The events of September 11, 2001 focused our attention on the devastating effects of a manmade disaster. However, each year numerous natural disasters produce far more deaths and damage than are caused by terrorism. This was most recently demonstrated by the multiple hurricanes that made landfall in Florida and Alabama. Disasters tend to have a disproportionate effect on older persons in the areas where they occur. In addition, heat waves tend to be the disaster with the highest death toll each year.

The Centers for Disease Control and Prevention (CDC) conducted assessments of the social and health (continued on page 16)
“Yea, though I walk through the valley of the shadow of death, I will fear no evil, for thou art with me.” Psalm 23:4

T

his issue of Aging Successfully is dedicated to providing information on how older persons and the health care professionals working with them can prepare to minimize the human toll of both natural and man-made disasters. It is important that we approach this rationally, without generating excess fear and anxiety. Nevertheless, it needs to be recognized that since September 11, 2001, although we have made many improvements to our disaster preparedness training system, it is by no means perfect. In particular, there has been minimal focus on older persons, particularly those who are homebound or in nursing homes.

One step towards including the special concerns of the elderly is the development of an emergency preparedness kit for seniors. A general kit for the population has been developed by the Federal Emergency Management Agency (FEMA) (see page 14). The Gateway Geriatric Education Center (GEC) kit has built on this general kit in order to emphasize items of particular concern to seniors. The Gateway GEC Kit suggests including:

- a three-day to one-week medicine supply
- a medication list
- contact numbers for family (one of whom lives at a distance)
- Social Security, Medicare, and insurance numbers
- detailed plans for pet evacuation
- an identification bracelet (for those who are cognitively impaired)
- phone numbers of physician and hospital of choice
- a flashlight
- extra glasses and hearing aids, if available
- extra batteries for both the flashlight and hearing aids, and

Recent disasters have taught us that in addition, persons who need oxygen must have an emergency system in place to provide oxygen if available systems fail. Also, based on the Israeli experience, when emergency masks are to be provided, they need to be tested in older persons with pulmonary disease to make sure that they do not produce suffocation. Evacuation plans for nursing homes need to be in place. These must include some method for identifying all the residents and their family members’ contact numbers. This is particularly important in view of the large number of demented residents and also those with mild cognitive impairment.

Since Noah’s flood and the plagues visited on the Egyptians, disasters have been a part of our existence. Proper preparedness, especially for and among older persons, will help to limit the negative outcomes associated with these events. Finally, we should remember that most disasters, even biological, chemical, and nuclear disasters are not usually due to terrorist attack. For this reason, we need to develop comprehensive disaster plans and not just those aimed at combating terrorism.

John E. Morley
GECs work to advance mission on bioterrorism and emergency preparedness planning for an aging population

By Elyse Perweiler, RN, MPP, Robert Roush, EdD, MPH, and Nina Tumosa, PhD

Immediately following the attacks of September 11, 2001 and the subsequent anthrax scare, key publications and reports called for training of the nation’s health work force in the area of bioterrorism preparedness. Extensive reviews of this literature on bioterrorism revealed little information on age-appropriate care for older people exposed to weaponized biological, chemical, or nuclear agents that terrorists might use.

In 2002, the prestigious Institute of Medicine (IOM) issued a report entitled Biological Threats and Terrorism: Assessing the Science and Response. Written by 63 leading epidemiologists, infectious disease specialists, emergency department physicians, and public health workers, this otherwise comprehensive document did not address the special needs of older people. Of the 63 co-authors, several were pediatricians; none were geriatricians —http://books.nap.edu/books/0309082536/html/index.html accessed 6/12/03.

Further evidence of the dearth of geriatrics-specific Bioterrorism and Emergency Preparedness in Aging (BTEPA) information regarding the six Class A agents (anthrax, smallpox, plague, tularemia, botulinum toxin, and viral hemorrhagic fevers) designated by the Centers for Disease Control and Prevention (CDC) is in these findings:

1) John van de Leuv, MD, in a review of “Bioterrorism Simulator,” (JAMA, March 2003, Vol. 289, p.1574), found 314,000 citations on bioterrorism in the literature; none of the first few hundred he reviewed referenced treating frail elders. (Personal communication with the author at Mary Immaculate Hospital, Newport News, VA: April 8, 2003.)

2) In reviewing an excellent and widely cited book on the subject – Bioterrorism: Guidelines for Medical and Public Health Management by D.A. Henderson, MD, MPH, et al., AMA Press: Chicago, IL, 2002 –no recommendations to treat frail elders as a special population were noted, although pregnant women and small children were mentioned as having special needs.

(continued on page 4)
In the fall of 2002, the National Association of Geriatric Education Centers (NAGEC) recognized this lacuna of information and inadequate training of health care providers for older people and authorized a survey of what the nation’s 47 Geriatric Education Centers (GECs) were doing in the area of bioterrorism. NAGEC also formed a Bioterrorism and Emergency Preparedness in Aging (BTEPA) Committee, co-chaired by Drs. Robert E. Roush, Director of the Texas Consortium of GEC, and Nina Tumosa, Co-Director of the Gateway GEC. Subsequently, this group of 21 GEC representatives adopted a position statement on bioterrorism and emergency preparedness as it affects the elderly. That statement was published in the Spring 2003 issue of *Aging Successfully*.

The following is a summary of what the members of this committee have accomplished since 2002 and propose to do during the next fiscal year.

- Several needs assessments of health care providers around the country were conducted and revealed less than 50% have had any formal training in bioterrorism and only 10% had any geriatrics-specific training. This low figure becomes especially problematic when older people surveyed on this issue revealed that they will rely on their health care providers and emergency departments for relevant information and care in the event of an attack by bioterrorists.

- Six GECs were awarded one-year curriculum development grants in Bioterrorism and Emergency Preparedness in Aging (BTEPA) by the Health Resources and Services Administration (HRSA). These six GECs are Consortium of New York, Case Western Reserve GEC, Ohio Valley/Appalachia GEC, The Gateway GEC of Missouri and Illinois, The Texas Consortium GEC, and the Stanford GEC.

- HRSA-funded GECs were invited by the Gerontological Society of America to coordinate and conduct a symposium on BTEPA at the 2003 Annual Meeting in San Diego, CA.

- Project leaders from these six leading health science centers held a consensus conference in January 2004 to determine what the minimum content of an all-hazards approach should contain.

- A second consensus conference in August of 2004, consolidated opinions of the needs for BTEPA training for the next 10 years and resulted in commitments of the attendees to assist Dr. Robert Roush of the TCGEC at Baylor College of Medicine in the production of a consensus of curricular content and recommendations for the age-appropriate training of the nation’s health work force in this area for the *HRSA White Paper on Bioterrorism and Aging*.

- A second needs assessment of the 47 GECs indicated that, in response to local needs assessments, about 1/3 had already provided, or were planning to provide, BTEPA training for their faculty in 2004.

- The largest stated need for BTEPA training was in the field of mental health, with requests for medical, social services, and emergency training all tying for second place.

- The six GECs mentioned above are developing a comprehensive train-the-trainer curriculum, complete with core competencies, which will be ready for pilot-testing to interested groups in 2005.

- A poster session on *Emergency Preparedness for Caregivers of Older People* will be presented at the GSA conference in November, 2004, followed by two preconferences: one at the Association for Geriatrics in Higher Education in Oklahoma City on February 24, 2005 on *HRSA-funded GECs: Infusing And Teaching Curriculum Content On Bioterrorism And Emergency Preparedness For The Aging* and the second on *Geriatric Education and Neighborhood Planning for Bioterrorism and Emergency Preparedness* at the American Society on Aging and the National Council on the Aged Conference in Philadelphia on March 10, 2005.

NAGEC believes what is needed now is continued federal and state support of BTEPA efforts nationwide to ensure that all health care providers of America’s frail elders know what they need to know before they have to use it. GECs constitute a national resource through which to disseminate BTEPA curricular materials and conduct training in their areas of the country for healthcare professionals of multiple disciplines. Thus, continued funding of GECs and BTEPA training is vital to both homeland security, as well as all areas of geriatrics. Far too many of the nation’s health care providers are still not adequately prepared to care for America’s burgeoning older population. The GECs stand ready to meet this challenge.
Preparing for Bioterrorism and Emergencies

The Ohio Valley Appalachian Regional GEC Develops Rural Program

By Arleen Johnson, PhD

The Ohio Valley Appalachia Regional Geriatric Education Center (OVAR/GEC) has tapped consortium faculty from the Universities of Kentucky, Louisville, and Cincinnati, and East Tennessee State University to contribute expertise in creating bioterrorism and emergency preparedness in aging (BTEPA) resources with special emphasis on serving older persons in rural areas. Region-wide training has been provided and resources have been developed that include a database, focus group reports, and curricula modules.

The OVAR/GEC BTEPA resources database currently contains geriatric related resources on biomedical, aging/public emergencies, planning/mobilizing, public communication, mental/behavioral health, ethical/legal issues, and other related areas. The database is available at [http://www.rgs.uky.edu/aging/btepa/index.html](http://www.rgs.uky.edu/aging/btepa/index.html) and will be expanded to include additional BTEPA resources as they are developed.

During 2003-2004, OVAR/GEC faculty and staff conducted nine focus groups throughout the region with 82 older persons and health care providers from 20 counties across KY, OH, and TN. Results from the focus groups included the following:

- They were unaware of community preparedness plans specifically addressing the needs of older persons and, if such plans were in place, neither older people nor agency personnel who worked with older people were involved in the development.

- They were concerned about issues related to planning and preparation, locating isolated elders, contaminated water, inappropriate media coverage, transportation, and evacuation.

- They were concerned about securing needed medications and health care services. The majority expected their health care providers to be prepared to meet their needs but had not discussed BTEPA issues with them.

- They voiced general concern regarding the chain of command and who would be in charge of decision-making during an emergency situation, where older persons should go, and how they could be transported if evacuation was required.

- They requested educational programs and materials.

- Elders felt they would feel more secure if they had more information and requested guidelines for preparing for emergencies, for managing themselves, for helping others during emergencies, and for recovering following emergencies. Elders felt that their life experience could be a resource for others during an emergency and were interested in learning of ways that they could help.

(continued on page 6)
Professionals indicated a need for guidelines for developing more complete community emergency plans that included older persons, and requested models for identifying isolated and other at-risk elders and/or persons with disabilities. Elders requested information on creating emergency kits and developing personal plans.

Elders and professionals agreed there is a need for better communication among community planners, bioterrorism and emergency preparedness leaders, older persons and the aging services network providers.

These focus group results guided the content for the 11 model curricula created by OVAR/GEC that are appropriate for interdisciplinary health care professions students, faculty, and providers:

- Disaster Services: Volunteer and Non-Profit Agencies
- Disaster Services: Federal Resources
- Bioterrorism Awareness: What Individuals Should Know to Reduce the Threat
- Risk of Bioterrorism and the Elderly: Will We be Ready to Meet Their Needs?
- Bioterrorism: The Medical Needs of the Elderly
- Understanding Disasters and Terrorism
- The Aging Network
- Mental Health Responses to Bioterrorism: What About Older Adults? (partially funded by HRSA grant # 1 T01HP01397-01-00)

In addition, the OVAR/GEC collaborated with the Kentucky Department for Public Health (KDPH) to develop three Internet-based continuing education courses. These distance learning modules were utilized in train-the-trainer-training for 15 KDPH Regional Bioterrorism Training Coordinators who now train elders and health care providers in each of their regions. The courses are appropriate for interdisciplinary health care professions students, faculty, and providers:

- Helping Older Persons Prepare for Bioterrorism and Emergencies
- Aging Network (some resources and data specific to Kentucky)
- Disaster Preparedness: Developing an Agency Plan

These distance learning courses are available to the public via the KDPH Training Finder Real-time Affiliate Integrated Network (TRAIN) by registering at http://ky.train.org. A login name, password of choice, and selected demographic data are required for enrollment into the courses. Core competencies for bioterrorism and emergency readiness for public health professionals have already been selected for the TRAIN courses. However, core competencies will have to be created and assigned for other healthcare professions.

In the coming year, the educational resources being developed by the OVAR/GEC and other HRSA funded GECs will be utilized in training for interdisciplinary faculty, students, and health care professionals via university classes, national conferences, Internet-based distance learning courses, community forums, and interactive television broadcasts. Every effort will be made to ensure that the special needs of older persons are recognized and that older persons and aging services providers are included in the emergency planning process.

For more information about the OVAR/GEC and its bioterrorism and emergency preparedness for the aging initiatives, contact Arleen Johnson, PhD, (859/257-8314 or arleen@uky.edu) and visit http://www.rgs.uky.edu/aging/gec/.
The Consortium of New York Geriatric Education Centers (CNYGECs) convened a 13-member panel of experts to develop curricula on geriatric disaster preparedness training. Faculty members from New York University Division of Nursing, Columbia University Stroud Center for Geriatrics and Gerontology, and Mount Sinai School of Medicine/Bronx Veterans Affairs’ Geriatric Research, Education, and Clinical Center (Bronx VA GRECC) have developed a Geriatric Mental Health and Disaster Preparedness curriculum. The faculty determined that a complete curriculum should include content on:

- Types of man-made and natural disasters
- Definitions and examples of such terms as crisis, emergency, disaster, preparedness, and readiness
- Special considerations of the elderly with regard to housing, transportation, psychology, and health
- Overview of aging and mental health
- Geriatric mental health during an event, including individual responses, normal vs. abnormal responses, elder abuse in times of crisis, and differential diagnosis of mental disorders
- Geriatric mental health post event, including coping strategies, assessment, interventions, therapies and the use of complementary medicine
- Clinical perspectives and processes in the care of elders during disasters, and
- Self-care for the healthcare provider with respect to trauma and burnout.

This curriculum has resulted to date in three geriatric/disaster preparedness training sessions that were co-sponsored with the New York Academy of Medicine and a videoconference broadcast hosted at the Bronx VA/GRECC to 25 sites in VA hospitals. One such training session included information about:

- Common traumatic stress reactions
- Who develops mental health problems following a disaster
- Types of disaster trauma
- Implementing disaster mental health services
- Psychological distress signals in elders
- Special concerns that exacerbate this distress
- Recommended interventions

The CNYGECs have developed a comprehensive geriatric mental health Disaster Preparedness curriculum that includes case studies in post 9/11 geriatric mental health, slide presentations of the talks, and a video on mental health. They are preparing a video highlighting the stories of survivors of the 9/11 disaster and more curricula for upcoming training on Mental Health and Quality of Life Improvement in Turbulent Times and Spirituality During Times of Stress. Training sessions have already been scheduled for the New York State Society on Aging and for pre-conferences or symposia at three national aging conferences, AGHE, GSA, and ASA.
Preparing for Bioterrorism and Emergencies
Case Western Reserve GEC Works to Prepare Citizens

By Barbara Palmisano, MA, RN

The Western Reserve Geriatric Education Center (WRGEC) is focusing its Bioterrorism and Emergency Preparedness in Aging (BTEPA) efforts on enhancing safe and supportive communities for older adults. To that end, WRGEC faculty have:

♦ created an interdisciplinary web-based curriculum,
♦ developed a staff development tool for use in long term care facilities, and
♦ integrated BTEPA content in training programs of WRGEC consortium partners.

The interdisciplinary web-based curriculum can be found at http://darla.neoucom.edu/ElderPrepare. The site contains a series of four educational modules designed to:

♦ teach emergency responders about the special needs of vulnerable older adults,
♦ teach the principles of emergency preparedness to provider groups that serve older adults, and
♦ provide educational resources and information to students and individuals in the community interested in emergency preparedness.

The first module, which is presented in two parts, addresses category A and selected category B diseases/agents, including anthrax, smallpox, and the plague. Application of physiological aging to the impact of a possible bioterrorist event and relevant considerations for chronic frailty and disease are addressed in the second module. The third module focuses on common psychological responses to emergencies that elders experience, as well as how healthcare and service providers can help promote healthy coping and empowerment amongst elders in the face of bioterrorism threats. The final module discusses the civil rights and liberties of older adults in a community emergency. Special issues and concerns of older adults that must be considered by authori-

ties in the implementation of the Model State Emergency Health Powers Act in an emergency are discussed.

Co-sponsored by the Department of Continuing Medical Education at Northeastern Ohio Universities College of Medicine, the curriculum modules are complete with post-tests and evaluations. They are available as a curriculum resource for allopathic, osteopathic, nursing, allied health, and public health students throughout Ohio and will be introduced as a component of the gerontology course at Medical College of Ohio in Toledo.

WRGEC has infused BTEPA content into the senior level community medicine clerkships at Northeastern Ohio Universities College of Medicine. Three four-week group projects have resulted in a needs assessment and the development and pilot testing of two tabletop exercises for BTEPA training in long term care facilities. Building on these projects, the WRGEC is developing a facilitators’ guide for using tabletop exercises for staff development in long term care facilities.

Tabletop exercises stimulate active learning in a non-threatening environment and provide staff with the opportunity to communicate in ways that promote mutual respect for each other’s responsibilities, appreciate limitations and coordinate team efforts. Commonly used in public health forums, tabletop exercises are designed to provide scenarios of unpredictable yet realistic circumstances that lead participants to see the need for collaborative problem solving. The facilitator’s guide will provide educational tools for long term care facilities to assist staff in thinking through the effectiveness of existing emergency and infectious disease policies and “test” the policies in a mock scenario.

The faculty preceptors for the Community Medicine Clerkships on Bioterrorism and Aging (l to r) Teresa Albanese, PhD, Margaret Sanders, MA, LSW, and Barbara Palmisano, MA, RN
The faculty at the Gateway GEC of Missouri and Illinois began to develop discipline-specific Bioterrorism and Emergency Preparedness in Aging curricula by holding focus groups with:

- Physicians
- Public health administrators
- Nurses
- Social workers
- Allied health professionals
- Interdisciplinary group
- Elders.

Each group had unique insights into the needs of both elders and their healthcare providers during times of emergency. The importance of pre-planning by everyone was emphasized by all groups. Plans need to have pre-event, event, and post-event components. The groups that were encouraged to develop emergency plans were:

- Individuals
- Families
- Communities
- Businesses
- Fire and police districts
- Towns/Cities
- Regions (e.g., counties)
- States/Reservations
- Federal agencies

The content of each of these plans can be quite consistent across all of the groups. For example, all plans must include good communication between:

Evacuation strategies and quarantine plans
Mental health
Ethics
Recognizing signs and symptoms
Geriatric syndromes/concerns
Elder limitations (physical, mental, emotional, financial)
Nuclear, biological, chemical, and incendiary threats
Communication in a crisis, chain of command
Yourself and family

Plans for treatment and outreach
Restoring the spirit
Ethnic diversity, ethnogeriatrics, and CLAS standards
Preparation of emergency kits
Awareness of aging resources
Residences need plans
Education saves lives
Diagnostic hallmarks change with age
Notification strategies, numbers to call
Event documentation is critical
Special needs, surge capacity
Spirituality

Animal (service and companion) needs and evacuation
Natural disasters
Diagnose exposure early
Dissemination of plans is critical
Impaired communication by elders
Service gaps assessed
Assistive devices and other technology life support
Stress disorders
Transportation needs
Emotional needs
Rapid response is critical

Prescriptions
Local planning
Assess needs in advance
Needs assessments help with planning
 Necessary supplies, personal items
Identification and mobilization of resources
No one forgotten
Global planning

those different plans that sets up a chain of command that will minimize redundancy and conflict. However, there is some content of each plan that is unique. For example, parents of school-aged children will include a plan to contact other adults who are responsible for their children during the day. At the other end of the age spectrum, elders are their own responsible adult. For them the unique aspects of the plan will include having access to enough medication to see them through a crisis. For healthcare providers of those elders, the unique aspects include understanding how elders respond differently from younger adults to certain biological assaults such as anthrax, or to stress. For fire and police personnel, it requires understanding that service and companion animals play a critical role in the health of elders and that plans must be made to evacuate animals along with people.

Gateway GEC faculty recognize that the many components of a plan can be overwhelming and has created the mnemonic on this page to aid everyone in remembering the many critical pieces. Each letter of the mnemonic represents a critical component of the overall care of our vulnerable elders.

Preparation for Bioterrorism and Emergencies
The Gateway GEC of Missouri and Illinois Develops Curriculum Components

By Nina Tumosa, PhD
Preparing for Bioterrorism and Emergencies
Stanford GEC Develops Ethnogeriatric Preparedness Curriculum

By Melen McBride, PhD, RN

The faculty of the Stanford Geriatric Education Center (Stanford GEC) has made the healthcare of ethnic elders a priority. Following a survey on sensory loss and emergency preparedness, they created the mnemonic ETHNIC ELDERs (below) to form a framework for curriculum content on emergency preparedness for their elderly constituents.

In order to teach healthcare providers about sensory loss and emergency preparedness for diabetic clients, the faculty developed a role play for nurses, psychologists, rehabilitation specialists and social workers. Trainees learned how to do an intake assessment for clients with hearing loss, make an appropriate referral, orient the client to the environment, use technology for communication and support the client’s medical and social needs.

Lessons learned included the fact that healthcare trainees of diabetic ethnic elders who have difficulty hearing did not consider emergency preparedness to be a priority. They felt that they already had too many cultural and language barriers to overcome and that emergency preparedness training was just one layer too many to work on. However, those trainees agreed that the distribution of flyers containing emergency advice to hard-of-hearing or deaf, diabetic ethnic elders, in their own language, would be critical for assisting elders in an emergency situation. The creation of an emergency kit that contains the items listed below provides ethnic elders and emergency providers with some feeling of control and some assurances that emergency instructions might be understood.

✓ Extra hearing aid
✓ Assistive listening device
✓ Batteries
✓ Extra glasses
✓ Medications
✓ Syringes and needles
✓ Glucometer and supplies
✓ Names and contact information of doctors
✓ Paper and pens
✓ Written information about how they communicate

Information about what all people should know about preparing for an emergency can be seen at www.redcross.org/services/disaster. Information about special considerations for people with disabilities can be found at www.ilrcsf.org/Publications/prepared/HTML/Emergency_Preparedness01.html.
Preparing for Bioterrorism and Emergencies
Statewide Teaching in Texas

By Robert Roush, EdD, MPH

The Texas Consortium of Geriatric Education Centers (TCGEC) includes faculty from the Huffington Center on Aging, Baylor College of Medicine; the Sealy Center on Aging, UTMB at Galveston; Texas Southern University; Texas Woman’s University; University of Houston; University of Texas-Pan American; University of Texas Health Science Center at Houston; University of North Texas; and the Texas Cooperative Extension Service at Texas A&M University. Dr. Robert Roush, TCGEC director, is working with his colleagues to develop curriculum content at each of these institutions in Bioterrorism and Emergency Preparedness in Aging (BTEPA). Through needs assessments, consensus committees, content experts, and advisory groups, BTEPA curricula are being finalized.

- Needs assessments of healthcare providers indicated that less than 50% of healthcare providers in Texas have had any formal training in bioterrorism and only 10% have had any geriatrics-specific training.
- Needs assessments of older people revealed that they will rely on their health care providers and emergency departments for relevant information and care in the event of an attack by bioterrorists.
- Three consensus meetings, consisting of educators and healthcare providers from across the nation, met in January, August, and October 2004, to consolidate opinions of the needs for BTEPA training for America’s frontline workers. The first two meetings were of the six HRSA grantees in BTEPA and resulted in assisting Dr. Roush and his colleagues in the production of a comprehensive curriculum and in recommendations for the age-appropriate training of the nation’s health work force for the HRSA White Paper on Bioterrorism and Aging.

- Content experts are being asked to contribute both geriatric and BTEPA content to the final curriculum.
- A recent study by the California Health Care Foundation found that innovations in health care spread faster among homophilous groups (those with similar characteristics) than among heterophilous groups (those that differ in important ways). Advisory committee members expert in geriatric healthcare and in bioterrorism are assisting the TCGEC on how to identify who will become opinion leaders in the BTEPA training model in order to train homophilous groups who will go on to produce a cadre of BTEPA healthcare experts throughout Texas.

Questions? FAX: (314) 771-8575 • email: agingsuccess@slu.edu  Aging Successfully, Vol. XIV, No. 3
SENIOR DISASTER

3 day to 1 week medicine supply

extra batteries

3 day to 1 week medicine supply

extra batteries

list of medications and diseases and written prescriptions for medications

Identification bracelet

extra pair of glasses and hearing aids

Medication List

- Synthroid 125 mcg 1 per awerh
- Hydrochlorothiazide 1 at meals
- Coumadin 600 mg 3 per da
- Synthroid 125 mcg 1 per awr
- Hydrochlorothiazide 1 at meal
- Coumadin 600 mg 3 per da
- Synthroid 125 mcg 1 per aw
- Hydrochlorothiazide 1 at meal
- Coumadin 600 mg 3 per da

Disease List

- Chronic back pain
- High blood pressure
- COPD
- Arthritis
- Gout
- Reversed leg twitch
- Myocardial infarction
- Duodenal ulcer
- Ulcerative panc
**Preparedness Kit**

- **Family pictures**
- **Bottled water**
- **Pet evacuation plan**

**Emergency Contact Info**
- Local family member ... 946-9686
- Distant contact person ... 555-123-4567
- Physician ... 211-0101
- Pharmacy ... 211-0202
- Hospital ... 123-9876
- Medical insurance ... 555-987-6543
- Medicare number ... 00-0000-000

Questions? FAX: (314) 771-8575 • email: agingsuccess@slu.edu

Aging Successfully, Vol. XIV, No. 3
Check out these great resources!

For those who prefer to purchase ready-made emergency preparedness kits, the American Red Cross has just the website for you!

Visit [www.redcross.org](http://www.redcross.org) and click on “Store” for information about how to purchase kits - for business or family.

![Image of Red Cross website]

For do-it-yourselfers, a complete list of recommended content for emergency preparedness kits is available at this FEMA website:

[www.fema.gov/rrr/talkdiz/kit.shtm](http://www.fema.gov/rrr/talkdiz/kit.shtm)

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**TIPS**

- Keep a smaller Disaster Supplies Kit in the trunk of each car. If you become stranded or are not able to return home, having some items will help you to be more comfortable until help arrives.

- Keep items in airtight plastic bags. This will help protect them from damage or spoiling.

- Replace stored food and water every six months. Replacing your food and water supplies will help ensure their freshness.

- Rethink your kit and family needs at least once a year. Replace batteries, update clothes, etc.

- Ask your physician or pharmacist about storing prescription medications. It may be difficult to obtain prescription medications during a disaster because stores may be closed or supplies may be limited.

- Use an easy-to-carry container for the supplies you would most likely need for an evacuation. Label it clearly.
Citizen Guidance on the Homeland Security Advisory System

<table>
<thead>
<tr>
<th>Risk of Attack</th>
<th>Recommended Actions for Citizens</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low Risk</td>
<td>Create an “Emergency Supply Kit” for your household.</td>
</tr>
<tr>
<td></td>
<td>Be informed. Visit <a href="http://www.Ready.gov">www.Ready.gov</a> or obtain a copy of “Preparing Makes Sense, Get Ready Now” by calling 1-800-BE-READY.</td>
</tr>
<tr>
<td></td>
<td>Know how to shelter-in-place and how to turn off utilities (power, gas, and water) to your home.</td>
</tr>
<tr>
<td></td>
<td>Examine volunteer opportunities in your community, such as Citizen Corps, Volunteers in Police Service, Neighborhood Watch or others, and donate your time.</td>
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<td></td>
<td>Consider completing an American Red Cross first aid or CPR course, or Community Emergency Response Team (CERT) course.</td>
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<tr>
<td><strong>BLUE</strong></td>
<td>Complete recommended steps at level green.</td>
</tr>
<tr>
<td>Guarded Risk</td>
<td>Review stored disaster supplies and replace items that are outdated.</td>
</tr>
<tr>
<td></td>
<td>Be alert to suspicious activity and report it to proper authorities.</td>
</tr>
<tr>
<td><strong>YELLOW</strong></td>
<td>Complete recommended steps at levels green and blue.</td>
</tr>
<tr>
<td>Elevated Risk</td>
<td>Ensure disaster supply kit is stocked and ready.</td>
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<td></td>
<td>Check telephone numbers in family emergency plan and update as necessary.</td>
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<td></td>
<td>Develop alternate routes to/from work or school and practice them.</td>
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<tr>
<td></td>
<td>Continue to be alert for suspicious activity and report it to authorities.</td>
</tr>
<tr>
<td><strong>ORANGE</strong></td>
<td>Complete recommended steps at lower levels.</td>
</tr>
<tr>
<td>High Risk</td>
<td>Exercise caution when traveling, pay attention to travel advisories.</td>
</tr>
<tr>
<td></td>
<td>Review your family emergency plan and make sure all family members know what to do.</td>
</tr>
<tr>
<td></td>
<td>Be Patient. Expect some delays, baggage searches and restrictions at public buildings.</td>
</tr>
<tr>
<td></td>
<td>Check on neighbors or others that might need assistance in an emergency.</td>
</tr>
<tr>
<td><strong>RED</strong></td>
<td>Complete all recommended actions at lower levels.</td>
</tr>
<tr>
<td>Severe Risk</td>
<td>Listen to local emergency management officials.</td>
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<td></td>
<td>Stay tuned to TV or radio for current information/instructions.</td>
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<tr>
<td></td>
<td>Be prepared to shelter-in-place or evacuate, as instructed.</td>
</tr>
<tr>
<td></td>
<td>Expect traffic delays and restrictions.</td>
</tr>
<tr>
<td></td>
<td>Provide volunteer services only as requested.</td>
</tr>
<tr>
<td></td>
<td>Contact your school/business to determine status of work day.</td>
</tr>
</tbody>
</table>

*Developed with input from the American Red Cross.*
Table I: Preventing Heat-Related Deaths

- When available, use home air-conditioning.
- If no home air-conditioning is available, try to go to an air-conditioned mall.
- Check frequently on persons at high risk.
- Wear lightweight, light-colored clothing.
- Reduce strenuous activities.
- Drink plenty of fluids.
- Avoid alcohol and caffeine.
- Take cool showers or baths frequently.
- Municipalities should develop a comprehensive heat emergency response plan including early warnings, appropriate health messages, and transportation to emergency shelters.

Older adults living in this region had marked disruptions in their quality of life as well as disruptions in medical care for pre-existing conditions such as heart disease, diabetes mellitus, and physical disabilities. In particular, there was disruption in social support networks. Approximately one-third of the older adults in the area had a worsening of their medical conditions because of the hurricane. Major problems included a lack of access to prescription medicines and loss of routine medical care for a pre-existing medical illness. In the areas in the eye of the hurricane, more than one in ten seniors had a house that was made uninhabitable by the storm. This was particularly true of those living in mobile homes. Over 10% had no running water, functioning toilet, or electricity. Three percent lacked access to a three-day food supply. Of the deaths related to Hurricane Charley, 62% were due to trauma or drowning. Medically related deaths included loss of power leading to loss of access to needed oxygen and exacerbation of cardiac disease. Forty-two percent of deaths occurred in persons older than 60 years of age. Hurricane Iniki in Kauai, Hawaii, was associated with an increase in the rate of diabetes mellitus-associated deaths for a year following the disaster.

In a study of residents in the high-impact area following Hurricane Andrew, one-third of persons had high levels of post-traumatic stress disorder. Negative (intensive) thoughts were also very common. Variables predicting post-traumatic stress syndrome included property damage, exposure to life-threatening situations, and injury. Sleep problems, and immune system disruption were common in those with post-traumatic stress disorder.

Heat and Fire

On average, heat causes about 400 deaths a year in the United States, which is more deaths than all other natural disasters combined. More than 650 people died in less than 2 weeks during the Chicago heat wave of 1995. Similar high rates of mortality were seen recently during the heat wave in Paris, France. In the 1993 heat wave in Philadelphia, there was a 26% increase in total mortality with a 98% increase in cardiovascular deaths, particularly in those 65 years of age or older.

Persons most likely to die during a heat wave are older, poor persons who live in the inner cities. People with chronic illness and those who are homebound are particularly at risk. Heat disasters are often aggravated by blackouts (power shortages), which lead to air conditioning being unavailable. The CDC has characterized this as “a disaster within a disaster.” The appropriate responses to a heat emergency are listed in Table 1 above.

Older persons are at very high risk for fire fatalities. These occur (continued on page 18)
SLUCare Physicians Listed Among Best

A total of 98 doctors from SLUCare made the list of the best doctors in St. Louis and were featured in the cover story of the August issue of St. Louis Magazine. The magazine published the list based on information from the 2004 guide to the Best Doctors in America. The publishers of this book process more than one million peer evaluations to form a directory of 30,000 specialists from whom other doctors would seek treatment. The selected SLUCare geriatric physicians are Joseph H. Flaherty, MD, John E. Morley, MB, BCh, and David Thomas, MD.

Dr. Wilson Named Best Teacher

Dr. Margaret M.G. Wilson has been recognized by the medical students at Saint Louis University School of Medicine as the Best Teacher of 2003-2004. The award, given by the Department of Internal Medicine, acknowledges excellence in student teaching. Congratulations, Dr. Wilson!

SLU is a Leader in End-of-Life Care

A Dartmouth Medical School study showed that Saint Louis University Medical School and the Mayo Clinic Hospitals had the least hospital days for persons during the last six months of life. In addition, both hospitals had very low severity-adjusted mortality rates. (See graphs below.) As pointed out by John Weinberg, the lead researcher at Dartmouth Medical School, “It is clear that quality is inversely correlated with the intensity of care and that the better hospitals are using fewer resources and providing fewer hospitalizations and physician visits.”

Dr. Wilson Edits New Book

For those of you seeking to learn more about incontinence, we have just the book for you. We recommend the recently published Clinics in Geriatric Medicine, Vol. 20, No. 3. SLU’s own Dr. Margaret M.G. Wilson edited this special volume, which addresses current research and clinical practice guidelines for the treatment of incontinence.

For more information, visit www.theclinics.com.
most commonly in the home with those living in mobile homes being at very high risk. The combination of alcohol and misuse of cigarettes is frequently reported as the cause of fatal fires, though this is more common in younger persons. Faulty or misused electrical items are commonly found to have caused fires in homes of older persons. Lack of smoke detectors is highly associated with fire deaths.

Earthquakes
The effects of earthquakes on health have been carefully studied. An earthquake in the Hyago Prefecture in Japan which measured 7.2 on the Richter scale resulted in a 50% increase in coronary heart disease deaths over the next four months. All deaths occurred in persons over 60 years of age who had experienced earthquake-associated property damage. Following an earthquake in Italy, older persons who were displaced from their homes had higher levels of high blood pressure, depression, and anxiety. The Hanshen-Awagi earthquake resulted in a three-fold increase in deaths from myocardial infarction in persons living near the epicenter. There was a doubling in the frequency of strokes. Blood pressure levels increased and there was an increased coagulability of blood (e.g., increased D-dimer, vonWillebrand factor, and tissue type plasminogen activator) following the earthquake.

In a longitudinal study done during the seven years after an earthquake, those who were still suffering stress from the disaster had higher uric acid levels. Elevated uric acid is a risk factor for heart disease.

Following earthquakes, rumination, worry, psychosocial stress, and post-traumatic stress disorder all occur at higher rates as shown in studies in the United States, Italy, Asia, and Australia. Older persons appear to show less long-term psychosocial problems than do younger persons. Increased psychosocial stress has been related to negative changes in the immune system. This makes these persons more vulnerable to infections and cancer. Psychosocial problems remain for up to a year following a major earthquake.

Floods
Floods are a relatively common natural disaster. Besides trauma and drowning, the most common medical condition associated with floods is an increase in gastrointestinal symptoms. There is also an increase in the frequency of earaches. In a study of flood victims in the southeast of France, it was found that there was an increase in post-traumatic stress disorder that was still present five years after the flood.

Melick and Logue studied flood victims in the Wyoming Valley of Pennsylvania. While older victims did not have an increase in anxiety and depression compared to non-victims, they did have more distress during recovery, worse quality of life, and an increased frequency of thinking about flood matters.

Terrorism
Much of what is needed to prepare the nation for the handling of natural disasters is the same as that which is required to be prepared for terrorism. The events of 9/11 have increased the public awareness and fearfulness of future terrorist attacks. However, focusing exclusively on being prepared for a terrorist attack may result in resources being moved away from developing a comprehensive disaster plan. Another concern is that research on the agents that might be used for bioterrorism and on
nuclear agents may lead to accidents which may then cause disease in the unprepared community. In addition, when vaccines against biological agents are produced, there is a risk of negative, possibly serious, reactions which may be greater than the risk of contracting a rare disease that might be due to a terrorist attack.

There is a need to improve national and global surveillance techniques for disease outbreaks and environmental illnesses. If this is appropriately done by the Environmental Protection Agency and the Centers for Disease Control and Prevention (CDC), the chances of early detection of a terrorist attack would be greatly increased. An example of why there must be improvement is the failure of the Public Health authorities to recognize the salmonella outbreak by the terrorist cult in Oregon in 1980. The development of the Homeland Security Advisory System has certainly raised public awareness of bioterrorism threat. However, continued altering of the terror alert level is itself liable to create psychological distress, so care must be taken to provide adequate education for people whenever the alert level is changed.

Three forms of terrorist attack need some special knowledge to handle their aftermath. These are biological, chemical, and nuclear and radiological weapons. Each of these are briefly reviewed in the next few paragraphs. In-depth reviews of these areas are available at [www.cyberounds.com](http://www.cyberounds.com).

**Biological attacks** will be the most difficult to detect because, early on, they produce nonspecific symptoms and signs such as cough, chills, and skin lesions. Latency between exposure and symptoms may be prolonged. A solitary practitioner may see only one or two cases during an epidemic. Biological agents considered most likely to be used by terrorists include:

- Smallpox
- Anthrax
- Plague
- Botulism
- Tularemia
- Ebola
- Marburg hemorrhagic fever
- Lassa
- Ricin (from the beans of the castor plant)
- T-2 Mycotoxins (from grain mold)
- *Salmonella*
- *Staphylococcal enterotoxin B.*

Prevention of the spread of bioterrorism agents includes isolation of the patient with fever, new onset cough, dyspnea, or skin and mucous membrane lesions by the receptionist who screens patients. These patients should not be seen at the same time as other patients and should immediately be placed in an examining area on arrival to minimize contact with other patients. Similar precautions would be appropriate for a patient thought to be suffering from influenza who has not been vaccinated. Normal standard precautions should be used on all of these patients. These include

- hand washing
- wearing gloves, gowns, and masks where appropriate
- avoiding needle sticks, and
- cleaning surfaces after contact.

Early diagnosis requires the clinician to have an increased suspicion that the disease does not quite produce the symptoms of more common conditions such as influenza. All patients should be asked about potential venues of exposure such as attendance at sports events or concerts. When the physician is suspicious, s/he should obtain an infectious disease consult and report the findings to the local Public Health Department. As shown with the anthrax outbreak in 2001, older persons are more susceptible to biological agents and more likely to have a poor outcome.

(continued on page 22)
GEROGRAPHICS
Light-Hearted Illustrations for Concepts in Aging

What’s a GEROGRAPHIC?
a compendium of over 100 pages of illustrations humorously depicting various concepts and dimensions in aging built upon the theme “You know you’re getting old when...”

How can I use them?
• in slide presentations
• make greeting cards
• insert in newsletters
• in seminars or workshops
• use to play BINGO
• tickle your funnybone

How can I buy them?
Send your request along with a check for $59.00 to:
Mature Markets
1909 Galena Street
Urbana, Illinois 61802-7009

OR fax your request with your credit card information (MasterCard or Visa only, please) to 217.337.1750.

Computerized games, developed by the Gateway Geriatric Education Center of Missouri and Illinois, to educate health professionals concerning the unique needs of elders in preparing for emergencies are available now.

The Geriatric Concerns CD
♦ Five case studies of disasters in various home settings from nursing homes to high-rise apartments to single family dwellings.

The Nursing Homes CD
♦ Covers the development of personal, institutional, and community plans in preparation for disasters striking a nursing home.
♦ Cost: $15.00 each or both for $20.
♦ To order, send your check or credit card information (including signature and expiration date) to Pat Byrne-Mulligan at 1402 S. Grand Blvd., St. Louis, MO 63104 or call 314.977.8848 for more information.
John E. Morley
Chosen Winner of
Joseph T. Freeman
Award

John E. Morley has been named as the 2004 Joseph T. Freeman Award winner by the Gerontological Society of America (GSA). Joseph Freeman was one of the foremost early geriatricians in the United States. Dr. Morley has been the editor of the Journals of Gerontology-Medical Sciences, for the last five years. He received the award at the GSA meeting in Washington, D.C. this year. Congratulations, Dr. Morley!

Aging Successfully is on the Web!

This issue and every issue is available for viewing on our website: http://medschool.slu.edu/agingsuccessfully/

Also, there, you will find screening tools, links to other useful sites, and information about our upcoming conferences. Check it out!

If you wish to have additional copies of this issue of Aging Successfully, please contact Dr. Nina Tumosa at tumosan@slu.edu.

More Morley Mnemonics

Community Plan

Diagnose early
Impaired communication
Supplies
Animal evaluation
Scripts
Transportation
Emotional needs
Rapid response necessary

Individual Plan

Prescriptions
Recognition
Essential supplies
Personal items
Animals
Resource numbers
Vacation strategy
Documents

Questions? FAX: (314) 771-8575 • email: agingsuccess@slu.edu Aging Successfully, Vol. XIV, No. 3
Chemical warfare agents were originally used in ancient Greece and extensively during World War I. The subway attack in Tokyo in 1995 highlighted the risk of using chemical agents by terrorists. Two major classifications of chemical warfare agents exist. These are vesicants (blistering agents) such as mustard gas and lewisite, and nerve agents from the G groups (e.g., GA-Tabun, GB-Sarin, and GD-Soman) and the V-group (e.g., VX). All of these nerve agents are cholinesterase inhibitors. The early symptoms of these nerve agents include:

- excessive tearing and salivation
- miosis
- ptosis
- nausea
- vomiting
- bronchospasm
- bradycardia
- muscle fasciculations
- paralysis
- restlessness, and
- delirium.

Treatment for these agents and biological toxins should be confirmed by going to the CDC website (www.cdc.gov).

Nuclear weapons have tremendous destructive power. “Dirty bombs” utilize a conventional method to deliver radioactive materials. Nuclear power facilities and the movement of highly radioactive materials between the site of use and the site of disposal both represent potential targets for terrorists. Nuclear submarines represent another possible target. Detonation of a 12.5 kiloton nuclear weapon in New York City has been estimated to be likely to produce at least a quarter of a million deaths from the blast effects and radiation. Hundreds to thousands of fatalities could result from an attack on a nuclear power plant or during transport of nuclear waste.

Responses to nuclear attacks should include keeping people indoors until they can be safely evacuated and limiting exposure to milk and dairy products produced in that region. Potassium iodide prophylaxis reduces damage to the thyroid. Decontamination facilities and illness tracking need to be available.

Conclusion

Disasters, both natural and man-made, tend to have a disproportionate effect on older persons. Most disaster plans have failed to take note of the special needs of older persons. The Federal Emergency Management Agency (FEMA) distributes a booklet called “Are You Ready? A Guide to Citizen Preparedness.” This booklet provides information on how to prepare for and respond to both natural and man-made disasters (www.fema.gov/areyouready). Citizens can become involved in disaster preparedness through FEMA’s Citizen Corps (www.citizencorps.gov). While we should not live in perpetual fear of disasters, the government, citizens, and health care professionals all have a duty to develop systems that will minimize death and injury when disasters do occur.
Upcoming CME Programs

24th Annual Geriatric Research, Education, and Clinical Center Conference Community Emergency Responses:
FOCUSING ON NURSING HOMES
Friday, December 10, 2004

16th Annual Saint Louis University Summer Geriatric Institute
STAYING FOCUSED ON QUALITY
June 7-9, 2005

16th Annual Saint Louis University School of Medicine Symposium for Medical Directors
NURSING HOME ISSUES
Saturday, December 11, 2004

Saint Louis University Geriatric Academy (SLUGA)
FOCUSING ON NURSING HOMES
Friday, December 10, 2004

3rd International Meeting
International Academy on Nutrition and Aging
May 6-8, 2005
at the Renaissance Grand Hotel, St. Louis, MO
For more information, contact Jacqueline Dougherty at 866.968.2851 or visit www.boomeredu.com/ianaconference.htm

Saint Louis University Geriatric Academy (SLUGA)
(Facing page)
January 10-14, 2005

All of the conferences will be held at Saint Louis University, except as noted. For more information about any of these conferences, please call 314-977-8848.

Been Here? Done This?
Offering regular updates on geriatrics, Cyberounds, an internet-based educational program for physicians and other health providers, is edited by Dr. John E. Morley. The internet address for Cyberounds is: www.cyberounds.com

A cybersite for seniors has been developed in collaboration with Saint Louis University and the Gateway Geriatric Education Center. Besides articles written by geriatric experts, this site provides health updates and an interactive question and answer section. The address for this site is www.thedoctorwillseeyounow. See you in cyberspace!
Please fax the mailing label below along with your new address to 314-771-8575 so you won't miss an issue! If you prefer, you may email us at agingsuccess@slu.edu. Be sure to type the address exactly as it appears.