

**ROUNDTABLE ON “CRISIS IN THE ER: HOW  
CAN WE IMPROVE EMERGENCY MEDICAL CARE?”**

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**HEARING**

BEFORE THE

SUBCOMMITTEE ON BIOTERRORISM AND PUBLIC  
HEALTH PREPAREDNESS

OF THE

COMMITTEE ON HEALTH, EDUCATION,  
LABOR, AND PENSIONS  
UNITED STATES SENATE

ONE HUNDRED NINTH CONGRESS

SECOND SESSION

ON

EXAMINING MEASURES TO IMPROVE EMERGENCY MEDICAL CARE, FO-  
CUSING ON THE NEED FOR CHANGE TO CONTINUE PROVIDING  
QUALITY EMERGENCY MEDICAL CARE WHEN AND WHERE IT IS EX-  
PECTED

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SEPTEMBER 27, 2006  
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# C O N T E N T S

## STATEMENTS

WEDNESDAY, SEPTEMBER 27, 2006

	Page
Burr, Hon. Richard, Chairman, Subcommittee on Bioterrorism and Public Health Preparedness, opening statement .....	1
Isakson, Hon. Johnny, a U.S. Senator from the State of Georgia, opening statement .....	27
Blum, Frederick, M.D., F.A.C.E.P., Associate Professor of Emergency Medicine, Pediatrics, and Internal Medicine at West Virginia University and President, American College of Emergency Physicians .....	3
Prepared statement .....	5
Bonalumi, Nancy, R.N., M.S., C.E.N., Director of Emergency Nursing, The Children's Hospital of Philadelphia, and President of Emergency Nurses Association .....	11
Prepared statement .....	13
VanAmringe, Margaret, M.H.S., Vice President for Public Policy and Government Relations at the Joint Commission on Accreditation of Healthcare Organizations .....	17
Prepared statement .....	19
Bass, Robert, M.D., F.A.C.E.P., Executive Director for Maryland Institute for Emergency Medical Services and President of National Association of EMS Officials .....	22
Prepared statement .....	24
Haley, Leon, Jr., M.D., M.H.S.A., F.A.C.E.P., Associate Professor of Emergency Medicine and Vice Chair of Clinical Affairs for Grady Health Systems .....	27
Prepared statement .....	30

## ADDITIONAL MATERIAL

Statements, articles, publications, letters, etc.:	
Prepared statements of:	
American Academy of Pediatrics .....	50
Advocates for EMS .....	57



## ROUNDTABLE ON “CRISIS IN THE ER: HOW CAN WE IMPROVE EMERGENCY MEDICAL CARE?”

WEDNESDAY, SEPTEMBER 27, 2006

U.S. SENATE  
SUBCOMMITTEE ON BIOTERRORISM AND PUBLIC HEALTH  
PREPAREDNESS, COMMITTEE ON HEALTH, EDUCATION,  
LABOR, AND PENSIONS,  
*Washington, DC.*

The subcommittee met, pursuant to notice, at 2:33 p.m. in Room SD-430, Dirksen Senate Office Building, Hon. Richard Burr, chairman of the subcommittee, presiding.

Present: Senators Burr and Isakson.

### OPENING STATEMENT OF SENATOR BURR

Senator BURR. Let me call to order this official roundtable. Let me take this opportunity to apologize, with all the Hill—there are many things going on, on the Senate side today, that I know we’re going to have some members that are in and out of the room. We’re going to make sure, by unanimous consent, we leave the record open for those members who would like to make opening statements and any members that would like to extend to you questions because of their inability to be here. And I hope all of you will open yourself up to that.

Again, I want to thank you for coming to this HELP Subcommittee on Bioterrorism and Public Health Preparedness member roundtable to discuss the crisis patients face every day in emergency departments across the country: overcrowding.

I’d like to welcome our panelists and to thank you for taking the time to travel to Washington to share your knowledge, your lessons learned, and recommendations from your firsthand experiences in emergency medical care. It’s my hope that this roundtable begins what I believe is a very important national dialogue on the state of emergency medical care in this country. Your testimony will help us better understand the crisis that our Nation’s emergency rooms are facing each and every day. This knowledge of the challenges facing emergency medical care will help us as we consider how we can better improve patient care throughout our health delivery system.

I’d like to also thank Chairman Enzi and Ranking Member Kennedy for their continued support, confidence, and latitude in where this subcommittee chooses to invest its time and the members’ times. Unfortunately, they’re unable to be with us today, but both

of them certainly have a tremendous amount of interest in the information that we hear today, and, ultimately, how that guides us, as a Congress, as to how we begin to address this crisis.

Let me share a few stories, if I could. I'm sure we will hear more as we hear some of the testimony, but there are ones that I've been personally exposed to as individuals have either visited my office or I've seen in an emergency room or I've had the opportunity to see in a public setting, and they shared their story.

A 49-year-old woman arrives at the ER with the symptoms of a heart attack, and dies in the waiting room after waiting 2 hours to see a doctor. A 9-year-old boy with a broken elbow is transferred to three different emergency rooms, and waits 24 hours to receive the pediatric orthopedic care he needs. A physician reports that every single bed in an emergency room is used by patients admitted to the hospital, patients who could not be moved to beds in the hospital inpatient wards, because they are all booked. A little girl with abdominal pain leaves the emergency room, because there is literally no room for her to lie down. She comes back by ambulance after her appendix bursts.

Now, these are just a few stories, and they're certainly not indicative of every emergency room in this country. This is not to suggest, in any way, shape, or form, that the function of these facilities is, in fact, deficient. I think that as we see investments made, we see those investments, not because hospitals like "bigger and better," but because hospitals see lines, and they're not able to deliver the care in a timely fashion.

The challenge for all of us is to make sure that as we are challenged with redesigning the healthcare delivery system in this country, that, in fact, we take into account what it is that emergency rooms are there to do, who it is they are there to serve, and that we learn from, in some cases, those experiences that were not done necessarily right, to make sure in the future, we don't do them that way again.

The Institute of Medicine has recently issued three groundbreaking reports about the system of emergency care in this country. The reports explored the system's strength, its limitations, and its future challenges; described a desired vision for the system; and recommended the strategies for achieving this vision.

I, personally, look forward to hearing from each and every one of you regarding your experiences. I know all of you have different experiences to share. Please know that what you tell this subcommittee today really will start our review of where we should go legislatively and how this fits in with what I think will be a very challenging time as we define what the delivery system for healthcare in the future looks like for every American.

At this point, let me take the opportunity to do a brief introduction for our witnesses today.

Our first witness is Dr. Richard Blum, from West Virginia University School of Medicine, where he is an Associate Professor of Emergency Medicine and Pediatrics. Dr. Blum is also the President of the American College of Emergency Physicians. He also served on the college's pediatric committee.

Next, we will hear from Nancy Bonalumi. She's the Director of Emergency Nursing at Children's Hospital of Philadelphia. She is also the President of the Emergency Nurses Association. Welcome.

Margaret VanAmringe is the Vice President for Public Policy and Government Relations with the Joint Commission on Accreditation of Healthcare Organizations, where she's responsible for developing strategic opportunities for the Joint Commission in both the public and in private sectors. Thank you, Margaret.

Dr. Robert Bass is the Executive Director for the Maryland Institute of Emergency Medical Services Systems, and is President of the National Association of EMS Officials. Doctor, welcome.

And finally, Dr. Leon Haley is the Chief of Emergency Medicine for Grady Health Systems, and Associate Professor of Emergency Medicine at Emory University.

We anticipate, with some degree of accuracy, that Senator Isakson will be here for a much longer introduction of you, and probably one richly deserved. But, on behalf of the committee and the Chairman and Ranking Member, let me once again say how pleased we are with your willingness to be here, how valuable the testimony that you're going to give will be to our process as we move forward.

And, with that, I'd like to recognize you, in the order that I introduced you, for the purposes of any statement.

Dr. Blum.

**STATEMENT OF FREDERICK BLUM, M.D., F.A.C.E.P., ASSOCIATE PROFESSOR OF EMERGENCY MEDICINE, PEDIATRICS, AND INTERNAL MEDICINE AT WEST VIRGINIA UNIVERSITY, AND PRESIDENT, AMERICAN COLLEGE OF EMERGENCY PHYSICIANS**

Dr. BLUM. Thank you, Senator.

America's emergency departments are underfunded, understaffed, overcrowded, and overwhelmed, and, in many places, are on the brink of collapse. In the past few years, the United States has faced unprecedented threats, such as terrorist attacks, and now one of the largest natural disasters in our history. During such events, Americans have rightly come to rely on the Nation's emergency departments.

My name is Rick Blum, and, as was said, I'm President of the American College of Emergency Physicians, which represents 24,000 emergency physicians nationwide. Thank you for giving me the opportunity to address you and the members of your committee today to discuss the vital role emergency departments play in our Nation's healthcare system, not only on a daily basis, but especially during those times of national catastrophe.

My testimony today comes from my own experiences as an emergency physician for 23 years, and also as a representative of thousands of emergency physicians, but it also comes from some recent landmark studies, such as the Institute of Medicine Report, in June, looking at hospital-based emergency care, "At the Breaking Point," and our own national report card on the state of emergency medicine, which was released in January.

For several years now, ACEP and its emergency physician members have been working to raise awareness of lawmakers and oth-

ers of a looming problem in the Nation's emergency departments. As was said, they are overcrowded. We currently have no surge capacity to be able to deal with the next big thing that comes along in the way of a terrorist attack or a natural disaster. And until we address these issues, we're not going to be prepared, as a country. These issues threaten our ability to provide high-quality medical care when and where it's needed.

You know, some of my friends frequently, kind of, assume that emergency medicine is a stressful job and that I, you know, sometimes am stressed out by it. And that is actually true. But it's not true because of the reasons they think. They think the job is what's stressful. But that's not at all stressful for emergency physicians. What's stressful is knowing how to do the job, and not being able to do it, because you don't have the capacity and you don't have the personnel to support you in that job. You don't have the space to put patients. You don't have, literally, gurneys to put patients on. That, ladies and gentlemen, is a very, very stressful thing. Taking care of sick people is what we do, and all of us take that job very seriously. And that's not the issue at all. But knowing how to do a good job taking care of sick people, and not being able to do it, is very, very disturbing for our members.

How have we gotten into this situation? Well, unfortunately, it's not a simple answer to that. Emergency-department visits have gone up by about 22 percent in the last 10 years. During that same period of time, the number of emergency departments in the country has dropped by almost 500. So, we are seeing more and more patients in fewer and fewer emergency departments.

We also have seen situations develop where we have a lack of on-call specialists in many hospitals. So, once the patient gets to the emergency department and we evaluate them and find they need specialized care, we are often unable to find someone to provide that care, sometimes requiring transfers hundreds of miles to get that care.

We have a lack of inpatient beds. We have—in a time of unprecedented growth in demand for healthcare, we have decreased the number of inpatient beds in this country by 200,000 in recent years. We have a population time-bomb that really is just hitting the healthcare market in the baby-boomers. Right now, the baby-boomers are a pretty healthy generation, but pretty soon they're going to hit the healthcare market in a very, very big way. And I can tell you, without any doubt at all, that they are going to stress the system to the breaking point.

We have significant shortages of nurses, both in numbers and in experience. One of the things that has occurred because of our nursing shortage is that a number of experienced emergency nurses have left the field of emergency nursing, because they've been asked to do more and more, again, with less and less, and simply have made the decision to go elsewhere, to take jobs in less stressful parts of the healthcare market.

In addition to having an absolute—you know, a problem with absolute numbers of nurses, we have had—and this all is really a symptom of declining reimbursement for emergency care in this country. Emergency physicians, emergency nurses, bear the disproportionate burden of the care of 47 million uninsured people

within this country. The result is that over 50 percent of emergency care in this country is unreimbursed. That's simply not a business model that is sustainable, and that is the reason why emergency departments are closing. If you have this kind of demand, and, you know, there was money to be made in emergency medicine, we would be building new emergency departments. But we are not. And I think you would have to go no further to find out, you know, where the problems are with regard to reimbursement for emergency care than to look at that factor.

We have some specific recommendations. We need to increase our surge capacity by ending the practice of boarding admitted patients in the emergency department, which is one of our problems across the country. We have several pieces of legislation that go a ways to do just that. We want to promote protocols and information systems that collect realtime data on capacity and diversion, and syndromic surveillance so that we can do more with what we have.

We need to recognize the role of emergency departments as first responders in natural disasters and in terrorist attacks. The role of public health in EMS is critical in such events, but let's not forget that, in some events, up to 75 or 80 percent of the patients will come directly to the emergency department. They will not use public health, they will not use EMS, they will come directly to the emergency department. And we really are a part of the first response. I think that's something that often gets left out of the equation.

We want to specifically mention two particularly vulnerable populations that we think need to be given some attention. The IR report addressed the pediatric population fairly comprehensively, but I would also like to add that the geriatric population didn't get as much attention, and is at least as vulnerable, as events around Katrina really suggest. During the next catastrophe, the Nation's emergency physicians will be there to do their jobs. The question is, Will they have the space? Will they have the support to do it well?

I was at a committee meeting earlier this year with Homeland Security and was asked, How can we engage your members in their responsibility for a natural disaster? And I said,

“You don't have to. We know our responsibility. We'll be there. We were there in Katrina, we were there in the other natural disasters. What you have to do is support us and give us the capacity to do our job well, and we'll be there.”

Every day, we save countless lives. Please give us the capacity and the tools we need to be there for you and the country, when and where you need us. The country should be able to take the emergency department for granted, but our policymakers cannot have that luxury. You need to be able to help us solve some of these problems now.

Thank you, Senator, for your leadership on this.

[The prepared statement of Dr. Blum follows:]

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

#### INTRODUCTION

America's emergency departments are underfunded, understaffed, overcrowded and overwhelmed—and we find ourselves on the brink of collapse.

Mr. Chairman and members of the subcommittee, my name is Rick Blum, M.D., F.A.C.E.P., F.A.A.P., and I would like to thank you for allowing me to testify today on behalf of the American College of Emergency Physicians (ACEP) to discuss the current state of emergency medical care in this country. In particular, I will address issues raised by ACEP's "National Report Card on the State of Emergency Medicine" and the Institute of Medicine (IOM) reports on the "Future of Emergency Care," which must be resolved to ensure emergency medical care will be available to the American public during a public health disaster.

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 of the Institute of Medicine (IOM) report "Hospital-Based Emergency Care: At the Breaking Point," which was just released on June 14. I would like to say that these findings are new to 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's emergency departments could be alleviated; sponsoring 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, the "Access to Emergency Medical Services Act" (and the subsequent Senate companion legislation, S. 2750); 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. Grades were 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 a 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's 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

As the frontline of emergency care in this country, emergency physicians are particularly aware of how overcrowding in our Nation's emergency departments is affecting patients. Here are two true patient stories that have been anonymously shared with ACEP that illustrate this point:

- I am at a level one trauma center, and we are so overcrowded that people are waiting up to 11 hours to be seen, patients are on stretchers lined up against the walls waiting for beds for 3 or more hours, and we are filled with patients being held for ICU beds. I am only able to see four to six patients in a 6-hour shift because there just are not beds to put the patients in to see them. We go on diversion, but so do the other hospitals in the area.

- A teenage girl was hit in the mouth playing softball, causing injury to her teeth. She arrived in the emergency department, which was full, at 6 pm and sat in a waiting room, holding a cloth to her face, bleeding for 2 hours. Finally, when a bed opened for her, the doctor saw she had significant dental injuries, including loose upper front teeth. He ordered an X-ray. Once he had the results several hours later, he called an orthodontist who fortunately agreed to see her right away. By then, it was 12 a.m.

The root of this problem exists due to overcrowded 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, but we are stretched beyond our means on a daily basis as well.

Every day in emergency departments across America, critically ill patients line the halls, waiting hours—sometimes days—to be transferred to inpatient beds. This causes 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 reduced hospital resources; a lack of hospital inpatient beds; a growing elderly population and an overall increase in emergency department utilization; and nationwide shortages of nurses, physicians and hospital support staff.

#### ON-CALL SHORTAGE

ACEP and Johns Hopkins University conducted two national surveys, one in the spring of 2004 and another in the summer of 2005, 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 1 year. Nearly three-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).

As indicated by the IOM 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 premiums; and relaxed Emergency Medical Treatment and Labor Act (EMTALA) requirements for on-call panels.

Two anonymous reports on emergency crowding explain the on-call shortage well:

A 23-year-old male in Texas arrived unconscious with what turned out to be a subdural hematoma. We were at a small hospital with no neurosurgical services. Ten minutes away was a hospital with plenty of neurosurgeons, but that 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 was FINALLY accepted by a hospital many miles away, with a 90-minute Life flight helicopter transfer. The patient died immediately after surgery there.

A 65-year-old male in Washington State came to an emergency department at 4:00 a.m. complaining of abdominal pain. The ultrasound showed a six-centimeter abdominal aortic aneurysm (AAA) and he was unstable for CT scanning. We had no vascular surgeon available within 150 miles; a general surgeon was available, but he refused to take the patient out-of-state. We reversed the Coumadin and transferred the patient in 3 hours to the nearest Level I trauma center, but he died on the operating table. He probably would have had a better outcome without a 3-hour delay.

#### EMTALA

ACEP has long supported the goals of the “Emergency Medical Treatment and Labor Act” (EMTALA) as being consistent with the mission of emergency physicians. While the congressional intent of EMTALA, which requires hospitals with emergency departments to provide emergency medical care to everyone who needs it, regardless of ability to pay or insurance status, was commendable, the interpretation of some EMTALA regulations have been problematic.

When CMS issued its September 2003 EMTALA regulation, uncertainty was created regarding the obligations of on-call physicians who provide emergency care that could potentially increase the shortage of on-call medical specialists available and

multiply the number of patients transferred to hospitals able to provide this coverage. Under this new rule, hospitals must continue to provide on-call lists of specialists, but they can also allow specialists to opt-out of being on-call to the emergency department. Specialists can also now be on-call at more than one hospital simultaneously and they can schedule elective surgeries and procedures while on-call. Without an adequate supply of specialists willing to take call, some hospitals may choose not to provide emergency care at all, which would only shift the burden to the already strained hospital emergency departments that remain open.

#### REIMBURSEMENT AND UNCOMPENSATED CARE

The patient population can vary dramatically from hospital to hospital and the differences in payer-mix have a substantial impact on a hospital's financial condition. Of the 110 million emergency department visits in 2004, individuals with private insurance represented 36 percent, 22 percent were Medicaid or SCHIP enrollees, 15 percent were Medicare beneficiaries and another 16 percent were uninsured. These numbers demonstrate the large volume of care provided in the emergency department to individuals who are underinsured or uninsured. According to an American Hospital Association (AHA) statement from 2002, 73 percent of hospitals lose money providing emergency care to Medicaid patients while 58 percent lose money for care provided to Medicare patients. Even private insurance plans still frequently deny claims for emergency care because the visit was not deemed an emergency in spite of the "prudent layperson standard" which ACEP has strongly advocated for years.

While emergency physicians stand ready to treat anyone who arrives at their emergency department, uncompensated care can be an extreme burden at hospitals that have a high volume of uninsured patients, which now exceeds 51.3 million Americans and continues to rise. Hospital emergency departments are the provider of last resort for many people, including undocumented aliens, who have no other access to medical care. As such, emergency departments experience a high-rate of uncompensated care.

#### BOARDING

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 beds are available for admissions from the emergency 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 nonclinical 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 2 hours and nearly 20 percent of hospitals reported an average boarding time of 8 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 canceled 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 IOM report 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 1 hour (Weiss et al., 2004; Bradley, 2005).”

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. I have 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 1 in 10 hospitals reported being on diversion 20 percent of the time (more than 4 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 arriving by ambulance, and that 70 percent of those patients had urgent conditions that required care within an hour. A companion study found ambulance diversions in Los Angeles more than 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. 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.

Congress can begin to address these problems today by enacting S.2750/H.R.3875, the “Access to Emergency Medical Services Act.” This legislation provides: (1) limited liability protections for EMTALA-related care delivered in the emergency department to uninsured individuals; (2) additional compensation for care delivered in the emergency department; and (3) incentives to hospitals that move boarded patients out of the emergency department in a timely manner. As noted in my testimony, and supported by the findings of the GAO and IOM, these are three of the most critical issues facing emergency medicine.

#### 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. If no 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-term solution to a surge of patients, ultimately we need long-term 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 10 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 best interest of the American public.

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.

#### ATTACHMENT

*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 Healthcare 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. In short, 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. In an environment where emergency departments 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 (MA).

- 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 car-

diac 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 solve the crowding crisis that are in the 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. If 20 patients are waiting for 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 pay or 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.

Senator BURR. Thank you, Doctor.  
Nancy.

**STATEMENT OF NANCY BONALUMI, R.N., M.S., C.E.N., DIRECTOR OF EMERGENCY NURSING, THE CHILDREN’S HOSPITAL OF PHILADELPHIA, AND PRESIDENT OF EMERGENCY NURSES ASSOCIATION**

Ms. BONALUMI. Good afternoon. Thank you for convening this roundtable.

My name is Nancy Bonalumi. I’m the Director of Emergency and Trauma Nursing at the Children’s Hospital of Philadelphia, and the President of the Emergency Nurses Association (ENA).

ENA, with nearly 32,000 members, is the only professional nursing association dedicated to defining the future of emergency nursing and emergency care. And on behalf of ENA, I appreciate the

opportunity to engage with this subcommittee to explore options that Congress might implement to improve emergency care by reducing crowding in our Nation's emergency departments.

Let me state right up front that ENA does not support holding or boarding patients in the emergency department. This is not in the best interest of our patients.

The emergency nurse is on the forefront of care in your hospitals. We perform multiple tasks, including assessment and prioritization, planning and implementation, crisis intervention, stabilization, and resuscitation. In these roles, we experience with our patients the all-too-real effects of hospital crowding that we experience every day.

Crowding is a systems issue. It is not confined to the emergency department. Its causes often originate outside of the immediate control of the ED. Some of these causes include an inadequate number of beds in the hospital that have the right kind of equipment to care for the sickest of patients, an inadequate number of nurses who can provide proper monitoring, and elective-surgery patients that occupy beds that are needed by emergency patients. On any given day, each of these factors affects access to emergency care and threatens patient safety and patient outcomes.

Meaningful change for this system demands examination and problem solving at the institutional level, as well as the local, State, and national levels. We need measures to promote systems thinking and coordination that includes forming a national-level forum to facilitate effective communication and coordination related to emergency care. We saw this as a recommendation in the Institute of Medicine Report. To this end, ENA has supported the recent authorization of the Federal Interagency Committee on Emergency Medical Services, or FICEMS that will help to address regional, State, and local EMS system needs. But to enhance the effectiveness and create two-way communication between FICEMS and the outside world, ENA supports Government efforts to create a non-Federal Advisory Council that will provide input to FICEMS from stakeholders who work every day in the emergency-care system.

Federal leadership toward systems problem solving and crowding needs to focus on eliminating regulatory barriers, such as those that are associated with EMTALA. EMTALA has had the unintentional effect of burdening the emergency department with non-emergent patients who we are mandated to treat. And despite Federal efforts to overhaul the restrictions regarding patients with non-emergent conditions, there is much confusion that continues to surround this issue. Hospitals are fearful that if they turn away someone who shows up at their doorstep, that they will still be held liable under the EMTALA regulations, and be subject to severe fines and penalties. What we need is reasonable flexibility for clinical judgment by the emergency-department practitioners, nurses, and physicians to identify those patients who do not meet the EMTALA definition that triggers emergency care.

Nurses are not interchangeable resources. The emergency nurse has vital role that's made all the more precious owing to the workforce shortage that we are currently in. During the 10-year span of 2002 to 2012, healthcare facilities will need to fill more than 1.1 million R.N. positions. The nursing community has been urgently

asking Congress to increase funding for nursing workforce development programs, especially funding for nursing faculty preparation.

The Federal investment in nursing education is less than six-thousandths of 1 percent of the total Federal budget. In 1974, during the last serious nursing shortage, Congress appropriated \$153 million for nursing education, which, in today's dollars, is worth almost \$6 million, or approximately four times what our Federal Government is currently spending. Applications to nursing programs have been rising—thankfully, because we need this workforce shortage to be alleviated—but we have to turn away a number of qualified applicants.

In the academic year 2004–2005, almost 150,000 qualified candidates for nursing school were turned away, because there was no capacity in those schools of nursing to accept them. This is really due to the lack of faculty that we have in our nursing schools. We have no surge capacity in our emergency departments. We have no surge capacity in our nursing education programs. We have done a great effort to really publicize the value of nursing, particularly in emergency nursing; and yet, we cannot meet this demand. We have a great discrepancy between what we have as a workforce need and our ability to fill that.

Nursing educators are retiring at the rate of about 1,800 per year. We are only graduating 4,000 doctorally-prepared nurses annually. There is a huge discrepancy in what we need.

Now, these discrepancies are played out in the workforce in every emergency department in this country where there are short staffing; nurses who are struggling to be able to provide the care that their patients require; causing emergency-department crowding; ambulance diversions. And ultimately it is the patients who suffer the consequences.

The emergency nurses of this country strongly desire to provide skilled and compassionate emergency care to our patients, and we ask that you support the recommendations that ENA has outlined in its written testimony and work with us to create a coordinated, regionalized, and accountable emergency-care system that is staffed, trained, and prepared for our communities when they need us. We cannot achieve this national expectation by ourselves.

Thank you.

[The prepared statement of Ms. Bonalumi follows:]

PREPARED STATEMENT OF NANCY BONALUMI, R.N., M.S., C.E.N.

Good afternoon, Mr. Chairman and members of the subcommittee. Thank you for convening this roundtable to examine the current condition of emergency care 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 Nancy Bonalumi, Director of Emergency and Trauma Nursing at the Children's Hospital of Philadelphia, and the 2006 President of the Emergency Nurses Association (ENA). 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 nearly 32,000 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 engage with the subcommittee and explore options that Congress might implement to improve emergency care by reducing crowding in the Nation's emergency departments. Let me state right up front, *ENA does not support holding or boarding in the ED because this practice is not in the best interest of patients.*

Crowding is a systems issue, and not confined to the ED. Its causes often originate outside of the immediate control of the ED. Some of these are: an inadequate number of beds in the hospital with the right equipment to care for the sickest patients, an insufficient number of nurses who can provide the proper monitoring, and elective surgery patients occupying beds needed by emergency patients. On any given day, each of these factors affects access to emergency care, and threatens patient safety and patient outcomes. Meaningful change for this system demands examination and problem-solving at the institutional level, as well as at local, regional, and national levels.

#### FRAGMENTATION/REGIONALIZATION

*ENA supports government efforts to create a non-Federal advisory council to provide input to FICEMS.* Measures to promote systems thinking and coordination include forming a national-level forum to facilitate effective communication and coordination related to emergency care between and among Federal stakeholders. To this end, ENA supported the recent authorization of the Federal Interagency Committee on Emergency Medical Services (FICEMS) to address the regional, State, and local EMS systems needs. To enhance effective two-way communications between FICEMS and the outside world, a non-Federal advisory council is needed to provide input to FICEMS from stakeholders with daily operational experience in EMS.

*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 saturated, highly fragmented, and variable in the delivery of care. 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 state-wide trauma care systems. Although only eight States have fully developed trauma systems, these state-wide health care 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 fiscal year 2006, provided critical national leadership, and leveraged additional scarce State dollars, to optimize trauma care through system integration that offered seriously 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 an integrated, regionalized emergency care system 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.

#### 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.<sup>5</sup>

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 United States, 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.

#### 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 health care system that demands competencies for a multitude of situations. Hospital staffing systems must acknowledge the need for, and incorporate, training and education time and funding for emergency nurses.

During the 10-year span of 2002 to 2012, health care facilities will need to fill more than 1.1 million RN job openings. The nursing community has been urgently asking Congress to increase funding for HRSA's Nursing Workforce Development Programs, especially to increase funding for nursing faculty preparation. Do you know that Federal investment in nursing education is less than six hundred-thousandths of the total Federal budget? Or that in 1974, during the last serious nursing shortage, Congress appropriated \$153 million for nurse education programs. In today's dollars that would be worth \$592 million, approximately four times what the Federal Government is spending now.

*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.* Applications to nursing programs have increased but at the same time an estimated 147,000 qualified applications were turned away from nursing programs at all levels for the academic year 2004–2005 in large part because of the severe faculty shortage. The results of the disparities in workforce supply and demand are played out in staff shortages in the majority of emergency departments across the country—from staff who are struggling to provide care, to ED crowding, to ambulance diversions, and to the patients who ultimately suffer. The situation is only going to get worse as the population ages.

*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.

#### 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 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 U.S. 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. We ask that you support the rec-

ommendations that ENA has outlined in its written testimony and work with us to create a coordinated, regionalized, and accountable emergency care system that is staffed, trained, and prepared for our communities when they need us. We cannot achieve it alone.

Thank you.

Senator BURR. Margaret.

**STATEMENT OF MARGARET VANAMRINGE, M.H.S., VICE PRESIDENT FOR PUBLIC POLICY AND GOVERNMENT RELATIONS AT THE JOINT COMMISSION ON ACCREDITATION OF HEALTHCARE ORGANIZATIONS**

Ms. VANAMRINGE. Thank you. The Joint Commission welcomes the opportunity to add our voice to this important issue.

We accredit over 15,000 healthcare organizations across a continuum of care in approximately 95 percent of the hospital beds in this country. We recently had an expert roundtable on the issue of emergency-department overcrowding, and the discussions that came from that roundtable, as well as our experience with onsite evaluations, really serve as the basis for my statement today.

Many EDs are in trouble across the country, as we've already heard. It's no surprise, however, that this is the case. We have been building toward this situation for many years, starting far before the altering events of 9/11, the outbreak of SARS, and the threat of avian flu, all of which are making us far more attentive to the capacity in the healthcare system to respond to challenges of all sorts.

In the 1990s, funding policies, as well as stiff marketing competition, led to a wringing-out of many excesses in the healthcare system. This is not to say that those were bad things to have happened at the time, but, when combined with a dwindling base of essential professional staff needed in hospitals and now a burgeoning demand for medical services, we are left with a critical situation. The only guaranteed access to medical care in the United States is through the ED. All persons who present to the ED must be provided with medical screening, exam, stabilization. And no one can be turned away because of their inability to pay. Whereas, EDs were once meant for treating trauma and urgent illness, they are now the safety net for the safety net.

ED demand is driven by an aging, higher acuity population, as well as an increasing number of mentally-ill patients who have no other care option. Community health centers, specifically created to provide safety-net care to Medicaid, underinsured, or uninsured, are typically underfunded and overwhelmed by demand. And community mental-health services are especially lacking and very problematic, as the ED is one of the first places the police take disruptive citizens or mentally-ill, homeless individuals.

Unfortunately, this overall increased demand is coupled with reduced capacity. And I won't go through that, as we've already heard. But we must recognize, if we are to successfully tackle the problems facing EDs today, that what we have is a systems problem, as Nancy very well pointed out, and systems problem requires systems solutions, not piecemeal approaches. We need to look at broad community solutions while we also focus on what is happening within the hospital, such as available community resources to keep citizens out of the ED or the ability to discharge patients

into the community. The emergency department is clearly affected by the adequacy of nursing home, home care, mental health, and other community services to receive patients.

The ED is also part of a smaller system. It's a microsystem of the hospital itself, and thus, the ED can be greatly affected by what goes on in the rest of the organization, including staffing, because an unstaffed bed is an unavailable bed.

Although it is true that EDs have the capacity to deliver an array of medical services for acutely ill and injured patients, emergency departments also depend upon a number of ancillary services, such as laboratory, diagnostic imaging, and skilled nursing, to make that delivery happen. The failure of any one of these services could bring the ED to a halt, thus supporting the notion that the ED is not necessarily the cause of the backlog, but, rather, it is the unit most vulnerable to it. For example, lack of hospital efficiency in areas such as the throughput of patients, surgical scheduling, and management of inpatient care can cause backups in the ED. So can lack of HIT resources or poor triaging system. To underscore this point, it has been shown that hospital leadership, use of hospitalist bed czars, and smoothing of surgical schedules can have dramatic effects in ED backups.

So, what can Congress do? Again, there's no single magic bullet. But Congress, of course, can play an important role to address certain aspects of the problem. First, attention continues to need to be given to the issue of the uninsured, because they serve a large population of the ED. Nevertheless, and contrary to public perceptions of the uninsured's impact, the most frequent visitors to EDs are Medicaid beneficiaries, followed by Medicare beneficiaries. A major percentage of these patients are visiting the ED because of a severe illness that could have been prevented by proper intervention in the community. Therefore, Congress should also support, and work with States, as appropriate, to increase the availability of primary care and other community health services, especially mental-health services.

The current environment around pay-for-performance provides an opportunity for Congress to ensure that appropriate incentives are placed into reimbursement programs that can affect how care is delivered. So, another recommendation would be that, as part of the pay-for-performance framework, Congress should consider a number of incentives to improve the emergency-care processes, such as rewarding an institutional culture that drives improvements in ED quality and efficiency and implements hospital-wide solutions while rewarding HI—health information technology that can bring realtime laboratory and other information to the bedside in the ED, and not have staff in the ED have to search for information.

Another recommendation is that Congress should act on proposals that will lessen litigation and improve the medical liability system.

A fifth recommendation is that Congress should continue to invest in title VIII programs to address the critical nurse shortages in the country, but Congress should also consider how to invest in other health professions education programs in an effective manner, starting with qualified laboratory personnel for hospitals.

And here, I would just like to add that some of these investments need to be targeted. We need to make sure that our leaders of tomorrow, whether we're talking about our medical leaders, our nursing leaders, or our hospital administrative leaders, have schooling in the disciplines of systems engineering and human factors analysis. If we don't have this put into the curricula and have incentives to have this into the curricula of health professionals that—we will not solve the problems, because we will not have the knowledge and skill base we need in hospital care to do so.

So, I'd like to end by just mentioning something about communitywide preparedness. It's clear that we do not have the capacity to address a mass-casualty event, and we will have—we will suffer, I think, with these consequences unless we take some additional action. The Joint Commission, for a long time, has been encouraging communitywide preparedness. So, two recommendations we have for Congress in this area is that it should encourage communitywide, realtime healthcare systems capacity monitoring that gives continuous information on available beds, ED capacity, and other characteristics of the medical system. And if we have that in place on a day-to-day basis, then we will be much prepared, should we have a large-scale disaster.

And last, I would say, in the same area of mass casualty and preparedness, that Congress should also develop concrete expectations for communities that accept emergency preparedness funding and fund a program of objective evaluation for assessing the effectiveness of these emergency preparedness efforts across all players. The Joint Commission has standards for emergency preparedness for hospitals that include the ED. HRSA has its own checklist of hospital preparedness—requirements for hospitals. The homeland security has targeted capabilities list. All these lists need to be harmonized in a manner that there are clear expectations for hospitals for community preparedness. And if we don't have third-party independent evaluation of those metrics that we have all agreed upon that includes looking at the interconnectivity of the medical and healthcare capabilities with the community, we will not know whether or not we're truly prepared. This will require funding, but we believe that critical effort on this regard needs to take place.

Thank you very much.

[The prepared statement of Ms. VanAmringe follows:]

PREPARED STATEMENT OF MARGARET VANAMRINGE, M.H.S.

I am Margaret VanAmringe, Vice President for Public Policy and Government Relations at the Joint Commission on Accreditation of Healthcare Organizations. I appreciate the opportunity to submit comments on the current state of emergency and trauma care in U.S. emergency departments (ED). Founded in 1951, the Joint Commission is the Nation's oldest and largest standard setting and accrediting body in healthcare. The Joint Commission accredits approximately 15,000 healthcare facilities along the entire spectrum of services. Our mission is to continuously improve the safety and quality of care provided to the public. We are an independent voice that is derived from both the multitude of expert opinion that we bring together on tough issues facing the healthcare system, and from our more than 50 years gathering daily information on quality and safety from the front lines of care delivery.

On behalf of the Joint Commission, I would like to take this opportunity to thank the Senate subcommittee members for their dedication to improving the quality and safety of emergency care in the United States. We are especially grateful because we realize the subcommittee has jurisdiction over a very wide array of public health issues: BioShield, the Centers for Disease Control and Prevention (CDC), immuniza-

tions, infectious diseases, pandemic flu, and vaccines. Your specific focus on EDs and emergency care, strongly linked with the aforementioned issues, is both important and germane.

The Joint Commission agrees with the subcommittee's statement that, "ambulances are on diversion, stretchers line ED hallways, ambulances idle waiting to off-load patients, [and] patients leave EDs without being seen." Because the Joint Commission accredits most hospitals, these emergency care issues are of great concern. The Joint Commission recently sponsored an expert roundtable to discuss ED overcrowding. The issues raised in that session, in conjunction with the work we do with providers across the United States, serves as the basis for our responses to the questions the subcommittee has posed in its letter of invitation.

#### WHY ARE EMERGENCY DEPARTMENTS SO OVERCROWDED?

Bolstered by the *Emergency Medical Treatment and Labor Act of 1986* (EMTALA), the only guaranteed access to medical care in the United States is through the ED. All persons who present to the ED must be provided with a medical screening exam and stabilization, and no one can be turned away because of their inability to pay. Whereas EDs were once meant for treating trauma and urgent illness, they are now the "safety net for the safety net." Many patients wait hours, even days, in the ED because they have no other care option. Others, however, view the ED as a convenient choice to receive same-day service without lengthy appointment waits. ED demand is driven further by an aging, higher acuity patient population, as well as an increasing number of mentally ill patients who have no other care option. EDs also have disproportionately high Medicare and Medicaid patient populations.

Additionally, a growing number of uninsured is overwhelming community health centers and other public "safety net" providers. Community health centers specifically created to provide safety net care to Medicaid-insured or uninsured patients are typically under funded and overwhelmed by demand. Community mental health services are especially lacking and very problematic as the ED is one of the first places that police take disruptive citizens or mentally ill homeless individuals.

Unfortunately, this overall increased demand is coupled with reduced capacity. Hospitals are short of available beds and workers, particularly registered nurses. Rising demand for hospital-based care comes at a time when there are fewer hospitals and still fewer EDs. From 1988 to 1998, the number of EDs decreased by 1,128. This diminution of hospital capacity was a planned "benefit" of managed care and federally administered financial constraints designed to control costs and rid the healthcare system of excess and inefficiency. Another factor driving demand involves high medical liability insurance rates in some States, especially for physician specialists. At the same time, many specialists are in short supply and increasingly unwilling to agree to take on-call duties from hospitals.

Overcrowding is clearly a *systems* problem, not just an emergency department problem. This is even true within the hospital itself. The lack of inpatient beds is the most commonly cited reason for crowding in the ED. When patients are "boarded" in the hallway, they take up treatment space, equipment, and staff time, straining an already overwhelmed unit. Overcrowding may also involve the inability to appropriately triage patients, forcing patients into the ED waiting area while they await ED treatment spaces. Although it is true that emergency departments have the capacity to deliver an array of medical services for acutely ill and injured patients, it is also dependent upon a number of ancillary services such as laboratory, diagnostic imaging, and skilled nursing to make that delivery happen. The failure of any one of these services could bring the ED to a halt—thus supporting the notion that the ED is not necessarily the cause of the backlog; but rather is the unit most vulnerable to it.

Last, the emergency department is affected by the number and type of community services that can receive its patients, and the ease at which patient transfer can take place. There must be adequate nursing home, home care, mental health and other community services to receive patients that can be discharged to these other venues, and good service support and collaboration to make these transfers work efficiently.

#### WHAT CONGRESS CAN DO

Complex problems with multiple contributing factors require multifaceted solutions. Therefore, there is no one magic bullet, or single recommendation that will solve the problem. Many stakeholders have a part to play and a full list of strategies for all players would be quite long. The Congress, of course, can play an important role in addressing certain aspects of the problem.

- *First, Congress should continue to address the issue of the uninsured.* Unfortunately, a major source of healthcare for this underserved population is the ED. Thus, in order to properly address the subcommittee's first inquiry of why EDs are so crowded, the uninsured must be acknowledged as a significant demand on the system.

Nevertheless, and contrary to public perceptions of the uninsured's impact, the most frequent visitors to EDs are Medicaid beneficiaries, followed by Medicare beneficiaries. A major percentage of these patients are visiting the ED because of a severe illness that could have been prevented by proper intervention in the community, either by having a relationship with a primary care physician or by having available community-based services.

- *Congress should support and work with States as appropriate to increase the availability of primary care and other community health services, especially for publicly insured populations. One area that needs particular attention in the community is the creation and funding of more mental health services to meet a range of behavioral health needs.*

The current environment around pay-for-performance provides an opportunity for Congress to ensure that appropriate incentives are placed into reimbursement programs that can affect how care is delivered.

- *As part of a pay for performance framework, Congress should consider a number of incentives to improve emergency care processes, such as rewarding: an institutional culture that drives improvement in ED quality and efficiency; fast-track and intervention programs to help ensure patients are receiving care where it can be most effective and efficiently delivered; healthcare information technology solutions to improve occupancy and capacity monitoring; dedicated personnel for quicker bed turnover and streamlining discharge policies and procedures; the use of hospitalists to provide more inpatient care, and specific provisions for treating psychiatric patients in the ED.*

Certain bills introduced in 2005 and 2006, like the *Access to Emergency Medical Services Act* (H.R. 3875 or S. 2750), provide a model for addressing some of the problems and the standards contained within should be vetted with the private sector in order that the standards have broad-based support.

Finally,

- *Congress should act on proposals that will lessen litigation and improve the medical liability system.*

- *Congress should continue to invest in title VIII programs that are aimed at addressing the critical nurse shortages in this country and consider effective funding programs aimed at growing shortages in other essential hospital staff, such as qualified laboratory personnel.*

#### FEDERAL OPTIONS FOR ENHANCING SYSTEM COORDINATION AND INTEGRATION

From a systemwide coordination and integration perspective, Congress should help to alter public perceptions, encouraging all healthcare stakeholders to view ED crowding as a collective problem. Because so many trauma centers and large hospitals report that their emergency departments are operating at or over capacity, it may be difficult or impossible to gain the surge capacity needed to sustain the health care system in a community during a mass casualty event. Community planning for emergency care is essential and should be part of ongoing community and regional efforts. If effectively done on a routine basis, such planning will position the community/region for large-scale disasters.

The Joint Commission has been promoting more community integration and coordination as a means to disaster preparedness. Recent publications have been produced to help guide communities in this regard. For example, the Joint Commission has published:

- *Are You Prepared? Hospital Emergency Management Guidebook* (2006)
- *Standing Together: An Emergency Planning Guide for America's Communities* (2005)
- *Managing Patient Flow: Strategies/Solutions for Addressing Hospital Overcrowding* (2004)

Despite the years of post 9/11 funding, there are still many more efforts which need to be made to ensure that communities are prepared.

- *Congress should encourage community-wide real-time healthcare system capacity monitoring systems.*

- *Congress should also develop concrete expectations for communities that accept emergency preparedness funding, and fund a program of objective evaluation for assessing the effectiveness of these emergency preparedness efforts across all layers.*

## CONCLUSION

If considered crowded today, EDs promise to become busier in the not-too-distant future. A large cohort of aging Baby Boomers are beginning to live longer, the ranks of the uninsured continue to grow, and a growing number of providers are less willing to treat Medicaid- and Medicare-covered patients. In short, more and more patients will enter a diminished number of EDs. Increased demand will be met with reduced capacity. It is the Joint Commission's contention that neither patients nor healthcare providers are well served by the current emergency care system in the United States. The central question is how emergency care services can be restructured to actively encourage providers to implement new policies. Redesigning the emergency care system will be a long-term endeavor, one that addresses larger/national social and economic issues.

Senator BURR. Thank you very much.  
Dr. Bass.

**STATEMENT OF ROBERT BASS, M.D., F.A.C.E.P., EXECUTIVE DIRECTOR FOR MARYLAND INSTITUTE FOR EMERGENCY MEDICAL SERVICES AND PRESIDENT OF NATIONAL ASSOCIATION OF EMS OFFICIALS**

Dr. BASS. Thank you, Mr. Chairman. Good morning.

My name is Robert Bass. I'm the Executive Director of the Maryland Institute for EMS Systems—that's the State EMS agency in Maryland—and I did serve as a member of the Institute of Medicine's Committee on the Future for Emergency Care in the U.S. Health System. I am an emergency physician who specializes in pre-hospital care, which, by the way, was a skill I learned while I was a police officer in Chapel Hill, North Carolina, in the early 1970s. That's a whole 'nother story.

Senator BURR. Did you graduate from Chapel Hill?

Dr. BASS. I did, sir.

Senator BURR. Having two sons there, you have picked up my day, knowing there's somebody that graduates from Chapel Hill.

[Laughter.]

Dr. BASS. I understand, Senator.

[Laughter.]

Dr. BASS. I'm going to briefly summarize the IOM Committee's findings and recommendations regarding pre-hospital EMS. I'm going to focus on that area, giving particular attention to those that relate to the impact of ED overcrowding, emergency preparedness, and the need for greater and more effective Federal coordination.

As you've heard, many emergency departments today are seriously overcrowded with patients, many of whom are being held in the ED because no inpatient bed is available. The widespread practice of holding admitted patients in the ED, also known as "boarding," ties up precious space, equipment, and staff that cannot be used to handle and manage the needs of incoming patients. While there are other factors contributing to ED overcrowding, hospital inpatient crowding and boarding of patients in the ED are believed to be major players.

When EDs are overcrowded, EMS personnel may not be able to transfer patients to an ED bed or turn over care to the staff. This situation can delay definitive care by hospital personnel, as well as delay ambulances from returning to service and responding to the next emergency.

Data from a recent study of ED overcrowding in Baltimore indicated ambulance delays in EDs are increasingly having an adverse impact on the availability of ambulances to respond in that community.

The committee offered three recommendations to address emergency-department overcrowding. No. 1, hospitals should reduce crowding by improving hospital efficiency and patient flow and using operational management methods and information technologies. No. 2, the Joint Commission on the Accreditation of Healthcare Organizations should re-instate strong standards for ED boarding and diversion. And, No. 3, the Centers for Medicare and Medicaid Services should develop payment and other incentives to discourage boarding and diversion.

With many hospitals and EMS services already operating at or above capacity, it is difficult to envision how they would absorb a surge of casualties from a disaster or major act of terrorism. Regardless of whether the disaster is a 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 today.

Disaster response capabilities are also hindered by poor communications and a lack of coordination. EMS, hospitals, and public safety often lack common radio frequencies, much less interoperable communications systems. These technological gaps are compounded by cultural gaps between public-safety providers and emergency-care personnel. 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. For example, there are 52 centers for public-health preparedness with Federal funding to access—excuse me—to address various aspects of bioterrorism, but not one federally-funded center focusing on the civilian consequences of terrorist bombings, even though explosives are the most common instrument of terrorism worldwide.

The committee made a number of recommendations to address these issues. First and foremost, and most important, 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 believes that this can best be accomplished by building a nationwide network of regionalized, coordinated, and accountable emergency-care systems. The committee recommends that Congress establish a federally funded demonstration program to develop and test various approaches to regionalize delivery of pre-hospital and hospital-based emergency care. And, second, designate a lead agency for emergency care in the Federal Government.

There are many compelling reasons for creating a new lead Federal agency for emergency care that are cited in the report. They include creating unified accountability for performance, optimizing allocation of resources, a single point of contact and better coordination of programs, more consistent Federal leadership on policy issues, increased visibility, identity, and stature for emergency-care providers and the system, and greater multidisciplinary collaboration to improve integration of services.

On the other hand, there are significant questions and challenges regarding the location, structure, and function of the new lead agency, the impact this will have on existing EMS-related Federal programs and funding; the difficulties in combining agencies with different missions and cultures, as was experienced in the formation of DHS, that could lead to—result in enhanced fragmentation.

In closing, 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? Strong measures must be taken by Congress, the States, hospitals, and other stakeholders to achieve a level of response that Americans expect and deserve.

I'd like to thank you both for your leadership on this issue, and thank you for the opportunity to allow me to testify today.

[The prepared statement of Dr. Bass follows:]

PREPARED STATEMENT OF ROBERT R. BASS, M.D., F.A.C.E.P.

#### 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. I am an emergency physician who specializes in prehospital care.

#### THE MARYLAND INSTITUTE FOR EMS SYSTEMS

The Maryland Institute for EMS Systems (MIEMSS) is the independent State agency that oversees and coordinates the emergency medical services and trauma system in Maryland.

#### 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 regarding prehospital EMS, giving particular attention to those that relate to the impact of ED overcrowding, emergency preparedness, and the need for greater and more effective Federal coordination.

#### GENERAL FINDINGS

Many emergency departments (EDs) today are severely overcrowded with patients, many of whom are being held in the ED because no inpatient bed is available. The widespread practice of holding admitted patients in the ED ties up pre-

cious 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.

When EDs are overcrowded EMS personnel may not be able to transfer patients to an ED bed or turn over care to ED personnel in a timely manner. This situation can delay definitive care of the patient by hospital personnel as well as delay ambulances from returning to service and responding to the next emergency. Data from a recent study of ED overcrowding in Baltimore indicate that ambulance delays in the EDs are increasingly having an adverse impact on the availability of ambulances.

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

With many hospitals and EMS services 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.

Protecting hospital and EMS personnel 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. EMS personnel that were utilized to transfer patients were some of the earliest victims.

If a patient with SARS called 911 or walked into an American emergency department tonight, the effect would be like tossing a lighted match into a tinder-dry forest.

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.”

#### FEDERAL COORDINATION

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. This may explain, in part, why large amounts of funding are directed toward 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 con-

sequences of terrorist bombings. Explosives are the most common instrument of terrorism worldwide.

The current level of funding received by EMS and 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 hospital and EMS personnel, the committee recommends that Congress significantly increase preparedness funding in fiscal year 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.

#### REFLECTIONS OF THE RECOMMENDATION FOR A LEAD FEDERAL AGENCY

There are many compelling reasons for creating a new Federal lead agency for emergency care that are cited in the report. They include creating unified account-

ability for performance; optimizing allocation of resources; a single point of contact and better coordination of programs; more consistent Federal leadership on policy issues; increased visibility, identity, and stature for the emergency care system and providers; greater multidisciplinary collaboration to improve integration of services.

On the other hand, there are significant questions and challenges regarding the location, structure and function of the new agency; the impact on existing EMS-related Federal programs and funding; the difficulties in combining agencies with different missions and cultures as was experienced with the formation of DHS that could lead to enhanced fragmentation.

#### CLOSING

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? 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 IOM 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 that you might have.

Senator BARR. Thank you, Robert.

I'm going to turn to my colleague, Senator Isakson, who, as I promised you, probably had a more thorough introduction of Dr. Haley.

#### OPENING STATEMENT OF SENATOR ISAKSON

Senator ISAKSON. Well, I thank you, Chairman Burr, not only for allowing me this privilege of introducing Dr. Haley, but I commend you on all the work you're doing on bioterrorism and this important hearing regarding emergency medical services.

And it's really with a great deal of pride that I introduce Dr. Leon Haley, of Grady Memorial Hospital, in Atlanta. It is an almost 1,000-bed hospital serving 22 counties in North Georgia and more than 5 million people in the metropolitan Atlanta area. And it is the designated coordinating hospital for emergency for the region.

There is nobody more qualified to talk about that than Dr. Haley. He's the Deputy Chief of Staff, the Deputy Senior Vice President, and the Chief of Service of the emergency medical delivery system for Grady Memorial Hospital. And to let you know what that impact means and what he oversees, Grady averages 130,000 emergency visits a year. So, nobody is more capable to testify before us and give us some ideas of ways we can improve responding to emergencies and the way we can plan for those tragedies that may or may not come in the future.

It's an honor for me to introduce a great Georgian, and a good friend, Dr. Haley.

#### **STATEMENT OF LEON HALEY, JR., M.D., M.H.S.A., F.A.C.E.P., ASSOCIATE PROFESSOR OF EMERGENCY MEDICINE AND VICE CHAIR OF CLINICAL AFFAIRS FOR GRADY HEALTH SYSTEMS**

Dr. HALEY. Thank you, Senator. I appreciate it. And, again, I want to thank you both for your leadership on this important initiative.

I would like to take the opportunity to thank the U.S. Senate Subcommittee on Bioterrorism and Public Health Preparedness for

inviting me today. I'm honored by the opportunity to participate in a roundtable discussion.

As has been stated in the recent IOM report on the future of emergency care, the emergency care system is but one component of a larger healthcare system and an even larger social safety-net system. Moreover, this crisis is augmented by fragmented local, regional, and national leadership, which led to inadequately coordinated and integrated systems of care.

In addition, unrealistic expectations of daily service performance, disaster-response capability, and surge capacity have become an additional burden for the emergency-care system to shoulder.

Unfortunately, the reasons why emergency departments are crowded are complex and multifactorial, and, like in many things in healthcare and in life, they have tremendous local and regional variation.

On a macro level, a simplistic reason for emergency-department crowding is a rise in emergency-department visits across the country, from 90 million visits in 1996 to over 113 million visits in 2003, while, during the approximate same timeframe, the number of emergency departments in this country fell by almost 500. There are reports of emergency departments closing weekly across the country, with little or no commensurate options for patients and their families to choose.

A more complex but more microrealistic deal is when emergency-department crowding is best viewed by the Asplin conceptual model of the emergency-department crowding that involves input, throughput, and output.

The input phase represents the entrance point into the emergency department. It's composed of those patients who are truly seriously ill and injured, and require emergency care. They may arrive on their own, by ambulance, or by other emergency vehicle, or they may have been sent from another healthcare environment because their condition outstrips the capability of the referring location. This phase also captured the unscheduled urgent care, which is typically a function of the lack of capacity of the current ambulatory-care system to support this component of healthcare. This has increasingly been shown to be a part of an individual's desire for immediate care, secondary to job conflicts, family, or inconvenience. This phase, however, captures individuals where the ED represents the safety net. This group is composed of the vulnerable populations of our society—the chronically ill, the uninsured, the underinsured, prisoners, mental health, and those suffering from substance abuse.

The drivers of this phase are many. They include EMTALA, which has been spoken about before, which mandates that all patients who present to a hospital ED must at least receive a hospital screening exam to ensure that an emergency does not exist. The proof and responsibility is ultimately on the provider, but may include diagnostic testing and specialists to reach that conclusion. While some patients have a level of awareness of EMTALA, all healthcare providers do. This means if they opt not to see a patient in their office and send them to the emergency department, they know the ED must do the screening exam, at the very least. Many EDs and emergency physicians, because of the level of work and re-

sponsibility associated with medical screening exams, just go ahead and complete the patient's evaluation.

Another driver in this phase are the difficulties in accessing primary and urgent care in a timely fashion in many communities, especially when evenings and weekends are taken into consideration. Components of this driver range from decreased reimbursements for primary-care physicians from Medicare, Medicaid, and managed-care, to the uninsured, who have no other choice but to seek the emergency department, to the fact that physicians treating patients in the ED have access to a wide range of medical technology and equipment, consultants, and other evaluation tools. In other words, emergency departments have become one-stop shopping for patients and healthcare providers. And in many States the effect of illegal or undocumented citizens compounds the problem.

The throughput phase, as has been spoken on before, represents that triage phase, which includes nursing assessment, physician assessment, diagnostic treatment, and consultative needs. Crowding drivers in this phase include several operational issues. One of the most significant problems is with ancillary services. Derlet & Richards conducted a survey for the Emergency Nurses Association in which respondents felt that 50 percent of their ED service delays were due to wait times for laboratory and radiology results. Shortages in health-professional staffing also make significant contributions to this crowding in this phase.

While there are certainly shortages in radiology, lab, and pharmacist, a major contributor is nurse staffing. From 1995 to 2000, there was a 26-percent decrease in the number of new nursing graduates in this country. And when compounded with the fact that the average age of a nurse is now 47 and that the ED workload for nurses is generally more complex and more challenging, with worse ratios, it's no surprise that this continues to be a problem.

Another crowding driver in this phase is the increasing problem in the ED with on-call coverage for specialty physicians. In many hospitals and many communities, there's limited or no neurosurgery coverage, limited or no orthopedic coverage, and other specialties are challenged, as well. Reasons for this lack of coverage range from reimbursement issues to malpractice concerns, all of which create incredible challenges.

The final phase is that of output. It represents the options for the ED once the ED patient's care has been completed. It ranges from discharge from the ED with primary- or ambulatory-care followup, transfer to another facility, to hospital admission. As has been stated, the hospital admission has proven to be the most complex and the most challenging, because when hospitals reach their inpatient capacity, there's no place for the admitted patient wait but the ED. It is not unusual for emergency departments to have 25 to 50 percent or more of their emergency departments filled with admitted patients who do not have a bed; hence, these patients become boarders. Having ED spots used by admitted patients means there are no new options for new patients that arrive in the ED. This, in turn, leads to problems with throughput, ultimately affects input, ultimately leads to ambulance diversion. And in many

locales, admissions for pediatric and mental health become increasingly complicated, and also contributes to extended delays.

There are a lot of ideas, but there are two overarching themes for Congress to address the ED crowding: opportunities and incentives. A major opportunity exists for Congress to create the appropriate incentives—primarily positive, but negative, as well—to reduce the ED crowding. One might be such as to address EMS to develop payment initiatives and other—possibly others, to encourage hospitals and health systems to reduce the hospital boarding problem by finding ways to facilitate patient movement in the inpatient setting.

A second incentive, that would encourage primary-care providers to engage with the urgent-care patients is by receiving patients in their offices or finding alternative sources of care beyond the emergency department.

We must also evaluate the effective DRG payments on the current system. It has been well-described that patients admitted from the ED are more costly than elective admissions for the same surgical DRG. As such, hospitals are more inclined to focus on elective admissions than those from the emergency department. And we also encourage the Joint Commission to re-instate strong standards that sharply reduce and ultimately eliminate ED crowding, boarding, and diversion.

Another great opportunity for Congress is to examine and augment the existing research in emergency medicine. I'm currently a member of the board of directors of the Society for Academic Emergency Medicine, the largest organization in the country whose mission is to promote research and education in emergency medicine. There is currently no NIH study section with a specific on emergency care, and there exists a great opportunity to create such a section or institute with that focus.

Finally, there exists a great opportunity for Congress to create a coordinated, accountable system that is both a function of opportunity and incentives. The system would be technologically advanced and efficient, would be seamless, with multiple entities, and would be supported with the appropriate advanced research.

I thank you for this opportunity to talk to you today, and we look forward to the continuation of the discussion.

[The prepared statement of Dr. Haley follows:]

PREPARED STATEMENT OF LEON L. HALEY, JR., M.D., M.H.S.A., C.P.E.

I would like to take the opportunity to thank the U.S. Senate Subcommittee on Bioterrorism and Public Health Preparedness for inviting me today. I am honored by the opportunity to participate in the roundtable discussion on *Crisis in the ER: How Can We Improve Emergency Medical Care?* As has been stated in the recent IOM report on *The Future of Emergency Care*, the emergency care system is but one component of the larger health care delivery system and of the even larger social safety net system. Moreover, this crisis is augmented by fragmented local, regional and national leadership which has led to inadequately coordinated and integrated systems of care. In addition, unrealistic expectations of daily service performance, disaster response capability and surge capacity have become an additional burden for the emergency care system to shoulder.

*Why are emergency departments (ED's) crowded and what can Congress do to improve the situation:* Unfortunately, the reasons why ED's are crowded are complex and multifactorial and like much in healthcare and in life, have tremendous local and regional variation. On the "macro" level, a simplistic reason for ED crowding is the rise in ED visits across the country from approximately 90 million visits in

1996 to close to 113 million in 2003 while during approximately that same time period, the number of ED's across the country fell from 4,547 in 1994 to 4,177 in 2000. There are reports of ED's closing weekly across the country with little to no commensurate options for patients. A more complex, but more "micro" realistic view on ED crowding is best described by the Asplin conceptual model of ED crowding. This model breaks the component of the ED visit into three phases: input, throughput and output; it serves as one of the best models to understand the complexity of the problem and will serve as the basis of my thoughts.

*Input:* This phase represents the entry point into the ED. It is composed of those patients who are truly seriously ill or injured and require emergency care. They may arrive on their own, by ambulance or other emergency vehicle or they may be sent from another healthcare environment because their condition outstrips the capability of the referring location. This phase also captures unscheduled urgent care which is typically a function of the lack of capacity of the current ambulatory care system to support this component of health care. This has increasingly been shown to be a function of an individual's desire for immediate care potentially secondary to job conflicts, family and/or convenience. Finally, this phase captures individuals where the ED represents the "safety net." This group is composed of the vulnerable populations in our society: the chronically ill, the uninsured, the underinsured, prisoners, mental health and those suffering from substance abuse. The drivers of ED crowding in this phase are multiple and many ED's suffer from not just one of these factors, but many of them. One primary crowding driver in this phase is EMTALA which mandates that all patients who present to a hospital ED (in a hospital that receives Medicare/Medicaid funding) must at the very least receive a medical screening exam to ensure that an emergency does NOT exist. The proof and responsibility is ultimately on the provider, but may include diagnostic testing and specialists to reach that conclusion. While some patients have a level of awareness of EMTALA, all healthcare providers do. This means if they opt not to see a patient in their office and send them to an ED, they know the ED must do the screening exam at least. Many ED's and many emergency medicine physicians, because of the level of work and responsibility associated with medical screening exams, just go ahead and complete the patient's evaluation. Another driver in this phase are the difficulties in accessing primary and urgent care on a timely fashion in many communities, especially when evenings and weekends are taken into the equation. Components of this driver range from decreasing reimbursements for primary care physicians from Medicare, Medicaid and Managed Care, to the uninsured who often have no other choice but to seek care in the ED, to the fact that physicians treating patients in the ED have access to a wide range of medical technology and equipment, consultants and other evaluation tools—all in environment. In other words, many ED's have become "one-stop shopping" centers for patients and healthcare providers. Another driver in many parts of the country, but not all, is the influx of undocumented individuals into the system. Border States tend to be most affected, but because of limited options for the healthcare needs of undocumented individuals, the ED becomes a place of choice.

*Throughput:* This phase represents the actual treatment component of the ED visit. This includes the actual triage process by which we ascertain patient acuity, the nursing assessment, the physician assessment and any diagnostic, treatment and consultative needs. Crowding drivers in this phase include several operational issues. One of those is significant problems with ancillary service delays. Derlet and Richards conducted a survey for the Emergency Nurses Association in which respondents felt that 50 percent of their ED service delays were due to wait-times for laboratory and radiology process and results. Shortages in health professional staffing also makes significant contributions to crowding in this phase. While there are certainly shortages in radiology and laboratory technicians and pharmacists, a major contributor is nurse staffing. From 1995 to 2000, there was a 26 percent decrease in the number of new nursing graduates in this country and when compounded with the fact that the average age of a nurse is now 47, and that the ED workload for nurses is generally more complex and with worse staffing ratios, then it should come as no surprise that ED's have challenges with nurse staffing. Another crowding driver in this phase is the increasing problem with ED on-call coverage for specialty physicians. In many hospitals and in many communities, there is limited or no neurosurgery coverage for the ED, there is limited or no orthopedic coverage and other specialties are challenged as well. Reasons for the lack of coverage range from reimbursement issues to malpractice concerns which may or may not be legitimate, but certainly create challenges for many ED's.

*Output:* This phase represents the options for the ED once the patient's ED care has been completed. This ranges from discharge from the ED with primary or ambulatory care followup, to transfer to another care facility to hospital admission. It is

the hospital admission that has proven to be the most complex and the most challenging because when hospitals reach their inpatient capacity, there is no place for the admitted patient to wait, but the ED. It is not unusual for many ED's to have 25–50 percent (or more) of their ED's filled with admitted patients who do not have a bed; hence these patients become “boarders” in the ED. Having ED spots being used by admitted patients means there are no options for the new patients that arrive in the ED. This in turn leads to problems with throughput as described above and ultimately affects the input phase as well which can lead to ambulance diversion. Moreover, in many locales, admissions for pediatric and mental health patients is even more complicated and also contributes to extended stays in the ED.

*Options for Congress:* While there are a lot of ideas, I think there are two overarching options for Congress to address ED crowding: Opportunities and Incentives. A major opportunity exists for Congress to create the appropriate incentives—primarily positive, but negative ones as well—necessary to reduce ED crowding. One such incentive might be for the Centers for Medicare and Medicaid Services to develop payment incentives (and possibly others) that encourage hospitals and health systems to (a) reduce the hospital boarding problem by finding ways to facilitate patient movement to the in-patient setting; (b) incentives that encourage primary care providers to engage with urgent care patients by either seeing patients in their offices or finding alternative sources of care beyond the ED; (c) to evaluate the effect DRG payments have on the current system. As well described in the IOM report, there is research from Munoz-1985 and Henry-2003 that suggests patients admitted from the ED are more “costly” than elective admissions for the same surgical DRG. As such, hospitals are more inclined to focus on elective admissions than those from the ED; and (d) to encourage the Joint Commission on the Accreditation of Healthcare Organizations (JCAHO) to reinstate strong standards that sharply reduce and hopefully ultimately eliminate ED crowding, boarding and diversion. As the primary accreditation organization for hospitals and health systems, JCAHO, under a mandate from Congress, is in the appropriate position to force hospitals to meet their crowding demands. Congress can also intervene on the crowding issue by “creating” opportunities. One such opportunity proposed by the IOM would be the development of a demonstration program to encourage States and local regions to identify and test alternative strategies to address crowding on a system level than leaving it strictly to the behavior of individual hospitals. Another great opportunity for Congress is to examine and augment existing research in Emergency Medicine. I currently am a member of the Board of Directors of the Society for Academic Emergency Medicine, the largest organization in the country whose mission is to promote research and education in Emergency Medicine. There is currently no NIH study section with a specific focus on emergency care and there is a great opportunity to create such a section or institute with that focus.

*Who is leading the charge to improve emergency care at the Federal level and what options exist for enhancing system coordination and integration.* Unfortunately, there is no lead organization addressing emergency care at the Federal level. In fact, that concept is a specific recommendation from the IOM report which states that the Federal Government should consolidate functions related to emergency care, currently scattered among multiple agencies, into a single agency in the Department of Health and Human Services. There are agencies responsible for disaster preparedness, bioterrorism, public health and emergency services for children, but they are all acting independently and not under a single umbrella.

In any existing locale, there is the potential for several ED's and several EMS providers not to mention fire and police. Unfortunately, these organizations do not communicate well together, both philosophically as well as logistically. They operate under different leadership structures, often have different missions and visions and almost always have different technologies that prevent adequate coordination on a daily basis, yet alone during the events of a disaster. There are over 6,000 9-1-1 systems across the country and they are frequently under different jurisdictions and the standards by which they and EMS providers operate are not under a Federal or national standard.

Congress has several options and opportunities to enhance system integration and coordination. One, technology coordination. As mentioned earlier, different ED's, EMS providers, fire and police are frequently using different technology and even if the first responders are on the same frequencies, the hospital ED is often the forgotten link and is not included. Through grants, demonstration projects or awards, Congress can encourage system integration, by awarding locales or regions that agree to work together money for technology integration. For example, we should envision a system that allows an EMS provider to pick up a patient from any location, look at a computerized screen in the truck that allows them to see the ED status of all the ED's in their region, select the most appropriate ED based upon pa-

tient condition and acuity, ED status and the other cases that are currently in route to the ED's in that region. Two, system accountability. Unfortunately the number of service providers (ED, EMS, etc) means that there is no one system of accountability of care, there is no centralized database to assess EMS or emergency department care and without a lead organization/agency, there is no one to monitor the process or progress. There has been suggestion that creating a lead agency, composed of the appropriate mix of legislators, physicians, EMS providers and government officials would be an appropriate entity for congress to create and develop.

#### SUMMARY

Many hospital emergency departments are crowded and the reasons are multifactorial. The problem can best be viewed through both a "macro" assessment of the issues as well as the "micro" events that actually occur at the emergency department level. Moreover, problems with ED crowding are inadequately addressed at the Federal level. There is currently no lead agency in the Federal Government that has the responsibility to assess and monitor emergency services and while challenging, there is opportunity for the Federal Government to step up to the challenge and change emergency services for our future. It is clear that ED crowding is really a function of "hospital and system" crowding and solutions should reflect that reality.

There are many issues that affect ED's on the "macro" level. There are shifting demographic trends in emergency care as ED visits across the country have been rising in the past decade; over 113 million patients were seen in the Nation's emergency departments in 2003, up from 90 million one decade ago. In addition, the number of emergency departments across the country has fallen by over 400 during this same time period. Also on the macro level, emergency departments must comply with EMTALA which mandates that all patients presenting to hospital ED's must at least provide a medical screening exam for patients. ED's are also often the first option for care for patients who are uninsured or underinsured, but increasing, even the insured population has come to view the ED as a viable first alternative for care. ED's have become "one-stop shops" where advances in technology, access to consultants and specialists and diagnostic testing is available of a 24/7/365 basis. Finally, ED's have become the safety net for the vulnerable populations in our society including the mentally ill.

On a "micro" level, hospital ED crowding can be broken into three phases: (a) input, (b) throughput, and (c) output, where problems in any one of these phases will lead to crowding. Input is composed on legitimate emergencies, but more importantly patients who are vulnerable and those who were unable to access the urgent or ambulatory care system leaving them no other option but the hospital ED. Throughput represents the actual treatment and care phase of the ED visit. Factors that lead to problems with throughput range from staffing inadequacies, particularly nursing, to delays in ancillary testing to problems with on-call specialty/consultant coverage. Output represents that phase where a disposition decision has been made. In most cases, that represents a discharge from the ED. However problems arise when admitted patients, or ED Boarders, remain in the ED when the inpatient units are full.

Unfortunately, there is a no lead Federal agency that directs emergency care services; there are instead several agencies, in several departments where emergency care is currently scattered. Unfortunately, this leads to fragmentation, lack of accountability and inadequate monitoring. There exists the opportunity for Congress to create a coordinated, accountable system that is both a function of opportunity and incentives. This system would be technologically advanced and efficient, would be seamless between multiple entities and would be supported with advanced research.

Senator BURR. Dr. Haley, thank you very much.

What I'd like to do is spend just a few minutes on some initial questions, if I can, and then recognize Johnny for some questions before he has to leave. And then I'll spend the balance of the time, maybe until 4 o'clock, in an exchange of questions, and hopefully a little further mining of some of your thoughts, not just on the problems that exist that I think we find pretty wide consensus on, but where those solutions are.

And, I guess, first and foremost, I want to go to Margaret and Nancy, because I think both of you raised, actually everybody

raised, the nursing shortage in some fashion. And I remember, about 5 years ago, we passed the Nurse Reinvestment Act, targeted at underserved areas, from the standpoint of nursing. It dealt with scholarships, loan repayments, and faculty loan repayments. I don't question that there's a nursing shortage. It's real. I see it in every community I represent. My question to you two would be, Is this program working? If it is, is it just not producing enough? Or, if we mine down, do we find that we have shortages on clinical facilities for nursing programs to expand and the clinical side of their studies can't be completed? Are there additional shortages, as in professors, that don't allow the class sizes or the multiple classes in the 24-hour period to take place? And, if you would, rank the issues in importance, from the standpoint of how we solve this.

Ms. VANAMRINGE. Well, you're probably the expert, Nancy, but I'll put my 2 cents in anyway. I think the Nurse Reinvestment Act was very, very important, but there still are a number of issues.

First of all, it takes a long time between the initial investment in a nurse going through the training for us to actually see the results out in the field. So, it's going to take a number of years anyway. And we're certainly trying to pull together the data to show: for every X number of dollars one puts into the Nurse Reinvestment Act, how many nurses we get out. But a critical stumbling block we have right now is the faculty issue. So, many qualified applicants to nursing schools are being turned away, because there isn't enough sufficient faculty to teach these students. That is a real problem. So, I think we have that.

We also have an issue, in that we need to have, I think, a consideration of almost a residency or type of training program for nurses, postschool, to make sure that they have the expertise to go into these high-pressured situations, as opposed to just being put into the hospital, kind of, cold, with just the hospital's own training courses. So, I think we need some additional funding in that area, as well.

Ms. BONALUMI. I do want to express my gratitude for the Nurse Reinvestment Act that was passed in 2002. The unfortunate part of it is that the appropriations are not adequate to meet the demand. We have only been able to fund approximately 18 percent of the loan repayment requests that have come in, and about 6 percent of the scholarship applications that have come in, in the years that have passed since the Reinvestment Act was launched.

And, as our colleague has said, the nursing faculty shortage is critical. We are turning people away who want to become registered nurses. We're making them go through extensive periods of time before they can begin their education to become an R.N. And then, indeed, once they graduate—and as a director of an emergency department, we hire nurses right out of their education into the emergency-department setting. We really try to screen for the most qualified candidates from the best schools so that we have the best and the brightest coming to work in our department, but we still can't fill all the positions that we have, even with taking in brand-new nurses. They require an extensive period of time before they're really comfortable taking care of patients on their own, especially in my department, where our patient population is really very vulnerable. They're very small children, and they have—they

come in very critically ill, and it requires a great deal of expertise to care for them. So, we make our nurses go through a minimum of 4 to 6 months of, kind of, tutored education before we let them work independently in our department, and that is a very—that is a long time. Some hospitals don't grant that much protected time to get oriented to the work and are put in their new jobs and are working on their own, independently, within a matter of a few weeks. That is a very stressful situation.

So, I think the recommendation of a—kind of a residency program, or sort of a tiered approach to education, would be something that would be very prudent.

But, clearly, the funding, in and of itself, is a part of the root cause of why we cannot create enough nurses. There is interest; we just can't meet the demand. Some of it is physical space in schools of nursing, that they don't have enough classroom, but it is really the allocation of how many students a faculty person can have in their classes. And I've worked as faculty in a school of nursing. I'm only able to carry a responsibility for seven or eight nursing students when they're in their clinical practice. You can't supervise more than that and expect them to be able to practice safely. So, there's a huge issue with being able to generate enough people who want to train the next generation of nurses in our country.

Nursing faculty positions are very poorly paid compared to positions in a hospital. So, the salary of a person who has a doctorate in nursing, who is teaching at a school of nursing, may be one-half of what a staff nurse who is working in a hospital setting could receive. So, there's a great disparity in the amount of education they need and the expense they incur to do that. Combined with poor salaries, really doesn't make it a very attractive combination for people to move into that role.

But through additional funding from Congress to the Nurse Reinvestment Act, I think that we can make a difference. And it won't be something that will happen overnight, you're absolutely right. It takes 4 years for a nurse to go through a college program, and then another year to really feel comfortable in their practice. So, even if we increased funding in the fiscal year 2007 budget, it would be, you know, perhaps fiscal year 2012 before we would really see the full effect of what that increased funding could do to help schools of nursing and help the nursing workforce shortage.

Senator BURR. Clearly, this won't be the last time we go into this area, from the standpoint of trying to figure out what we do.

I want to recognize Senator Isakson.

Senator ISAKSON. I want to thank the panel. I want to apologize. I just got—my BlackBerry went off, and I've got to go back to another hearing, but—I was very intrigued by Dr. Haley's testimony, particularly in the section entitled "Options for Congress," talking about positive and negative incentives to accomplish some things to reduce the pressure on emergency rooms.

And I guess this is both a statement and a question. I hope you will follow that with some specific recommendations on what those incentives might need to be. Particularly, I was intrigued when you talked about incentives that encourage primary-care providers to engage with urgent-care providers by either seeing patients in their office or finding alternative sources of care beyond the emergency

room. Anything you can get to us that we might do as a policy, that, through incentives, could cause those types of things to happen, would be a tremendous help. You list five specific categories there we could address. I would just say, on behalf of the Chairman, here, and myself, any of those suggestions you have, we would love to see.

Dr. HALEY. Thank you. I think—and we listed a few of those—I think the opportunity does exist to create the appropriate options and incentives. And, obviously, form follows finance, as—oftentimes for the healthcare community, as well, and making it financially feasible for primary-care physicians to keep extended office hours, to be specific, or weekends, or whatever the options may be. Right now, there's no incentives for them to see more patients. In fact, it may be more stressful, and depending upon their cost structure, it may actually cost them to stay open. So, making sure we have those options for people and whatever freestanding urgent-care centers or options for people exist, I think, is important, as well.

And then, sort of, dovetailing it with some of the hospital initiatives, making sure that we create whatever financial incentives are appropriate to reduce that boarding problem, to help get patients upstairs, will then give us options, in terms of seeing urgent-care population in the ED setting.

Senator ISAKSON. Just one, following up on that. A lot of people—and I'm not a medical person, but a lot of people talk about—when you referenced that the cost of treating a emergency-room referral in the hospital for the same illness or problem is oftentimes much more expensive than the person that does not refer from the emergency room, I would assume that's because those nonemergency-room folks probably have better access to normal healthcare, normal physician services, than one who shows up in the emergency room. Is that correct?

Dr. HALEY. That's one way of thinking about it. I think the challenge we have, of course, is sometimes the perspective that we bring. So, we're obviously trained, from a physician and nursing standpoint, to think emergency first and making sure the patient doesn't have an emergency. So, we tend to think from one different perspective.

The other option is, we have standby costs; and so, if we're going to be—or use our emergency departments to help us with surge capacity, emergency preparedness, we do have a lot of standby costs that are built into it. In that regard, by getting people to an appropriate setting of care, means that we can probably do it from a lower-cost perspective.

Senator ISAKSON. Thank you, Doctor.

Senator BURR. Thank you, Johnny.

Johnny actually headed where I was going next. I'm going to spend a little bit of time here, because—I think it started with Dr. Blum's comment, which I thought was very appropriate, "Our job is taking care of sick people. That's what we do." So, I'm going to ask a similar question in a different way. How many people that you treat are not sick?

Dr. BLUM. Well, sir, it's probably a bit of a misconception that we try to address that our Nation's emergency departments are full of people that don't need to be there. Certainly, there are some of

those. We sometimes joke that nonemergent patients crowd our waiting rooms, but they don't necessarily crowd our emergency departments. Because we take the worst patients first, you know, people that aren't very sick go, kind of, to the back of the line. And so, there are certainly people that have no access to care anywhere else, that have minor problems, that come to the emergency department, but that's not the root cause of this problem.

Now, it would be safe to say that people with minor problems end up in the emergency department because of lack of care of their minor problems. If the patient with asthma doesn't get regular care, they will eventually have an asthma attack that appropriately lands them in the emergency department. A patient with diabetes that doesn't have regular access to care for that diabetes will end up with a diabetic emergency that lands them in the emergency department. But, Senator, it's a misconception to believe that if we could just get nonemergent patients out of the emergency department, we would solve our problems. That will not do it, trust me. In my emergency department, the people that are lining my hallways and filling my beds all need to be there. Many of them need to be upstairs after I've done my job and treated them, but they all need to be in a healthcare facility. My waiting room may be full of people that don't necessarily need to be there.

Senator BURR. Is there any distinction between the individuals that are uninsured and individuals that might be Medicaid-covered, relative to how they access the ED?

Dr. BLUM. Only in that it affects their access to primary care. We are blind to that. As an emergency physician, I have no idea what kind of insurance they may have. I mean, I could make speculation about someone being uninsured or whatever, but we are appropriately blinded to that. We take people on the basis of their illness and not on their insurance or medication. Now, having said that, if you have a Medicaid system in the State that provides very limited access to patients to primary care, they're going to use the emergency department in increased volumes. Certainly, the uninsured have no other option. There are 47 million people out there that have no option.

And even the Medicare population—you know, physicians in this country are facing 37-percent pay cuts under Medicare over the next 8 years. Many primary-care physicians are already operating at the margin on Medicare patients. You know, as those cuts go into effect, primary-care physicians are going to have a limited ability to see more and more Medicaid patients—Medicare patients, I'm sorry. And we know the Medicare population is burgeoning. And so, what's going to happen to those patients when they can't get their primary care? They're going to come to the emergency department.

And so, all of those—all of those payor types have reasons to use the emergency department. And all those issues need to be addressed if we're going to truly create a system that has the kind of capacity that we need.

Senator BURR. Dr. Haley, you raised the issue of—I think, in response to Senator Isakson, as well as in your testimony—that we need to focus on creating some incentives so that people choose the right delivery point to get access to care. If it is not an emergency

case, then—even if it's not many in your settling, it may be more in somebody else's where patients actually access the emergency department for primary care—but there needs to be an incentive to sort that out so we don't have to deal with it.

I think Walgreen is headed into some type of primary-care delivery in their stores. Is that right, is the private sector now attempting to do what you're talking about, creating an option that, No. 1, is on a predictable schedule and No. 2, predictable from the standpoint of cost, if they prove that the quality can be delivered there? Is that now in competition with not just the emergency room, from the standpoint of whether somebody goes for a non-emergency visit, but also isn't that, in essence, going to compete with the private docs, as well?

Dr. HALEY. Well, I think the—

Senator BURR. And do you see it as a help or a hindrance?

Dr. HALEY. I think—a couple of issues. Certainly, the patients who present to the mini-clinic concept of the Walgreen's—and we're seeing some of that in Georgia, as well—for a sector of the patient population, that might be a reasonable option for them to choose. But, obviously, that group is not going to take the uninsured, they're not going to take the underinsured, and they're certainly not going to take the vulnerable. So, for a very small segment of the patient population, that may be a reasonable option for them, and we'll just have to see. Now, many of those clinics, of course, are not staffed by physicians; they're using nurse practitioners. So, there's a limitation in the amount of care they can provide. Obviously, there are timeframes. So, for a very small segment, that's going to be an option. For some of the segments that Dr. Blum was talking about, in our emergency department, you've got a different group of patients. And he described it very well. The emergency department is very crowded with very sick and injured patients. The waiting room is very crowded, in our case, with patients who have urgent-care options. The patients are making their own individual choices about how to access the system. And, yes, ultimately we can think through a better payor system. We may be able to think about how to create the appropriate patient incentives. But right now we don't even have the appropriate healthcare provider incentives, so there are no, or very limited, incentives for healthcare providers to provide extra ambulatory or extra care, there are very little incentives. In fact, in many States, as Medicaid managed care continues to be rolled out, particularly in our State, there's even less of an incentive to do that, because they're getting challenged by some of the payment mechanisms, that they don't even want to be able to participate in the system, if possible.

So, it gets back to, I think, what was addressed by some of the earlier speakers about really making sure we think about how we address the system. We keep trying to get to, sort of, one element of—one silo, and another silo, and another silo. We've got to really think, from a systems perspective, about how to address, sort of, that bigger problem.

Senator BURR. Dr. Bass.

Dr. BASS. Senator, I was going to say that the IOM report actually spent a fair amount of time on this issue. And the figure I want to throw out is that—you've heard me refer to the growth in

the number of patients coming in the ER over a 10-year period was from about 90,000 to 110 to 114—million, excuse me. And the bottom line there is, if you look at those patients, the majority of the new patients coming to the ER, in fact, were insured. And there are probably a number of reasons for that. One is that, even though they were insured, they had difficulty accessing care. It might be because their physicians don't have convenient hours. It might be because they're enrolled in an HMO that has very tight scheduling, and, when unscheduled demand for care comes, they turn to the ER. But there was another big factor, which is that the perception in the public right now is that there's quality care in the emergency departments, and they view that as a safe, good place to go for care. So, that is a factor.

I also wanted to point out that there was a recent study in the *Annals of Emergency Medicine* that, sort of, looked at this issue of the folks who aren't too sick coming to the ER, and whether they were plugging up the ER. In fact, if you look at it in the study, it strongly indicates that it's not the patients with minor complaints that are plugging up the ER; it's the sick patients that come in, that need to be admitted, that are tying up the staff. And, in fact, they've looked at some areas where they, sort of, try to take these minor illnesses out of the equation; and, in fact, it has no impact on crowding.

Other research, up in Massachusetts, looked at the issue of trying to correlate what was happening in the hospital with ambulance diversion. They found out that the number of folks coming to the ER had almost no impact on ambulance diversion, but the percentage of beds occupied in the hospital had a very high impact on ambulance diversion.

Senator BURR. I agree. And I think Margaret alluded to the fact that having the ability to upgrade health technology, the ability to, in realtime, know where the vacancy exists, know where the backlog isn't, so that, in fact, we can direct patients to the right entry point, the better off the entire system is. Without that, you're blind. If there's a delay, the delay gets worse with everyone that comes in.

Nancy, you said—and I just want to explore this a little bit more—EMTALA was burdening ERs with nonemergency cases. Now, the good news is, I think the data exist for us to figure out how many of the overall emergency-room visits are, in fact, non-emergencies. It's a little bit more difficult, because of—not your interpretation of EMTALA or his interpretation of EMTALA or my staff's interpretation—who just reminded me, in 2003, CMS tried to clarify EMTALA to say “only need to do screening”—the only interpretation that's important is the lawyer of the hospital, because his interpretation will not be “screening only,” it will be “do everything you need, to make sure that, from a liability standpoint, we are covered.” Therefore, it is not as much what the percentage is of nonemergency folks, it's “Should we be treating nonemergency folks? Should we be delivering primary care in an emergency department?” Maybe it's not the degree of it, but, based upon the legal interpretation of “exposure,” what lengths does an ED doc, what lengths does an ED nurse, what lengths does an administrator then require the system to go to?

And, ultimately, we know that the majority of the system is only going to reimburse a certain amount. And if they're uninsured, the likelihood is the collection rate is less than 10 percent, and few, but some, pay out of pocket. But the reality is that, in some cases, we're delivering \$50 worth of care and charging \$1,100 because of the legal interpretation that has nothing to do with the healthcare professionals.

And I want to mine down just a little bit further, if I can. How much of the challenge is with individuals who either come to the ER, who should have never been an emergency-room case, or who might be Medicaid and end up there, or are uninsured and end up there, end up in the ER because they have no relationship with a healthcare professional?

Ms. BONALUMI. I think that would be information that would be really helpful, because I think, as you heard, the emergency departments have become primary-care centers, and that many of these patients who come in, when you say, "Who's your family doctor?"—because that's information we, as triage nurses, will ask them, because we want to forward a report to them—"I don't have one," period, especially the uninsured, who have, really, no other access point.

Emergency departments have really become the Ellis Island of healthcare, in terms of what we are expected to provide to our communities. And I think, Margaret, you talked about the safety net. We are the safety net to the safety nets now for communities at large. And so, the fact that these patients are coming into our hospital, and we really are still very limited in our ability to say, "You have had a cold for 2 weeks, and we would like you to go to this clinic tomorrow morning and have an examination over there, where it will cost you, incrementally, you know, a very small percentage of what we will charge you for an emergency-department visit," there is still great concern that that's a liability for the hospital, because we haven't really proved, or ruled out, that a medical emergency really exists.

So, the recommendation I would make is that Congress really have CMS clarify those very finite pieces of the EMTALA regulation. They have used it, but it still creates—I think, Rick, you, as a practicing ER doc, know it's very conflicting, and we feel very caught in the middle.

You know, there was a point in time, with the immigration bill, that hospitals were going to be asked to identify and report illegal aliens that came for care in the ER. That's in direct conflict to the EMTALA regulation, which says, regardless of who you are—

Senator BURR. We have never said we were consistent.

[Laughter.]

Ms. BONALUMI. We would like some consistency. That's my recommendation.

Rick.

Dr. BLUM. I'm, unfortunately, old enough to have practiced before EMTALA, so I can give the perspective of pre-EMTALA versus post-EMTALA. And I can tell you, for me and the colleagues that are in my generation of older emergency physicians—or getting there, anyway—EMTALA didn't make much difference in our day-

to-day practice at all. We still saw everybody that came in the door, and treated them appropriately.

With regard to the screening exam, it's an interesting feeling for that. You know, there's this concept, "Well, if we could just screen them and get them out of the emergency department, that would solve our issues," but once you've screened them, as an emergency physician, you're 90 percent done. You know, it would be like fixing your transmission and not putting the last bolt in to not give them that prescription and send them on their way. So, most of us just do that. Because that—quite frankly, you know, it's hard to look a patient in the eye and say, "Well, I've evaluated you, and you have an earache, and maybe you really don't need to be in the emergency environment, but you need this antibiotic; but I'm not going to give it to you, because, you know, this was just a screening exam." It's an unreasonable kind of position to take. So, most of us just go ahead and complete the treatment, at that point, because we're 90 percent there by the time—

Senator BURR. Let me suggest to you that I think you do put the last bolt in. But what that person needs to hear is, "A transmission is not designed to go from reverse to drive while you're still in motion." Therefore, without that education, the likelihood is they're going to come back for another transmission. And my point is that we could probably talk all day about the makeup of the patient that you see, and I think we'd all agree it's probably different everywhere that you go. But when you talk about the patient that likely could have been prevented from being a visitor, when you focus on where that problem is, I think what we're going to find out is, that without a relationship with a healthcare professional, there is no education. You're not designed to be an educational component to somebody who walks into the ED. You're there to treat sick people. A healthcare relationship is one that's there to begin to educate somebody about disease management, takes that asthmatic and makes sure that they learn to avoid an exacerbation—where they're going to the ER.

And to some degree—I know we hate to admit it, but the practice of medicine has changed since EMTALA came into place, because we no longer have the ability after 5 o'clock to call and all of a sudden have our primary-care doc, or any doc, necessarily say, "Let me come by and see you." That's the realities of what we're dealing with. And we're challenged with trying to make this work, understanding that some changes are irreversible, as well.

Margaret.

Ms. VANAMRINGE. I couldn't agree with you more. I think you said it very well. The issue we found at our roundtable is that there's significant belief that the lack of having primary-care relationships is contributing to the problem. And, as you said, the issue isn't just that they come to the ED. If they get that prescription and they leave, if they have any problem with that prescription, understanding the dosage, anything at all, they're going to go back and call the ED or go back to the ED. So, what you really want is to have incentives in Medicare and Medicaid programs, as well as in other private programs, for that relationship so it can be an ongoing coordination relationship that allows people to get that education and not have to keep bouncing back.

Senator BURR. Let me dig just a little bit deeper. I don't want to be consumed with this issue, but—North Carolina has a new Medicaid program that they're rolling out, where they have broken the State down regionally. Every Medicaid beneficiary will be assigned a primary-care provider, be it a primary-care doc, a hospital, a community health center, a nurse, a physician's assistant. Somebody is in charge of their healthcare. That, in itself, will not change whether they choose the emergency room or pick up the phone and call this person that was assigned to them.

If—and this is a big “if”—if you could change EMTALA to reflect that if that person walked into the emergency room and was screened and determined not to be an emergency case, the hospital then has the right to pick up the phone and call the primary-care provider and say, “Where do you want me to send them?” Is there any objection to that around the table?

Dr. BASS. I think one of the challenges that we heard was that a lot of the patients coming into the ED had primary-care relationships, but, when they had a problem that needed to be evaluated—perhaps it wasn't a clear emergency, but it seemed to be urgent; they were in pain, something needed to be addressed—they tried to access care, and couldn't get into their primary-care physician, and, in fact, may have been directed.

Senator BURR. Well, I think in many cases they are directed to go to the emergency room. It is the safety net, as you said, of everybody. And, again, without the parameters established, which are sometimes difficult, you won't eliminate that one, as well.

Ms. BONALUMI. I think Dr. Haley's recommendation that there be incentives for primary-care physicians to really take this workload that really is appropriate for them to do, is really a strategy that should be looked at, in terms of the reimbursement model. If patients are under the Medicare system and Medicare coverage, then I think there is some ability for Congress to be able to help direct how those patients get seen and to put some incentives in place to help those physicians who are taking care of that patient population, feel that they're being adequately compensated for the work they're doing, especially for after hours.

Senator BURR. I'm not sure you would find disagreement on the Hill. I think you might find frustration on the Hill that our past efforts to bring preventive care into the Medicare reimbursement system—which has come in very slowly, but has made a difference—would include pharmacy reimbursements for their aid in monitoring of prescriptions filled and prescriptions taken, where the physician can't keep up with what patients do after they leave—and our inability to get that funding. So, you know, there are some things that are limitations that we will not overcome, in its current design.

Dr. BLUM. I think, before we leave this particular issue, I would also be remiss if I didn't say what doesn't work in this arena, and that is something that we've been exposed to for a number of years in our practice, which is the practice of determining retrospectively that, “It wasn't an emergency; therefore, we're not going to pay you.” That simply adds to the burden of poor reimbursement in the emergency department. It provides no disincentive to the patient

from using the emergency department. And it makes our job more difficult.

And the other thing is—and this gets lost in this argument sometimes—is that the patients don't come in with urgent or nonurgent label on them. It is sometimes difficult to tell. I've admitted a patient, with an ankle sprain, to the ICU for her toxic shock syndrome because of my observation of her skin condition when she came in for her sprained ankle. And that—all of us could tell you those stories, you know, that have happened a number of times over the years, where seemingly nonurgent things have become urgent or emergent because of our intervention. And so, it's sometimes very, very difficult to tell. And, until we do our evaluation—which, like I said, once we have done it, we're almost home—you know, it's very difficult to determine who meets that criteria and who doesn't.

Senator BURR. Dr. Haley, Atlanta was the site of the 1996 Olympics. And we had a terrorist act at the Olympics. Let me ask you. Today, if you had a similar incident in Atlanta—and let's say, hypothetically, there were a hundred bomb-blast injuries—could Atlanta handle that?

Dr. HALEY. I think we would be significantly challenged. And let me give you some stats that prove that.

When I was boarding the plane this morning to come here, I got my daily e-mail from our bed czar who manages all of our beds in the hospital as we try and address these problems, and today we started off with two ICU beds for the entire Grady Health System. And that is pretty much how we start every day. In fact, most of the time it's closer to zero.

And so, I think the challenge you have with a terrorist act in our city, or any city, would be, we would be significantly stretched to provide the care, once we got past some of that initial emergency-department evaluation. I have a number of emergency physicians and nurses who would be very capable of providing that front level of care, but then once we got past that initial resuscitation phase, what do we do with them? We have that challenge every day.

We looked at our trauma referral statistics over the past year, and we received about 430 requests from around the State of Georgia for patients to be sent in for our level-one trauma center. We had to turn down 190 of those during a 1-year timeframe. It's almost—so, almost 40 percent of that group, or more, had to be turned down—42 of those were turned down because there were no beds at all in the hospital; 74 were turned down because there were no ICU beds at the hospital; and 21 were turned down because we were on some form of diversion. So, the challenge is, we have the EMS providers who provide front-level care, we've got great ED personnel who can do that, but then we're stuck. And that's the challenge. And if you add more to that patient population—if it were 1,000 patients, or 10,000 patients—then you can see the concerns that all of us have.

Senator BURR. Margaret, the Federal Interagency Commission on Emergency Medical Services is administered by NHTSA and housed within the Department of Transportation. Why?

Ms. VANAMRINGE. I don't know the answer to that, Senator. I do think we need to have much more collaboration at the Federal level

between those who are concerned with emergency response, in terms of police, fire, transportation, and those who have responsibility in the medical-care and public-health systems. We're just not all working as well together, I think, as we need, to do that.

As I said in my testimony, I think we need to have some better metrics of what community preparedness is, because this is—the community—it's all interconnected. I just heard the Doctor talk about how few ICU beds you have and so forth. So, every community has to, obviously, have a plan to figure out how to use all of its medical resources—the nursing homes, the home care, the hospices, everything within its system to come together.

So, we need, I think, at the Federal level, a better understanding of what needs to be done at the local level and have the agencies work well together, in terms of deciding what are the metrics that we want to measure in the community to decide whether that community has properly paid attention to preparedness. And then we have to have an independent evaluation of whether or not that community has actually done that. But we have all these different expectations, at the Federal level, because, as I mentioned, we have—HRSA has its checklist, DHS has its checklist and targeted capabilities, the Joint Commission has its checklist. We need to harmonize those and come up with a common set of metrics for the community.

Senator BURR. I think you'll find almost complete consensus on the belief that we need to streamline our assessments and our response. I would suggest to you that, at least as it relates to pandemic threats and bioterrorism, it's been our assessment that the Federal Government should not be the lead, it should be the State; that it's more appropriate for the State to incorporate into their plan, whether it's Atlanta or Athens, what that response should be, and that the Federal Government should be the reviewer of the plan, and that our role should be to supplement what they've designed and to be there as that logistic resupply at the end of 72 hours with whatever the need is, be it supplies or medicines. And I don't think that's out of sync with what you just said, but I think that I've learned, as we've gone through the last 2 years, we have to state this much more clearly than we ever have in the past if we, in fact, want to begin to move this somewhere.

Ms. VANAMRINGE. I think that's true. I think, though, what the Federal Government can do is help with those metrics that allow the States to go and do their planning, but they need some kind of guideposts, sometimes, just to help them understand what is good preparedness, and then they can organize their communities and regions in accordance with some, at least, guidance, if you will.

Senator BURR. Robert, I would love to hear from you. EMS: Is it housed within the Department of Transportation?

Dr. BASS. It is. And I'll briefly try to tell you that story. The EMS program at the Department of Transportation began about 1967. It was about a year after the original IOM white paper, called "Accidental Death and Disability," and it was really focused on—initially, on providing care to folks who were injured in vehicle accidents, which was a terrible problem, and remains a problem, but a more significant problem, in terms of the lack of care. IOM reported out that we need a system of EMS. We need a system of

emergency medicine. And, actually, it was DOT that came out of the chute the following year, in 1967, and set up that program, which has been with us ever since.

In 1972, Congress passed the Emergency Medical Services Act, which actually ended up establishing a program within HEW. Both of those programs funded EMS development significantly during the 1970s. We saw an explosion of EMS, emergency medical services, systems around the country. Emergency medicine, as a specialty, grew. The trauma program grew. And then, abruptly, in 1981, the principal funding for the HEW—well, funding for the HEW program went away, the program went away, which left NHTSA with a much-reduced funding, and they, in essence, have been the lead EMS agency since about 1981, with a relatively modest budget, around \$2 million a year.

There is another program at HRSA, EMS for Children, that has a little bit better funding. They're around \$20 million a year. And they partner very closely with NHTSA in trying to improve emergency medical services around the country. I mean, obviously, the EMS for Children is sort of the seminal principle with respect to disasters. If you don't have a good EMS system for everybody, you're not going to have a good EMS system for kids. So, they have been working very collaboratively.

FICEMS was an effort to try to bring together all of the entities that are involved in emergency medical services, and then, with the recommendation of the non-Federal advisory body to advise FICEMS on issues, and up until the IOM report, that was the vision of where we wanted to go with respect to Federal coordination. And the IOM report actually looked at that issue, but it was felt that a department of emergency care, or division of emergency care, that included trauma, EMS, emergency medicine—that's hospital-based EMS for children—was principally health-based, and recommended that it be at HHS.

However, as I mention in my testimony, there are a number of concerns about how we make that kind of transition. The program at NHTSA has worked very well for EMS, even though it's modestly funded. And as modest a program as it is, our concern is that, in the transition, that we might lose funding, lose coordination, etc. So, we have a lot of concern about how this would be affected.

Senator BURR. I would suggest to you that's not a new issue up here. Usually anybody's hesitancy about a change in program has, first, to do with funding, and, at some point down the line, the evaluation of, in fact, whether it fits better. And I think the one thing you've seen in the last 2 years is an attempt to try to take the healthcare response, be it to natural, intentional, accidental events, and to make sure that we clearly know, before it happens, who's in charge. And with a great degree of reluctance on the part of the Department of Homeland Security, we have begun to move some of the health responses out of DHS and now back to HHS. We've talked about a collaboration that's never existed between HHS and CDC—which is odd, that that consultation process has not existed—but not necessarily moving things. And I think clearly something we ought to look at is whether we take this important ingredient, which is our emergency medical capability, and decide whether it needs to be under the umbrella with everything else

that is in healthcare response. I haven't looked at it long enough to make an opinion today, but I think it's certainly something we'll continue to explore.

Margaret, the Joint Commission made some strong progress in the areas of pay-for-performance, and I want to give you an opportunity to talk about how that might improve the quality of emergency care, and, more importantly, how Congress can assist us in getting there. And, as a side to that, Do we have the access today to the data that allows us to make a determination about our ability to pay for performance?

Ms. VANAMRINGE. Certainly. Well, I think pay-for-performance poses a number of opportunities, for a couple of reasons. First, it can be a good statement to the healthcare professions about what other people believe, on a consensus basis, are important priorities to pay attention to. And, second, financial incentives are very powerful, so it gets people's attention when you append money to a particular behavior you would like to have.

I think we do have a lot of information, because there's been over a hundred demonstrations on pay-for-performance, to show that financial incentives can have a positive effect. Of course, we also have to worry about unintended consequences in any programs. There always have to be some evaluation of what you do to make sure that you haven't changed the situation in a way that's also negative. But I think the opportunity here for Congress is great, because the Medicaid program, for example, must provide to Congress, by 2008, a plan for how it's going to move—pay-for-performance. And a number of the things we've talked about today could be considered under that framework.

We've talked about trying to provide incentives for hospital leaders to have a more efficient system, and that means cultural changes. But it means investing in management. It doesn't mean money-investing all the time. But it's time. And time, of course, can translate into money. But if hospital leaders, for example, could have incentives to pay attention to moving patients through to having a bed czar, as was mentioned before, for making sure that the physicians write their discharge notes early in the morning instead of late in the afternoon, that there are ways to smooth the surgical schedule. There are so many things, through an operations research type of evaluation and through efficiencies, that hospitals could do. So, if you put some monetary incentive, and you say that, "If you meet these standards for efficiency in your hospital, you're eligible for an incentive payment," I think we would get a lot more attention paid to the management side of things that we need to have to make sure that the ED is, again, not the victim of all of the problems that are occurring in the larger hospital itself.

Senator BURR. Do you feel confident we know enough about the rest of the system to be able to identify those places?

Ms. VANAMRINGE. We have a lot of data to show that—what some best practices of hospitals have done, how that has reduced not only the overcrowding, but ambulance diversion. So, we have hard data to show that these practices have a very beneficial effect. So, I think we have an opportunity to wrap up some of those ends so we don't get caught up with only looking at clinical measures

under pay-for-performance, that we also look at some process measures that we're talking about that are problematic today.

Senator BURR. Nancy, several years ago, the Colorado Nurses Association surveyed nurses in seven States. One-third of the respondents had been victims of workplace violence in the previous year. According to Department of Labor, healthcare services led all service industries in nonfatal assaults and violent acts resulting in lost workdays. What concerns do you have for staff safety, and especially as it relates to the crowded ER situation today? And I think it goes without saying—we alluded to the first preference of ER drop-points for law enforcement on mental health, on substance abuse, and I think we could probably all come up with a very lengthy list.

Ms. BONALUMI. You're absolutely correct. The Bureau of Labor Statistics reported that the healthcare industry led all other sectors in workplace assaults, at four times the rate of any other group within their statistics. And of that workgroup, registered nurses represented 46 percent of those people who were assaulted. Because we're on the front lines of healthcare and we spend probably the most amount of time at the bedside of patients and their families, we tend to be the people who get into harm's way when things go awry.

There are a number of factors in the emergency-department environment that influence that, starting with the fact that emergency departments generally have unlimited access and generally low amounts of security because of staffing. We have our doors open 24 hours a day. The light is on. And we're there for people in our community to come in. We want them to find their way to us when they need us. But that also means that people can get into the emergency department who might not be there for good intention.

I had an experience in a hospital that I worked in, in Pennsylvania, where a patient was brought in by the police to be screened before going to jail. He wrestled the gun away from the police officer and discharged it in a part of the emergency department that was occupied by 10 other patients and a large number of staff. The bullet went through the door, skidded along the floor, and stopped at the foot of one of my staff. And I can tell you, that was an enormous event for our department. We were thankful no one was seriously hurt. The officer was actually injured by the assault. But had that bullet gone to another patient or to a member of our staff, I think the consequences would have been phenomenal. But that is just the environment that we work in, and we willingly walk into that every single day.

I think that hospitals need to look at the standards that were created by OSHA, guidelines for preventing workplace violence for healthcare and social-service organizations. Those are voluntary guidelines. But I think hospitals need to have zero-tolerance policies for violence that occurs in the workplace setting. Patients come into the emergency department on an unplanned basis. They don't wake up and say, "Gee, I think I'll fall down the stairs and break my ankle at 2 o'clock this afternoon." So, when they come in, it's always a disruption to their lives, and certainly a disruption to them and to their families. Compounded with a long wait in a crowded space or a very unprivate hallway, anger and frustration

begins to rise. That, coupled with patients who come in, as we talked about, under the influence of drugs, alcohol, and the increasing number of patients with mental illness who have nowhere to go to receive any community services, is really just a place waiting to ignite with violence.

And so, we see that in the evidence and the statistics of who's being hurt in the emergency-department setting, and I fear for my staff. We have had two events since January in the emergency department I work in, where family members have gotten into altercations with other family members, or with members of our staff. I work at a trauma center. And if the person who came in was a victim of violence, frequently those who, kind of, created that violent setting are looking to finish the job, and you have to be very careful screening people who come in claiming to be the family member of so-and-so who came in to be—who came in as a result of a gunshot wound or a stabbing, because, honestly, they may be in there to try and finish that off. They walk in with guns and weapons. In most emergency departments we're not patting people down or making them go through metal detectors. So, my staff is at risk every day that they come to work, and yet they willingly do it, because they know their job is to be there, as Rick said, to take care of people who are sick. And it is just a consequence of the environment we work in. So, I worry about them. And I worry, nationally, when I look at these statistics, about how unsafe our hospitals really can be and what opportunities we can take to help regulate that and at least create safer, stronger environments for our healthcare workers.

Senator BURR. Nancy, thank you. And I want to thank all of you. I have to apologize, but they're going to make me go to the Senate floor and actually work now. That's the only way I can make my wife believe that I actually do something up here, if she sees me occasionally on TV.

Let me end with this. I think Dr. Blum made a statement that I think probably displays how difficult this is, because it is the way one State or one town looks at it. You said, "We're not building new ERs." And I'd be willing to bet that we are. In North Carolina, in the five urban areas I can think of—my hometown of Winston-Salem, two 800-bed facilities, both have state-of-the-art ER facilities being built right now—that built state-of-the-art ER facilities 5 to 7 years ago. And so, I hope you understand that, one, there is a lot of that going on. It is not, probably, everywhere that it needs to be done.

And I also have to look at some of it and ask, Are we doing it in places that we shouldn't? And I think that is the tricky balance we're trying to establish, that we need to make sure the healthcare system, delivery system of the future, that all the pieces are designed specifically for what we want to deliver there, because we can't afford to deliver what can be done more effectively, from a cost standpoint and from a quality standpoint, somewhere else.

I'm not sure we can answer all the questions about emergency services without understanding where it is we need to go, from an overall standpoint in our healthcare system, and that these are all interconnected. And as we design that delivery system of the future, and we know which piece of it Medicaid plays and which

piece of it Medicare plays, and how they interact within the delivery system, it suggests to us the role of hospitals and emergency rooms and urgent-care facilities, and, yes, Walgreen's and the decisions that a Wal-Mart might make in the future as it relates to our healthcare system.

If there's one thing that disappoints me, it's the lack of boldness on the part of Congress to tackle the structural changes. We consistently tinker around the edges, but I think we would all agree that no longer are you able to get there by talking about the changes in reimbursements, and I'm not sure that we get there by incentives alone. You have to have a system that reflects that type of change. If we're moving to performance-based pay and performance-based reimbursements, then it is hard for me to believe you can get there if you don't have the IT infrastructure in place to collect the data. If not, we're trying to find a white shirt in a black closet.

So, it really is everything in total. This is one that is of great urgency because of exactly what it is, and it delivers care to the most vulnerable, or to the sickest, or to the ones who don't have time to be anywhere else. And I think, for that reason, it is important that we start with it, because we want to make sure at least the core function of the ED is something—that we're able to deliver, and we're not encumbered by things that we could change today. But, from the standpoint of its overall structure and how it fits, clearly that's a much bigger issue that we will deal with.

The Commission, as it relates to recommendations—I try to remind everybody that, as it relates to healthcare, sometimes we believe that we have an unlimited pot of money. And the reality is, we have a designated pot of money in this country that we're going to devote to healthcare. Today, a lot of people participate in the funding of that—the Federal Government, State government, employers, employees. There are a lot of different pieces of it. The pot does not get bigger. The way we split the pot up is affected. And when we recognize that, we understand just how close to the edge we are. Because if it was unlimited money, it would be real simple to handle the nurse shortage. We would just pay more. We would, I know. But that water balloon, when we allow you to expand, causes a real difficult situation to somebody else—that might be the ED, it may be some other area of the hospital. So, everything has a consequence, whether it was unintended or not. There is an effect that it has on the system, and our challenge is, Can we redesign it in a way that as much, if not all, profit from it. More importantly, the patients are the ones that ultimately will be the determining factor as to whether we continue to deliver the same level of care.

So, again, I want to thank each one of you for your knowledge that you've shared with us, and, more importantly, I hope that you will stay engaged in this as we go through this process, trying to find out where it is we need to go short-term, medium, and long-term.

Thank you very much. This roundtable is adjourned.  
[Additional material follows.]

## ADDITIONAL MATERIAL

### PREPARED STATEMENT OF THE AMERICAN ACADEMY OF PEDIATRICS

The American Academy of Pediatrics appreciates this opportunity to submit testimony for the record of the Health, Education, Labor and Pensions Subcommittee on Bioterrorism and Public Health Preparedness hearing, "Roundtable on Crisis in the ER: How Can We Improve Emergency Medical Care?" The American Academy of Pediatrics is a nonprofit 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. Over the past decade, the Academy has engaged in a broad range of activities related to disaster preparedness, including policy statements on clinical care and tools for pediatricians in crisis situations.

#### BACKGROUND

Emergency medical services are the foundation of our Nation's defense for public health disasters. The Academy expects the hearing'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.<sup>1</sup> 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. The Academy's testimony focuses on issues concerning pediatric emergency preparedness so the committee 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.<sup>2</sup>

- 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 cooperate with decontamination.<sup>3</sup> 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.<sup>4</sup> 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.<sup>5</sup>
- Children may be developmentally unable to communicate their needs with healthcare 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 healthcare 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.<sup>6</sup> 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 percent surviving the event, and with 75 percent 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 percent of all emergency department visits in the United States, and 5 to 10 percent 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 percent of children receive their emergency care in a nonchildren'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.

Children with special healthcare needs<sup>7</sup> are the fastest growing subset of children, representing 15 to 20 percent of the pediatric population.<sup>8</sup> 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.<sup>9 10</sup>

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 healthcare 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.<sup>11</sup>

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 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 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.<sup>12</sup>
- 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. Last, 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.<sup>13</sup>

A unique consideration in pediatric emergency care and disaster planning is the role of schools and daycare facilities. Children spend up to 80 percent of their waking hours in school or out-of-home care. Schools and daycare 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.<sup>14</sup> Families should also be encouraged to engage in advance planning for emergencies and disasters.<sup>15</sup>

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.<sup>16</sup>

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 healthcare providers to calculate dosages quickly and accurately. However, one study showed that 46 percent of Disaster Medical Assistance Teams were lacking these tapes, in addition to other critical pediatric equipment.<sup>17</sup>

Training is vital to pediatric preparedness. Many healthcare 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 healthcare 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 are 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.<sup>18</sup>

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.<sup>19</sup> 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.<sup>20</sup> 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.<sup>21</sup> 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.<sup>22</sup> Just last month, the IOM issued its report on the pediatric aspects of the emergency care system.<sup>23</sup> 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 healthcare 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 percent.

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 statewide 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 policymakers, researchers, providers and professional organizations across the spectrum of emergency care, is well positioned to assume this leadership role.”<sup>24</sup>

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 policymakers 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 healthcare 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 healthcare facilities to address pediatric preparedness, including maintaining surge capacity and creating specialized treatment areas for children, such as isolation and decontamination rooms.
- Schools and daycare 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 healthcare professionals;
  - Address the care requirements of children with special healthcare 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 reauthorized 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.<sup>25</sup>

*School and daycare issues:* Children spend up to 80 percent of their waking hours in school or out-of-home care. Schools and daycare facilities must be integrated into disaster planning, with special attention paid to evacuation, transportation, and reunification with parents.<sup>26</sup>

*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 healthcare.<sup>27</sup>

*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 healthcare 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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#### PREPARED STATEMENT OF ADVOCATES FOR EMS

Chairman Burr, Ranking Member Kennedy, Advocates for EMS, a not-for-profit organization founded to educate elected and appointed officials and the public on important issues affecting EMS providers, would like to thank you for holding this important roundtable discussion today examining emergency care. Advocates' Board of Directors is comprised of members from the National Association of State EMS Officials, the National Association of Emergency Medical Systems Physicians, the National Association of Emergency Medical Technicians and the National Association of Emergency Medical Services Educators.

We would like to address in particular, the Federal Interagency Committee on Emergency Medical Services (FICEMS) and the Institute of Medicine's (IOM) recommendation of establishing a lead agency for emergency medical services at the Department of Health and Human Services (HHS). While there is merit to the IOM's recommendation to establish a lead agency at HHS, we are concerned that National Highway Traffic Safety Administration's (NHTSA) long-standing support of EMS systems has not been carefully considered. Never in our Nation's history has there been a time when EMS systems need more coordination and consolidation of EMS activities. The new, fully-formed FICEMS is the ideal body to consider the lead agency issue and fully form a consensus on how to best organize and perhaps realign Federal support of EMS systems.

Advocates has long been concerned about emergency medical services getting lost in the shuffle at the Federal level. For the past 20 years, Federal support for EMS has been both scarce and uncoordinated. In fact, following the September 11th attacks, when the country focused its attention on all terrorism preparedness, first responders were described as police, fire, and "other." In conjunction with police and fire, EMS is the primary first responder for medical assistance in the event of a natural or man-made disaster or public health emergency. However, unlike with police, fire and emergency management, there was a lack of coordination at the Federal level and no dedicated program to support EMS infrastructure or disaster response. Currently, several Federal agencies are involved with EMS, though most focus on just one segment of the EMS system, such as fire-based EMS, EMS for Children or trauma systems.

In 2001, the General Accounting Office cited in its report, *Emergency Medical Services: Reported Needs are Wide-Ranging With a Growing Focus on Lack of Data*, the need to increase coordination among Federal agencies as they address the needs of regional, State or local emergency medical services systems.

During the 108th and 109th Congress, Advocates worked closely with Senators Susan Collins and Russ Feingold as well as members of the Senate Commerce, Science and Transportation Committee to authorize the FICEMS that would serve to coordinate the various Federal agencies that are involved in EMS, including HHS, the Department of Homeland Security (DHS) and NHTSA at the Department of Transportation. On August 10, 2005, the FICEMS was signed into law as part of H.R. 3, the Safe, Accountable, Flexible, Efficient, Transportation Equity Act—A Legacy for Users (SAFETEA-LU). The new FICEMS is beginning its work this year.

Advocates believes the new FICEMS will greatly enhance coordination among the Federal agencies involved with the State, local, tribal and regional emergency medical services and 9-1-1 systems. The Interagency Committee will help assure that Federal agencies coordinate their EMS-related activities and maximize the best utilization of established funding. In addition, the FICEMS is required to submit an annual report to Congress to help provide Members of Congress with information on emerging Federal EMS issues.

We worked with Members of Congress to establish the FICEMS at NHTSA because of NHTSA's longstanding role in EMS. Since the early 1970's NHTSA has been the only agency to consistently focus on improving the overall EMS system. NHTSA has been responsible for creating national standards for EMS education, operations and system development. NHTSA supported the creation of a consensus-based national EMS strategic plan, the *EMS Agenda for the Future*, which united the many professional factions of EMS service in a common effort to improve system performance.

As a result of this long-standing leadership, national EMS leaders and organizations rely on NHTSA for guidance on a wide range of EMS issues. NHTSA is widely considered by the EMS community to be the lead Federal EMS agency addressing the overall EMS system that is comprised of many different organizational structures, including fire-based (42 percent), hospital-based (7 percent), other governmental or public utility model (21 percent), and private and other configurations (30 percent). Among these organizations, part are staffed totally with career staff (48.5 percent), part totally with volunteers (24 percent) or with a combination of career and volunteer staff (27.5 percent).

At this time, Advocates believes that establishing a lead agency for emergency medical services needs careful consideration. The FICEMS, in consultation with EMS associations and providers throughout the country, should study the issue and make a recommendation as to whether there should be a lead agency for EMS and what roles other Federal agencies should play in EMS. A rush to judgment would only further jeopardize the few EMS programs that currently exist along with their funding.

An emergency medical services system serves as the safety net for the local health care system and individuals who call 9-1-1 for an emergency medical services trans-

port when all other sources of help are exhausted. A comprehensive, coordinated emergency medical services system is essential to assure prompt, quality care to persons experiencing medical crisis.

On behalf of the pre-hospital and hospital-based emergency care associations and providers that make up Advocates for EMS, we look forward to working with you as you consider this issue further.

[Whereupon, at 4:15 p.m., the hearing was adjourned.]

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