

**EMERGENCY CARE CRISIS: A NATION
UNPREPARED FOR PUBLIC DISASTERS**

HEARING

BEFORE THE

**SUBCOMMITTEE ON EMERGENCY
PREPAREDNESS, SCIENCE, AND
TECHNOLOGY**

OF THE

**COMMITTEE ON HOMELAND SECURITY
HOUSE OF REPRESENTATIVES**

ONE HUNDRED NINTH CONGRESS

SECOND SESSION

JULY 26, 2006

Serial No. 109-94

Printed for the use of the Committee on Homeland Security



Available via the World Wide Web: <http://www.gpoaccess.gov/congress/index.html>

U.S. GOVERNMENT PRINTING OFFICE

35-563 PDF

WASHINGTON : 2007

For sale by the Superintendent of Documents, U.S. Government Printing Office
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**EMERGENCY CARE CRISIS: A NATION
UNPREPARED FOR PUBLIC HEALTH
DISASTERS**

Wednesday, July 26, 2006

U.S. HOUSE OF REPRESENTATIVES,
COMMITTEE ON HOMELAND SECURITY,
SUBCOMMITTEE ON EMERGENCY PREPAREDNESS,
SCIENCE, AND TECHNOLOGY,
Washington, DC.

The subcommittee met, pursuant to call, at 2:03 p.m., in Room 210, Cannon House Office Building, Hon. David Reichert [chairman of the subcommittee], presiding.

Present: Representatives Reichert, Rogers, Dent, Pascrell, Dicks, Lowey, Christensen, and Thompson.

Mr. REICHERT. The Committee on Homeland Security, Subcommittee on Emergency Preparedness, Science and Technology, will come to order. The subcommittee will hear testimony today from health and medical experts about the state of emergency and medical preparedness and response in the United States.

We are in a different room today for us, so I think I see people in the back. This is like a—it is kind of in a tunnel here.

Thank you all for being here. Yes, bowling alley, Bill says—it kind of reminds me of. But I have an opening statement I would like to give and we will move to other members to give their opening statement.

And let me just first welcome our distinguished witnesses this morning, and thank you so much for taking time out of your busy schedule to be here with us. And we look forward to your testimony.

I would like to congratulate the Members first, before we get started on the subcommittee, on the passage yesterday of H.R. 5852, the 21st Century Emergency Communications Act of 2006, by a vote of 414 to 2. The members of the subcommittee didn't just develop this bipartisan legislation overnight. It was a series of hearings and a product of hard work over the past spring to address the state of emergency communication in our country. And I would like to extend my thanks to Mr. Pascrell, Ranking Member of the subcommittee, for all of his hard work on this legislation and Mr. Thompson, the Ranking Member of the full committee for his hard work and leadership on this issue, and all the subcommittee members.

Given the success of our series of hearings on emergency communications, it is my intent for the subcommittee to replicate this process in the future.

That is, pick the problematic policy issue, hold hearings examining a variety of perspectives on that topic, and then move bipartisan legislation based on the record established by those hearings through the legislative process.

I think a few issues more problematic or more important than the state of emergency of medical preparedness response in the United States—I can think of only a few issues more problematic. And that is why today's hearing will be the first in a series of hearings examining our Nation's emergency medical care crisis from prehospital treatment to mass decontamination and mortuary services. There is no question about the state of our Nation's readiness to handle a surge of sick or injured persons during a public health emergency. We are neither prepared nor capable of responding.

According to recent reports released by the Institute of Medicine and the American College of Emergency Physicians, emergency medicine in the United States is at its breaking point. Emergency rooms are dwindling and overcrowded. Ambulances are routinely diverted. Key specialists in neurosurgery and trauma care are often unavailable. And emergency rooms often lack the equipment and supplies needed to treat patients, especially children.

I could go on and on. The problems are legion. As the tragic events in New Orleans and other communities along the gulf coast made clear, this is a real problem.

The hospital and public health infrastructure currently in place in most areas of the country is barely adequate to get through a busy Saturday night in the emergency room and, believe me, as a law enforcement officer I have been in emergency rooms on a Saturday night.

Indeed, the potential threat of a mass trauma event from a weapon of mass destruction or pandemic influenza outbreak would quickly overwhelm our already overstretched emergency medical system. Homeland security must include preparing our Nation for public health emergencies. But given the multiple problems facing our Nation's emergency medical system, can we honestly say that America could cope with the immediate medical needs of thousands of people injured by an act of terrorism? Are we prepared to handle the needs of hundreds of thousands, if not millions, injured by a weapon of mass destruction? Quite frankly, the answer is no.

It is for this reason that today's hearing is so important. This hearing will help set the stage for the subcommittee's activities in this area of medical preparedness and response, which, I am sad to say, has not received as much attention as it deserves.

The subcommittee's intent therefore will focus its attention on a number of medical preparedness and response issues, including the extent of collaboration between the Departments of Homeland Security and Health and Human Services, where the national disaster medical system should be located, whether the metropolitan medical response system is as robust as it needs to be, and whether our Nation's emergency medical services personnel have the support necessary to fulfill their responsibilities.

I am eager to hear the testimony of our witnesses today. And I look forward to working with you to ensure that we as a Nation will be able to care for our citizens, regardless of the circumstances.

Again, thank you for joining us.

[The information follows:]

PREPARED STATEMENT OF CHAIRMAN DAVE REICHERT

Let me first welcome our distinguished witnesses. We greatly appreciate your appearance before us today and look forward to your testimony.

Before we begin, I'd be remiss if I didn't congratulate the Members of this Subcommittee on the passage yesterday of H.R. 5852, the "21st Century Emergency Communications Act of 2006," by a vote of 414 to 2. The Members of the Subcommittee didn't just develop this bi-partisan legislation overnight. Rather, H.R. 5852 was the product of a series of hearings held this past Spring on the state of emergency communications. I'd like to extend my thanks to Bill Pascrell, the ranking Member of this Subcommittee, for his hard work on this legislation.

Given the success of our series of hearings on emergency communications, it is my intent for the Subcommittee to replicate this process in the future—that is, pick a problematic policy issue, hold hearings examining a variety of perspectives on that topic, and then move bi-partisan legislation based on the record established by those hearings through the legislative process.

I can think of few issues more problematic or important than the state of emergency medical preparedness and response in the United States. That is why today's hearing will be the first in a series of hearings examining our Nation's emergency medical care crisis. From pre-hospital treatment and mass prophylaxis to mass decontamination and mortuary services, there is no question about the state of our Nation's readiness to handle a surge of sick or injured persons during a public health emergency—we are neither prepared nor capable of responding.

According to recent reports released by the Institute of Medicine and the American College of Emergency Physicians, emergency medicine in the United States is at its breaking point. Emergency rooms are dwindling and overcrowded. Ambulances are routinely diverted. Key specialists in neurosurgery and trauma care are often unavailable. And the equipment and supplies needed to treat patients, especially children, are often unavailable.

I could go on and on—the problems are legion. As the tragic events in New Orleans and other communities along the Gulf Coast made clear, this is not merely a theoretical problem. The hospital and public health infrastructure currently in place in most areas of the country is barely adequate to get through a busy Saturday night in the emergency room, let alone treat the thousands of sick and injured resulting from a catastrophic act of terrorism, a natural disaster, or other emergency. Indeed, the potential threat of a mass trauma event from a weapon of mass destruction or pandemic influenza outbreak would quickly overwhelm our already overstretched emergency medical system.

Homeland security must include preparing our Nation for public health emergencies. But, given the myriad problems facing our Nation's emergency medical system, can we honestly say that America could cope with the immediate medical needs of thousands of people injured by an act of terrorism? Are we prepared to handle the needs of hundreds of thousands, if not millions, injured by a weapon of mass destruction? Quite frankly, the answer is no.

It is for this reason that today's hearing is so important. This hearing will help set the stage for this Subcommittee's activities in the area of medical preparedness and response, which, I'm sad to say, has not received as much attention as it deserves.

The Subcommittee, therefore, will focus its attention on a number of medical preparedness and response issues, including:

- The extent of collaboration between the Departments of Homeland Security and Health and Human Services;
- Where the National Disaster Medical System should be located;* Whether the Metropolitan Medical Response System is as robust as it needs to be; and
- Whether our Nation's emergency medical services personnel have the support necessary to fulfill their responsibilities.

I am eager to hear the testimony of our witnesses, and I look forward to working with you to ensure that we, as a Nation, will be able to care for our citizens regardless of the circumstances. Thank you again for joining us this afternoon.

Mr. REICHERT. And the Chair now recognizes Mr. Pascrell, the Ranking Member, for his statement.

Mr. PASCRELL. I want to thank our good friend, Chairman Reichert, for charting the course for the subcommittee that has gone virtually unexplored in Congress.

This hearing will be the first in a series of hearings examining the state of medical preparedness and response in the United States. I don't think I am engaging in excessive hyperbole, Mr. Chairman, when I say this is about as important an issue as we can possibly address.

The fact is this: The emergency medical care in the United States is on the verge of ruin.

We have a declining number of emergency rooms, as the Chairman just pointed out, that are already dangerously overcrowded and too often unable to provide the expertise needed to manage seriously ill people in a safe and competent manner.

I have seen hospitals in New Jersey that have an infrastructure in place that is barely adequate to get through an average Saturday evening, let alone effectively treat the thousands of sick and injured resulting from a devastating act of terrorism or natural disaster or any emergency.

New Jersey is better equipped than most States. Nationwide we have a veritable epidemic of inadequate emergency care. It is a crisis that cannot be ignored.

You don't have to take my word for it. Just read the grim conclusions from a series of recently released reports by the Institute of Medicine on the Future of Emergency Care, as well as the National Report Card on the State of Emergency Medicine issued by the American College of Emergency Physicians.

According to the Institute of Medicine, few hospitals have personnel trained in disaster preparedness. Most hospitals have inadequate medical equipment and supplies needed for an influx of entries, and most hospitals have ineffective isolation capacities needed to quarantine infectious patients.

Another major concern is the lack of critical specialists in emergency medicine available to treat patients in our Nation's emergency departments. This lack of on-call specialists can obviously lead to tragic, heartbreaking results.

And things are getting worse. From 1993 to 2003, the United States population grew by 12 percent, but emergency room visits grew by 27 percent. From 90 million to 114 million people use the emergency rooms.

In that same period, 425 emergency departments closed, along with about 700 hospitals and nearly 200,000 beds. I mean, I am not a mathematical wizard, but you can figure out the mathematics here. We are heading for disaster.

I know Massachusetts put forth a health plan, universal health plan for the State, several months ago, bipartisan plan which is primarily directed at covering children who don't have health insurance coverage. The primary purpose of that plan is to keep people out of emergency rooms. They figure they are going to save millions and millions of dollars in doing that.

We should be doing that anyway—anyway—regardless of what the situation could possibly be. But we have in our hands here a

real difficult situation which we are going to hopefully try to address.

In 2003, over 500,000 ambulances were diverted from the hospital where they normally would have delivered a patient because the emergency room was full.

2004, 70 percent of urban hospitals reported that their emergency departments had been on diversion at least once.

About 14 percent of emergency room patients end up admitted to the hospital. A study by the Government Accountability Office in 2003 found that 20 percent of emergency departments had to board patients in hallways or other temporary spaces for an average of 8 hours before a bed opened. We are talking about the United States of America here. We are not talking about Calcutta.

Lets get that straight. This can't continue.

With the threats of terror and natural disasters lurking, we have to be prepared for every worst-scene scenario. Many proposals we have for easing the solution—the situation ranging from new regional systems to improve the flow of patients to the most appropriate and least crowded emergency rooms, to an infusion of money to cover unpaid emergency care to bolster preparedness for large-scale disasters. Fixing this problem will require money.

It is my hope that through the leadership of the subcommittee, Congress can start tackling these critical problems, perhaps even be able to get the powers that be in this institution to stop focusing on gay marriage, flag burning, tax breaks for millionaires, and instead focus on real problems and real issues that truly affect the lives of our citizens. Oh, that is something different.

I look forward to hearing from our witnesses today, Mr. Chairman, and thank you for putting us together.

Mr. REICHERT. Thank you Mr. Pascrell.

Before we get started and move to Mr. Thompson, I would like to ask unanimous consent to enter into the record a report issued by the American College of Surgeons, entitled "A Growing Crisis in Patient Access to Emergency Surgical Care."

Without objection, so ordered.

Mr. REICHERT. The Chair now recognizes the Ranking Member of the full committee, Mr. Thompson.

Mr. THOMPSON. Thank you, Mr. Chairman. I appreciate the opportunity to give these comments during this hearing, as well as to support the comments of Ranking Member Pascrell who just presented earlier.

Mr. Chairman, while firefighters and law enforcement are our first line of defense, our hospitals, EMS personnel and public health agencies also stand directly on the front lines. Unfortunately our Nation's emergency medical system has received little focus from this Congress and this administration. As we all know, terrorists threaten to use biological, chemical, radiological and traditional explosive weapons against the United States. If successful, an attack has the potential to result in a large amount of casualties.

In addition, naturally occurring catastrophes such as hurricanes and pandemic flu also have the potential to overwhelm many of our communities. How the United States responds to such an attack or natural disaster will depend upon the preparedness of local hospitals, outpatient facilities, emergency medical services and health

care professionals. It would also depend on the preparedness of States and the Federal Government to augment local capabilities.

While preparing for, preventing, and responding to any large incident is a local responsibility, the Federal Government has a significant role in assisting cities and States to ensure that they are ready. So where do we stand as a country right now? In June of this year, the Institute of Medicine released three reports culminating its extensive look at the state of the emergency care system in the United States. According to the report, most hospitals are not prepared for public health emergencies.

Few hospitals have personnel trained in disaster preparedness, and most hospitals have inadequate equipment and beds needed for an incident resulting in a large surge of patient. In fact, Mr. Chairman, from 1993 to 2003, the U.S. population grew by 12 percent, but the emergency room visits grew by 27 percent, from 90 million to 114 million. In that same period, 425 emergency room departments closed, along with about 700 hospitals and nearly 200,000 beds.

In addition, a report released in June by the Institute of National Security and Counterterrorism at Syracuse University entitled "Are We Ready" examined the strategic national stockpile and whether America is truly ready to respond to a public health emergency.

The report found overlaps in management, jurisdiction, confusion in decision-making situations, and a lack of full capacity in supply and distribution.

Mr. Chairman, I would like unanimous consent to introduce a copy into the record.

Mr. REICHERT. Without objection.

Mr. THOMPSON. Thank you very much. I would also like to personally thank and acknowledge the work of Barbara Andersen, Adam Piner, Nicholas Rossmann, Kerri Weir, Dan Wilder, Jason Yaley and Matthew Zeller. These graduate students, under the direction of Professor William Banks, produced a thorough report with many excellent recommendations that I urge my colleagues to look at.

I would like to thank the witnesses again for appearing before us today and I look forward to that testimony.

I yield back.

Mr. REICHERT. Thank you, Mr. Thompson.

Other members of the subcommittee are reminded that opening statements must be submitted for the record.

We are pleased to have with us our distinguished witnesses today.

First we have Dr. Robert Bass, the Executive Director of the Maryland Institute for Emergency Medical Services System and a Member of the Institute of Medicine's Committee on the Future of Emergency Care.

Dr. Frederick Blum, the President of the American College of Emergency Physicians and an Associate Professor of Emergency Medicine, Pediatrics, and Internal Medicine at the West Virginia University School of Medicine.

Ms. Mary Jagim, Internal Consultant for Emergency Preparedness and Pandemic Planning for MeritCare Health System in

Fargo, North Dakota and Past President of Emergency Nurses Association.

And, finally, Dr. Steven Krug, the head of Pediatric Emergency Medicine at Children's Memorial Hospital in, Chicago, Illinois, and the Chairman of the Committee on Pediatric Emergency Medicine for the American Academy of Pediatrics.

Let me remind the witnesses, please, that their entire written statement will appear in the record. We ask that witnesses strive to limit their testimony to no more than 5 minutes.

Mr. REICHERT. The Chair now recognizes Dr. Bass.

Dr. Bass.

STATEMENT OF ROBERT R. BASS, M.D.

Dr. BASS. Good morning Mr. Chairman, members of the subcommittee, my name is Robert Bass. I am the Executive Director of the Maryland Institute for EMS Systems, that is the State EMS agency in Maryland, and I served as a member of the Institute of Medicine's Committee on the Future of Emergency Care in the U.S. Health System.

The Institute of Medicine's Committee on the Future of Emergency Care in the United States was formed in September 03 and consisted of 40 national experts from fields including emergency care, trauma, pediatrics, health care administration, public health and health services research.

I will briefly summarize the committee's findings and recommendations, giving particular attention to those that relate to emergency preparedness.

In 2003, nearly 114 million visits were made to hospital emergency departments. Emergency care has made important strides over the past 40 years. Yet just beneath the surface, a growing crisis in emergency care is brewing, one that could imperil everyone's access to care.

Many emergency departments—EDs as we call them today—are severely overcrowded with patients, many of whom are being held in ED because no inpatient bed is available. When crowding reaches dangerous levels, hospitals often divert ambulances to other facilities. This prolongs ambulance transport times and disrupts established patterns of care. And because crowding is rarely limited to a single hospital, commonly a community may experience a health care equivalent of a rolling blackout where overcrowding just rolls from hospital to hospital and everyone's access to care is affected, insured and uninsured alike.

Physician shortages are another problem. Gaps in specialist coverage, especially surgical, deprive patients of necessary care once they arrive in the ED.

With many hospitals already operating at or above capacity, it is difficult to envision how they could absorb a surge of casualties from a disaster or major act of terrorism. Regardless of the cause of the disaster, our Nation's emergency care system simply lacks the capacity to mount an effective response.

Training for EMS personnel and hospital staff in disaster procedures is limited.

Many hospitals lack critical infrastructure to manage the consequences of a large-scale population emergency. Protecting hos-

pitals and their staff from secondary contamination in the event of biological or chemical events poses extraordinary challenges.

The outbreak of SARS in Toronto was triggered in part by a young man who spent his first night in a crowded Toronto ED with what was thought at the time to be a simple case of pneumonia. An important tool of limiting the spread of air-borne pathogens is negative pressure rooms that are engineered to keep airborne germs from spreading. The number of such rooms in hospitals in the United States is very limited.

Training in and access to personal protective equipment for hospitals as well as prehospital EMS personnel is inadequate. Disaster response capabilities are also hindered by poor communications and a lack of coordination.

Health care and EMS professionals are frequently not included in local disaster planning. Fragmentation of local efforts is mirrored by a lack of coordination at the Federal level. Federal responsibility for emergency care is spread across multiple agencies and departments.

As a result, large amounts of funding are directed towards some priorities but not others that may be a greater priority. There are presently 52 Centers for Public Health Preparedness funded by the CDC to address various aspects of bioterrorism, but not one federally funded center focused on civilian consequences of terrorist bombings; yet we know that explosives are the most common instrument of terrorism worldwide.

Funding received by hospitals is inadequate to enable them to develop the needed surge capacities for disasters, much less a major flu epidemic.

The needs of children have been largely overlooked, especially in disaster scenarios. Children are far more vulnerable to the consequences of disasters than adults.

I would just like to highlight a few committee recommendations. First and foremost, the best way to ensure an effective response in the event of a disaster is to create an emergency care system that effectively functions on a day-to-day basis.

The committee recommends that Congress, number one, establish a federally funded demonstration program to develop and test various approaches to regionalize delivery of prehospital and hospital care, and, number 2, designate a lead agency for emergency care in the Federal Government.

The committee recommends that States actively promote regionalized emergency care services to ensure that the right hospital—excuse me—that the right patient gets to the right hospital in the right time.

The committee also recommends that Congress significantly increase preparedness funding in fiscal year 2007 for hospitals in the U.S. in a number of key areas, and that EMS be brought to a parity level with other public safety entities in disaster planning and operations.

The committee further recommends that disaster response topics be included as essential elements in the training, continuing education, and credentialing of all emergency care professionals.

To address the special needs of pediatric patients in preparing for disasters, the committee made a number of specific recommendations which are included in its reports.

Finally, the committee concluded that there should be greater integration of the Veterans Affairs health care resources into civilian disaster planning.

In closing, if the system's ability to respond on a day-to-day basis is already compromised to a serious degree, how will it respond to a major medical or public health emergency? Strong measures must be taken by Congress, the States, hospitals, and other stakeholders to achieve the level of response that Americans expect and deserve.

Thank you for the opportunity for testifying. I would be happy to answer any questions that the subcommittee might have.

Mr. REICHERT. Thank you, Dr. Bass.

[The statement of Dr. Bass follows:]

PREPARED STATEMENT OF ROBERT R. BASS

INTRODUCTION

Good morning, Mr. Chairman and members of the Subcommittee. My name is Robert Bass. I am Executive Director of the Maryland Institute of EMS Systems and I served as a member of the Institute of Medicine's Committee on the Future of Emergency Care in the U. S. Health System.

THE IOM

The Institute of Medicine, or IOM as it is commonly called, was established in 1970 under the charter of the National Academy of Sciences to provide independent, objective, evidence-based advice to the government, health professionals, the private sector, and the public on matters relating to medicine and health care.

THE STUDY

The Institute of Medicine's Committee on the Future of Emergency Care in the U.S. Health System was formed in September 2003 to examine the full scope of emergency care; explore its strengths, limitations and challenges; create a vision for the future of the system; and make recommendations to help the nation achieve that vision. The Committee consisted of 40 national experts from fields including emergency care, trauma, pediatrics, health care administration, public health, and health services research. The Committee produced three reports—one on prehospital emergency medical services (EMS), one on hospital-based emergency care, and one on pediatric emergency care. These reports provide complimentary perspectives on the emergency care system, while the series as a whole offers a common vision for the future of emergency care in the United States.

This study was requested by Congress and funded through a Congressional appropriation, along with additional sponsorship from the Josiah Macy Jr. Foundation, the Agency for Healthcare Research and Quality, the Health Resources and Services Administration, the Centers for Disease Control and Prevention, and the National Highway Traffic Safety Administration.

I will briefly summarize the Committee's findings and recommendations, giving particular attention to those that relate to emergency preparedness.

GENERAL FINDINGS

Emergency and trauma care are critically important to the health and well being of Americans. In 2003, nearly 114 million visits were made to hospital emergency departments—more than 1 for every 3 people in the United States. While many Americans need emergency care only rarely, everyone counts on it to be available when needed.

Emergency care has made important strides over the past 40 years: emergency 9–1–1 service now links virtually all ill and injured Americans to an emergency medical response; EMS systems arrive to transport patients to advanced, life-saving care; and scientific advances in resuscitation, diagnostic testing, trauma care and emergency medical care yield outcomes unheard of just two decades ago. Yet just beneath the surface, a growing crisis in emergency care is brewing; one that could imperil everyone's access to care.

Many emergency departments (EDs) today are severely overcrowded with patients, many of whom are being held in the ED because no inpatient bed is avail-

able. The widespread practice of holding admitted patients in the ED ties up precious space, equipment, and staff that cannot be used to meet the needs of incoming patients.

When crowding reaches dangerous levels, hospitals often divert ambulances to other facilities. In 2003, U.S. hospitals diverted more than 500,000 ambulances—an average of one per minute. Diversion may provide a brief respite for a beleaguered staff, but it prolongs ambulance transport times and disrupts established patterns of care. It also creates ripple effects that can compromise care throughout the community. Because crowding is rarely limited to a single hospital, decisions to divert ambulances can prompt others to do the same. When this happens, a community may experience the health care equivalent of a “rolling blackout”. Everyone’s access to care is affected—insured and uninsured alike.

Physician shortages are another problem. The rising cost of uncompensated care, fear of legal liability for performing risky procedures, and disruptions of daily practice and home lives has led more surgical specialists to opt out of taking ED call. Gaps in specialist coverage increase the frequency of ambulance diversion, because hospitals cannot accept certain types of patients if no specialist is available to treat them.

SHORTCOMINGS IN THE EMERGENCY CARE SYSTEM’S CAPACITY TO RESPOND TO DISASTERS

With many hospitals already operating at or above capacity, it is difficult to envision how they could absorb a surge of casualties from a disaster or major act of terrorism. A sustained outbreak of disease, whether triggered by an emerging strain of influenza or intentional release of a bioterror agent, would be even more problematic because casualties would keep arriving for days, weeks, or months. But regardless of whether a disaster is the result of terrorism, human error, a natural disaster, or epidemic, our nation’s emergency care system simply lacks the capacity to mount an effective response. In light of these concerns, the IOM Committee’s recommendations have a special urgency.

Training for EMS personnel and hospital staff in disaster procedures is limited. Despite the self-evident fact that mass-casualty events produce mass casualties, only 4 percent of Department of Homeland Security first responder funding in 2002 and 2003 was directed to emergency medical services. As a result, few EMS personnel have received adequate training in how to respond to chemical, biological, radiological, nuclear, and explosive (CBRNE) terrorism, much less natural disasters.

In addition to lack of capacity, many hospitals lack critical infrastructure, such as sufficient intensive care unit (ICU) beds, ventilators, and decontamination units to manage the consequences of a large scale population emergency.

Protecting hospitals and their staff from secondary contamination in the event of biological or chemical events poses extraordinary challenges. The outbreak of severe acute respiratory syndrome (SARS) in Toronto was triggered, in part, by a young man who spent his first night in a crowded Toronto ED with what was thought at the time to be a simple case of pneumonia. In the process, he infected two nearby patients, both of whom subsequently died of SARS (as did the first patient), but not before they infected scores of others, some of whom also died.

If a patient with SARS walked into an American emergency department tonight, the effect would be like tossing a lighted match into a tinder-dry forest.

An important tool in limiting the spread of airborne pathogens is negative pressure rooms that are engineered to keep airborne germs from spreading throughout the emergency department. Unfortunately, the number of such rooms is very limited, and is generally restricted to a handful of tertiary care hospitals in each major population center. Staff must also be protected through appropriate personal protective equipment and respirators. Currently, staff training and provision of equipment are inadequate.

Disaster response capabilities are also hindered by poor communications and lack of coordination. EMS, hospitals, and public safety often lack common radio frequencies, much less interoperable communication systems. These technological gaps are compounded by cultural gaps between public safety providers and emergency care personnel. In many communities, emergency management and homeland security meetings are held without a single health care professional in the room, even though, (in the words of one of my fellow committee members), “Sometimes, in a disaster, people get hurt.”

Fragmentation of local efforts is mirrored by lack of coordination at the federal level. Federal responsibility for emergency care is spread across multiple agencies and departments. This may explain, in part, why large amounts of funding are directed towards some priorities, but not others. For example, federal spending on bioterrorism and emergency preparedness in the Department of Health and Human

Services (DHHS) rose from \$237 million in fiscal year 2000 to 9.6 billion in fiscal year 2006. During this same time period, the Congress eliminated the Trauma/EMS Systems Program at DHHS from the federal budget. There are presently 52 Centers for Public Health Preparedness with federal funding to address various aspects of bioterrorism, but not one federally funded center focusing on the civilian consequences of terrorist bombings. Explosives are the most common instrument of terrorism worldwide.

The current level of funding received by hospitals is inadequate to enable them to develop needed surge capacity for disasters, much less a major flu epidemic.

The needs of children have been largely overlooked, especially in disaster scenarios. Children are far more vulnerable to the consequences of disasters than adults, both physiologically and psychologically. For example, if children sustain burns, they have a greater likelihood of life-threatening fluid loss and susceptibility to infection. If they sustain blood loss, they develop irreversible shock more quickly. Because they are closer to the ground, and have a faster metabolic rate, they are more vulnerable to the effects of toxic gases. Additionally, if separated from their caregiver, they lose their protection and support system. In spite of this, the needs of children are often overlooked in disaster planning. Many states do not address pediatric needs in their disaster plans, and disaster drills frequently lack a realistic pediatric component. Presently few sheltering sites ensure the availability of resources for children, including formula, diapers, and cribs.

COMMITTEE RECOMMENDATIONS

The Committee offers several recommendations to address these inadequacies.

First, and most important, the best way to insure an effective response in the event of a disaster is to create an emergency care system that effectively functions on a day-to-day basis. The Committee believes that this can best be accomplished by building a nationwide network of regionalized, coordinated, and accountable emergency care systems. To promote the development of these systems, the Committee recommends that Congress: 1) establish a federally funded demonstration program to develop and test various approaches to regionalize delivery of prehospital and hospital-based emergency care, and 2) designate a lead agency for emergency care in the federal government to increase accountability, minimize duplication of efforts and fill important gaps in federal support of the system.

The Committee recommends that states actively promote regionalized emergency care services. This will help insure that the right patient gets to the right hospital at the right time, and help hospitals retain sufficient on-call specialist coverage. Disaster planning would take place within the context of these regionalized systems so that patients get the best care possible in the event of a disaster. Integrating communications systems would improve coordination of services across the region; not only during a major disaster but on a day-to-day basis.

In addition to offering these general recommendations for strengthening the emergency care system, the Committee developed specific recommendations to enhance disaster preparedness. For example, to address concerns about lack of surge capacity, inadequate training, and insufficient protection of hospitals and staff, the Committee recommends that Congress significantly increase preparedness funding in FY 2007 for hospitals and EMS in a number of key areas—surge capacity; trauma care systems; EMS response to explosives; training programs; availability of decontamination showers, standby ICU capacity, negative pressure rooms, and personal protective equipment; and research on response to conventional weapons terrorism. In addition, the Committee recommends that EMS be brought to a level of parity with other public safety entities in disaster planning and operations.

The Committee further recommends that disaster response topics be included as essential elements in the training, continuing education, and credentialing of emergency care professionals (including medicine, nursing, EMS, allied health, public health, and hospital administration).

To address the special needs of pediatric patients in preparing for disasters, the Committee made a number of specific recommendations: minimizing parent—child separation; enhancing the level of pediatric expertise on organized disaster response teams; including pediatric surge capacity in disaster planning; improving access to pediatric-specific medical, mental health, and social services in disasters; and developing policies that ensure that disaster drills include a meaningful pediatric component.

Finally, the Committee concluded that the Veterans Affairs (VA) hospital system is an underutilized resource for emergency preparedness at the local level. Therefore, there should be greater integration of VA resources into civilian disaster planning.

CLOSING

The Committee believes that the nation's emergency care system is in serious peril. If the system's ability to respond on a day-to-day basis is already compromised to a serious degree, how will it respond to a major medical or public health emergency? The Committee believes that strong measures must be taken by Congress, the states, hospitals and other stakeholders to achieve the level of response that Americans expect and deserve. The Committee's recommendations provide concrete actions that can, and should lead to an emergency care system that is capable of providing safety and security for all Americans.

Thank you for the opportunity to testify. I would be happy to address any questions the Subcommittee might have.

Mr. REICHERT. The Chair recognizes Dr. Blum.

STATEMENT OF FREDERICK BLUM, M.D.

Dr. BLUM. Thank you, Mr. Chairman. My name is Rick Blum. I am the President of the American College of Emergency Physicians. I am a practicing emergency physician in Morgantown, West Virginia. I can tell you the problems you have outlined today are present in small-town America as well as large cities.

In the past few years, we have had the unfortunate experience in this country of experiencing some of the biggest disasters, both natural and man-made, that we have ever had. During those events, the American public has come to rely on the emergency department as a key player in the care of—in the medical needs of the patient that result from those disasters.

We have become very good at doing more and more with less and less. But that has a limit, and we are here today to talk about that limit.

This testimony today comes not only from my own experience, but the thousands of members of the American College of Emergency Physicians, and it also comes from data that has already been outlined here from the Institute of Medicine and from the national report card that the College put out earlier this year.

For several years now, the College has worked to raise awareness of these issues. It is perhaps a symptom of how good we have become at doing more and more with less and less that so far we don't feel like these messages have been heard.

But right now as we sit here today, every minute of every day an ambulance is being diverted away from an emergency department.

Right now, as we sit here today, there are hospitals, probably in this city—certainly in most cities in the country—where patients critically ill oftentimes are lying in the hallways and waiting hours to get into inpatient beds.

This creates a gridlock situation in our emergency departments that prevents us from doing what we know how to do, which is take care of patients as they present to the emergency department. We simply have no place to see them.

What are the contributing factors to this situation? Well, there are many. First of all, there is lack of access to basic health care for many Americans. It would be a misconception to think that our emergency departments are crowded with people that don't need to be there.

It is more appropriate to say that they are crowded with people who, if they had access to reasonable health care somewhere else,

would have their health care conditions not get to the point where they need an emergency department.

Most of our patients actually need to be in the emergency department, but many of them are there because they can't get basic health care.

We also have a significant lack of inpatient beds; that has already been outlined today, over 200,000 in the past few years decrease.

We have tried to control cost in this country by controlling our building of hospital beds, which I think has been a flawed public policy. We also have a growing population and the baby boomers are still pretty healthy. They have not even hit the system in big numbers yet. And when they do, most of us are predicting a pretty disastrous situation.

We have a shortage of nurses and other providers. You are going to hear more about that today, I am sure. It is a critical shortage. We cannot staff the beds we do have in this Nation in inpatient beds or in the emergency department because of the shortage.

We have reduced reimbursement for Medicare, Medicaid, and other payers to the point where 50 percent of all emergency care in this country is not reimbursed. That is simply not a sustainable business model for most hospitals. They often make the decision to close their emergency department rather than to continue to lose money at that rate. That is simply not sustainable. And that is at a time when the number of ED visits have gone up and the number of EDs have dropped, as you've mentioned.

To be prepared, we really must take steps now to shore up the critical infrastructure of the emergency care system in this country. And I am not talking about ventilators or negative pressure rooms. I am talking about human resources and I am talking about basic support.

If an emergency department closes, if a trauma center closes, it closes for everybody, whether you have insurance or not. We have seen that in communities around the country; in Las Vegas, when they lost their trauma center and patients were being shipped to California.

My written testimony outlines specifics. I won't repeat them all here. I will summarize four.

We simply have to increase surge capacity by ending the practice of boarding patients in the emergency department. We have proposed some specific measures, including H.R. 3875 and Senate bill 2750.

We must promote protocols and information systems that collect real-time data on diversion and on capacity and also provide the function of syndromic surveillance.

We must make sure that Homeland Security agencies at both the Federal, State, and local levels recognize that emergency care in the emergency department is part of the first response.

We know that 75 to 80 percent of patients in many disasters bypass many agencies and come directly to the emergency department.

Emergency physicians and nurses simply must play a role in planning for these disasters. We must be included, as I said, as first responders.

I can tell you—I will sum up by saying that when the next big disaster occurs, the Nation’s emergency physicians and nurses will be there. They will be doing their job, just as they did in Katrina where they cared for patients for days, without food or water or electricity or linen. We will be there. We will be doing our job as best we can, but please let us do that job effectively by giving us the resources that we need. Thanks.

Mr. REICHERT. Thank you Dr. Blum.
[The statement of Dr. Blum follows:]

PREPARED STATEMENT OF FREDERICK C. BLUM, M.D., F.A.C.E.P., F.A.A.P.

Introduction

At an alarming and increasing rate, America’s emergency departments are overcrowded and understaffed to meet the needs of patients. An ambulance is diverted away from a hospital every minute in our country. Patients admitted to the hospital every minute in our country. Patients admitted to the hospital lie in hallways for days waiting for transfer to inpatient beds. America’s ability to “surge” in a crisis is greatly diminished or eliminated altogether. This is affecting the nation’s ability to respond to acts of terrorism and save lives during disasters, such as Hurricane Katrina.

Mr. Chairman and members of the subcommittee, my name is Dr. Rick Blum, and I would like to thank you for allowing me to testify on behalf of the American College of Emergency Physicians, the largest specialty organization in emergency medicine, with nearly 24 000 members committed to advancing emergency care.

The testimony I give is not only from the experiences of emergency physicians, but from the findings of the Institute of Medicine reports, released in June, and of a National Report Card on the State of Emergency Medicine, released in January.

ACEP has been working to raise awareness among lawmakers and the public of the critical conditions facing emergency patients today and how this is affecting the ability of emergency physicians and nurses to “surge” in a crisis. These the findings of a 2003 GAG report on crowding; conducting a stakeholder summit last year; and commencing a rally on the west lawn of the U.S. Capitol attended by nearly 4,000 emergency physicians to promote H.R. 3875/S. 2750, the “Access to Emergency Medical Services Act”.

And we know from our experience with Hurricane Katrina that more people would have lived had surrounding hospitals had more surge capacity.

ACEP is the largest specialty organization in emergency medicine, with nearly 24 000 members who are committed to improving the quality of emergency care through continuing education, research, and public education. ACEP has 53 chapters representing each state, as well as Puerto Rico and the District of Columbia, and a Government Services Chapter representing emergency physicians employed by military branches and other government agencies.

At an alarming and increasing rate, emergency departments are overcrowded, surge capacity is diminished or being eliminated altogether, ambulances are diverted to other hospitals, patients admitted to the hospital are waiting longer for transfer to inpatient beds, and the shortage of medical specialists is worsening. These are the findings Institute of Medicine (IOM) report “Hospital-Based Emergency Care: At the Breaking Point,” which was just released on June 14. I emergency physicians, but they are not.

ACEP for years now has been working to raise awareness of the critical condition that exists in delivering high-quality emergency medical care with lawmakers and the public. More recently, these efforts included promoting the findings of a 2003 Government Accountability Office (GAO) report on emergency department crowding; conducting a stakeholder summit in July 2005 to discuss ways in which overcrowding in America emergency departments could be alleviated; commencing a rally on the west lawn of the U.S. Capitol in September 2005 attended by nearly 4 000 emergency physicians to promote the introduction of H.R. 3875/S. 2750, the “Access to Emergency Medical Services Act;” and releasing our first “National Report Card on the State of Emergency Medicine” in January 2006.

ACEP National Report Card on the State of Emergency Medicine

ACEP’s “National Report Card on the State of Emergency Medicine” is an assessment of the support each state provides for its emergency medicine systems. determined using 50 objective and quantifiable criteria to measure the performance of each state and the District of Columbia. Each state was given an overall grade plus

grades in four categories *Access to Emergency Care, Quality and Patient Safety, Public Health and Injury Prevention, and Medical Liability Reform.*

In addition to the state grades, the report card also assigned a grade to the emergency medicine system of the United States as whole. Eighty-percent of the country earned mediocre or near-failing grades, and America earned a C—, barely above a D.

Overall, the report card underscores findings of earlier examinations of our nation safety net—that it is in desperate need of change if we are to continue our mission of providing quality emergency medical care when and where it is expected.

Emergency Department Overcrowding and Lack of Surge Capacity

As the frontline of emergency care in this country, emergency physicians are particularly aware of how the lack of surge capacity in our nation's emergency departments is affecting patients. Here are two true patient stories that with ACEP that illustrate this point:

I know of a little girl with abdominal pain who came to a crowded emergency department in Texas. The waiting room was crowded with people, and there was literally no room for her to lie down. So she went home, and her appendix burst. The ambulance raced her back to the hospital where she was treated right away. She nearly died, and it took three months for her to recover. Three months of needless fear, pain, suffering and costs that would have been avoided—and could have been avoided.

I know of a 50-year-old Ohio man with chest pain who came to an overcrowded emergency department. The initial EKG showed no signs of heart attack, so he had to wait in the waiting room due, because no beds were available. His pain worsened and he arrested in the waiting room and died while waiting for a bed.

The root of this problem exists due to lack of capacity in our nation's emergency departments. To be clear, I am not discussing crowded emergency department waiting rooms, but the actual treatment areas of emergency departments.

Overcrowded emergency departments threaten access to emergency care for everyone—insured and uninsured alike—and create a situation where the emergency department can no longer safely treat any additional patients. This problem is particularly acute after a mass-casualty event, such as a man-made or natural disaster.

Every day in emergency departments across America, critically ill patients line the halls waiting hours—sometimes days—to be transferred to inpatient gridlock, which means other patients often wait hours to see physicians, and some leave without being seen or against medical advice.

Contributing factors to overcrowding include a lack of hospital inpatient beds; a growing elderly population and nationwide shortages of nurses, physicians and hospital support staff. As indicated by the 10M report, another factor that directly impacts emergency department patient care and overcrowding is the shortage of on-call specialists due to: fewer practicing emergency and trauma specialists; lack of compensation for providing these services to high percentage of uninsured and underinsured patients; substantial demands on quality of life; increased risk of being sued and high insurance and relaxed Emergency Medical Treatment and Labor Act (EMTALA) requirements for on-call panels.

ACEP and Johns Hopkins University conducted two national surveys, one in the spring of 2004 and another in the, to determine how current regulations and the practice climate are affecting the availability of medical specialists to care for patients in the nation's emergency departments. The key findings of these reports include:

- Access to medical specialists deteriorated significantly in one year. quarters (73 percent) of emergency department medical directors reported inadequate on-call specialist coverage, compared with two-thirds (67 percent) in 2004.
- Fifty-one percent reported deficiencies in coverage occurred because specialists left their hospitals to practice elsewhere.
- The top five specialty shortages cited in 2005 were orthopedics; plastic surgery; neurosurgery; ear, nose and throat; and hand surgery. Many who remain have negotiated with their hospitals for fewer on-call coverage hours (42 percent in 2005 compared with 18 percent in 2004).

Two anonymous stories dramatize the complex challenges of the on-call problem:

I know of a 23 year-old male who arrived unconscious at a small hospital in Texas. It turned out he had a neurosurgical services. Ten minutes away was a hospital with plenty of neurosurgeons, but the hospital would not accept the patient because the on-call neurosurgeon said he needed him to be at a trauma center with an around-the-clock ability to monitor the patient. All the trauma centers or hospitals larger were on “divert.” The patient FINALLY was accepted

by a hospital many miles away, with a 90-minute Life flight helicopter transfer. The patient died immediately after surgery.

I know of a 65 year-old male in emergency department complaining of abdominal pain. showed a six-centimeter abdominal aortic aneurysm and he was unstable for CT scanning. The hospital had no vascular surgeon available within 150 miles; a general surgeon was available, but he refused to take the patient out-of-state. The emergency team reversed the Coumadin transferred the patient three hours away to the nearest Level I trauma center, but he died on the operating table. I understand he probably would have lived had there not been a three-hour delay.

In addition, reductions in reimbursement from Medicare, Medicaid and other payers, as well as payment denials, continue to reduce hospital resource capacities. To compensate hospitals have been forced to operate with far fewer inpatient beds than they did a decade ago. Between 1993 and 2003, the number of inpatient beds declined by 198 000 (17 percent). This means fewer department, and the health care system no longer has the surge capacity to deal with sudden increases in patients needing care.

The overall result is that fewer inpatient beds are available to emergency patients who are admitted to the hospital. Many admitted patients are “boarded” or left in the emergency department waiting for an inpatient bed, in non-clinical spaces—including offices storerooms, conference rooms—even—halls—when emergency departments are overcrowded.

The majority of America’s 4,000 hospital emergency departments are operating “at” or “over” critical capacity. Between 1992 and 2003, emergency department visits rose by more than 26 percent, from 90 million to 114 million, representing an average increase of more than 2 million visits per year. At the same time, the number of hospitals with emergency departments declined by 425 (9 percent), leaving fewer emergency departments left to treat an increasing volume of patients, who have more serious and complex illnesses, which has contributed to increased ambulance diversion and longer wait times at facilities that remain operational.

According to the 2003 report from the Government Accountability Office (GAO), overcrowding has multiple effects, including prolonged pain and suffering for patients long emergency department waits and increased transport times for ambulance patients. This report found 90 percent of hospitals in 2001 boarded patients at least two hours and nearly 20 percent of hospitals reported an average boarding time of eight hours.

There are other factors that contribute to overcrowding, as noted by the GAO report including:

- Beds that could be used for emergency department admissions are instead being reserved for scheduled admissions, such as surgical patients who are generally more profitable for hospitals.
- Less than one-third of hospitals that went on ambulance diversion in fiscal year 2001 reported that they had not cancelled any elective procedures to minimize diversion.
- Some hospitals cited the costs and difficulty of recruiting nurses as a major barrier to staffing available inpatient/ICU beds.

To put this in perspective, I would like to share with you the findings of the on hospital-based emergency care, which was just released on June 14:

Emergency department overcrowding is a nationwide phenomenon affecting rural and urban areas alike (Richardson et al., 2002). In one study, 91 percent of EDs responding to a national survey reported overcrowding as a problem; almost 40 percent reported that overcrowding occurred daily (Derlet et al., 2001). Another study, using data from the National Emergency Department Overcrowding Survey (NEDOCS), found that academic medical center EDs were crowded on average 35 percent of the time. This study developed a common set of criteria to identify crowding across hospitals that was based on a handful of common elements: all ED beds full, people in hallways, diversion at some time waiting room full, doctors rushed, and waits to be treated greater than hour (Weiss et al., 2004; Bradley, 2005).

As previously mentioned in my statement, ACEP has been working with emergency physicians, hospitals and other stakeholders around the country to examine ways in which overcrowding might be mitigated. Of note, ACEP conducted a roundtable discussion in July 2005 to promote understanding of the causes and implications of emergency department overcrowding and boarding, as well as define solutions. included an addendum to my testimony of strategies, while not exhaustive or comprehensive, which still hold promise in addressing the emergency department overcrowding problem.

Ambulance Diversion

Another potentially serious outcome from overcrowded conditions in the emergency department is ambulance diversion. It is important to note that ambulances are only diverted to other hospitals when crowding is so severe that patient safety could be jeopardized.

The GAO reported two-thirds of emergency departments diverted ambulances to other hospitals during 2001, with crowding most severe in large population centers where nearly one in 10 hospitals reported being on diversion 20 percent of the time (more than four hours per day).

A study released in February by the National Center for Health Statistics found that, on average, an ambulance in the United States is diverted from a hospital every minute because of emergency department overcrowding or bed shortages. This national study, based on 2003 data, reported air and ground ambulances brought in about 14 percent of all emergency department patients, with about 16.2 million patients arrived by ambulance, and that 70 percent of those patients had urgent conditions that required care within an hour. A companion study found that tripled between 1998 and 2004.

According to the American Hospital Association (AHA), nearly half of all hospitals (46 percent) reported time on diversion in 2004, with 68 percent of teaching hospitals and 69 percent of urban hospitals reporting time on diversion.

As you can see from the data provided, this nation's emergency departments are having difficulty meeting the day-to-day demands placed on them. Overcrowded emergency departments lead to diminished patient care and ambulance diversion. emergency departments have filled all of their beds, there is no reasonable way to expect that these stressed systems will be able to suddenly create the surge capacity necessary to effectively manage a pandemic, natural disaster, terrorist attack or other mass-casualty event.

ACEP Recommendations

We must take steps now to avoid a catastrophic failure of our medical infrastructure and we must take steps now to create capacity, alleviate overcrowding and improve surge capacity in our nation's emergency departments.

As my colleague, ACEP Board member David Seaberg, M.D., C.P.E., F.A.C.E.P., noted in his testimony before a joint hearing conducted by this subcommittee and the Prevention of Nuclear and Biological Attack Subcommittee on February 8, ACEP has developed a 10-point plan to achieve these goals and we continue to urge Congress to enact these measures in order to effectively manage a pandemic, natural disaster, terrorist attack or other mass-casualty event. We have noted where ACEP's recommendations are complimented by several key IOM report proposals, which I have included as an addendum to my testimony.

1. We must increase the surge capacity of our nation's emergency departments by ending the practice of "boarding" admitted patients in emergency departments because no inpatient beds are available. As mentioned previously in my this will require changing the way hospitals are funded to allow for inpatient and intensive care unit surge capacity to manage this burden. **This proposal is specifically addressed in the IOM report recommendations (# 4.4 and # 4.5).**

2. We must time data for syndromic surveillance, hospital inpatient and emergency department capacities and ambulance diversion status. Collection of this data is vital to developing appropriate protocols.

3. Homeland, State, and Local levels need to understand that hospitals and Emergency Departments are part of the community Critical Infrastructure. We can not have response and recovery in a disaster without fully functioning, protected, and connected health resources. **This proposal is specifically addressed in the IOM report recommendation (# 6.1).**

4. We must require hospitals and communities that are severely affected by a natural or man-made disaster, or even a severe influenza outbreak, to postpone elective admissions until the crisis has abated. We must develop a way to compensate those facilities for their loss of revenue.

5. Command and control of disaster medical response must be more coordinated across federal, state and local agencies and departments.

6. We must establish a committee of stakeholders and disaster medicine experts from the public—and private-sectors and academic institutions to develop and/or refine national medical preparedness priorities and standards. We must change the national preparedness culture to one which is consensus-driven and evidence-based.

7. We must provide federal and state funding to compensate hospitals and emergency departments for the unreimbursed cost of meeting their critical public health and safety-net roles to ensure these emergency departments remain open and available to provide care in their communities. **This proposal is specifically addressed in the IOM report recommendation (# 2.1).**

8. We must establish a sustainable funding mechanism for disaster preparedness for hospitals, emergency departments and emergency management that is tied to national benchmarks and deliverables.

9. To ensure and are considered in any national allocation of resources and protective measures Congress should continue to include them in any definitions regarding first responders to disasters, acts of terrorism and epidemics.

10. Congress should pass H.R. 3875/S. 2750, the “Access to Emergency Medical Services Act” which provides incentives to hospitals to reduce overcrowding and provides reimbursement and liability protection for EMTALA-related care.

Conclusion

Emergency departments are a health care safety net for everyone—the uninsured and the insured. Unlike any other health care provider, the emergency department is open for all patients who seek care, 24 hours a day, 7 days a week, 365 days a year. We provide care to anyone who comes through our doors, regardless of their ability to pay. At the same time, when factors force an emergency department to close, it is closed to everyone and the community is denied a vital resource.

America’s emergency departments are already operating at or over capacity. changes are made to alleviate emergency department overcrowding, the nation’s health care safety, the quality of patient care and the ability of emergency department personnel to respond to a public health disaster will be in severe peril.

While adopting crisis measures to increase emergency department capacity may provide a short-tenn solution to a surge of patients, ultimately we need long-tenn answers. The federal government must take the steps necessary to strengthen our resources and prevent more emergency departments from being permanently closed. In the last ten years, the number and age of Americans has increased significantly. During that same time, while visits to the emergency department have risen by tens of millions, the number of emergency departments and staffed inpatient hospital beds in the nation has decreased substantially. This trend is simply not prudent public policy, nor is it in the of the American public.

Let me close by assuring you that in any local, regional or national disaster or epidemic the nation’s emergency physicians and emergency nurses will be there to do their jobs, as was evident during the Hurricanes Katrina and Rita, as well as the terrorist attacks on September 11. ACEP urges this committee and the U. S. Congress to consider the 10-point plan that I have presented here today and specifically advocate the enactment of H.R. 3875/S. 2750, the “Access to Emergency Medical Services Act.”

Every day we save lives across America. Please give us the capacity and the tools we need to be there for you when and where you need us. . . today, tomorrow and when the next major disaster strikes the citizens of this great country.

Attachments

Overcrowding strategies outlined at the roundtable discussion “Meeting the Challenges of Emergency Department Overcrowding/Boarding,” conducted by the American College of Emergency Physicians (ACEP) in July 2005

Strategies currently being employed to mitigate emergency department overcrowding:

- Expand emergency department treatment space. According to a Joint Commission on Accreditation of Health care Organizations (JCAHO) standard (LD.3.11), hospital leadership should identify all of the processes critical to patient flow through the hospital system from the time the patient arrives, through admitting, patient assessment and treatment and discharge.
- Develop protocols to operate at full capacity., when emergency patients have been admitted, they are transferred to other units within the hospital. This means that the pressure to find space for admitted patients is shared by other parts of the hospital.
- Address variability in patient flow. This involves assessing and analyzing patient arrivals and treatment relative to resources to determine how to enhance the movement of patients through the emergency department treatment process and on to the appropriate inpatient floors.
- Use queuing as an effective tool to manage provider staffing. According to an article in the Journal of the Society for Academic Emergency Medicine, surveyors found that timely access to a provider is a critical measure to quality performance. an environment where emergency department’s are often understaffed, analyses of arrival patterns and the use of queuing models can be extremely useful in identifying the most effective allocation of staff.

- Maximize emergency department efficiency to reduce the burden of overcrowding and expanding their capacity to handle a sudden increase or surge in patients.
- Manage acute illness or injury and the utilization of emergency services in anticipatory guidance. In its policy statement on emergency department overcrowding issued in September 2004, the American Academy of Pediatrics noted: “The best time to educate families about the appropriate use of an emergency department, calling 911, or calling the regional poison control center is before the emergency occurs. Although parents will continue to view and respond to acute medical problems as laypersons, they may make better-informed decisions if they are prepared.”
- Place beds in all inpatient hallways during national emergencies, which has been effectively demonstrated in Israel.
- Improve accountability for a lack of beds with direct reports to senior hospital staff as done in Sturdy Memorial Hospital.
- Set-up discharge holding units for patients who are to be discharged in order not to tie-up beds that could be used by others. The 2003 GAO report found that hospitals rely on a number of methods used to minimize going on diversion, including using overflow or holding areas for patients.
- Establish internal staff rescue teams. This concept involves intense collaboration between emergency department staff and other services in the hospital when patient volume is particularly high.
- Improve coordination of scheduling elective surgeries so they are more evenly distributed throughout the week. For example, Boston Medical Center had two cardiac surgeons who both scheduled multiple surgeries on Wednesdays. The Medical Center improved the cardiac surgery schedule by changing block time distribution so one surgeon operated on Wednesdays and the other operated on Fridays.
- Employ emergency department Observation Units to mitigate crowding.
- Strive to minimize delays in transferring patients.
- Support new Pay-for-Performance measures, such as reimbursing hospitals for admitting patients and seeing them more quickly and for disclosing measurements and data.
- Monitor hospital conditions daily, as done by some EMS community disaster departments.
- Institute definitions of crowding, saturation, boarding by region with staged response by EMS, public health and hospitals. For example, the Massachusetts Chapter of ACEP has been working with its Department of Public Health (DPH) on this issue for several years, which has resulted in the development of a “best practices” document for ambulance diversion and numerous related recommendations including protocols regarding care of admitted patients awaiting bed placement. The chapter’s efforts also resulted in the commissioner of DPH sending a letter to all hospitals outlining boarding protocols.
- Seek best practices from other countries that have eased emergency department crowding.

Improve internal information sharing through technology.

Strategies and innovative suggestions to planning or testing phases:

- Physicians should work to improve physician leadership in hospital decision-making.
- Hospitals should expand areas of care for admitted patients. In-hospital hallways would be preferable to emergency department hallways. admission and there are 20 hallways available, putting one patient per hallway would be preferable to putting all 20 in the emergency department, which only prevents others from accessing care.
- Design procedures to facilitate quicker inpatient bed turnover, with earlier discharges and improved communications between the housekeeping and admission departments.
- Offer staggered start times and creative shifts that would offer incentives to those who couldn’t work full-time or for those who would benefit from having a unique work schedule.
- Collect data to measure how patients move through the hospital.
- Address access to primary care and issues to facilitate patient care that supply lists of clinics and other community-based sources of care.
- Communities should increase the number of health care facilities and improve access to quality care for the mentally ill.
- Policymakers should improve the legal climate so that doctors aren’t forced to order defensive tests in hopes of fending off lawsuits.

- Ensure emergency medical care is available to all regardless of ability to insurance coverage and should therefore be treated as an essential community service that is adequately funded.
- Lawmakers should enact universal health insurance that includes benefits for primary care services.

Appendix E
 Recommendations and Responsible Entities from the *Future of Emergency Care* Series
 HOSPITAL-BASED EMERGENCY CARE: AT THE BREAKING POINT

	Congress	DHHS	DOT	DHS	DOD	States	Hospitals	EMS Agencies	Private Industry	Professional Organizations	Other
Chapter 2: The Evolving Role of Hospital-Based Emergency Care											
<p>2.1 Congress should establish dedicated funding, separate from DSH payments, to reimburse hospitals that provide significant amounts of uncompensated emergency and trauma care for the financial losses incurred by providing those services.</p> <ul style="list-style-type: none"> • Congress should initially appropriate \$50 million for the purpose to be administered by the Centers for Medicare and Medicaid Services. • CMS should establish a working group to determine the allocation of these funds, which should be targeted to providers and localities at greatest risk; the working group should then determine funding needs for subsequent years 	X	X									
Chapter 3: Building a 21st-Century Emergency Care System											
<p>3.1 The Department of Health and Human Services and National Highway Traffic Safety Administration, in partnership with professional organizations, should convene a panel of individuals with multidisciplinary expertise to develop an evidence-based categorization system for EMS, EDs, and trauma centers based on adult and pediatric service capabilities.</p>		X	X							X	
<p>3.2 The National Highway Traffic Safety Administration, in partnership with professional organizations, should convene a panel of individuals with multidisciplinary expertise to develop evidence-based model prehospital care protocols for the treatment, triage, and transport of patients.</p>			X							X	

<p>3.6 Congress should establish a lead agency for emergency and trauma care within 2 years of the publication of this report. The lead agency should be housed in the Department of Health and Human Services, and should have primary programmatic responsibility for the full continuum of EMS, emergency and trauma care for adults and children, including medical 9-1-1 and emergency medical dispatch, prehospital EMS (both ground and air), hospital-based emergency and trauma care, and medical-related disaster preparedness. Congress should establish a working group to make recommendations regarding the structure, funding, and responsibilities of the new agency, and develop and monitor the transition. The working group should have representation from federal and state agencies and professional disciplines involved in emergency and trauma care.</p>	X	X													
Chapter 4: Improving the Efficiency of Hospital-Based Emergency Care															
<p>4.1 Hospital chief executive officers should adopt enterprise-wide operations management and related strategies to improve the quality and efficiency of emergency care.</p>															
<p>4.2 The Centers for Medicare and Medicaid Services should remove the current restrictions on the medical conditions that are eligible for separate clinical decision unit (CDU) payment.</p>		X													
<p>4.3 Training in operations management and related approaches should be promoted by professional associations; accrediting organizations, such as the Joint Commission on Accreditation of Healthcare Organizations (JCAHO) and the National Committee for Quality Assurance (NCQA); and educational institutions that provide training in clinical, health care management, and public health disciplines.</p>														X	X
<p>4.4 The joint Commission on the Accreditation of Healthcare Organizations (JCAHO) should reinstate strong standards that sharply reduce and ultimately eliminate ED crowding, boarding, and diversion.</p>															X

<p>6.3 The American Board of Medical Specialties and its constituent Boards should extend eligibility for certification in critical care medicine to all acute care and primary care physicians who complete an accredited care fellowship program.</p>																																																																																																																																																																																																																																																																																																																																																																																																																																																																																											
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Appendix E—Continued
 Recommendations and Responsible Entities from the *Future of Emergency Care* Series
 HOSPITAL-BASED EMERGENCY CARE: AT THE BREAKING POINT

	Congress	DHHS	DOT	DHS	DOD	States	Hospitals	EMS Agencies	Private Industry	Professional Organizations	Other
<p>7.3 Congress should significantly increase total disaster preparedness funding in FY 2007 for hospital emergency preparedness in the following areas:</p> <ul style="list-style-type: none"> • strengthening and sustaining trauma care systems; • enhancing ED, trauma center, and inpatient surge capacity; • improving EMS response to explosives • designing evidence-based training programs; • enhancing the availability of decontamination showers, standby ICU capacity; negative pressure rooms, and appropriate personal protective equipment; • conducting international collaborative research on the civilian consequences of conventional weapons (CW) terrorism. 	X										
Chapter 8: Enhancing the Emergency and Trauma Care Research Base											
<p>8.1 Academic medical centers should support emergency and trauma care research by providing research time and adequate facilities for promising emergency care and trauma investigators, and by strongly considering the establishment of autonomous departments of emergency medicine.</p>							X				

<p>8.2 The Secretary of the Department of Health and Human Services should conduct a study to examine the gaps and opportunities in emergency and trauma care research, and recommend a strategy for the optimal organization and funding of the research effort. This study should include consideration of: training of new investigators; development of multi-center research networks; funding of General Clinical Research Centers (GCRCs) that specifically include an emergency and trauma care component; involvement of emergency and trauma care researchers in the grant review and research advisory processes; and improved research coordination through a dedicated center or institute. Congress and federal agencies involved in emergency care research (including DOT, DHHS, DHS, and DoD) should implement the study's recommendations.</p>	X	X	X	X	X	X	X	X	X	X	X	X	X	X
<p>8.3 Congress should modify Federalwide Assurance Program (FWA) regulations to allow the acquisition of limited, linked, patient outcome data without the existence of an FWA.</p>	X													

Appendix E
Recommendations and Responsible Entities from the *Future of Emergency Care* Series
EMERGENCY MEDICAL SERVICES AT THE CROSSROADS

	Congress	DHHS	DOT	DHS	DOD	States	Hospitals	EMS Agencies	Private Industry	Professional Organizations	Other
<p>Chapter 3: Building a 21-Century Emergency Care System</p>		X	X							X	
<p>3.1 The Department of Health and Human Services and National Highway Traffic Safety Administration, in partnership with professional organizations, should convene a panel of individuals with multidisciplinary expertise to develop an evidence-based categorization system for EMS, EDs, and trauma centers based on adult and pediatric service capabilities.</p>		X	X							X	

Appendix E—Continued
 Recommendations and Responsible Entities from the *Future of Emergency Care* Series
EMERGENCY MEDICAL SERVICES AT THE CROSSROADS

	Congress	DHHS	DOT	DHS	DOD	States	Hospitals	EMS Agencies	Private Industry	Professional Organizations	Other
3.2 The National Highway Traffic Safety Administration, in partnership with professional organizations, should convene a panel of individuals with multidisciplinary expertise to develop evidence-based, model prehospital care protocols for the treatment, triage, and transport of patients.			X							X	
3.3 The Department of Health and Human Services should convene a panel of individuals with emergency and trauma care expertise to develop evidence-based indicators of emergency care system performance.		X									
3.4 Congress should establish a demonstration program, administered by Health Resources and Services Administration, to promote regionalized, coordinated, and accountable emergency care systems throughout the country, and appropriate \$88 million over 5 years to this program.	X	X									

<p>3.5 Congress should establish a lead agency for emergency and trauma care within 2 years of the publication of this report. This lead agency should be housed in the Department of Health and Human Services, and should have primary programmatic responsibility for the full continuum of EMS, emergency and trauma care for adults and children, including medical 9-1-1 and emergency medical dispatch, prehospital EMS (both ground and air), hospital-based emergency and trauma care, and medical-related disaster preparedness. Congress should establish a working group to make recommendations regarding the structure, funding, and responsibilities of the new agency, and develop and monitor the transition. The working group should have representation from federal and state agencies and professional disciplines involved in emergency and trauma care.</p>	X	X												
<p>3.6 The Department of Health and Human Services should adopt rule changes to the Emergency Medical Treatment and Active Labor Act (EMTALA) and the Health Insurance Portability and Accountability Act (HIPAA) so that the original goals of the laws are preserved but integrated systems may further develop.</p>		X												
<p>3.7 CMS should convene an ad hoc work group with expertise in emergency care, trauma, and EMS systems to evaluate the reimbursement of EMS and make recommendations regarding inclusion of readiness costs and permitting payment without transport.</p>		X												
Chapter 4: Supporting a High quality EMS Workforce														
<p>4.1 State governments should adopt a common scope of practice for EMS personnel, with state licensing reciprocity.</p>												X		
<p>4.2 States should require national accreditation of paramedic education programs.</p>												X		

Appendix E—Continued
 Recommendations and Responsible Entities from the *Future of Emergency Care* Series
EMERGENCY MEDICAL SERVICES AT THE CROSSROADS

	Congress	DHHS	DOT	DHS	DOD	States	Hospitals	EMS Agencies	Private Industry	Professional Organizations	Other
4.3 States should accept national certification as a pre-requisite for state licensure and local credentialing of EMS providers.						X					
4.4 The American Board of Emergency Medicine should create a subspecialty certification in EMS.										X	
Chapter 5: Advancing System Infrastructure											
5.1 States should assume regulatory oversight of the medical aspects of air medical services, including communications dispatch, and transport protocols.						X					
5.2 Hospitals, trauma centers, EMS agencies, public safety departments, emergency management offices, and public health agencies should develop integrated and interoperable communications and data systems.							X	X			X
5.3 The Department of Health and Human Services should fully involve prehospital EMS leadership in discussions about the design, deployment, and financing of the National Health Information Infrastructure (NHii).		X									
Chapter 6: Preparing for Disasters											
6.1 The Department of Health and Human Services, the Department of Transportation, the Department of Homeland Security, and the states should elevate emergency and trauma care to a position of parity with other public safety entities in disaster planning and operations.		X	X	X		X					

<p>6.2 Congress should substantially increase funding for EMS-related disaster preparedness through dedicated funding streams.</p>	<p>X</p>														
<p>6.3 Professional training, continuing education, and credentialing and certification programs of all the relevant EMS professional categories, should incorporate disaster preparedness training into their curricula, and require the maintenance of competency in these skills.</p>															
<p>Chapter 7: Optimizing Prehospital Care through Research</p>															
<p>7.1 Federal agencies that fund emergency and trauma care research should target additional funding at prehospital EMS research, with an emphasis on systems and outcomes research.</p>															
<p>7.2 Congress should modify Federalwide Assurance Program (FWA) regulations to allow the acquisitions of limited, linked, patient outcome data without the existence of an FWA.</p>															
<p>7.3 The Secretary of Department of Health and Human Services should conduct a study to examine the gaps and opportunities in emergency and trauma care research, and recommend a strategy for the optimal organization and funding of the research effort. This study should include consideration of: training of new investigators; development of multi-center research networks, involvement of emergency medical services researchers in the grant review and research advisory processes; and improved research coordination through a dedicated center or institute. Congress and federal agencies involved in emergency care research (including Department of Transportation, Department of Health and Human Services, Department of Homeland Security, and Department of Defense) should implement the study's recommendations.</p>															

Appendix E
 Recommendations and Responsible Entities from the *Future of Emergency Care* Series
EMERGENCY CARE FOR CHILDREN: GROWING PAINS

	Congress	DHHS	DOT	DHS	DOD	States	Hospitals	EMS Agencies	Private Industry	Professional Organizations	Other
Chapter 3: Building a 21st-Century Emergency Care System											
3.1 The Department of Health and Human Services and National Highway Traffic Safety Administration, in partnership with professional organizations, should convene a panel of individuals with multidisciplinary expertise to develop an evidence-based categorization system for EMS, EDs, and trauma centers based on adult and pediatric service capabilities.		X	X							X	
3.2 The National Highway Traffic Safety Administration, in partnership with professional organizations, should convene a panel of individuals with multidisciplinary expertise to develop evidence-based model prehospital care protocols for the treatment, triage, and transport of patients, including children			X							X	
3.3 The Department of Health and Human Services should convene a panel of individuals with emergency and trauma care expertise to develop evidence-based indicators of emergency care system performance, including performance of pediatric emergency care.		X									
3.4 Congress should establish a demonstration program, administered by the Health Resources and Services Administration, to promote regionalized, coordinated, and accountable emergency care systems throughout the country, and appropriate \$88 million over 5 years to this program.	X	X									

<p>3.5 The Department of Health and Human Services should adopt rule changes to the Emergency Medical Treatment and Active Labor Act and the Health Insurance Portability and Accountability Act so that the original goals of the laws are preserved but integrated systems may further develop.</p>	X																						
<p>3.6 Congress should establish a lead agency for emergency and trauma care within 2 years of the publication of this report. The lead agency should be housed in the Department of Health and Human Services, and should have primary programmatic responsibility for the full continuum of EMS, emergency and trauma care for adults and children, including medical 9-1-1 and emergency medical dispatch, prehospital EMS (both ground and air), hospital-based emergency and trauma care, and medical-related disaster preparedness. Congress should establish a working group to make recommendations regarding the structure, funding, and responsibilities of the new agency, and develop and monitor the transition. The working group should have representation from federal and state agencies and professional disciplines involved in emergency and trauma care.</p>	X																						
<p>3.7 Congress should appropriate \$37.5 million each year for the next five years to the EMS-Program.</p>	X																						
<p>Chapter 4: Arming the Emergency Care Workforce with Knowledge and Skills</p>																							
<p>4.1 Every pediatric and emergency care-related health professional credentialing and certification body should define pediatric emergency care competencies and require practitioners to receive the appropriate level of initial and continuing education necessary to achieve and maintain those competencies.</p>																							X
<p>4.2 The Department of Health and Human Services should collaborate with professional organizations to convene a panel of individuals with multidisciplinary expertise to develop, evaluate, and update pediatric emergency care clinical practice guidelines and standards of care.</p>																						X	

Appendix E—Continued
 Recommendations and Responsible Entities from the *Future of Emergency Care* Series
EMERGENCY CARE FOR CHILDREN: GROWING PAINS

	Congress	DHHS	DOT	DHS	DOD	States	Hospitals	EMS Agencies	Private Industry	Professional Organizations	Other
4.3 EMS agencies should appoint a pediatric emergency coordinator and hospitals should appoint two pediatric emergency coordinators—one a physician—to provide pediatric leadership for the organization.							X	X			
Chapter 5: Improving the Quality of Pediatric Emergency Care											
5.1 The Department of Health and Human Services should fund studies on the efficacy, safety, and health outcomes of medications used for infants, children, and adolescents in emergency care settings in order to improve patient safety.		X									
5.2 The Department of Health and Humane Services and the National Highway Traffic Safety Administration should fund the development of medication dosage guidelines, formulations, labeling, and administration techniques for the emergency care setting to maximize effectiveness and safety for infants, children and adolescents. EMS agencies and hospitals should implement these guidelines, formulations, and techniques into practice.		X	X				X	X			
5.3 Hospitals and EMS systems should implement evidence-based approaches to reduce errors in emergency and trauma care for children.							X	X			
5.4 Federal agencies and private industry should fund research on pediatric-specific technologies and equipment used by emergency and trauma care personnel.		X	X	X					X		
5.5 EMS agencies and hospitals should integrate family-centered care into emergency care practice.							X	X			

Mr. REICHERT. The Chair recognizes Ms. Jagim.

STATEMENT OF MARY JAGIM

Ms. JAGIM. Good, Mr. Chairman and members of the subcommittee. Thank you so much for convening this hearing today and allowing us to speak with you.

I am Mary Jagim, the Internal Consultant for Emergency Preparedness and Pandemic Planning for MeritCare Health System in Fargo, North Dakota, and I was a member of the committee that oversaw the development of IOM reports.

I am here today, though, representing the Emergency Nurses Association where I have served on the board of directors and was the 2001 president. ENA, with over 30,000 members, is the only professional nursing organization directed toward defining the future of emergency nursing and emergency care. And on behalf of ENA I appreciate the opportunity to discuss our concerns regarding hospital surge and mass trauma care capacity.

Over the past 5 years, millions of dollars have gone to strengthen our country's disaster preparedness. However, one area, as you have heard, still has not received the level of support it needs to prepare for mass casualty episodes. It is emergency care providers and hospitals, the ones who provide the emergency medical care for patients and family members during a disaster. Hospitals and EMSs have been underfunded, undersupported, and, in many cases, just plain left out. And it is the emergency care system of our country that right now is the most fragile, most oversaturated, and most fragmented of all of our health care needs.

So despite national expectations that our emergency care system on a day-to-day basis is there for people, instead, it is extremely overloaded and vulnerable, lacking the ability to respond appropriately when needed. How then is it to respond when the extraordinary occurs?

I want to focus most of my comments, though, on a vital role within our emergency preparedness response system, and that is the role of the emergency nurse.

There is an expansive skill set and knowledge base required to be an emergency nurse, as we must be prepared to care for every type of illness and injury of every age group, all of whom are in a state of crisis when they come to our doors.

Nurses entering the field of emergency nursing need a minimum of 2 years following their educational preparation simply to acquire the core knowledge needed to work in an emergency department. And years beyond those first two are necessary to fully master their significant role as a coordinator of patient care. For it is that coordinator-of-care role, along with their critical thinking skills, that really enables an emergency nurse to swiftly assess the situation at hand and respond appropriately and bring to the patient the resources they need at that moment in time.

Let's take, for example, the occurrence of a mass casualty event in one of your communities. When that occurs, it is the emergency nurse that receives the call from EMS that an event has occurred and that multiple victims will be brought to the hospital. It is that emergency nurse that activates the hospital's response plan and calls in additional nurses and physicians as well as others to assist.

It is the emergency nurse who then goes on to make arrangements to get all the current emergency department patients either admitted, discharged, or moved to other locations.

It is the ED nurse that organizes triage to receive the arriving victims and who direct the EMS crews and coordinates the disaster decontamination teams. It is emergency nurses then who also stay at the patient's bedside providing care and comfort in their time of need, and it is the nurses who notify family members and console those who have lost loved ones.

And most likely, it was an emergency nurse who helped to write the plan that activated the response, including the procurement of appropriate supplies and equipment, and who developed the educational training program and trained the staff—that is, if those plans and training have occurred in the first place.

The emergency nurse has a vital role, more precious right now because of the nursing shortage. During the 10-year span between 2002 and 2012 health care facilities will need to fill more than 1.1 million R.N. job openings.

The nursing community has been urgently asking Congress to increase funding for nursing workforce development programs, and especially to increase funding for nursing faculty preparation.

Do you know that the Federal investment in nursing education is less than 600-thousandths of the total Federal budget, whereas in 1974 during our last serious nursing shortage, Congress appropriated 153 million for nurse educational programs. In today's dollars that would be equivalent to \$592 million, which is about four times what the Federal Government is currently putting towards nursing education.

Applications to nursing programs have been increasing during this past time, but in the last school year, 147,000 qualified applicants had to be turned away because there were not enough faculty in the schools to teach them.

The results of the disparities in workforce supply and demand are played out in staff shortages in the majority of emergency departments and hospitals across this country. And it results in staff who are struggling to provide care, to ED crowding, to ambulance diversions, and to the patients who are ultimately the ones who suffer. And the situation is only going to get worse as our population ages.

The emergency nurses of this country have been underrecognized and undervalued and truly undersupported in their roles. Yet they so strongly desire to provide skills and compassionate emergency care to their patients.

We ask you, please, to support the recommendations that ENA has outlined in our written testimony and to work with us to create a coordinated, regionalized, and accountable emergency care system that is staffed, that is trained, and that is prepared, so that when our communities need us we can be there.

We cannot achieve this alone. Thank you.

Mr. REICHERT. Thank you Ms. Jagim.

[The statement of Ms. Jagim follows:]

PREPARED STATEMENT OF MARY M. JAGIM, RN, BSN, CEN, FAEN

Good morning, Mr. Chairman and members of the Subcommittee. Thank you for convening this hearing to examine the current condition of emergency care and its implications for maintaining security in our nation. Characterized as “overburdened, short of resources, under funded, and fragmented”, the present situation is an environment where emergency departments are less able to serve as the country’s safety net in ordinary situations, much less able to appropriately handle the extraordinary events of natural and man-made disasters.

I am Mary Jagim, the Internal Consultant for Emergency Preparedness and Pandemic Planning for MeritCare Health System in Fargo, North Dakota, and a member of the Institute of Medicine’s (IOM) committee that oversaw the development of the report, **Future of Emergency Care in the United States Health System**. I am here today representing the Emergency Nurses Association (ENA) where I have served on the Board of Directors and as the 2001 President. ENA is the only professional nursing organization dedicated to defining the future of emergency nursing and emergency care through expertise, innovation, and leadership. It serves as the voice of more than 30,000 members and their patients through research, publications, professional development, injury prevention, and patient education. Recognized as an authority in the discipline of emergency care and its practice, ENA was invited by the IOM to share its data and expertise on the current state of U.S. emergency departments (EDs). On behalf of the Emergency Nurses Association, I appreciate this opportunity to discuss with the Subcommittee our particular concerns regarding hospital surge and mass trauma care capacity.

MASS TRAUMA AND EMERGENCY NURSING CARE

Emergency nurses are no strangers to mass casualty challenges. We engage continually in every aspect of patient care throughout the emergency care system. Emergency nurses conduct triage, the first application of medical care in the ED, assessing patient conditions and swiftly prioritizing needs within a rapidly changing scenario. We coordinate treatment and autonomously intervene at a moment’s notice. In addition, it is our role to invest quality time with patients and their families as we teach them how to manage their conditions and prevent injuries. Emergency nurses are a critical member of daily emergency care and, owing to our requisite knowledge and skills, we occupy a unique role on the team of professionals delivering mass casualty care.

All hospitals and medical facilities across our country are vulnerable to mass casualty incidents. A mass casualty incident occurs as a result of an event where sudden and high patient volume exceeds an ED’s resources. Such events may include the more commonly realized multi-car pile-ups, train crashes, hazardous material exposures in a building or across a community, high occupancy structural fires, or the extraordinary events such as pandemics, weather-related disasters, and intentional catastrophic acts of violence. In all cases and degrees of calamity, the emergency department is the entry point into the hospital system and is the initial facility-based, patient-care area for victims of a mass casualty incident.

FRAGMENTATION/REGIONALIZATION

ENA supports the IOM’s assertion that the U.S. emergency care system needs to be coordinated and regionalized. The IOM report acknowledges that the nation’s emergency care system is poorly prepared to care for ill and wounded patients following a mass casualty incident. It describes today’s emergency care system as saturated, highly fragmented, and variable. In its 2002 **Mass Casualty Incidents** position statement, ENA recommended that emergency services be seamless with 911 and dispatch, ambulances, emergency medical services (EMS) personnel, hospital EDs, and trauma centers and specialists working in a coordinated manner. The ENA believes emergency care also must be regionalized to help ensure the patient is transported to the right hospital at the right time for the right care.

ENA supports the immediate reinstatement of funding for the HRSA Trauma-EMS Program in order to renew the work in the states toward establishment of state-wide trauma systems. The Trauma-EMS Program, administered by the Health Resources and Services Administration (HRSA), provided states with grants for planning, developing, and implementing statewide trauma care systems. Although only eight states have fully developed trauma systems, these statewide healthcare systems could be used as models for full regionalization of care. ENA recognizes the necessity of the Trauma-EMS Program, which has been the only federal source available to build a trauma system infrastructure in the United States. When it existed, the Trauma-EMS Program, which lost its funding in FY 2006, provided critical national leadership, and leveraged additional scarce state dollars, to optimize trauma care through system integration that offered seri-

ously injured individuals, wherever they lived, prompt emergency transport to the nearest appropriate trauma center within the “golden hour.” The IOM report bolsters support for such regionalized models of care by drawing on substantial evidence that “demonstrates that doing so [i.e., creating a coordinated, regionalized system] improves outcomes and reduces costs across a range of high-risk conditions and procedures.”

ENA supports the IOM’s call for a series of research demonstration projects that will put these ideas into practice by testing these strategies under various emergency care conditions. Achieving this result takes coordination, commitment of staff, development and implementation of standards of care, a process for designating trauma centers, and evaluation. To this end, ENA has advocated a regionalization that gathers together all community stakeholders to examine all alternatives for providing appropriate patient care and better patient outcomes. Our organization supports a best practice of coordinated, community-wide response planning, using a common framework that is applicable to all hazards and that links local, state, regional, and national resources.

DISASTER PREPAREDNESS

ENA supports development of basic and advanced continuing-education courses and training to prepare emergency nurses in the care and treatment of victims, across all age groups and diverse populations, of mass casualty incidents. Disaster preparedness is an essential function of frontline emergency nurses and the emergency care continuum. Emergency preparedness for mass casualty incidents should be a major part of an emergency nurse’s training and should be reflected in the work she or he does every day. Our organization, through its conferences and publications, including the quarterly **Disaster Management and Response** journal, provides its members with information and resources on disaster preparedness. But as the IOM report points out, in general, a lack of planning, training, and supplies, along with limited federal funding, complicates the mass casualty readiness situation at the hospital ED level across the country.

ENA joins the IOM in urging an increase in federal funding allocated to assist hospitals in plan-ning, in training, and in equipment and supply procurement for all-hazards disaster prepared-ness. Although EDs play a significant role in the medical response to major disaster events, a current imbalance exists in funding allocations. Funding either has not reached all hospitals, or—for those that received funding—the average amount was between \$5,000 and \$10,000 in 2002 and 2003. Owing to the capacity needs and infrastructure that must be advanced to meet the national goal of an emergency care system ready to appropriately respond to all-hazards disasters, the allocation of federal emergency preparedness funds is grossly insufficient.

For example, a considerable amount of the federal funding has been allocated to fire. Much of this funding has been used for equipment procurement and training involving chemical and biological contamination. Past experience has shown that in disasters of mass contamination, only a portion—as little as 20 percent—of the victims remain on scene for decontamination and medical care. The remaining 80 percent present at the hospital ED, where the appropriate equipment and training have been under funded, if funded at all. The fire and EMS personnel and equipment at the disaster scene are not available to respond and assist with the decontamination needs of the majority of the victims who are presenting to the ED. The allocation of emergency preparedness monies to hospitals has been disproportionate to the share of the medical response to major disaster events delivered by EDs. Without specific funding provided to hospitals for the purposes of planning, training, and procurement, these activities will not occur, leaving hospitals under—or unprepared, and our national goal of disaster preparedness unmet.

The ENA unites with COMCARE, a nonprofit national advocacy organization dedicated to ad-vancing emergency communications, in advocating that emergency communications systems and “interoperability” are defined to include interorganizational data communications and data communications generally. Coordinated and comprehensive communication is another critical aspect of disaster preparedness for mass casualty events. Appropriate protection of the public requires continuous, redundant, and reliable systems of all forms of communications and information technology. As a member of COMCARE, ENA recognizes the vital nature of data and information technology, whether supporting emergency alerts to agencies and the public, shared systems for incident management and situational awareness, patient tracking applications, resource management, or scores of other uses. Fully interoperable parameters necessitate the use of integrated, multimode emergency communications systems designed to communicate with one another on demand in real time, and—as necessary—support voice and

data interchange between the emergency and emergency support organizations, in addition to radio communications with mobile staff.

ED nurses, along with all other medical and emergency responders, need to be able to receive, send, and access all kinds of patient data on a daily basis. An example is the frequent occurrences of patients arriving at the ED on their own, by ambulance, or as a result of an evacuation from another hospital without any information regarding their medical history. Healthcare workers should have access to all of the appropriate information: Who is the primary physician? What medicines is the patient taking? What are the vitals? What treatments have already been given? Our members need to communicate and share information with other professions and jurisdictions so that we can provide the best care possible to our patients during and after everyday emergencies and mass casualty disasters.

ENA supports COMCARE in recommending that the local, regional, and state emergency communications planning and implementation required by current federal guidelines be conducted as an integrated whole, including all organizations involved with emergency response, and all forms of communications. We are concerned that the current planning processes are focused too narrowly and are compromising our nation's ability to rapidly improve our response capabilities. All organizations involved in emergency preparation and responses need to participate in planning and deployment. Furthermore, not only must funding guidelines allow expenditures on software and emergency services information technology in addition to equipment procurement, but the guidelines also must provide for planning and training.

THE FOUNDATION OF THE EMERGENCY CARE SYSTEM

Preparing for hospital surge and mass trauma care capacity will not happen without remediation of the general emergency care system infrastructure.

NURSING WORKFORCE AND NURSING FACULTY SHORTAGES

The IOM report also notes that nursing shortages in U.S. hospitals continue to disrupt hospital operations and are detrimental to patient care and safety. Because of the unique insight and clinical knowledge of an experienced emergency nurse, the nursing shortfalls constitute a loss of expertise in the system. Nurses are not interchangeable resources. The expertise of a seasoned ED nurse is critical to achieve quality patient outcomes in a dynamic healthcare system that demands competencies for a multitude of situations, including all-hazards mass casualty events. Hospital staffing systems must acknowledge the need for, and incorporate, training and education time and funding for emergency nurses.

ENA agrees with the IOM's recommendation that federal agencies must jointly undertake a detailed assessment of emergency and trauma workforce capacity, trends, and future needs to develop strategies meeting these needs in the future. Today's nursing shortage is very real and very different from any experienced in the past. The existing shortage is evidenced by an aging workforce and too few individuals entering the profession. A critical factor exacerbating the national nurse-workforce deficiency is the declining number of qualified nurses available to teach future generations of registered nurses.

ENA supports the IOM's assertion that national standards for core competencies applicable to nurses and other key emergency and trauma professionals be developed using a national, evidence-based, multidisciplinary process. To date, the ENA-affiliated Board of Certification of Emergency Nursing (BCEN®) has credentialed 14,000 Certified Emergency Nurses (CEN®) and more than 1,000 Flight Registered Nurses (CFRN®). BCEN® also recently announced the launch of the Certified Transport Registered Nurse (CTRN™) certification for nurses qualified to move patients between medical facilities.

The ENA is on record advocating increased federal efforts to support:

- Effective strategies for the recruitment, retention, and continuing education of registered nurses working in emergency departments, providing safe, efficient, quality care, especially during crisis situations when the ED is crowded and functioning above capacity; and
- New strategies to increase the numbers of individuals pursuing nursing careers, as well as initiatives to increase qualified nursing faculty, who are vital to addressing the nursing shortage.

CROWDING

Crowding in our nation's emergency departments is of increasing concern. In our 2005 position statement **Crowding in the Emergency Department**, ED crowding is described as "a situation in which the identified need for emergency services outstrips available resources in the emergency department. This situation occurs in

hospital emergency departments when there are more patients than staffed ED treatment beds and wait times exceed a reasonable period.”

When crowding occurs, patients are often placed in hallways and other nontreatment areas to be monitored until ED treatment beds or staffed hospital inpatient beds become available. In addition, crowding may contribute to an inability to triage and treat patients in a timely manner, as well as increased rates of patients leaving the ED without being seen. As a result of crowding, hospitals often implement ambulance diversion measures.

An emergency care system that is beyond saturation on a daily basis will have limited ability to respond to the surge of patients related to catastrophic events. The federal government must establish clear leadership and directed funding support to coordinate the functions of emergency care, as well as assist in providing system incentives for nonemergency care that is delivered in areas outside of the ED.

One aspect of crowding that ENA continues to address concerns the interpretation of emergency care’s federally mandated regulations. ENA wholeheartedly endorses unencumbered access to quality emergency care by all individuals regardless of their financial status. However, EMTALA, the *Emergency Medical Treatment and Labor Act* which ensures public access to emergency services regardless of ability to pay, has had the unintentional effect of increasing unnecessary visits to the ED for acute and chronic conditions that do not meet the Centers for Medicare and Medicaid Services’ (CMS) definition of “emergency medical condition”.

ENA acknowledges an attempt by CMS to lessen the restrictions regarding patients with nonemergent conditions. Despite a CMS clarification, much confusion continues to surround this issue, grounded in fear of possible reprisals for failure to strictly adhere to EMTALA mandates. EMTALA continues to limit an ED’s options to manage its patient load by limiting its ability to send nonurgent patients off-site for clinical care, rather than conducting a full medical assessment in the ED. Nurses cannot tell a patient probable wait times or suggest alternatives for care under the current rules. With severe crowding and ambulance diversions identified as a national crisis, compounded by the increase in patients using the ED for primary care, some flexibility is needed for clinical judgment by an ED practitioner (who has experienced an actual encounter with the patient) to identify those patients who do not obviously meet the definition of an emergency medical condition.

Notwithstanding EMTALA regulations, the problem of crowding is not confined to the ED, and is considered a systems issue, which can be examined at department and institution levels as well as at local, regional, and national levels. The factors contributing to ED crowding are numerous and varied and have been well documented in the literature. The root causes of ED crowding are embedded in the crisis of health care in the U.S., requiring solutions that may fall outside of the ED’s control. The ENA believes crowding is caused by

- Hospital/trauma center closures;
- Lack of inpatient beds, forcing emergency departments to hold patients;
- Increased use of emergency departments over the past decade; and
- Lack of universal access to primary and preventative health care and the use of the emergency department for primary care.

To address crowding, ENA recommends increased federal funding to support:

- Collaborative research by emergency nurses and physicians to develop and implement new flow management solutions for the emergency department to both prevent and manage ED crowding;
- Professional and public awareness programs as well as legislative efforts to reduce visits to the ED by
 - (1) strengthening capacity for nonemergent care by increasing access to primary care providers in the community and teaching when and how to access emergency care; (2) reducing the numbers of uninsured and underinsured; (3) reducing trauma caused by preventable injuries, violence, and substance abuse; and (4) improving prevention, wellness, and disease management efforts; and
 - Evaluation and prioritized performance incentives that increase capacity and efficiency, not only in the emergency department, but within hospitals and other patient care facilities in order to help reduce the burdens suffered by ED patients when emergency departments become too crowded for patients needing specialized care.

STATUTORY NATURE OF U.S. EMERGENCY CARE

When the American public is asked about its views on trauma centers and trauma systems, large majorities value them as highly as having a police or fire department in their community. In addressing the crucial nature of regionalized trauma services, the IOM report notes that trauma care “is widely viewed as an essential public

service.” The report further states that “unlike other such services [e.g., electricity, highways, airports, and telephone service . . . created and then actively maintained through major national infrastructure investments] access to timely and high quality . . . trauma care has largely been relegated to local and state initiative”.

The dilemma of emergency care with readiness for mass casualty events runs deeper than the disparity between the perceptions of emergency care as a public service and the funding underlying the system. A distinctive policy characteristic of emergency care is that emergency care is legislated (e.g., as previously suggested in the EMTALA regulations discussion). Of all the health care disciplines, emergency care is the one that is mandated by the United States government. In effect, the government has promised the people that emergency care will be a service to which the public has a lawful right (not just a discretionary, moral right). This statutory nature holds special implications, evoking general questions such as:

- How does federal support of this public service compare to support of other legislated services?; and
- To what degree is the government legally accountable for delivery of this right/public service?

For emergency care nurses, this legal requirement reinforces respective professional duties and ethical commitments. As front-line providers of emergency care, ENA believes it is essential that every person in our country has access to a system that provides definitive care as quickly as possible. The Emergency Nurses Association pledges our efforts and our expertise to work with you and your colleagues to assure the population’s protection and well-being as homeland security compels.

Mr. REICHERT. The Chair now recognizes Dr. Krug.

STATEMENT OF STEVEN KRUG, M.D.

Dr. KRUG. Thank you, Mr. Chairman, and I appreciate the opportunity to testify today.

My name is Steven Krug. I am a pediatric emergency physician, and I am the head of the Division of Emergency Medicine at Children’s Memorial Hospital in Chicago. Today I am proud to represent the American Academy of Pediatrics where I have the privilege of chairing the Academy’s Committee on Pediatric Emergency Medicine.

Emergency medical services are the foundation our Nation’s defense of public health disasters.

In addition to the many concerns raised by my colleagues and within the IOM report regarding the overall health of our Nation’s emergency medical services, these systems also bear some specific limitations in their ability to meet the medical needs of children. It has been said that children are not little adults, and this is especially true in an emergency or during a disaster. Their developing minds and bodies place children at disproportionate risk in a number of specific ways in the event of a disaster or terrorist attack. For example, children are particularly vulnerable to aerosolized biological or chemical agents, because they normally breathe faster than adults do and because these agents, being heavier than air, tend to circulate down near the ground in the breathing zone of children. There are dozens of other such crucial differences that make children more vulnerable.

Once children are critically ill or injured, their bodies respond very differently than adults in similar medical crises. In addition to their physiological vulnerabilities, children need different dosages in formulations of medications and smaller-sized equipment specific to their needs.

This is an adult-sized endotracheal breathing tube. You could not use this on a child. A small infant would require a tube of this size.

In pediatric emergency medicine, one size does not fit all. In fact, there are 12 different sizes between these two tubes. You have got to have the right size for the right patient or the patient is not going to survive.

In addition to having the appropriate medications and resuscitation equipment, it is critical that all health care workers be able to recognize the unique signs and symptoms of children that indicate a life-threatening situation, and that they then possess the skills to intervene accordingly.

The Institute of Medicine characterized the status of pediatric emergency readiness in 2006 using the word “uneven,” noting that not all children have access to the same quality of care. The report documents several examples of the problem. I will just list a few.

Only 6 percent of emergency departments across the Nation have all of the supplies necessary for managing pediatric emergencies. Only half of hospitals have at least 85 percent of those critical supplies. Of the hospitals that lack the ability to provide care for pediatric trauma victims, only half of those hospitals have written transfer agreements with hospitals that actually have that capability.

Finally, pediatric emergency treatment patterns and protocols vary widely across emergency care providers and across geographic regions.

Each of these shortcomings has major implications for just day-to-day emergency care and disaster preparedness. I can't emphasize this next point enough. Systems that are unable to meet everyday care needs for children, by definition, are unlikely to be able to deliver the care that we need during a time of disaster.

The IOM also observed that disaster plans have often overlooked the needs of children, even though their needs differ greatly from those of adults. One Federal program provides a clear example of the general neglect of children's issues in disaster planning.

HRSA's National Bioterrorism Hospital preparedness program provides funds to States in localities to improve surge capacity and other aspects of hospital readiness. In the most recent grant guidance, HRSA required that all States establish a system that allows for the triage treatment and disposition of 500 adult and pediatric patients per 1 million population.

While pediatric patients are referenced, it is not really clear whether they are required to be represented in proportion to the number in the State's population. A State could arguably plan for 499 adults and 1 child and actually satisfy the guidance.

Outside of that single pediatric mention in benchmark for surge capacity, children's issues are otherwise absent from the guidance.

Surge capacity issues are fundamental but many other issues require similar attention. We must plan for the availability of drugs and antidotes in the appropriate formulations and dosages for children. In many cases, medication dosing for children is determined by their weight. A simple device known as a Braslow tape—I have one right here—is a rather unique device which actually helps emergency care providers to calculate the weight-based dosing of vital resuscitation medications by measuring the length of the patient. This allows those health care providers to dose medications

quickly and accurately. Unfortunately, only about half of our disaster management assistance teams have devices like this.

Perhaps the most important and successful Federal program in improving emergency health care for children has been HRSA's Emergency Medical Services for Children program, or EMSC. With a modest budget allocation, EMSC has driven significant improvements in pediatric emergency care, including disaster preparedness.

As just one example, in the 21 years since the program was established, child injury rates have dropped by 50—rather, by 40 percent, excuse me. The American Academy of Pediatrics fully endorses the Institute of Medicine's comments regarding the value of the EMSC program. The program should be reauthorized and funded at or above the level recommended by the IOM.

The American Academy of Pediatrics has some specific recommendations for policymakers regarding children in emergency and disaster preparedness.

First, we must invest in creating effective local, State and Federal disaster response systems built upon a healthy, adequately funded, well coordinated, and functional emergency medical services system.

Secondly, pediatricians should be included in emergency planning at all levels of government and in all types of planning. Standards for pediatric emergency readiness for prehospital and hospital-based emergency services and the regionalization of pediatric trauma and critical care should be developed and implemented within every State and region.

Federal, State, and local disaster plans should include specific protocols for the management of pediatric casualties, including strategies to improve the level of pediatric equipment and medication readiness and clinical expertise in disaster response teams; improve access to pediatric medical and surgical subspecialty care and pediatric mental health care professionals; integrate schools and day care facilities in local and regional disaster plans; minimize parent and child separation and develop systems for the timely and reliable reunification of families; address the care requirements of children with special health care needs; and ensure the inclusion of pediatric mass casualty incident drills at both the Federal and State planning levels.

In addition, more research must be funded into all aspects of pediatric emergency planning response and treatment.

And, lastly, the EMSC program should be authorized and funded at or above the level recommended by IOM.

In conclusion, the American Academy of Pediatrics greatly appreciates this opportunity to present our concerns and recommendations related to pediatric emergency and disaster preparedness at this afternoon's hearing. Our children must not be an afterthought in emergency and disaster planning. They are our most valuable resource.

The American Academy of Pediatrics looks forward to working with you to protect and promote the health and well-being of all children, especially in emergency and disaster situations. Thank you.

Mr. REICHERT. Thank you, Doctor.

[The statement of Dr. Krug follows:]

PREPARED STATEMENT OF DR. STEVEN KRUG

I appreciate this opportunity to testify today before the Homeland Security Subcommittee on Emergency Preparedness, Science and Technology at this hearing, "Emergency Care Crisis: A Nation Unprepared for Public Health Disasters." My name is Dr. Steven Krug, and I am the Head of the Division of Pediatric Emergency Medicine at Children's Memorial Hospital in Chicago, Illinois and a Professor of Pediatrics at the Northwestern University Feinberg School of Medicine. Today I am proud to represent the American Academy of Pediatrics, a non-profit professional organization of 60,000 primary care pediatricians, pediatric medical sub-specialists, and pediatric surgical specialists dedicated to the health, safety, and well-being of infants, children, adolescents, and young adults. I have the privilege of chairing the Academy's Committee on Pediatric Emergency Medicine.

BACKGROUND

Emergency medical services are the foundation of our nation's defense for public health disasters. I expect today's panel members to be unified in communicating a concern shared by emergency care providers and healthcare consumers throughout our nation regarding the ability of a fragmented, over-burdened and under-funded emergency and trauma care system to meet the day-to-day needs of acutely ill and injured persons. As you are aware, the Institute of Medicine recently released a seminal report which indicates that our nation's emergency care delivery system is in a state of crisis. Without a strong emergency medical services system foundation, we will never be able to build an effective response for mass casualty events, including natural disasters or acts of terror.

In addition to the many concerns raised within the IOM report regarding the overall health of our nation's emergency medical services—issues that impact the day-to-day ability of pre-hospital and hospital-based emergency care providers to respond to the needs of all Americans—our emergency care systems also bear some specific and persistent limitations in their ability to meet the medical needs of children.ⁱ Adding further to this gap in the level of emergency readiness between adult and pediatric care is the long-standing observation that federal, state and local disaster planning efforts have traditionally overlooked the unique needs of children. As a representative of the Academy, and as an advocate for children, my testimony will focus on issues concerning pediatric emergency preparedness so you may better understand the unique challenges faced by emergency medical care professionals as they treat ill and injured children, and so that you may also appreciate the readiness gap in pediatric emergency care.

Children Are More Vulnerable Than Adults

It has been said that children are not little adults, and this is especially pertinent in a medical emergency or during a disaster. Their developing minds and bodies place children at disproportionate risk in a number of specific ways in the event of a disaster or terrorist attack:

- Children are particularly vulnerable to aerosolized biological or chemical agents because they normally breathe more times per minute than do adults, meaning they would be exposed to larger doses of an aerosolized substance in the same period of time. Also, because such agents (e.g. sarin and chlorine) are heavier than air, they accumulate close to the ground—right in the breathing zone of children.
- Children are also much more vulnerable to agents that act on or through the skin because their skin is thinner and they have a larger skin surface-to-body mass ratio than adults.
- Children are more vulnerable to the effects of agents that produce vomiting or diarrhea because they have smaller body fluid reserves than adults, increasing the risk of rapid progression to dehydration or shock.ⁱⁱ
- Children have much smaller circulating blood volumes than adults, so without timely intervention, relatively small amounts of blood loss can quickly tip the physiological scale from reversible shock to profound, irreversible shock or death. An infant or small child can literally bleed to death from a large scalp laceration.
- Children have significant developmental vulnerabilities not shared by adults. Infants, toddlers and young children may not have the motor skills to escape from the site of a hazard or disaster. Even if they are able to walk, young children may not have the cognitive ability to know when to flee from danger, or when to follow directions from strangers such as in an evacuation, or to cooper-

ate with decontamination.ⁱⁱⁱ As we all learned from Katrina, children are also notably vulnerable when they are separated from their parents or guardians.

Children Have Unique Treatment Needs

Once children are critically ill or injured, their bodies will respond differently than adults in similar medical crises. Consequently, pediatric treatment needs are unique in a number of ways:

- Children need different dosages and formulations of medicine than adults—not only because they are smaller, but also because certain drugs and biological agents may have adverse effects in developing children that are not of concern for the adult population.
- Children need different sized equipment than adults. In fact, emergency readiness requires the presence of many different sizes of key resuscitation equipment for infants, pre-school and school-aged children, and adolescents. From needles and tubing, to oxygen masks and ventilators, to imaging equipment and laboratory technology, children need equipment that has been specifically designed for their size.
- Children demand special consideration during decontamination efforts. Because children lose body heat more quickly than adults, mass decontamination systems that may be safe for adults can cause hypothermia in young children unless special heating precautions or other warming equipment is provided.^{iv} Hypothermia can have a profoundly detrimental impact on a child's survival from illness or injury.
- Children sustain unique developmental and psychological responses to acute illness and injury, as well as to mass casualty events. Compared to adults, children appear to be at greater risk for acute- and post-traumatic stress disorders. The identification and optimal management of these disorders in children requires professionals with expertise in pediatric mental health.^v
- Children may be developmentally unable to communicate their needs with health care providers. The medical treatment of children is optimized with the presence of parents and/or family members. Timely reunification of children with parents and family-centered care should be a priority for all levels of emergency care.

Children Need Care From Providers Trained to Meet Their Unique Needs

Because children respond differently than adults in a medical crisis, it is critical that all health care workers be able to recognize the unique signs and symptoms in children that may indicate a life-threatening situation, and then possess the experience and skill to intervene accordingly.^{vi} As already noted, a child's condition can rapidly deteriorate from stable to life-threatening as they have less blood and fluid reserves, are more sensitive to changes in body temperature, and have faster metabolisms. Once cardio-pulmonary arrest has occurred, the prognosis is particularly dismal in children, with less than 20% surviving the event, and with 75% of the survivors sustaining permanent disability. Therefore, the goal in pediatric emergency care is to recognize pre-cardiopulmonary arrest conditions and intervene before they occur. While children represent 25 to 30% of all emergency department visits in the U.S., and 5 to 10% of all EMS ambulance patients, the number of these children who require this advanced level of emergency and critical care, and use of the associated cognitive and technical abilities, is quite small. This creates a special problem for pre-hospital and hospital-based emergency care providers, as they have limited exposure and opportunities to maintain their pediatric assessment and resuscitation skills. In my practice, a pediatric emergency department located in a tertiary urban children's hospital and trauma center with over 50,000 annual visits, we are able to maintain those skills. However, over 90% of children receive their emergency care in a non-children's hospital or non-trauma center setting. Emergency care professionals in many of these settings, and most pre-hospital emergency care providers, simply may not have adequate ongoing exposure to critically ill or injured children.

This vital clinical ability to recognize and respond to the needs of an ill or injured child must be present at all levels of care—from the pre-hospital setting, to emergency department care, to definitive inpatient medical and surgical care. The outcome for the most severely ill or injured children, and for the rapidly growing number of special needs children with chronic medical conditions, is optimized in centers that offer pediatric critical care and trauma services and pediatric medical and surgical subspecialty care. As it is not feasible to provide this level of expertise in all hospital settings, existing emergency and trauma care systems and state and federal disaster plans need to address regionalization of pediatric emergency care within and across state lines and inter-facility transport as a means to maximize the outcome of the most severely ill and injured children.

I have alluded to the growing number of children with chronic medical conditions. Children with special health care needs^{vii} are the fastest growing subset of children, representing 15 to 20% of the pediatric population.^{viii} These children pose unique emergency and disaster care challenges well beyond those of otherwise healthy children. Our emergency medical services systems, and our disaster response plans, must consider and meet the needs of this group of children.

Pediatric Emergency Care Preparedness

Our nation's EMS system was developed in response to observed deficiencies in the delivery of pre-hospital and hospital-based emergency care to patients with critical illness or injury, with adult cardiovascular disease and trauma representing the sentinel examples. The Emergency Medical Services Act of 1973 helped to create the foundation for today's EMS systems, stimulating improvements in the delivery of emergency care nationally. Despite those improvements, significant gaps remained evident in EMS care, particularly within the pediatric population.^{ix, x}

These gaps were present because early efforts at improving EMS care did not appreciate that acutely ill and injured children could not be treated as "small adults." Children possess unique anatomic, physiologic, and developmental characteristics which create vitally important differences in the evaluation and management of many serious pediatric illnesses and injuries. Unique pediatric health care needs make it difficult for emergency care providers to provide optimal care in adult-oriented EMS systems (e.g. personnel training, facility design, equipment, medications).

In 1993, the Institute of Medicine (IOM) released a comprehensive report, "Emergency Medical Services for Children", on the status of pediatric emergency care. This study identified numerous concerns in several major areas, including gaps in the pediatric training and continuing education of emergency care providers, deficiencies in necessary equipment, supplies and medications needed to care for children, inadequate planning for pediatric emergency and disaster readiness, and insufficient evaluation of patient outcomes and research in pediatric emergency care.^{xi}

Over a decade later, last month's IOM report "Emergency Care for Children: Growing Pains," demonstrates that while some improvements have been achieved, the pediatric emergency readiness gap still remains, noting:

- Only 6% of emergency departments across the nation have all of the supplies necessary for managing pediatric emergencies.
- Only half of hospitals have at least 85% of those critical supplies.
- Of the hospitals that lack the ability to provide care for pediatric trauma victims, only half have written transfer agreements with hospitals that possess that ability.
- Many medications used in the emergency room setting for children are prescribed "off label," i.e. without Food and Drug Administration approval for use in children.
- Pediatric emergency care skills deteriorate quickly without practice, yet training is limited and continuing education may not be required for emergency medical technicians (EMTs) in many areas.
- Pediatric emergency treatment patterns and protocols vary widely across emergency care providers and geographic regions.
- Shortages of equipment and devices and deficiencies in pediatric training are exacerbated in rural areas.^{xii}
- Disaster preparedness plans often overlook the needs of children even though their needs differ from those of adults.

As stated in the IOM report, "If there is one word to describe pediatric emergency care in 2006, it is uneven." The specialized resources available to treat critically ill or injured children vary greatly based upon location. Some children have ready access to a children's hospital or a center with distinct pediatric capabilities while others must rely upon hospitals with limited pediatric expertise or equipment. Some states have implemented pediatric readiness guidelines for hospital emergency departments, but most have not. Some states have organized trauma systems and designated pediatric facilities while others do not. As trauma remains the leading cause of death and disability for children, the absence of a trauma system is particularly problematic for children. Lastly, state requirements for the pediatric continuing education and certification for EMTs vary widely. As a result, not all children have access to the same quality of care.

Finally, more research is needed in all aspects of pediatric emergency care. Due to the lack of scientifically validated research in this area, most recommendations are the result of expert consensus, not scientific evidence. More study is needed to advance the field and ensure that the measures we are taking are effective.

Pediatric Disaster Readiness

Each of these shortcomings in day-to-day emergency care has major implications for disaster preparedness. Emergency departments and emergency medical services systems that are unable to meet everyday pediatric care challenges are, by definition, unlikely to be prepared to deliver quality pediatric care in a disaster.^{xiii}

A unique consideration in pediatric emergency care and disaster planning is the role of schools and day care facilities. Children spend up to 80% of their waking hours in school or out-of-home care. Schools and day care facilities must be prepared to respond effectively to an acutely ill or injured child, and likewise, must be fully integrated into local disaster planning, with special attention paid to evacuation, transportation, and reunification of children with parents.^{xiv} Families should also be encouraged to engage in advance planning for emergencies and disasters.^{xv}

One key area of deficiency in our current disaster planning is in pediatric surge capacity. Most hospitals have limited surge capacity for patients of any kind. Even if beds may be available, appropriately trained or experienced staff and the necessary equipment, drugs and devices may not be. The use of adult critical care or medical/surgical inpatient beds in hospitals with limited pediatric expertise will likely prove to be an unacceptable option for the needs of many ill or injured children. Optimal outcomes for these children will only be achieved through regionalization of pediatric care and surge capacity.

One federal program provides a clear example of the general neglect of children's issues in disaster planning. The National Bioterrorism Hospital Preparedness Program (NBHPP), administered by the Health Resources and Services Administration (HRSA), is tasked with providing funds to states and localities to improve surge capacity and other aspects of hospital readiness. In the most recent grant guidance, HRSA required that all states establish a system that allows for the triage, treatment, and disposition of 500 adult and pediatric patients per 1 million population. While pediatric patients are referenced, it is unclear whether they are required to be represented in proportion to their numbers in the state's population. A state could arguably plan for 499 adults and 1 child and satisfy the guidance. Moreover, that guidance removed critical language that stated that NBHPP funds must not supplant funding received under federal Emergency Medical Services for Children grants and that strongly urged the incorporation of behavioral health and psychosocial interventions for adults and children into facility drills and exercises. Outside the pediatric mention in the benchmark for bed surge capacity, children's issues are essentially absent from the NBHPP guidance.^{xvi}

Equipment and devices, as noted above, are a crucial component of readiness. Because "children" encompass individuals from birth through adolescence, it is often insufficient to have a single size device to serve all children. In the case of respiratory masks, for example, different sizes are needed for infants, young children, and teenagers. Both individual facilities and large-scale programs, such as the Strategic National Stockpile, must take this into account and provide for these needs.

Similarly, drugs and antidotes must be available in appropriate formulations and dosages for children. Infants cannot be expected to take pills. Needles must be provided in smaller sizes. In many cases, dosages for children should be determined not by age but by weight. A simple device known as a Broselow tape can allow health care providers to calculate dosages quickly and accurately. However, one study showed that 46% of Disaster Medical Assistance Teams were lacking these tapes, in addition to other critical pediatric equipment.^{xvii}

Training is vital to pediatric preparedness. Many health care providers have few, if any, opportunities to use critical pediatric resuscitation and treatment skills. Skills that are not exercised atrophy quickly. Presently, there is great variation in state standards for required pediatric training and continuing education for pre-hospital care providers and other first responders. Regular training and education is central to ensuring that health care providers will be able to treat children in a crisis situation. The same holds true for facility and community emergency exercises and drills.

The issues of family reunification and family-centered care in evacuation, decontamination and in all phases of treatment are frequently overlooked. In the event of a disaster, both evacuation and treatment facilities must have systems in place to minimize family separation and methods for the timely and reliable reunification of children with their parents. In addition, facilities must take into account the need for family-centered care in all stages of care. Infants and young children are typically unable to communicate their needs to healthcare providers. Children of all ages are highly reliant upon the presence of family during an illness or periods of distress. Nearly all parents will be unwilling to be separated from their children in a crisis situation, many even willing to forego emergency treatment for themselves to be with their child. Hospitals must be prepared to deal with these situations with compassion and consistency.^{xviii}

It has been a source of great frustration for many of my pediatric and emergency medicine colleagues that our repeated calls for improved pediatric emergency preparedness have gone unheeded for the better part of a decade. As long ago as 1997, the Federal Emergency Management Agency raised the concern that *none* of the states it had surveyed had pediatric components in their disaster plans.^{xix} That same year, the American Academy of Pediatrics issued its first policy statement entitled, "The Pediatrician's Role in Disaster Preparedness," with recommendations for pediatricians and communities.^{xx} In 2001, the American Academy of Pediatrics formed its Task Force on Terrorism and issued a series of detailed recommendations on various aspects of chemical, biological, radiological and blast terrorism.^{xxi} In 2002, Congress created the National Advisory Committee on Children and Terrorism to prepare a comprehensive public health strategy related to children and terrorism. In 2003, the federal government sponsored a National Consensus Conference on Pediatric Preparedness for Disasters and Terrorism which, again, issued a laundry list of dozens of specific recommendations.^{xxii} Just last month, the IOM issued its report on the pediatric aspects of the emergency care system.^{xxiii} Despite all of this, progress in pediatric preparedness has been slow, fragmented, disorganized, and largely unmeasured and unaccountable.

The Emergency Medical Services for Children (EMSC) Program

The federal government has a crucial role in assuring pediatric emergency and disaster preparedness through a variety of agencies and programs, including the Department of Homeland Security, the Federal Emergency Management Agency, the Centers for Disease Control and Prevention, HRSA's National Hospital Bioterrorism Preparedness Program, and others. Perhaps the most important and successful federal program in improving emergency health care providers' ability to provide quality care to children has been HRSA's Emergency Medical Services for Children (EMSC) program. Created in 1984, the EMSC program was established after data and clinical experience showed major gaps between adult and pediatric emergency care at all levels. The program has funded pediatric emergency care improvement initiatives in every state, territory and the District of Columbia, as well as national improvement programs.

Despite a modest budget allocation, EMSC has driven significant improvements in pediatric emergency care, including disaster preparedness. To its credit, EMSC has managed to effect these changes despite the lack of pediatric emphasis in other related government programs. EMSC has funded the development of equipment lists for ambulances and hospitals, pediatric treatment protocols, and handbooks for school nurses and other providers that would be critical in the event of an emergency. EMSC supports training for emergency medical technicians and paramedics who often have little background in caring for children, and has underwritten the development of vital educational materials and treatment guidelines. In the 21 years since the program was established, child injury death rates have dropped by 40%.

As outlined in the IOM report, the EMSC program's resources and over 20 years of effective leadership and collaboration with key stakeholders have indeed led to important changes in pediatric emergency care at the state level:

- 44 states employ pediatric protocols for online medical direction of pre-hospital care at the scene of an emergency;
- 48 states have identified and require all EMSC essential equipment on EMS advanced life support ambulances;
- 36 of 42 states with state-wide computerized data collections systems now produce reports on pediatric care;
- 20 states have pediatric emergency care laws or pediatric emergency care related rules or regulations; and
- 12 states have adopted and disseminated pediatric guidelines that characterize the facilities that have trained personnel and equipment, medications and facilities to provide pediatric care.

EMSC supports a National Resource Center (NRC) which acts as a clearinghouse for educational resources on pediatric emergency care, enabling countless communities to learn from each other's experience and adopt proven models. EMSC also supports the National EMSC Data Analysis Resource Center (NEDARC) which assists EMSC grantees and State EMS offices to improve their ability to collect, analyze, and utilize data to improve the quality of pediatric care.

EMSC has also been a very important source of funding for grants that have contributed to increasing evidence-based care for acutely ill and injured children. Research is an essential element in the development of an evidence-based practice of medicine. The practice of evidence-based pediatric emergency medicine is needed to provide the best treatment for acutely ill or injured children. Unfortunately, in

many situations, emergency care providers must rely upon limited or anecdotal experience, or an extrapolation from adult care standards when treating children, because reliable research studies involving acutely ill and injured children are few.

In recent years, EMSC has funded the establishment of the Pediatric Emergency Care Applied Research Network (PECARN), the only network of its kind supporting pediatric emergency care research. PECARN is providing the infrastructure for critical research on the effectiveness of interventions and therapies used in pediatric emergencies.

The recent IOM report contained a strong endorsement of the EMSC program: “the work of the EMSC program today remains relevant and vital.” The report acknowledged the need to address the serious gaps that remain in pediatric emergency care and stated that “The EMSC program, with its long history of working with federal partners, state policy makers, researchers, providers and professional organizations across the spectrum of emergency care, is well positioned to assume this leadership role.”^{xxiv}

The American Academy of Pediatrics fully endorses the IOM’s comments regarding the value of the EMSC program. While enormous strides have been made in pediatric emergency care, much more remains to be done. The program should be reauthorized and funded at or above the level recommended by the IOM, which we hope would allow EMSC to pursue pediatric emergency and disaster preparedness thoroughly and aggressively.

POLICY RECOMMENDATIONS

The American Academy of Pediatrics has specific recommendations for all policy-makers regarding children and emergency and disaster preparedness:

- If our nation’s over-burdened emergency and trauma care systems are to respond effectively to a significant mass casualty event, we must invest in creating effective local, state and federal disaster response systems involving a healthy, adequately-funded, well-coordinated and functional emergency medical services system.
 - Standards for pediatric emergency readiness for pre-hospital and hospital-based emergency services, and regionalization of pediatric trauma and critical care, should be developed and implemented in every state.
 - Evidence-based clinical practice guidelines for the triage, treatment and transport of acutely ill and injured children at all levels of care should be developed.
 - Pediatric emergency care competencies should be defined by every emergency care discipline and professional credentialing bodies should require practitioners to achieve the level of initial and continuing education necessary to maintain those competencies.
 - Primary care pediatricians and pediatric medical and surgical subspecialists should be included in emergency and disaster planning at every organizational level—at all levels of government, and in all types of planning.
 - Emergency preparedness efforts should use an “all-hazards” model that allows for holistic planning and multipurpose initiatives, and should support family-centered care at all levels of treatment.
 - Pediatric health care facilities (e.g. children’s hospitals, pediatric emergency departments, and pediatricians’ offices) should be included in all aspects of preparation because they are likely to become primary sites for managing child casualties.
 - Financial support should be provided to health care facilities to address pediatric preparedness, including maintaining surge capacity and creating specialized treatment areas for children, such as isolation and decontamination rooms.
 - Schools and day care facilities must be prepared to respond to emergencies and must be fully integrated into local, state and federal disaster plans, with special attention paid to evacuation, transportation, and reunification of children with parents.
 - Federal, state, and local disaster plans should include specific protocols for the management of pediatric casualties, including strategies to:
 - Minimize parent-child separation and implement systems for the timely and reliable reunification of families;
 - Improve the level of pediatric expertise on disaster response teams (e.g. Disaster Management Assistance Teams);
 - Improve access to pediatric medical and surgical subspecialty care and to pediatric mental health care professionals;
 - Address the care requirements of children with special health care needs;
- and

- Ensure the inclusion of pediatric mass casualty incident drills at both federal and state planning levels.
- More research is needed regarding all aspects of pediatric emergency planning, response, and treatment to support the development of effective emergency therapies, prevention strategies, and evidence-based clinical standards in pediatric emergency medicine.
- The Emergency Medical Services for Children (EMSC) program should be re-authorized and funded at the level of \$37.5 million per year, as recommended by the Institutes of Medicine report, to support the continued improvement in pediatric emergency and disaster preparedness.

Other Issues of Concern

In addition to hospital surge capacity and emergency room preparedness, a number of other critical issues continue to be neglected in the area of pediatric readiness.

Government organizational issues: Pediatric concerns must be represented in all aspects of disaster planning and at all levels of government, including issues such as evacuation strategies and large-scale protocols.

Federal systems issues: Children's needs must be taken into account in various federal systems. The Strategic National Stockpile must contain equipment, devices and dosages appropriate for children. Disaster Medical Assistance Teams must include individuals with appropriate pediatric expertise. Pediatric casualties should be simulated in all disaster drills.

Special disasters: Children have unique needs in certain types of disasters. For example, in the event of a radioactive release, children must be administered potassium iodide as quickly as possible and in an appropriate form and dosage to prevent long-term health effects.^{xv}

School and day care issues: Children spend up to 80% of their waking hours in school or out-of-home care. Schools and day care facilities must be integrated into disaster planning, with special attention paid to evacuation, transportation, and reunification with parents.^{xvi}

Credentialing. Health care providers are critical volunteers in time of disaster. A comprehensive system for verifying credentials and assigning volunteers appropriately is vital. HRSA's Emergency System for Advance Registration of Volunteer Health Professionals (ESAR-VHP) must be supported and accelerated.

Psychosocial concerns: Children's reactions vary greatly depending on the child's cognitive, physical, educational, and social development level and experience, in addition to the emotional state of their caregivers. This presents unique challenges to providing quality mental health care.^{xvii}

Evacuation and shelter issues: A top priority must be placed on not separating parents from children in evacuations. In shelters, special arrangements must be made for pregnant women and children with special health care needs, as well as for the safety and security of all children.

CONCLUSION

In conclusion, the American Academy of Pediatrics greatly appreciates this opportunity to present our views and concerns related to pediatric emergency care and disaster preparedness. While great strides have been made in recent years, with many of these improvements the direct result of the federal EMSC program, much more remains to be done. America's children represent the future of our great nation, our most precious national resource. They must not be an afterthought in emergency and disaster planning. With focused, comprehensive planning and the thoughtful application of resources, these goals can be achieved. The American Academy of Pediatrics looks forward to working with you to protect and promote the health and well-being of all children, especially in emergency and disaster situations.

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^{iv}American Academy of Pediatrics. Children, Terrorism & Disasters Toolkit. The Youngest Victims: Disaster Preparedness to Meet Children's Needs. <http://www.aap.org/terrorism/topics/PhysiciansSheet.pdf>

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Mr. REICHERT. I have a few questions and then we will move to other members of the committee.

Part of the challenge of this committee—and as a new Member of Congress, this is my freshman year—is trying to identify how the Federal Government can really help rather than hinder. So part of the reason for your presence here today and your testimony is to help us understand the problem a lot more clearly, hopefully, and then also have you help us identify solutions to the problems that you so readily see every day that you come to work.

So I have just jotted down lots of notes and the other members have also. And some of the things I have noted from the witnesses that they are also—not only are you presenting problems, but you are presenting some solutions.

And we just want to know, really—I guess the first question I have is for Dr. Bass. You mentioned in one of your points that there should be some Federal funding in an effort to put together a pilot program, a regional pilot program. Would you describe that more for me, please?

Dr. BASS. Yes, sir, I will. The committee believes that emergency care can best be delivered in the form of regionalized care, where the bottom line is trying to get the right patient to the right hospital in the right time. Meaning, for instance, the trauma patient that has severe trauma gets to a trauma center; the patient with an acute heart attack gets to a center that can provide the right care; the pediatric patient with critical care needs gets to a hospital that has the ability to provide pediatric intensive care.

That system should be—there should be data collected as to how that system performs, such as issues such as bypass, response times, diversion issues, et cetera. So it should be accountable. And it should be coordinated, meaning that different elements of the system should be working together. Hospitals should be working with the prehospital care, should be working with disaster management, to make sure that the care is integrated. The care that is provided in the prehospital care environment should be completely seamless, if you would, from the care that is provided in the emergency department, and then the hospital as a continuum of care, and we should be able to build on that. It can't be fragmented. It needs to be coordinated. So coordinated, accountable, regionalized care is one of the central themes of the IOM report.

Mr. REICHERT. This would include EMS personnel, ambulance personnel?

Dr. BASS. EMS emergency departments, specialty care trauma centers, all of those would be included in that.

Mr. REICHERT. And would include communication systems, I suppose, in the health IT protocol?

Dr. BASS. Interoperable systems with respect to both data and voice.

Mr. REICHERT. Do you know if there is a community in the Nation here that currently has a plan underway that—I am sure most of these things start at the local level and then

Dr. BASS. I was in a difficult position while the committee met. I really am very proud of the State of Maryland, and we were cited as an example in the IOM report. And I am not saying we have achieved all of the goals and recommendations in the report, but we have a statewide system. It started with trauma care in 1970. We have a statewide Medevac program. We know that 87 percent of our patients with serious injuries make it primarily to a trauma center.

We are working on cardiac and stroke now. We have a statewide communications system where hospitals can talk to EMS, and we are adding public health to that now, and it is all through a coordinated center that operates out of Baltimore.

Mr. REICHERT. What has been your contact with the Department of Homeland Security in putting this sort of a plan together?

Dr. BASS. Well, we work fairly closely with DHS on a variety of different projects. I met with Dr. Rungy, for instance, who is the chief medical officer, on a number of occasions.

Mr. REICHERT. Federal grants awarded as a part of putting this program in?

Dr. BASS. We get the State grants primarily, and then the State grants we distribute through—we have a process that we use to distribute through Homeland Security and our emergency manage-

ment agency. And I will say in my State, very proud to say that the health and medical folks are there at the table.

Mr. REICHERT. What sort of Federal grants then come to the State, or are they part of the UASI?

Dr. BASS. We get UASI, we get State Homeland Security grants, we get the HRSA bioterrorism grants. That comes through the health department. And we have an agreement with the hospitals, their support, and the health department; 10 percent of that goes to prehospital care.

Mr. REICHERT. And one last quick question. The Department of Health and Human Services have been just as helpful, I would imagine.

Dr. BASS. We have worked very closely with them as well, and sometimes we wish they would work as closely with each other as they do with us.

Mr. REICHERT. That was my next question. I will complete my questioning and move on to Mr. Pascrell.

Mr. PASCRELL. Thank you very much, Mr. Chairman.

I am curious. We have four distinguished folks in front of us on the panel, and I want to throw a specific problem at you and I would like to know what your response and reaction is.

I have read about what is going on in New Orleans and in the aftermath of people who lost their lives in a hospital. Decisions had to be made in that hospital during a time of crisis. That is easy for me to make value judgments, sitting miles away. I don't know of what was going on in the doctors' or the nurses' minds, the three of them, when they made the decision. Or did they make that decision?

Do you think that the hospitals—you know, we talk about being prepared; do we have an exit strategy? Do we have a strategy that would assist in vacating hospitals, or any facility for that matter, if there was a crisis?

I want your quick opinion, which is not fair to you, but that is okay. I want your quick opinion about what you—how you assess what has happened there, in that one particular hospital with the doctor and two nurses, in view of the patients dying. What does that reflect in the system, or is it just unique to New Orleans or that hospital?

Dr. Krug.

Dr. KRUG. I am not going to offer an ethical opinion to their actions. But I guess I would comment that at the very least, there was an extraordinary situation there, and in fact what happened is also not just there but at other institutions as well. We had patients and care providers stranded with no help, with little security support, without basic infrastructure, and with no clear understanding when they would receive relief.

In the pediatric universe, in fact, the sickest of the children at the children's hospitals were not evacuated by a Federal or State response. They were evacuated through a shared-aid system through other children's hospitals that sent teams down to help them out. And in fact, because of coordination issues, there was some hazard there.

So I am not surprised that there was a sense of desperation. And, again, I can't comment on their actions. I am not sure what the right thing is to do.

Mr. PASCARELL. Ms. Jagim.

Ms. JAGIM. I think that when it comes to evacuating hospitals, that is a very complex issue and it certainly articulates, I think, the need for community-wide planning and regionalization also.

You need to have a plan, because when we sit down as a community back in Fargo and talk about evacuation, it is evacuating hospitals, nursing homes, group homes, all kinds of places; and everybody thinks they can rely upon the the same resources to accomplish that, and that is not realistic. And so it is very complex.

And I think it is a great example of what is not in place and what isn't going to work should another crisis occur.

Mr. PASCARELL. Thank you. Dr. Blum.

Dr. BLUM. I too can't comment about the specifics of that case, I simply don't know enough about them to be able to comment about that. I don't know enough about the specifics of that case to comment specifically about the ethics or the decision making that went into that.

I could make a few general comments, though, and that is all emergency care, especially in the mass casualty, mass illness situation, uses the principle of triage, which is basically the principle of where can you do the most good for the most people, you know, over a short period of time.

And during those times, sometimes very, very difficult decisions have to be made about who gets care first—

Mr. PASCARELL. Right.

Dr. BLUM. Et cetera. So that is a general principle of emergency care. As far as hospital evacuation is concerned, understand that hospitals are very unique places. I could tell you my hospital in Morgantown, West Virginia, if we had to evacuate, the closest equivalent facility is over 100 miles away. And to evacuate the type and complexity of patients we have in that tertiary care hospital would require a massive effort, probably a massive airlift effort. It is a nearly 500-bed—

Mr. PASCARELL. Are people talking about that?

Dr. BLUM. There simply aren't the resources immediately locally available to do that very easily, and so while we talk about it, the solutions are not very obvious. It simply—and we saw that in New Orleans. These were some very big hospitals with lots and lots of patients, many of whom were very sick, that needed to be evacuated, often under fire. And all I can tell you is that at least from the emergency medicine perspective, the docs stayed and took care of patients, often bagging them by hand for long periods of time because there was no power to the ventilators.

Dr. BASS. I would emphasize the importance of prior planning, and, as was mentioned by one of my colleagues, I believe a lot of folks believe they can call 911 and 911 will help them with their evacuation. The problem is if you have 100 or 200 or 500, or as one of our counties might have, 7—or 800 facilities to evacuate, 911 can't handle all that.

So you have to know where the patients are, where the people are that need to be evacuated, and that is not just hospitals, it is

nursing homes; now we have assisted living facilities, we have a number of people. And we need to, one, know where they are; two, have a plan, work with transportation to, A, get appropriate vehicles, B, have routes planned, et cetera. You have to do that kind of planning or you end up with a situation where people are desperate.

Mr. PASCRELL. Mr. Chairman, it would—it strikes me in the testimony, I glanced through all of the panelists, and the comments today, it strikes me that perhaps—just perhaps—you cannot discuss emergency services without discussing the other services of the hospital. And many of those hospitals are hanging by a thread, and you can't expect the emergency room to be in any better shape.

So we may, you know, we are not going to generalize to the point of looking at the entire health system in its delivery forces, although we may be forced to do that in order to prepare for the worst.

Thank you, Mr. Chairman.

Mr. REICHERT. Thank you, Mr. Pascrell.

And the Chair recognizes that are other committees and subcommittees that certainly have jurisdiction over the issue that we are discussing today. We are today focusing on Homeland Security, and certainly the system is so interconnected that we can't ignore one part of the problem to solve another part of the problem. It is going to be solved together. So hopefully we can work—as you have worked with Homeland Security, Dr. Bass, and the Department of Health—we hope to work with the other committees and subcommittees in helping the Nation be a lot more ready for—a lot more prepared for any emergency that might come into our trauma centers and emergency rooms.

The Chair now recognizes Mr. Dent.

Mr. DENT. Thanks, Mr. Chairman. Good afternoon.

In your opinion—and I know this is a question for all the panelists—but what do you see is the level or extent to which there is cooperation and coordination between Department of Homeland Security and HHS for these types of public health disasters or medical emergency situations?

Maybe, Dr. Bass, do you have any thoughts or insights on this?

Dr. BASS. I would be candid. I have good friends and colleagues in both agencies, but at the same time, I sometimes get incredibly frustrated. I think during Katrina and Rita was a good example of where, in trying to work with the two agencies, we saw sometimes very sort of different approaches to how they were going to address the needs of the folks who were down in the gulf area, and, you know, one talking about evacuation, the other talking about moving Federal treatment facilities down into the area.

And that is—it is well and good to have different plans, but at some point these plans need to come together and they need to be integrated. And that is the one thing I think that I can say on behalf of all of my State director colleagues, is that we would really very much like to see DHS and DHHS work more closely and in a more integrated way when things such as Katrina and Rita occur.

Mr. DENT. Dr. Blum.

Dr. BLUM. I think it is an evolving and improving relationship. But from the perspective of my colleagues I would say that both—both entities tend to take for granted the emergency departments in the part of the equation. If you think about it, most of the planning that goes on for disaster preparedness has as its end point the delivery of a patient to an emergency department.

In it is argued that very often no one has looked to see whether that emergency department is able or capable of taking care of the number and types of and complexities of patients it might get from all those planning efforts that are aimed at delivering the patient to the emergency department.

I guess my message today is that is a critical part of the puzzle as well, that is a critical part of the planning; and if we ignore that part, we have created an incredible system to deliver a patient to a dysfunctional system and that doesn't make any sense.

Ms. JAGIM. I would just like to add I think that the emergency department, as Dr. Blum had indicated, we have one foot in the public response entity and we have one foot in a private hospital business, and I think that that is a part of why we have been left out of a lot of the disaster preparedness conversations or planning because we are not seen as part of that solely public emergency response, and I would like to see more—at least on the frontlines—feel more integration and more focused coordinated leadership related to emergency response.

Mr. DENT. Dr. Krug?

Dr. KRUG. I don't want to take up time here, but I soundly agree with the comments made by my three colleagues. I think there is good intention on both sides, but there really can only be one plan and the plan has to reflect the reality of the foundation or the response, which is the crisis we are here talking with you guys about this morning or this afternoon.

Mr. DENT. And my final question and you don't have to give long answers, but as you may be aware, there is a training facility for these medical preparedness situations down at the Noble Facility in Alabama. Have any of you taken advantage of that training? Just anybody want to say anything, would you like to comment on that?

Ms. JAGIM. I think it is a great resource. I was there a couple of years ago. I think it provides a lot of different types of courses. The access—I am not sure that everybody has all the information about it or has had an opportunity to experience it, but I think it has provided a lot of education.

Mr. DENT. Thank you. Dr. Blum, do you want to say something?

Dr. BLUM. I have not taken advantage of the training at that specific facility, but I have had some training in this area. Again though, I want to emphasize that most natural and even man-made disasters, the medical conditions that need to be treated are medical conditions that we see and treat every day. There are unique situations that we have to deal with depending on the entity that is involved, but in the vast majority of situations, you know, it is basic trauma care, it is basic emergency care, and that is what we do every day.

Mr. DENT. And either Dr. Krug or Dr. Bass, you have had any experience?

Dr. BASS. I am familiar with Noble and I think it is a great resource but I think it is underutilized and a lot of people don't know about it.

Mr. DENT. Thank you. Okay, yield back.

Mr. REICHERT. Chair recognizes the ranking member of the full committee, Mr. Thompson.

Mr. THOMPSON. Thank you very much and I appreciate the testimony of our witnesses. One of the things we grapple with is whether or not from a lessons learned standpoint if another Katrina/Rita-type situation happened, are we in any better situation today than we were 11 months ago? Have you seen in your professional duties on a day to day, any leadership on the part of DHS or HHS to better prepare your profession or the communities you work in for these situations? And I will go down the line.

Ms. JAGIM. You know, the only difference I have seen in 11 months is we were finally able to get some funding at my hospital within the last year to help with supplies and equipment related to mass casualty or any type of patient surge issues, but up until that point in time we had not received any support.

Dr. KRUG. I mean, there has certainly been ongoing planning in various communities that were already engaged in the process. However, I share your concern. I think there are a lot of lessons to be learned from Katrina and I am not yet sure we have taken the time to learn and react to what we have saw. So I would be greatly concerned about what would happen if Katrina came again this hurricane season, and then this also then gets back to the point that we are here talking with you about, just the overall system, the emergency delivery care system. This year is no better than it was last year. In fact, it could be one year more worn than it was a year ago because, if nothing else, I am sure ED visits continue to rise.

Dr. BASS. I would offer that I know that the Gulf States and surrounding States have been meeting together and working very hard to help plan with some Federal support to do that. I also know that HHS and DHS have been working together as well to—and after beating up on them, I think it is fair to say to we have seen some efforts for them to work together to make sure that the Federal Government can come in and provide backup to the States in an efficient and quick way.

So obviously the proof is going to be in the pudding. If we have to face something like Katrina or Rita again, we will know, but I think it is fair to say that we have seen some evidence that there is an effort on the part of both defendants.

Mr. THOMPSON. Well, Dr. Blum, let me give you another question and you can take both of them. Our national response plan says that certain things kick in once the incident of national significance has been declared. Are you comfortable that if that incident of national significance is declared that the emergency response systems in this country can manage another Katrina-type catastrophe at this point?

Dr. BLUM. No. I am sorry. No. To answer the first question, I believe the Federal performance and the State performance as a follow-on to the immediate disaster I think will be improved with the next event. I think the lessons learned from Katrina in those areas

will improve the imperformance at both the Federal and State levels. But again I seem to be a broken record on this, the initial response will be from—by the local emergencies, by the local emergency departments, and their infrastructure is stretched to the breaking point today, and so the question of whether the local response will be adequate I think is very much up in the air, and I can tell you without qualification that the emergency care system in general in this country, especially with regard to the emergency department, is worse today than it was this same time last year and if we don't change things it will be worse next year than it is today.

Dr. KRUG. I guess the one positive to this is we have been doing our planning in Chicago both in hospitals and throughout the city. What we learned from Katrina is that that basic tenet of the Federal response is something that we can't rely upon, and so we will be better prepared to function on our own for a longer period of time because of that. And again, the proof will be in the pudding. Let's hope it never happens again, but we are going to have to wait and see what happens again the next time this does happen.

Mr. THOMPSON. Thank you, Mr. Chairman.

Mr. REICHERT. Thank you, Mr. Thompson. The Chair recognizes Mr. Dicks.

Mr. DICKS. Thank you, Mr. Chairman. I want to thank you for holding this hearing. I think this is a very appropriate hearing, and one that I think—I am glad that we are getting down to these kinds of issues. And I know this is a problem in Washington State where I am from. Let me ask you, Dr. Blum, you were pretty strong in saying the emergency room—emergency department situation has declined. Is the reason for that because the hospitals are closing down these emergency departments because they don't want to have to pay the cost of treating these people, many of which don't have insurance? I think—what did you say, I think it was 50 percent do not have insurance? Is this the reason this is happening at a time when we should be strengthening the emergency medical system, faced with these possibilities of terrorist attacks in the future, what we are seeing is a national decline in these services that people consider to be crucially essential?

Dr. BLUM. Yes, sir, that is a huge part of it. It is not the only cause.

Mr. DICKS. What else is it? Give me all the causes you can think of.

Dr. BLUM. I will try to summarize them. There are many. There is increasing demand, first of all.

Mr. DICKS. That is because people don't have insurance, right?

Dr. BLUM. Well, there is multiple reasons for it. People do not have insurance, 47 million Americans do not have insurance at all. There is another probably 40 million Americans who are under-insured and that is a big part of it. But even people with insurance, there is an increasing demand. Managed care, one of the side effects of managed care has been that primary care practitioners are very, very tightly scheduled. So that if there is any event that occurs in their patients' lives that kind of falls outside that very, very tight schedule for the practitioner, the emergency department is often the only option to receive care, and so actually we have seen

an increased volume of patients in the number of patients that have insurance as well as that don't have insurance. We have seen declining reimbursement from insurance companies as they try to figure out ways not to pay for emergency care.

Mr. DICKS. Including the Federal Government with the reduced cost—reimbursements for Medicare and Medicaid?

Dr. BLUM. That is correct. I went to a meeting earlier this year in Washington where a senior official for Medicaid said in the very same sentence that we are going to add a million new people to the Medicaid rolls, and we are going to decrease the budget by \$10 billion. Well, you don't have to be a rocket scientist to figure out that that doesn't make sense, and it especially doesn't make sense for the emergency care aspect of Medicaid. And that is using just one example.

Mr. DICKS. Let me ask one thing. In Washington State, for example, we have—I think there is a Level 1 trauma care, isn't that right, where the most severe injuries go, that is Harbor View. We have created a little program in Pierce County with the Madigan Army Hospital and some of the local hospitals in Tacoma to have a Level 2, but that is it in the whole State of Washington. And people have to be flown in by helicopter. If they have a severe injury, they have to go to one of those two places and many times it is the Harbor View and they are underfunded now. They are having their funding cut off by the State of Washington for some reason. I mean, is this happening around the country? Is this not—I assume this is the same kind of problem we are facing in other parts of the country.

Dr. BLUM. Yes, sir. In many of those specialized care entities, such as trauma centers, exist within the large public hospital entities within the given State or city, and those often bear disproportionate proportion of the under and uninsured patient population. So their finances are more vulnerable to any up or downswings that compare to, you know, private hospitals, and that should be a concern to everybody because when—West Virginia only has one Level 1 trauma center in Morgantown. Only one for the whole State. If that closed, it would close for everybody, whether you had insurance or not, and I can tell you that it is a challenge to keep that trauma center running whenever we—we also are the State's primary provider of care for the uninsured and underinsured.

Mr. DICKS. Ms. Jagim, you mention—and I will ask everybody else to respond. You mention the cutback in funding for nurses. Is that now—where—that is in the Health and Human Services budget I take it? In the Federal Government's—

Ms. JAGIM. I believe so, yes.

Mr. DICKS. Or is that under Medicare?

Ms. JAGIM. No. I think it is in Health and Human Services.

Mr. DICKS. And how many years has this been cut now?

Ms. JAGIM. Well we—I think the amount of funding has been fairly low but stable, but we need to increase it in order to—

Mr. DICKS. So we don't have enough nurses?

Ms. JAGIM. Right. There is a shortage, and we need help to fix it.

Mr. DICKS. And I would assume we are short emergency nurses as well as nurses in general.

Ms. JAGIM. Absolutely. Absolutely. And as I indicated, you know, they are not an interchangeable resource. It requires a lot to get them at the level that you need them to perform in that emergency nursing role. And so it is not to be taken lightly, and that is why we need to shore up the resources.

Mr. DICKS. Dr. ug, do you have a comment?

Dr. KRUG. Just a couple of comments. It is true that the underinsured and the uninsured are overrepresented in emergency departments in comparison to their proportion in the Nation. That said, it would be a mistake to simply look at that population of patients and summarize that that is where the problem exists. That is part of the problem, but in fact as people have studied this, insurance has nothing to do with it. It is access to a primary care provider. I have got great insurance. I am a pretty savvy utilizer of health care. I can't see my doctor when I get sick. So if I am really sick I have one place to go. It is the emergency department. It has been argued that the largest increase in emergency department utilization over the past 5 years has not been by the uninsured but by people with insurance. The other key points about emergency department overcrowding is that emergency departments are not only crowded with patients trying to get in, but with patients trying to get out. And so in my emergency department right now if I was to call there—

Mr. DICKS. Trying to get into the hospital.

Dr. KRUG. Exactly. If I would call there right now, I am just guessing, in our 16-bed emergency department where we jam 55,000 patients a year through every year, I would bet you five of those beds are filled with patients waiting for beds upstairs. And that is a phenomenon in every emergency department or most emergency departments and particularly in the ERs and places like trauma centers and tertiary care centers, the places where you are sending the sickest patients to begin with.

So there is a huge problem. And then it could be argued that if we could actually build a bigger emergency department, my next dilemma would be finding the people to work there. So there is a shortage of emergency physicians, subspecialists, and particularly of nursing. We are running into a brick wall as it relates to nursing, at least based upon what I have seen.

Mr. DICKS. Thank you, Mr. Chairman.

Mr. REICHERT. Thank you, Mr. Dicks. The Chair recognizes Mrs. Christensen.

Mrs. CHRISTENSEN. Thank you, Mr. Chairman. And I am going to say it anyway, although I don't have to tell you how pleased I am that we have finally gotten to this type of a hearing, and I thank you and the ranking member for holding it. I also am going to say in advance that this is where the rubber meets the road for me, and I know a lot of times we are asked to abide by bipartisan agreements. But if we don't address this in legislation, and if relevant legislation does not significantly address this, I am voting no. I am not going to be a part of those agreements. We clearly are unprepared for what is most likely to be—well, what is one of the most likely terrorist events, and that is bioterrorism and especially in our poor and our rural and our communities of color.

I have a lot of questions. I am sure I am going to end up submitting some for you to send to our panelists. We received this book last week, and I guess this would probably be speaking of 2005, and it said, there are still no official agreed upon measurable performance standards of accountability for State bioterrorism and emergency public health preparedness programs and activities.

Is that still the case, that we don't have any standards that are at least the basic minimum standards that have been communicated to emergency departments and hospitals that must be met to reach a certain level of preparedness; is there any standard that has been promulgated?

Dr. BASS. There are standards that are in the process now.

Mrs. CHRISTENSEN. Within the Department of Homeland Security?

Dr. BASS. Correct. Targeted capability lists, TCLs, that have actually been underway. I think it is part of HSPD-8. There are multidisciplinary processes. Again, I think to talk about the fragmentation issue, DHS is doing that, but the ET program is principally at HRSA. I will say now that we are seeing some evidence that they are beginning to work together and HRSA is willing to recognize, and they are beginning to recognize each other's standards. So I believe that situation is improving.

Mrs. CHRISTENSEN. I am going to follow up with another question. We have a chief medical officer who comes to the Department of Homeland Security with good experience. Do you think that office is necessary? What is the role—what should the role of that officer be? Do you think it is a necessary office? And what would you like—what would you like to see it do? Anyone can answer.

Dr. BLUM. I think it is critical. I don't think it is necessary. I think it is critical. And I think you have a very, very talented and an appropriate person in that position, and I guess my view would be that that is a very undermanned position, given the scope of problems that you all have to plan for. It is inconceivable to me that any significant threat from a homeland security standpoint wouldn't have huge medical consequences, and the coordination of those activities via the department I think are absolutely critical if we are really going to effectively respond to the kinds of things that you are talking about. And so I would say not only do you have—not only is it appropriate that you have a very, very talented and good person in that position, but I would say that they need a lot more support in the future.

Ms. JAGIM. I think I would echo that we would want to see them have a much greater role than they have.

Mrs. CHRISTENSEN. And the HBHPP, I put that down there, abbreviation, but the National Bioterrorism Health Preparedness Program I guess is supposed to support hospital readiness to meet terrorists and other public health programs. What grade would you give it in doing this?

Dr. BASS. Are you referring to the HRSA BT program again?

Mrs. CHRISTENSEN. The bioterrorism hospital program, the funding that goes to hospitals and—

Dr. BASS. I don't think—without doing a comprehensive assessment, it would be difficult for me to put a grade on it. I can say that they have been funding hospitals. I know it comes through our

Department of Health in Maryland, and it is really the only source of dedicated funding that I am aware of now.

Mrs. CHRISTENSEN. Do you think that the funding is anywhere near where it needs to be? I went to Highland Hospital. It is a major trauma center in a big city, covering a big area of the country, about 200,000.

Dr. BASS. If there is a limitation of the HRSA BT program, it is the amount of funding. I believe it is somewhere around \$500 million, maybe slightly short of that now. If you divide that among 50 States, that ends up being actually what, \$10 million say, for instance, that my State would get that comes down, and that money has to be divided up between what health department is doing, and we take 10 percent for pre-hospital care because we also want to make sure they are prepared, trained, equipped to handle BT events. And then you have got the amount coming to the hospitals, you divide that among 47 hospitals. It ends up being enough money to do a little bit of training, to buy a little bit of equipment, but not really to do the job.

Mrs. CHRISTENSEN. Dr. Krug?

Dr. KRUG. I don't have enough information to give it a grade. I would comment that I agree with the math of Dr. Bass, but arguably the money needs to be targeted towards the foundation. Again, we are planning for acts of terrorism and it is important that we do that, but we have arguably little disasters that occur in our emergency department every day of the week, flu season, trauma season, and I would comment that there is variation in terms of what is happening on a state-by-state level and in the arena of pediatrics, I am not sure we would give them a terribly high score at this point.

Mrs. CHRISTENSEN. If Dr. Blum could answer?

Dr. BLUM. I have no problem giving a grade and it would be incomplete for the reasons Steve mentioned. You know the whole base of the pyramid of the response, which we believe to be, you know, as I said, the emergency—emergency department is the first response for 75 to 80 percent of the patients in most scenarios that you could generate, and I can tell you very little of that money has trickled down through all those entities to the emergency department, even when the hospital gets some, very—it seems that very little has actually gotten to the place where the rubber actually does meet the road, which is in the emergency department. So I would say emphatically it is an incomplete grade.

Mrs. CHRISTENSEN. Mr. Chairman, I don't want to ever—I agree completely with what Dr. Krug said. Whatever funding we have, if it doesn't prepare our hospitals, our emergency room and the whole health system to meet the daily needs of the communities around them, it is not going to be able to help us in a terrorism or natural disaster event.

Mr. REICHERT. Thank you, Mrs. Christensen. The Chair would absolutely agree with that. And Mrs. Lowey is recognized.

Mrs. LOWEY. Thank you very much. And I personally want to thank the Chair and the ranking member for holding these issues. I also sit on the Labor-HHS Appropriations Committee, as you know, and these issues have been upper most on my mind for many a year. And in fact, I can't resist asking you, have you ever

heard—do you interact with the HHS command center? Have you heard of it?

Dr. BASS. I have. Yes, I have on occasion. I am a regional person, and we have met with them during regional events.

Mrs. LOWEY. Let me not play 20 questions here. But several years ago—I won't ask the Chair and the ranking member if they have heard of it. But several years ago our Appropriations subcommittee was asked to visit the command center by Secretary Thompson. It was an extraordinary room, Mr. Chairman, probably four times the size of this. Screens everywhere, every hospital was identified, every health facility was identified, and we were all very optimistic that this was going to be a great, great resource. Now, not criticizing any of the staff in this room, but I was trying to remember the name of it, and I must have asked at least a half dozen members of this staff, including my own, who are all very efficient, and I won't ask you, Mr. Chairman and Mr. Ranking Member, because I can see the look on your face, but megamillions of our taxpayer dollars were invested in this center and the whole idea was to evaluate and coordinate surge capacity. If an avian flu epidemic broke out, God forbid, in New York City or the suburbs where I am the Congresswoman, they would know exactly how many beds are here, how many beds are there, who has sufficient supplies of everything that is necessary. Well, needless to say, I have been talking to my hospitals. They haven't heard of it either, and there hasn't been any interaction.

So my first question was, Dr. Bass responded, have you—and you have important responsibilities. Has there been any contact with the HHS command center? Do you feed into it? Do you have confidence that the Federal—I see you shaking your head—that the Federal Government really knows what is happening in every part of this country? Now, I have no idea, Mr. Chairman, whether this is still functioning, whether the millions of dollars that have been invested are just sitting there in the equipment, and maybe some of us should visit again or find out whether it has functioned. I see one head shaking. What about Dr. Blum, are you aware of this?

Dr. BLUM. In my role in my regular job, it wouldn't be my role to regularly interact with an entity like that. So I would have to say no, that I have not interacted with it, but I would speculate that they would have difficulty currently in the environment as it exists meeting their mission because of the data problems that we have in the interoperability of the data systems that we have. That is one—if you will remember, that is one of the recommendations we have as a college is to develop a uniform way of collecting data on capacity and diversion, et cetera, and that doesn't exist right now, and until it does exist there is no way for any entity to really collect the data and do the function that you described.

Dr. BASS. I was going to say, in Maryland we have our communication center we call SYSCOM/EMRC, which is in Baltimore, and one of its principal tasks is to stay in touch with all the hospitals. We have links with all the hospitals. We have a tool that is a web-based tool we call FRED, Facility Resource Emergency Database. And in an emergency, we can use FRED to inform the hospitals of what is happening but also FRED can bring information back from a hospital, like how many beds they have, how many doses of anti-

biotics, ventilators, things like that, and we do that statewide in Maryland.

Mrs. LOWEY. Do you report to the Federal Government?

Dr. BASS. Other States—not many other States do it on a statewide basis. Many communities do but I will reiterate what Dr. Blum said, the problem here is it comes back to the data interoperability issue, in that the way we collect it and other people is not the same. We count things differently. And I will tell you just last week I saw a proposal from HHS to pull that together. Their goal is to be able to pull in the data from Maryland and other communities and hopefully all States would be doing what we are doing in Maryland and put that in their database.

Mrs. LOWEY. Well, I will save the rest of my questions because the red light is on, but I hate to say it is business as usual, Mr. Chairman. We went to visit this center at least 3 or 4 years ago. It was before my current staff was working on the issue. And I am glad to know that someone there is interested in pulling all this information together several years later. So I would certainly suggest that we get an update and find out what this center is doing, and I am glad to see that the current administration of—I don't know which agency, at HHS is beginning to think about using a facility such as this and bringing the information together.

So I thank you and I thank you for your testimony, and I think we all know that there is a lot more work to do, certainly in my area, in the metropolitan region of New York, and we appreciate your service to your community and your country. Thank you.

Mr. REICHERT. Thank you, Mrs. Lowey. We will direct the staff to get us an update of the current status of the HHS special operations centers so we have more detailed information on that for all the members of this committee, and if the witnesses could just bear with us a few more minutes, we want to have a second round of questions. And it looks like there might be three or four of us here to ask those additional questions.

I want to go back and focus on the—I love to solve problems. We have heard a lot about, you know, what the issues are and what the problems are that we are facing and all the way from Medicare to access to primary care and there is lots of reasons that we don't have access, or some do have access, and shortages of nurses and physicians and shortages of facilities and instructors and professors with no training and on and on. One of the things that we did in the bill that I mentioned when we started this hearing, the interoperability bill, we listened to the people who were the ones doing their job, and they helped us come up with some legislation. We don't want to write legislation just for the sake of producing paperwork and laws. So Federal standards are one thing. I heard some discussion on that. And there was a mention of a need for written transfer protocols. Is that something where the Federal—the Department of Homeland Security or the Congress could get involved in and helping to set some sort of standards on, just for an example, one of the problems on written protocols on transfers?

Dr. BASS. That really I believe is a State and regional issue, and also the Joint Commission for the Accreditation of Health Care Organizations also has requirements that hospitals have transfer agreements. In my State we do that because we have a regional-

ized system of care. We put out a booklet that says, for instance, these are our trauma centers, these are our burn centers, these are the hand centers, and those are recognized regional centers. So there is no agreement required. The hospital can know that within our system they can transfer patients to those patients in our EMS providers and to know to take those patients there primarily.

Mr. REICHERT. So we know that the care to date—yes, sir, doctor.

Dr. KRUG. I agree it is not a Federal mandate, but the simple observation is in spite of the joint commission process and in spite of State rules and regulations, there are a significant number of institutions that don't have that. So the question then becomes—and this gets back to the fragmentation of the process.

Mr. REICHERT. Yes.

Dr. KRUG. At some point if we want this all to work, somebody is going to have to define a process that is fairly consistent from one State to the next because it needs to be consistent from one State to the next.

Mr. REICHERT. We talked a little bit about identifying a lead agency. Who would you suggest that might be? Anybody on the panel.

Dr. BASS. A lead agency for emergency care? I think—

Mr. DICKS. At the Federal level, Mr. Chairman?

Mr. REICHERT. Yes, Federal level.

Dr. BASS. At the Federal level, I mean, the Institute of Medicine report recommends that that be at the HHS simply because—not simply, but because of the fact that it looked at this overarching system that would include trauma care, emergency medicine, pre-hospital care, EMS for children, that is really, I mean, that is all fundamentally related health care and ideally that would be at HHS.

Mr. REICHERT. Anyone else have an opinion?

Dr. BLUM. Agree.

Mr. REICHERT. Everyone would agree with that? And the key then is to get DHS and HHS to communicate more clearly.

Dr. BASS. The other issue is that just because you have a lead agency at HHS doesn't mean that other agencies aren't significantly involved with that system and so not only does there need to be a lead but there still needs to be coordination, interoperability, and so on, or we are just—even with the lead agency we are going to be fragmented.

Mr. REICHERT. Yes.

Ms. JAGIM. If I could I just want to echo what Dr. Krug said. Not all systems are as well coordinated as Dr. Bass'. Certainly in my part of the world, we do not have the strength of the Maryland system by any means. And I also want to point out that many States yet have not even established a basic trauma system. And you know that is kind of the blueprint that we are using when we talk about regionalization, and that is a stepping point. You know, we need to get—part of that basic infrastructure that needs to be developed across the country, that is the need for that central leadership to make sure that every State gets onboard, every region is coordinated because that is not so now.

Mr. REICHERT. If you have thought—had the time to think about this at all, what one piece of sort of legislation might you think we

could start to promote, work on to help—well, the greatest need was the everyday service which goes beyond and prepares us for the emergency that we might face some time in the future. I guess you know how can the Federal Government—how can Congress help you?

Ms. JAGIM. Well, I will take a dive in. I think number one is that strong central leadership point within the Federal Government because I don't think—I don't see any way that we can establish the coordinated regionalized care system that we need that has interoperable communications without that central Federal leadership. It is just not going to happen. And secondly, I would say the need for the study on workforce issues and how we can shore up that workforce or it is not going to be there.

Mr. REICHERT. Anyone else? Yes.

Dr. BLUM. Well, I am going to be more specific. I think a lead agency is a good start. But we could free up a huge amount of capacity in this country in the Nation's emergency departments if we—and I would also judge this to be relatively low-hanging fruit as far as something that is doable. We could free up a huge amount of capacity in the Nation's EDs if we simply stop the practice of boarding admitted patients in the emergency department. There is really nothing special about the hallway in the emergency department as compared to a hallway up on an inpatient unit. We could simply decide that this is not an acceptable way to do business anymore and stop it. That would free up a huge—as I said, a huge capacity and allows us to at least have the space to do our job. If we don't have enough nurses and don't have enough resources, we would at least have the ability to have the space to do our job.

Mr. REICHERT. Thank you.

Mr. Pascrell.

Mr. PASCRELL. Dr. Blum, the National Disaster Medical System, NDMS, supports State and local agencies, as you know, during disasters. At the core of this system, there are the disaster medical assistant teams, assistance teams. There are regional teams of doctors and nurses and other health professionals. Do you think that the NDMS is properly equipped and organized to assist communities during large-scale disasters? And then I am going to ask you, who are your contacts in DHS and HHS? And what guidance are they providing to you in terms of planning? Got the questions?

Dr. BLUM. Yep. I think so. I think I will do better with the first than the second. I think the disaster medical assistance teams work very, very well at their defined role, which is kind of a follow-on, you know, direct at the site of the disaster sort of role. Unfortunately they don't go far enough. There probably needs to be another type of response that supports the disaster medical—the DMAT teams, and that is—and the phenomenon here is one that we saw in Katrina very clearly. We saw the destruction of the infrastructure, the medical infrastructure in the directly affected areas. So what happened then was the medical response pulled back to what we would call in medicine the penumbra or the surrounding area so that those hospitals became very rapidly overwhelmed with patients from the disaster area. They were still functioning, but their nurses, their doctors were overtaxed pretty quickly. And we need some way—especially in a disaster like Katrina

that has week and month-long implications for medical care, we need to figure out some way to support those surrounding hospitals in a much more direct way than we do now.

I could tell you my own personal response. I am an emergency physician. I am trained in the care of patients like existed in Katrina. I tried to volunteer for a period of 2 weeks to go do exactly what I am talking about, which is backfill in a functioning emergency department, and I discovered there was no way for me to do that within the Federal system. I had to sign up, you know, to be—to either do a month stretch or more, and many, many of my colleagues found that they were simply unable to help, which was their natural instinct was, you know, I had some time off as it occurred, which is rare, and I wanted to go help for a while, but it—the politics and the bureaucracy of it was simply more than could be done. I didn't want to go put a tube in my teeth and go dig through wreckage. I just wanted to go to the surrounding emergency department and go do my job to help the people who were there, and it was not possible.

Mr. PASCRELL. Are you getting guidance? You don't want to answer that question.

Dr. BLUM. Well, I am probably not the best person to ask that question because I am not even the disaster guru at my own hospital. That is just simply not my role. When it comes to disaster management on a personal level, I am one of the Indians, I am not one of the chiefs. So I am probably not the best person to ask that question to.

I could tell you that our State has been very active in planning, but again, I would reiterate the same thing that I said before, that very rarely trickles down to the actual emergency department.

Mr. PASCRELL. Thank you.

Dr. Krug?

Dr. KRUG. I would reiterate that point. The guidance that we receive is probably indirect through actually again our fragmented State. We work with both the Chicago Department of Health and also the Illinois Department of Health and Human Services because there is joint jurisdiction there. And so how that guidance is interpreted is actually then I think interpreted in part by the direct recipient of the grants, which is the State or the city, and again from our perspective as a children's hospital, there is nothing in that guidance that helps us. So we actually do something well beyond what the guidance would suggest for readiness.

I would reiterate Rick's point about the disaster response. There were a lot of folks that wanted to help that couldn't because there was no process to do that. In a variety of ways and other than sort of the traditional way.

Secondly, I think that everything that we learned from Katrina is that these responses need to be prepared to provide support for a lengthy period of time. These response teams were set up to go in and do good for a certain period of time and then go back and maybe then send a second volley. Well, we need to consider a second volley, a third, a fourth, a fifth, a sixth, and today there is still a disaster there. There are still underserved patients, both adults and children, whose needs aren't being met because the hurricane

came through and ripped out the infrastructure and what is left is inadequate.

Mr. PASCARELL. Thank you, Mr. Chairman.

Mr. REICHERT. Mr. Dicks.

Mr. DICKS. Just a couple quick questions here. Let me just ask you, do you agree with these numbers? The Institute of Medicine report found that from 1993 to 2003 the U.S. population grew by 12 percent but emergency room visits grew by 27 percent, from 90 million to 114 million. That is accurate, right? In the same period, however, 425 emergency departments closed along with 700 hospitals and nearly 200,000 beds, and I would assume that is mainly for financial reasons. I know I have a number of hospitals in rural Washington State where I represent that are just barely hanging on, and you know, 50 or 60 percent of their patients are either Medicare or Medicaid, and they don't—they just can't make it financially. So again, I think this is a part of the problem that we are faced with and that we have to—we as a Federal Government have to look at.

Now, the other thing I was—that we have here is that—as it says, as you know, the National Bioterrorism Hospital Preparedness Program administered by HRSA now—are you aware of this program? Prepares hospitals and supporting health care systems to deliver coordinated and effective care to victims of terrorism and other public health emergencies. The program received \$474 million in fiscal year 06. I know Congresswoman Lowey knows about this because she is on that subcommittee. Is that sufficient funding for that program? Should dollars be distributed based on risk instead of population as it is now? What do you think of that?

Ms. JAGIM. You know, it is a little bit of both. The other thing I just wanted to point out, too, you kind of touched on it as far as rural hospitals in Washington. I think the thing to keep in mind when it comes to rural facilities, we interface with them. Of course I wouldn't be from North Dakota if I didn't talk about rural hospitals. The problem that they have is they have low population bases that they are working with. Most of them in my State are critical access hospitals.

Mr. DICKS. Exactly. They have all switched because they get a better reimbursement under Medicare.

Ms. JAGIM. Fee for service payments instead of DRG-based, which has been helpful for them. It saved them from closing.

Mr. DICKS. That is exactly the same for us.

Ms. JAGIM. When it comes to emergency preparedness, they have no depth of their bench, so to speak, to pull from as far as resources for planning and training. You look at them and you talk to them about it and they have this lost, glazed look on their face. They are struggling out there, and they don't have the depth of resources to help them accomplish what they need to do to prepare. And that is where when you look at—they are not a population base, but yet they are there, and they serve in a very, very key role.

Mr. DICKS. Rural communities?

Ms. JAGIM. Right. Right.

Mr. DICKS. Without the hospital they would be in deep trouble?

Ms. JAGIM. Exactly.

Mr. DICKS. Some of the communities actually bond themselves to help subsidize the hospital, Mason County being one.

Ms. JAGIM. If you don't have a regionalized system of some sort, whether it is based on a trauma system or you have been able to advance it beyond that, there is no linkages that are occurring then between the rural hospitals and the larger regional centers. And that needs to happen.

When we look at pandemic planning, where I am from in Fargo, we don't have capacity in my hospital but we know that there is some capacity, maybe in rural, maybe not. But we know that if we are going to survive a catastrophic event, we are going to have to do it together and not separate individual entities, and that is where this concept of regionalization is so vitally important.

Mr. DICKS. So—and I would assume that if we have an avian influenza outbreak, that would be—we are all focused kind of on hurricanes right now, but that is still hanging over our head, right?

Ms. JAGIM. Correct. And again, they have a short bench, you know. So if you see an epidemic occurring, they may have some limited space in their hospital. They don't have the resources. If they lose 40 percent of their workforce, it goes from like four people to one. You know what I mean? They just don't have any depth. And I think that is really a concern, and you look to our whole system. Most of the hospitals in the country are community hospitals such as mine. There is many, many hundreds of rural hospitals in the country. Your EMS system in rural States such as mine is 98 percent volunteer. It is not paid. It is volunteer, and you know, I think that we have got a lot of weaknesses in the system.

Mr. DICKS. Dr. Krug.

Dr. KRUG. Just to reiterate an important point that you made. This is akin to Katrina. As we disaster plan, we think of how we are going to provide services with existing resources to a large number of victims. But what happens if some of those victims are health care providers? The avian flu is a great example of that. That scares us a lot at a fairly well resourced institution. We have a big bench. So if we lost half of our physicians, we could still run our emergency department. Your average small community hospital loses its physician, what do they do?

So the plans really need to consider that as well. We have talked about a buddy system where the bigger, better resourced institutions may need to be in a position to help others and not just simply say send us your patients. We are going to need to send them providers.

Mr. DICKS. Yes, Dr. Blum.

Dr. BLUM. Well, I would like to put a little bit different twist on this. I think you would have to build the entire system up because you can't really predict how an epidemic or a pandemic is going to evolve. It may be that rural America is the answer and not the problem to a pandemic flu. If you look at how human-to-human transmission occurs in a pandemic flu, it is easy to conceive that urban areas may be increasingly impacted—have increased impact early in an epidemic and the capacity may actually exist for care in the rural parts of the country. So I don't think you could look at it from where—let's try to guess what is going to happen and where it is going to happen. I think you have to build the entire

system up because you can't really predict how something like a pandemic is going to evolve over time.

Mr. DICKS. And that hasn't been done, right?

Dr. BLUM. That hasn't been done clearly. A critical access hospital where most of the inpatient beds have been converted to nursing home beds would be no help in a situation like that, and they might be a great help in, you know, in a pandemic flu, you know, if we needed additional hospital beds and capability.

Mr. REICHERT. The gentleman's time has expired.

Mr. DICKS. Mr. Chairman, again, I compliment you for having the hearing.

Mr. REICHERT. Mrs. Lowey.

Mrs. LOWEY. Thank you again and thank you to the panel. This issue is so important I want to follow up on my colleagues' comments and questions because I know in my district, which is the suburbs of New York City, they can barely accommodate increases in daily emergency room visits, let alone effectively treat thousands of sick and injured individuals resulting from an act of terrorism or public health emergency. And that is in the New York Metropolitan Area.

We know that the Institute of Medicine study, the American College of Emergency Physicians report both found that hospitals across the country are not prepared to handle a public health emergency with specific gaps in surge capacity. Now, we know this. The Federal Government knows this. We have been hearing about this since 9/11 over and over again.

So I guess my question is, what can, what should the Federal Government do to assist hospitals in increasing their surge capacity? For example, are there any Federal or State guidelines for creating surge capacity? Should all U.S. hospitals be required to increase hospital beds and staff by 20 percent—I am just throwing that out—within 8 hours of a public health emergency?

I am really following up with your comment that it should be dealt with in both the rural areas and our obvious areas like New York City. Should there be specific guidance and performance measures? Are you recommending them for surge capacity? Has the Department of Health and Human Services even estimated the cost of creating a minimal level of surge capacity? And who is in—I am asking all of these together so perhaps you can comment. Who is in charge actually of ensuring that States and localities create the surge capacity for treating people who became ill during a public emergency or terrorist event?

Maybe I should stop at that point and have you respond. Who is in charge? What should they be doing? Should the Federal Government assume a greater responsibility? And maybe we will all find out what that command center is doing these days with all the money that has been invested in it. Whoever wants to comment, that is fine.

Dr. BASS. I would argue that would really, in my estimation, be the role of—the health department at the State level should lead the process for looking at surge planning and we do that in Maryland. We have had a process underway for several years. We work very closely with the hospitals. And I know that there are grants. I believe it is CDC grant. I don't want to hold myself to that, but

that is—that they are able to use to help to fund that process, and I believe the Federal Government should provide some guidelines, and they do, but that it really boils down to the States and the regions taking those guidelines and converting into operational plans, and that is where the rubber hits the road.

Mrs. LOWEY. Well, if the rubber hits the road and we have an emergency and the State doesn't do what you think they should do or that Maryland is doing, what is the Federal Government's responsibility?

Dr. Blum?

Dr. BLUM. Well, you probably won't like this answer, but you know the infrastructure problems that I outlined with regard to the emergency department quite frankly are not going to be fixed by grants from, you know, Homeland Security. They are not. They are simply too big and too pervasive. In order to truly—

Mrs. LOWEY. How about HHS? How about HHS?

Dr. BLUM. Well, perhaps at that level. One of the problems with emergency care in this country is that all the problems of the health care delivery system seem to be focused and concentrated in the emergency department. When any part of the system doesn't work properly, the emergency department bears the brunt of it. I think probably the simplest thing we could do—and this isn't the purview of this committee, but figure out how to share that burden across the entire health care, you know, enterprise in this country, which we don't do right now.

The answer to who is in charge is everybody and nobody. It depends on where you are. The State health department might be the right place if they are used to and regularly talk to the emergency departments. I could tell you in some States they do not. Those conversations don't exist. And so the public health sector makes the same assumption that the public does, which is that the emergency departments are going to be there and functioning and have the capacity and their planning all reflects that.

Mrs. LOWEY. If I could ask you—because I see my yellow light is on. But this I think has to do with the funding. The National Bioterrorism Hospital Preparedness Program, where you get a lot of money from, is administered by the Health Resources and Services Administration, and it does prepare hospitals and supporting health care systems, and so on.

The program received \$460 million in fiscal year 2006, which is a \$10 million decrease from fiscal year 2005. Given all the needs that are out there, would you have recommended that they cut the program or do you think we need to invest more money in the program?

I don't want to put you on the spot, but I will.

Ms. JAGIM. That is an easy question. No, it shouldn't have been cut. And I would just like to tack on to the other comments that have been made. I think the ability of the State health department to assist with that surge capacity planning is somewhat based upon the day-to-day strength of that health department, and my personal perspective is I don't know that I have a great deal of confidence in the strength of that in my own home State, and I think, however, they have put some tools into place, such as a bioterrorism wide area network that could connect all the hospitals in

times of crisis so that we can communicate even when everything else goes down.

So they have helped us to develop some basic guidelines, but I think the strength is variable across the country.

Dr. KRUG. I have a local anecdote. A neighbor recently put on an addition to their house. Apparently there wasn't enough attention paid to the foundation of that addition. Can you imagine what happened to the addition? It literally almost fell off the house. Everybody thought that was pretty amusing in the neighborhood.

We have a similar problem. We can actually give hospitals lots of money to increase their surge capacity, but if you don't deal with the foundation, if you don't deal with the personnel issues, if you don't deal with the access and the system issues, it is not going to work. It is really that simple.

Mr. REICHERT. Gentlelady's time has expired.

I thank the witnesses for your time and your testimony. This was a very enlightening hearing, and as you can tell, the members are eager to help find some solutions to the problems that you described to us today, and the members of the subcommittee may have some additional questions for the witnesses, and if they do, we will ask that you respond to those questions in writing, please. The hearing record will be held open for 10 days. And without objection, this hearing is closed.

Thank you.

[Whereupon, at 4:01 p.m., the subcommittee was adjourned.]

