented population growth. From 1900 to 2000, the world

population quadrupled from 1.6 billion to 6.1 billion. Now 7 billion people share space on the planet. Demographers believe that by 2050 the population will stabilize at 9.1 billion. This increase is a health explosion due to a decline in mortality. The global life expectancy went from 30 years in 1900 to 65 years in 2000. The overall life expectancy in the United States is now 78.2 years.

The U.S. birth rate far exceeds most other developed countries. Our fertility rate is 50% higher than the rates in Russia, Germany, and Japan, and well above those in China, Italy, Korea, and virtually all of Eastern Europe. All of these countries will have a third or more of their population over 65 by 2050. Within the next four decades, our economic competitors in the developed countries of Europe and East Asia will become veritable old age homes.

Throughout history, low fertility rates have been linked to socioeconomic decline. This was true in ancient Rome and it will also be true for contemporary Europe, South Korea, and Japan. In Italy, one half of women age 16-24 do not want to have children. A rapidly falling population (as in China) may present a greater threat to the well-being of a nation than steady population growth. A decline in population will not only reduce the work force necessary to support the high cost of health care for larger numbers of the elderly, but will also affect a nation's long-term productivity and competitive future.

Even if China reaches the United States in GDP, it is certain to lag far behind in per capita income in U.S. dollars. Poverty in rural China continues to be a massive problem in spite of gleaming urban buildings and rapid transport. China's sacrifice of democratic institutions for economic gain, in addition to its historic insularity, are other problems facing its future overall development.

The economic strength of America matters because we are the world's best example of the democratic experiment. According to the Nobel Prize winning economist Joseph Stiglitz, 40% of America's wealth is controlled by 1% of Americans. This is happening at a time when poverty in the world's richest country is increasing sharply and shrinking the middle class. This is an enormous problem for the future of our democracy.

While the demographic trends are encouraging for our economy, no generation can escape adversity. Recalling times of grueling wars and severe economic hardship, America has repeatedly demonstrated strength in adversity. I am sure that Isabel's generation will carry on this remarkable American tradition.

J. Barry Hanshaw, MD is Former Dean and Chair of the Department of Pediatrics, UMass Medical School.

Spoken History Project: A. Jane Fitzpatrick, MD

Anthony L. Esposito, MD



Anthony Esposito, MD

In the mid-1990s, A. Jane Fitz-patrick (Kilroy) and other area physicians were interviewed by students from the University of Massachusetts Medical School (UMMS) for the Worcester District Medical Society's Spoken History Project. The interviews were videotaped and, in some cases, transcribed; recordings and transcriptions are available through the WDMS.

Dr. Fitzpatrick practiced as a pediatrician in Worcester for 40 years and served the city's Department of Public Health for 45 years. Because of her extraordinary dedication to the wellbeing of Worcester's children and their families, Dr. Fitzpatrick twice received the Key to the City; in 1991 she was honored by the Worcester District Medical Society which established the Community Service Award as a tribute to her legacy of service. Dr Fitzpatrick passed in 2009 at the age of 93.

Dr. Fitzpatrick was interviewed for the Spoken History Project in 1995, about ten years after she retired from clinical practice and public service. Not comfortable with being the focus of attention, she was nevertheless patient with the interviewer and thoughtful in her responses to his many, many questions. Most revealing during the interview was her passion for her work as a physician, her devotion to her young patients and their families, and her acceptance of the rigors of a solo medical practice.

The Interview

A large, matronly lady sitting in a Queen Anne chair, Dr. Fitzpatrick wore a bright dress with flowering and interlocking vines,

a soft smile, and an expression of timeless patience. Large glasses with round lenses framed her inquiring brown eyes. In response to a question regarding her decision to become a physician, Dr. Fitzpatrick acknowledged a childhood fascination with medicine and the importance of relatives who were in the profession and who lit her path as role models. To secure admission to medical school, Dr. Fitzpatrick completed her undergraduate studies at Tufts University in Medford where she majored in chemistry. Tuition at Tufts in the 1940s was \$300. "It was hard for my family to come up with it," she said, "but they did...My family was behind me 100%." Because she could not afford to live in Boston, she stayed in Wellesley Hills with an aunt and an uncle who were both osteopaths practicing in Boston, and she commuted from Wellesley Hills to Medford on buses, a long and tedious trip in that era. "I spent hours waiting for the bus," she recalled.

Her effort to meet the commuting and academic challenges of her undergraduate education were rewarded. "I put in my application at Tufts Medical and was accepted. I don't know why, but in any case, I was." During medical school, she lived in a Boston tenement, noting, "Medical school tuition was \$500 when I started. I managed to pay for it without a problem because I had a mother who was a saving mother and knew how to save."

Dr. Fitzpatrick reports there were eight women in her class, which was the largest in the history of the school. "[Medical school] was a great experience. I had great classmates," adding with pride, "And all the girls graduated."

Dr. Fitzpatrick performed an internship at Hahnemann Hospital, where she had worked during the summers. Because the year was 1942 and the world was at war, the other three interns were all called into service. Shrugging with acceptance, she said, "I was on my own. No time off at all. I had to do every-

thing. I was there every single day." Perhaps alarmed her comments might be interpreted as complaints, she straightened and added, "It was tough times, but you were essential. It was the least I could do." With another shrug, she concluded, "Once in a while, I'd get time off."

After her internship, she completed a pediatrics residency in New York City. "It was on Welfare Island. You had to take a ferry....For the most part, we didn't go off the island much. You were always there in case somebody needed you." With her formal training behind her, she applied for an appointment at Worcester City Hospital. "My application went through tough times, because the chief of surgery did not want women on the staff." Smiling with satisfaction, she added, "But there were enough people who had worked with me at Hahnemann who were on the Board, and I got on the staff...I wanted to do more service work and so I got an appointment in the outpatient. Eventually, I got an appointment to the medical staff and saw everything...When I first went to City, pediatrics was in the Department of Medicine, but after a few years, we got our own Department of Pediatrics and we got residents to come."

She established a private, solo practice in an office that consisted of "a small examination room and a tiny waiting room" and that was so small, "I had no room for a secretary or nurse, so I had no one to help me. It was kind of tough...Eventually, I had someone come in the morning when I was at the hospital to do work in the office." Chuckling with the memory, she added, "I made enough to pay the rent but not much more." She stayed in the same office her entire career.

"After I got married [to a physician, Edward F. Kilroy, MD, in 1946], I had all these children, one after the other [five in toto].

I had to work up until the time I delivered and then could only take a couple of days off." When asked if she felt she had enough time to spend with her children, Dr. Fitzpatrick shrugged and added with resignation, "I do not believe the children resented it because they didn't know anything different."

A typical day began with inpatient rounds at Worcester City Hospital, Hahnemann Hospital or St. Vincent Hospital. The afternoons were spent in the office, and on the average day, Dr. Fitzpatrick would see 14 to 16 patients. "Most of my office

visits were well-child visits. If somebody got sick, you went to their house to see them." After office hours, she would make house calls. "Some days I'd go home and check on the children and then make the house calls. Sometimes I would go directly from the office."

House calls were a common aspect of Dr. Fitzpatrick's practice and a source of great satisfaction. "I really enjoyed the house calls. I think that is the way I really learned about my patients...You saw what their problems were...you knew where those people came from and what they had to contend with."

The challenges of making house calls were numerous. "It seemed I was always out during the worst times of the year," she said, adding playfully, "And it always seemed as though my patients were on the top floor of the three-deckers...you had to kick the cans out of the way. I saw the worst of it...On one house call, there were seven kids; there was something wrong with all of them. It took me all night to go over all of them. Naturally, I did not get paid on that one." When the interviewer acknowledged her evident joy in relating her home visit experiences, Dr. Fitzpatrick smiled. "I really, really enjoyed that part of it," she agreed.

Her patients "were all working people...There weren't many immigrants at that time, but they were poor people. I loved them. They were wonderful patients...Sometimes they were out of work. They didn't have much of anything. I was never good at collecting bills. It was no skin off my teeth not to charge them. I knew they would pay if they could. I had that relationship with the patient rather than wondering how much money I was going to make." Her affection for her patients is also reflected in her comment, "The sadness that you would



have when you had a patient with something you couldn't do anything about would last forever."

How could her patients contact her in an era before wireless communications? "I never had a beeper...my patients would find me through the answering service...I called the answering service at least once an hour...My office line rang in the house."

Her fees when she began? "An office visit was \$3; \$5 for a house call." When asked what she charged before she retired, Dr. Fitzpatrick replied, "I don't know. I never changed my fees." Later in the interview, she voiced the obvious: "I was not a good businesswoman. I did not pay much attention to what was coming in."

Although she maintained a solo practice throughout her career, Dr. Fitzpatrick did not work in isolation. "I got all the support in the world from my immediate colleagues, Fran O'Connor and Bob Cox...I met with them every day over coffee to discuss difficult or interesting cases...It was a great group."

Her thoughts on her career as a physician? "I have wonderful feelings about being a pediatrician in Worcester and being able to help in some very difficult situations...It was a joy to practice medicine as far as I was concerned."

Dr. Fitzpatrick offered advice for men and women going into medicine now: "Be sincere and appreciate what has been given to them...There is no greater joy in life than to have the role a physician has."

Anthony Esposito, MD

Anthony Esposito is Chief of the Department of Internal Medicine and Director, Division of Infectious Diseases and Geographic Medicine at St. Vincent Hospital.and a member of the Editorial Board, Worcester Medicine

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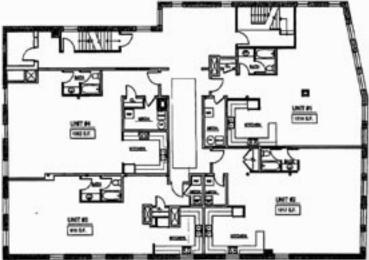
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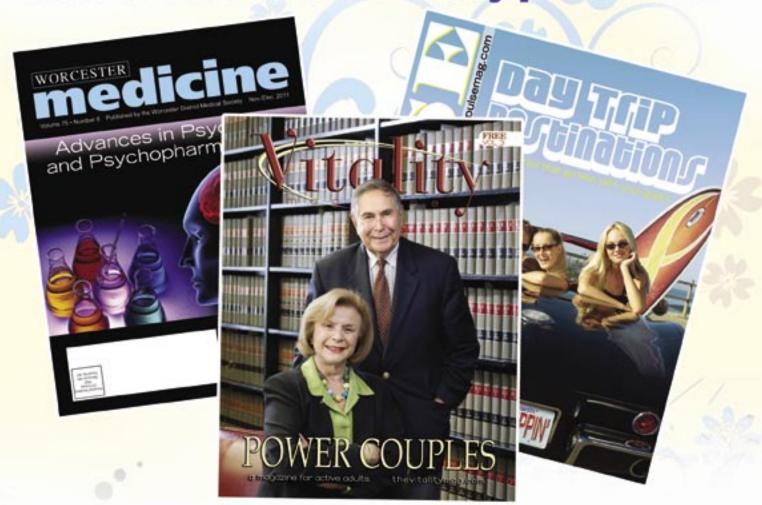




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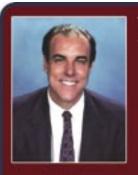


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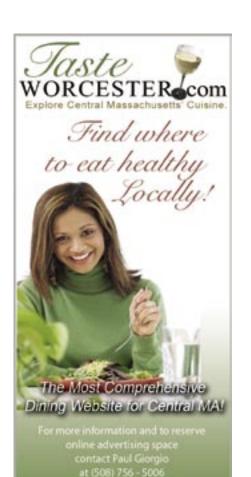


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Wednesday, April 11, 2012, 5:30pm Beechwood Hotel, Worcester, MA

"The Phantom Menace of Sleep Deprived Doctors"

Last year, changes by the Accreditation Council for Graduate Medical Education reducing the number of hours a first-year resident can work went into effect nationwide. New residents are no longer allowed to work the 30-hour, overnight shifts that have become the hallmark of the physician training programs. yet, incredibly, the rate of medical errors has failed to fall despite recent changes in resident work hours. In this discussion, we'll explore the reasons why.



Guest Speaker: Darshak Sanghavi, MD

Darshak Sanghavi is associate professor of pediatrics and chief of pediatric cardiology at the University of Massachusetts Medical School, where he directs clinical and research programs dedicated to children's heart defects. An award-winning medical educator, he also has worked in medical settings around the world and pub-

lished dozens of scientific papers on topics ranging from the molecular biology of cell death to tuberculosis transmission patterns in Peruvian slums. A frequent guest on NBC's Today and commentator for NPR's All Things Considered, Darshak is a contributing editor to Parents magazine and Slate's health care columnist, and often writes about health care for the New York Times.

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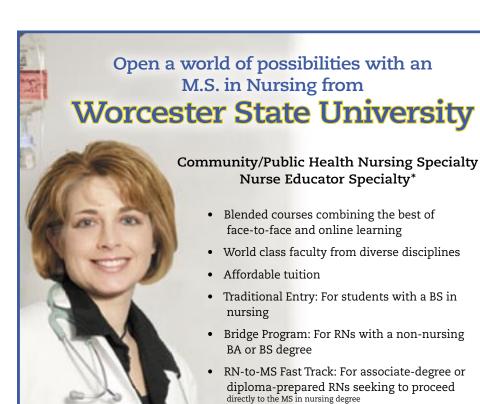
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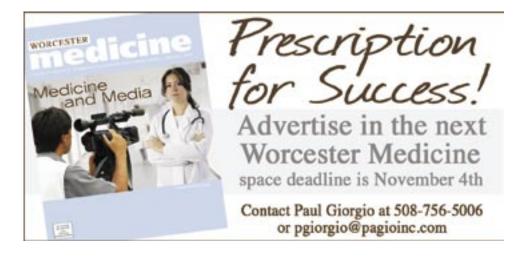
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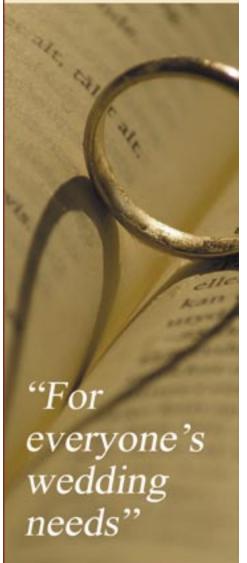
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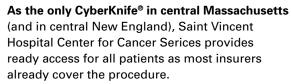
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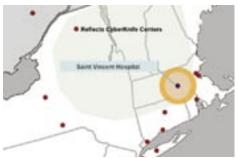
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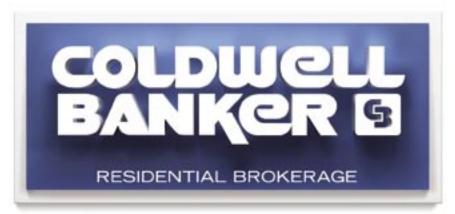
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