

**LESSONS LEARNED FROM KATRINA IN PUBLIC
HEALTH CARE**

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 LEGISLATIVE IMPROVEMENTS TO ENSURE OUR NATION IS
BETTER PREPARED FOR PUBLIC HEALTH EMERGENCIES

JULY 14, 2006 (New Orleans, LA)

Printed for the use of the Committee on Health, Education, Labor, and Pensions



Available via the World Wide Web: <http://www.access.gpo.gov/congress/senate>

U.S. GOVERNMENT PRINTING OFFICE

28-865 PDF

WASHINGTON : 2007

For sale by the Superintendent of Documents, U.S. Government Printing Office
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FRIDAY, JULY 14, 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 1:39 p.m. in the U.S. Supreme Court Hearing Room, Louisiana U.S. Supreme Court Building, 400 Royal Street, New Orleans, Louisiana, Hon. Richard Burr, chairman of the subcommittee, presiding.

Present: Senators Burr, Alexander, and Landrieu.

OPENING STATEMENT OF SENATOR BURR

Senator BURR. Good afternoon. Let me take the opportunity to apologize to the panelists that we have for our tardiness. We'll apologize profusely to the next group, that we will loop back around.

I want to thank Senator Alexander for his work at setting up this two-subcommittee field hearing together in New Orleans. We're grateful to the State of Louisiana and to the city of New Orleans, to Senator Landrieu, for the opportunity to learn from the witnesses on these two issues of critical importance, education and public health preparedness, which will be the subject of the afternoon hearing.

I want to thank all of you for your willingness to attend the Subcommittee on Bioterrorism and Public Preparedness hearing. I'd like to take this opportunity to welcome the panelists and to thank them for taking the time to share your experiences and lessons learned from Hurricane Katrina. I know you are all extremely busy and I along with the entire subcommittee appreciate your willingness to be with you today and, more importantly, you with us.

It's been almost a year since Katrina touched the shores of Louisiana and devastated so much of this beautiful city and the Gulf Coast. Its impact on the public health and the health care system has been significant. Then your State experienced Hurricane Rita. I might add here as the Senator from North Carolina, we're used to the annual summer experience of storms as well.

Rita additionally damaged the health care system in places like Cameron Parish, which forced several hospitals to evacuate. Today your testimony will help us make the necessary legislative improvements to ensure our Nation is better prepared for public

health emergencies, whether natural, deliberate, or accidental. This field hearing will assist us as we move forward to reauthorize the Public Health, Security, and Bioterrorism Preparedness and Response Act. That legislation, which was passed in 2002 shortly after 9-11, began to move this country in the right direction. But as we have seen from the effects of Hurricane Katrina, it has not done enough. We must ensure that the failures of Katrina are not repeated. We can and must do better.

One of the pressing issues that our public health and medical response system faces is our ability to increase our capacity to take care of people in large public health emergencies. We need to think systematically about how to develop surge capacity within our health care delivery system. We must also maintain a well-trained and well-prepared public health workforce. This is no small task since 45 percent of the current health workforce is eligible for retirement in the next 5 years.

In relatively short order, I hope we will produce and mark up legislation that addresses a number of lessons learned from this disaster. I think your testimony today will provide critical input into that effort. I certainly look forward to your testimony.

I want to once again thank Senator Landrieu for the incredible help that she has been, but more importantly the incredibly loud voice she has been for this community and for this State, and specifically for the health care delivery system. It is impossible for us in Washington, DC., to understand the magnitude of the disaster, and to also understand the tremendous magnitude of the challenge to start over again. We certainly are appreciative for her insight. She has been a tremendous spokesperson.

We have foregone any other statements from the members and because we've truncated the time a little bit let me give you the rules. I will introduce our entire group and then we'll start from left and move right, if that's okay, from my left and move to the right. Each of you have 8 to 10 minutes to share with us those things that you think are most important. I hope that fits within the confines of what you had planned.

Our panel today is made up of a number of individuals, and I'll try to get it in the correct order: Fred Cerise, Secretary, Louisiana Department of Health and Hospitals; Sharon Howard, Louisiana Department of Health and Hospitals, Division of Public Health; Don Smithburg, CEO, Louisiana State University Health Systems, which is I believe 9 of the 11 public facilities; Dr. Letourneau, Assistant Dean, LSU; Dr. Whelton, Dean, Tulane University School of Medicine; Dr. Quinlan, Ochsner Health Systems, a four-hospital system; Dr. Rouse, Deputy, New Orleans Coroner's Office; and Gery Barry, CEO, Blue Cross and Blue Shield, and also serves as the Vice Chairman of the Louisiana Healthcare Redesign Collaboration.

With that, Dr. Cerise.

STATEMENTS OF DR. FRED CERISE, SECRETARY, LOUISIANA DEPARTMENT OF HEALTH AND HOSPITALS; DR. SHARON HOWARD, DIVISION OF PUBLIC HEALTH, LOUISIANA DEPARTMENT OF HEALTH AND HOSPITALS; DON SMITHBURG, CEO, LOUISIANA STATE UNIVERSITY HEALTHCARE SERVICES DIVISION; DR. JANICE LETOURNEAU, ASSISTANT DEAN, LOUISIANA STATE UNIVERSITY HEALTH SCIENCE CENTER; DR. PAUL WHELTON, SENIOR VICE PRESIDENT FOR HEALTH SCIENCES AND DEAN, TULANE UNIVERSITY SCHOOL OF MEDICINE; DR. PATRICK QUINLAN, CEO, OCHSNER HEALTH SYSTEM; DR. JEFFERY ROUSE, DEPUTY, NEW ORLEANS CORONER'S OFFICE; AND GERY BARRY, CEO, BLUE CROSS AND BLUE SHIELD OF LOUISIANA AND VICE CHAIR, LOUISIANA HEALTHCARE REDESIGN COLLABORATION

Dr. CERISE. Thank you, Senator, and thank all of you for your interest and your visit today and your support over the past year as we try to pick up the pieces and move forward.

In terms of looking at public health preparedness and lessons that we've learned, I think the overriding lesson that we've seen is a basic shift in our thinking of what we make of a traditional public health disaster, in terms of infectious disease and outbreaks of disease and that type of thing, in regards to what we saw after this disaster, and that is just a total disruption of the health care delivery system and along with that lack of access to care for people with chronic disease, people with urgent needs.

There was a lot of talk about and concern about outbreaks and toxic soup that people were in, and it turns out that we didn't have toxic soup and we didn't have outbreaks of diseases. We were doing surveillance on all of our shelters and hospitals. That didn't materialize, but probably the access to primary care providers, access to specialty providers, access to pharmaceuticals, routine things like that that were available before the storm, were challenged for some in the population, the uninsured and Medicaid population, but became a problem for everyone and remains a problem for some months later after this episode.

So I'm going to go through a few components that stand out for me that would help us in the immediate phase and in the recovery phase as we look back and see the lessons learned. I can tell you, the whole experience exaggerated the deficiencies that we have in the system today. They just stood out. But it also accelerated some of the improvements that we were embarking upon beforehand and it's brought together people to move some of those improvements ahead. I'm going to give you a few examples.

First, in terms of an emergency response network, we do not have a coordinated statewide emergency response network in Louisiana. That was something that we could have used at the time. We did okay in terms of phone calls and contacts with providers, but it was all pieced together in the midst of the hurricane, and that's how we moved people around the State. We know that having an emergency response network with electronic real-time information from providers across the State on what is your capacity, what can you accommodate, are important things. It is an important system to have in place, not only at the time of a crisis like this, to handle surge capacity as you discuss, but also it's the kind

of system that can be useful and save lives every day when you're looking at time-sensitive illnesses, to be able to direct emergency personnel or someone with trauma or heart attack or stroke to the right place that's got the right capacity to treat that person with the right resources.

So, coming out of this, our legislature did appropriate \$3.5 million for some of the manpower and basic infrastructure to develop what's called the LERN system, Louisiana Emergency Response Network. It is not all we need in terms of connectivity to connect first responders to the ultimate hospital that people will be brought to, but, as I said, this kind of highlighted the need for that and it has jump-started some of the response there.

Another area where the deficiencies were highlighted had to do with information technology. You're probably well aware of this, the many number of people who were dispersed and did not have adequate information on the health care, the health care needs of those individuals as they were dispersed, and paper records had either been destroyed or they were just inaccessible at the time.

There were a couple of striking examples of where things worked well. The VA system, as you know, has a very nice electronic record. As veterans were displaced across the country, they were able to access those records and be well taken care of.

There was another private-public effort that happened in the immediate 7 to 10 days after the hurricane called katrinahealth.org, where, using information from the major chain drugstores, from the major health plans, from Medicaid, using claims data, the pharmacy information was put together and as a physician I could call, I could call the AMA and they would verify that I am who I say I am, give me a password, and I could go to this Web site and type in a person's name, a date of birth, and a zip code, and if I'm from an impacted area, and it would give me the last 6 months of that person's prescription drug history, which actually pieces together a fair amount of the medical history from that.

That was put together within 7 to 10 days after this incredible tragedy and was not—demonstrates a couple of things. One, you can do this type of thing. You can put these things together. The limitations oftentimes are human limitations more than the technical ability to put these records together.

In the aftermath of Katrina we were able to work with the office of the National Center for Health Information Technology. Our State received a grant to help work with the Gulf States Collaborative to develop a prototype for a health information exchange to be able to share information that's electronically available now across providers, among providers, so that we will be able to access patient information in different sites, not just at the source where the original paper record resides.

We obviously have a long way to go here. The interoperable piece has been jump-started and pushed ahead briskly because of the communications now that have occurred as a result of people working together in the aftermath of the hurricane, but that is—I think it was the highlight of the deficiency of our health care system, not only in Louisiana, but it's a deficiency nationwide, and that pushed to develop interoperability among various medical records not only in the case of a tragedy, but in the case of routine everyday office

practice, to have information available for the patient wherever that person happens to show up. It improves safety, it improves efficiency and those types of things.

Another area that we were challenged in, again having to do with people with chronic disease, was access to pharmaceuticals. Again, traditionally in public health disasters we think about things like having access to biologicals and things, antidotes for biological weapons, and that sort of medicine stockpile that is available. The stockpile we needed was the stockpile of medicines for blood pressure and diabetes and heart disease and things like that.

As people were displaced, obviously many people then didn't have medication, didn't have access to that information. So that's another system that was put in place in the immediate aftermath, to try to piece that together, and going forward it has continued to be a challenge for us as support systems for people who do not have regular access to pharmaceuticals now had to be recreated. So that remains a challenge for us today.

Then finally, I'm going to end on the issue of workforce and sharing and I'm going to say a few words about that as well. But I'll just say that in the immediate aftermath of the hurricane there was an outpouring of volunteerism. We had Federal teams come into the State and there was a lot of support for the immediate aftermath. Sustaining that response has been difficult. Making the transition from those Federal teams to using State and local resources has been a challenge. The reimbursement mechanisms are not set up to be able to put those teams in place. The rules are to fund those teams that come in from out of State to do that work. To be able to have the flexibility to engage local providers, nurses, physicians, and other health workers early on in the process to make that transition could keep those people engaged and help limit the spread of those workers that ended up spreading all over the country and also would provide that source of care for those individuals in smaller practices and the larger practices as well in trying to get back on their feet, to deal with the disconnect then in the number, the lack of volume of regular, routine visits to support that practice.

So that's a very brief description of how I've seen the public health crisis in terms of really looking at it in terms of disruption of the delivery system for a lot of people that rely on that delivery system for routine care today.

Senator BURR. Thank you, Dr. Cerise, and if I would read your name tag up there versus my writing I wouldn't have mispronounced your name. I apologize.

Dr. CERISE. Oh, you're not the only one that does that.

Senator BURR. Sharon.

Dr. HOWARD. I think the lesson that we learned with regard to the public health workforce is that our public health infrastructure is extremely fragile, and I say it's fragile because of some of the things that the Senator already talked about: the fact that 45 percent of the workforce in public health is eligible for retirement. In addition to that, we have a shrinking workforce. I would think in the last 5 years we've lost over 300 nurses.

The other concern that we have with regard to the public health workforce is that because of the changing role of public health, be-

cause of the fact that we are prepared to protect the health of the public as it relates to a manmade disaster or a natural disaster, our skill level has to be enhanced. We in public health are used to doing preventive health. We're used to doing those things that we need to do to keep the public healthy. But now what we have to do is we have to enhance our skill set because, as Dr. Cerise said, we're charged with the responsibility of manning special needs shelters, and when you staff those special needs shelters those individuals who are in those special needs shelters are those individuals who are chronically ill or who have acute medical problems, and our workforce is used to dealing with babies and our workforce is used to doing family planning, and our workforce is used to doing immunizations.

So one of the lessons that we have learned is that we're going to have to enhance our skill set in order to be able to address our changing role in public health because of the fact that we have a shrinking workforce in public health. We have no redundancy. We have a lack of redundancy in staff, and that was quite evident during the response to Hurricane Katrina and the response to Hurricane Rita. Because of that lack of redundancy, we had people who were on their feet for hours and hours and hours.

We did what we usually do. We packed 3 days of clothes, and they're not the best of clothes, and you go to work. So we did that. We packed our 3 days of clothes and it ended up being 3 months, 4 months, 5 months, 6 months.

We have a responsibility after the storm. The responsibility that we had after the storm on the environmental side is that we have to make sure that the water is safe for people to drink and we have to make sure that people get the information that they need to get in order to be able to come back into the community after the disaster and be safe.

We issued 135 press releases during the whole response to Hurricane Katrina and for Rita. Normally in the span of time we would issue 35 press releases. But 135 press releases delivered everything from having that N-95 mask on when you went back in, to dealing with, in the beginning of the response, what you need to take with you to have your medications.

I'd just like to end with your understanding that the public health infrastructure is fragile. But just talking about some of the things that we did with that public health infrastructure: We opened up special needs shelters across the State in the unimpacted area; We took care of over 2,000 special needs patients; We sent strike teams—we're talking military stuff now—we sent strike teams to general shelters and to special needs shelters. Those strike teams were made up of our staff and our volunteers and our LSU partners, etcetera, to do immunizations.

We did surveillance because we have a responsibility to check on injuries. We have responsibility to make sure that when you have people in these closed confined areas, large numbers of people, that disease doesn't spread. So we had surveillance teams. We called them drop-down surveillance teams. And we had an electronic system that we were able to record that information in.

We did 110,000 tetanus shots. We managed an enormous donated pharmacy of pharmaceuticals and medications that were

given to us from just the well-meaning and wonderful people from across the country. We managed our strategic national stockpile. Again, like Dr. Cerise said, we didn't have a lot of the things that we needed in there because basically that strategic national stockpile is configured in such a way that it is to take care of biological kinds of things. We needed antibiotics, we needed IV fluids, etcetera.

So I would hope that something could be done on a Congressional level to kind of change the composition of that so that it can be for manmade disasters as well as natural disasters.

I just would like to end with saying that we could not have done this without the help of our Federal partners. We could not have done this without the help of our private hospitals and our public hospitals in Louisiana. We also had the responsibility of credentialing over 2,000 volunteers that came to the State to help us.

Senator BARR. Thank you, Ms. Howard.

Don Smithburg.

Mr. SMITHBURG. Thank you, Mr. Chairman, members of the committee. I'm Don Smithburg, CEO of the LSU Hospitals and Clinics here in Louisiana. We thank you for your interest in health care in Louisiana, especially after Katrina and Rita. I particularly want to thank and recognize and acknowledge Senator Landrieu for her extraordinary leadership both here in the affected area and of course on Capitol Hill. I also thank you for your invitation to appear here today and the opportunity to at least attempt to answer any questions that you may have about the public hospital system and what we've learned from the catastrophe and about how we are preparing for the future.

I represent 9 of the 11 State public hospitals and over 300 clinics that traditionally have been called here in Louisiana the charity hospital system. In other States what would be known as a county hospital is actually under the state-owned governance structure through LSU here in Louisiana, and all of those public hospitals that you might know of as being locally governed is actually under the State aegis here.

Our hospitals and clinics constitute the health care safety net, as a result, for the State's underinsured and uninsured, particularly the working uninsured. We see two-thirds of our patients have traditionally been hard-working, employed Americans. Louisiana has one of the highest rates of uninsurance in the Nation. Over 20 percent of the population have nothing and another 21 percent of our citizens in Louisiana are on Medicaid, and that was before Rita and Katrina. Since the hurricanes, there is an estimated 120,000-U.S.-person increase in the ranks of the uninsured as businesses fail because of the storms' destruction.

The LSU hospitals have also played an integral role in supporting the education programs of our medical schools and health training institutions. Our flagship hospital here in New Orleans is commonly known as "Big Charity." It's actually two facilities, the charity hospital and university hospital, operated as one medical center umbrella. It also includes the only trauma center in south Louisiana. There were thousands of Tulane and LSU students and

residents in training when Katrina hit here in New Orleans and when her floods forced the multiple failures in the levees.

In recent months, LSU and the Department of Veterans Administration have been engaged in an historic and collaborative effort that we hope will result in rebuilding one chassis that will support two hurricane-hardened hospitals, both able to better serve their respective patient populations and conserve Federal and State resources at the same time.

Now, what happened at Big Charity when the levees failed? In brief, the city's streets and hospital basements flooded. Power to the city was lost and hospital emergency generators were able to operate for only a short time because of a lack of access of fuel to feed those generators. Supplies of essentials such as food and water were not allowed to be brought in to augment our own depleted stores. Restrooms did not work and maintaining sanitary conditions was difficult at best. External communications were exceedingly limited.

The result was that patient care and safety was compromised, especially for such critically ill patients as those on ventilators. Staff in the hospitals worked heroically to care for patients, manually ventilating some for hours and then for days. It became imperative to evacuate both patients and staff, but the hospital itself had no means to do so.

The committee is perhaps looking for the lessons from this disaster with an eye toward improving not only the Gulf Coast emergency preparedness, but also that of a potentially vulnerable Nation. From our perspective there were several general lessons and many others at the hospital operational level. On evacuation, there proved to be in our view inadequate ability or insufficient priority to evacuate patients and staff from Big Charity in a reasonable period of time. In the future we will not again assume that agencies that are physically and bureaucratically remote from our hospitals will come to our rescue. Instead, we have developed a means to transport patients and staff should the need arise.

In fact, when Rita approached southwest Louisiana a few short weeks after Katrina—and we operate facilities in southwest Louisiana as well—we did evacuate threatened patients and staff from Lake Charles, Lafayette, and Homa, Louisiana, to facilities in Baton Rouge and Alexandria that were out of harm's way. We took care of ourselves without asking or expecting help, and it worked.

At this point, our 2006 evacuation costs are unbudgeted and are conservatively estimated at \$2 million to \$4 million this season just for our anticipated hospital evacuations in New Orleans, Homa, and Lafayette. Because our region suffered and continues to suffer, we likely will be evacuating from storms that if it weren't for Katrina we would not have considered leaving.

I fear that our fear may create patient care risks, although I have no real solution for that dilemma.

Another major lesson from the crisis was the need for reliable communications, as has already been described. Our police radios in New Orleans and other affected areas worked, but only intermittently. Ham radio was most reliable, but it's slow. Satellite phones were generally useless for us. The communications problem undoubtedly does have a technological problem and we need to deter-

mine the best way to stay in touch in emergencies and put the appropriate equipment in the right hands.

In a time of major emergency, it became clear that our public hospitals are embedded in an extended, multilevel, multiagency, multigovernment bureaucratic structure, no one part of which is responsible for our rescue. We do not have a single parent organization to act on our behalf, such as the VA or private hospital companies, but instead are dependent on the coordination and the gelling of a diverse set of scattered entities that work together only intermittently and in some cases with unrelated contract employees brought on for a particular disaster, such as the FEMA structure.

Let me emphasize this. After Katrina's floods struck, the State Department of Health and Hospitals, the Louisiana Hospital Association, and others of authority quickly determined that our public hospital should be in the top priority group for evacuation, given the critical condition of our patients. They were and have been consistent on that. We were all rowing in the same direction, and then suddenly some other authority seemed to supersede.

To this day, I do not know if the evacuation priorities were reordered once teams got to New Orleans or when FEMA got involved or if anyone actually coordinated our hospital rescue. I do know that numerous State agencies and military branches were logistically involved, performed well, as did private resources, but under whose order, if any, remains a mystery.

We learned many other lessons and have developed ongoing plans and processes to take the actions that these lessons have taught us. Some of these identified needs are: host facilities able to accommodate evacuated patients. This includes developing surge capacity on our own hospitals—and I'm almost done—and making other arrangements, such as temporary housing.

We have within our system the capability to accommodate surge capacity, but in Katrina our plan was overridden. We lost contact with all of our patients and thousands of our staff.

A system to provide a continuing flow of information on evacuated patients and staff. This involves creating backup IT systems and protection of medical records from potential damage.

This is very key to us: Temporary housing for staff whose homes were destroyed or damaged, but who are able to work in the disaster area.

Last, security to protect our people and our assets.

We know now that it is essential to plan for the worst case, not just something approaching it, and to prepare for the aftermath of a crisis, not just the episode itself. As was quoted in the New York Times just a couple of weeks ago by a New Orleanian as she was commenting about depression and suicide, quote: "I thought I could weather the storm and I did. It's the aftermath that's killing me."

Thank you very much.

[The prepared statement of Mr. Smithburg follows:]

PREPARED STATEMENT OF DONALD R. SMITHBURG

Mr. Chairman and members of the committee, I'm Don Smithburg, CEO of the LSU Hospital & Clinic System in Louisiana. I thank you for your interest in health care and in Louisiana after Katrina and Rita. I also thank you for your invitation to appear today and the opportunity to answer any questions you may have about

Louisiana's State public hospital system, about what we have learned from catastrophe, and about how we are preparing for the future.

I represent 9 of the 11 State public hospitals and over 350 clinics that traditionally have been called the "charity hospital system" in Louisiana. I would like to describe this system briefly.

Our hospitals and their clinics constitute the health care safety net for the State's uninsured and underinsured, *particularly the working uninsured*— $\frac{2}{3}$ of our patients are hard-working Americans. In your States, this role is generally a local government function, but in Louisiana it is the responsibility of a state-run and statewide hospital and clinic system under the aegis of LSU. Every individual in the State is eligible to receive services in any of our facilities regardless of where they live or their ability to pay. Louisiana has one of the highest rates of uninsurance in the Nation; over 20 percent of the population and estimated to include over 900,000 individuals. Another 21 percent of the citizenry is on Medicaid. So 41 percent of Louisiana's population is without private health insurance. That was before Katrina and Rita. Blue Cross of Louisiana has recently projected a 120,000 person increase in the ranks of the uninsured as businesses fail because of the storms' destruction. In New Orleans alone, the uninsurance rate is 41 percent since Katrina.

The LSU hospitals also have played an integral role in supporting the education programs of our medical schools and training institutions, and that includes not only LSU but also Tulane and the Ochsner Clinic Foundation. Our LSU system flagship is in New Orleans, commonly known as "Big Charity," is actually two facilities, Charity Hospital and University Hospital, operated under one medical center umbrella. At our New Orleans facility alone, there were over 1,000 Tulane and LSU medical students and residents in training, and many more nursing & allied health students, when Katrina struck and the multiple levee failures devastated our institution.

Some of these same students at Big Charity had rotations at the VA hospital in New Orleans as well. The VA facility sits a stone's throw from Big Charity and was also devastated by the flooding. In recent months, LSU and the Department of Veterans Affairs have been engaged in an historic and collaborative effort that we hope will result in rebuilding one plant that will support two hurricane-hardened hospitals, both are able to better serve their respective patient populations and conserve Federal and State resources at the same time.

I know you will understand that the destruction of Charity Hospital is felt especially deeply here. "Big Charity" was the second oldest continuing hospital in the Nation and has endured as one of the most significant medical institutions in the Nation over the 270 years. It was established in 1736. The hospital was destroyed once before by a hurricane, in 1779, but rebuilt just 5 years later; without FEMA, by the way. Today, it sits in ruins.

EMERGENCY PREPAREDNESS

Having created both a **statewide** and a **public** hospital system, it is natural and appropriate that Louisiana would turn to this system in times of emergency. Under State emergency preparedness plans, our hospitals are designated as the lead facilities in each region to accept patients who have special acute needs that may become emergent in a crisis or catastrophe. We have regarded it as our hospitals' obligation to gear up for potential disasters and to continue to operate when others may not be able to. We have the capacity as a system to transfer patients to our facilities in other parts of the State, if necessary. And since Louisiana's only Level I trauma and specialty care centers—in New Orleans and Shreveport—are operated by LSU, special medical needs generally could be accommodated internally.

Louisiana's emergency preparedness plans, and our role in them, were fundamentally sound up to a point. Clearly, that point was surpassed by the magnitude of Katrina in the New Orleans area. Our hospitals were prepared to help the victims of disaster, but not to be a victim ourselves.

THE REALITY OF DISASTER AND THE PAUCITY OF RESPONSE

What happened at Charity and University Hospitals when the levees failed? In brief, the city streets and hospital basements flooded. Power in the city was lost and hospital emergency generators were able to operate for only a short time because of lack of fuel. Supplies of essentials, such as food and water, were not allowed to be brought in despite our attempt to deliver such basic supplies and provisions. Restrooms did not work and maintaining sanitary conditions was difficult. External communications were exceedingly limited since telephones generally did not work. The sentinel result was that patient care and safety was compromised, especially for such critically ill patients as those on ventilators. Conditions didn't meet the

standards we would expect of Third World countries. Staff in the hospitals worked heroically to care for patients, manually ventilating some for hours and then days. In a few instances staff administered intravenous nutrition to one another. In sum, it became imperative to evacuate both patients and staff. But the hospital itself had no means to do so.

You are looking for the lessons from this disaster with an eye toward improving not only Louisiana's future emergency preparedness, but also that of a vulnerable Nation. From our perspective, there were several general lessons and many others at the hospital operational level.

Evacuation. First, as this committee is aware, there proved to be inadequate ability—or insufficient priority—to evacuate patients and staff at Charity and University Hospitals within a reasonable period of time. In the future we will not again assume that agencies that are physically and bureaucratically remote from our hospitals will come to our rescue. Instead, we have developed the means to transport patients and staff should the need arise. Quite simply, a trauma center is designed to stand in place in order to take in casualties after a disaster. This season, we are prepared to evacuate without reliance on the government.

Should assistance be available, we will gladly accept it, and certainly we will work cooperatively with agencies at any level to create an effective means to deal with all aspects of emergencies such as Katrina and Rita. But we will also exercise our capacity to take care of our own people within our system.

In fact, when Rita threatened Southwest Louisiana a few short weeks after Katrina, we did evacuate threatened patients and staff from Lake Charles, Lafayette and Houma to facilities in Baton Rouge and Alexandria. We didn't wait for the established cavalry as we did after Katrina's floods. We became our own cavalry and took care of ourselves without asking or expecting help. And it worked.

Since the storms, we have developed contracts with out-of-state ambulance companies to be available to transport patients in the event of emergency. These contracts stipulate that the companies' capacity must be devoted exclusively to our hospitals for the particular emergency. We hope that FEMA would reimburse our system should a future catastrophe require the activation of these transportation services. At this point, our 2006 evacuation costs are unbudgeted, but are estimated at \$2.5 million this season for evacuations affecting New Orleans, Houma and Lafayette.

Communications. One major lesson from this crisis was the need for reliable communications. Both in New Orleans and Bogalusa (along the Louisiana-Mississippi border, where our hospital received serious wind damage, communications with our central office, the State Office of Emergency Preparedness and others were exceedingly difficult. In the case of Bogalusa, there was silence for 2 days. Our police radios worked in New Orleans, but only intermittently in about 45 second intervals. Ham radio was most reliable, and it is a technology we will continue to invest in—but it is slow. Interestingly, cell phone text-messaging worked in a number of cases even though cell phone conversations often did not. Satellite phones were generally useless for us. Although several different technologies failed or were of very limited use, the communications problem undoubtedly has a technological solution. We need to determine the best way to stay in touch in emergencies, and put the appropriate equipment into the right hands.

It is not enough to have disaster plans. We must understand what they call for and be prepared to implement them unless unforeseen and overriding factors arise. To give you one concrete example, despite the designated role of our hospitals to receive evacuated patients, we received far fewer than we had capacity for. I personally worked at the State Office of Emergency Preparedness headquarters to help move both the patients and the staff from Charity and University to other LSU hospitals that were prepared to accept them, but this approach—the **planned** approach—was overruled by FEMA. Instead, patients from Charity and University Hospital were taken to the N.O. airport, ultimately put on military transports and scattered across the country. Only medical records, but no staff, accompanied them. To our knowledge, no record was kept of who was on what plane, where they came from or where they were taken.

Immediately after the evacuation, it was as if our patients had disappeared, and when the calls from families came asking about those in our care, we could not tell them where they were. Staff spent literally weeks calling hospitals across the country asking if any of our patients had been transferred there. Despite these efforts and those of the Louisiana Hospital Association, we never did find out where all our patients were taken.

In a time of major emergency, it became clear that our hospital is imbedded in an extended, multilevel, multiagency, multigovernment bureaucratic structure, no one part of which was responsible for our rescue. We do not have a single "parent" organization to act on our behalf, such as the VA or hospital companies, but instead

are dependent upon the coordination and the jelling of an exceedingly diverse set of scattered entities that work together only intermittently and in some cases with contract employees brought on for a particular disaster.

Hopefully, something can be done to tighten this structure. But its deficiencies are the reason that we must establish contingency plans to take care of ourselves.

Other Lessons. We learned many other lessons and have developed ongoing plans and processes to take the actions that these lessons taught. Identified needs include:

- A stockpile of supplies for a longer period than previously thought, at least 2 weeks. Supplies should include food, water, medications, generators, gasoline, flashlights, and red bags and buckets with lids.
- Receiving facilities able to accommodate evacuated patients. Includes developing surge capacity in our own hospitals and making other arrangements such as temporary housing as well.
- A system to provide a continuing flow of information on evacuated patients and staff, including clinical information, location, and family contacts. This involves creating backup capacity for clinical IS systems and protection of medical records from potential damage.
- Temporary housing for staff whose homes were destroyed or damaged but who were able to work.
- Security to protect our people and our assets.

We have also come to understand that we must help shape the capabilities and expectations of the outside world. We cannot afford for emergency preparedness entities and health care providers to maintain unrealistic expectations of what our hospitals can do in the event of a disaster that overwhelms us all. Coping with disaster is our problem, and we hope it is on the way toward resolution. All providers and agencies must craft realistic contingency plans of their own.

We know now that it is essential to plan for the worst case, not just something approaching it, and to prepare for the aftermath of a crisis not just the immediate crisis period itself. As was quoted in the *New York Times* 2 weeks ago, a New Orleanian said as she reflected on depression and suicide: "I thought I could weather the storm, and I did. It's the aftermath that is killing me."

Thank you again for your interest and for the opportunity to share LSU's perspectives on these critical matters.

Senator BURR. Thank you, Mr. Smithburg.

Dr. Letourneau.

Dr. LETOURNEAU. Thank you, Mr. Chairman, and subcommittee members and staff.

There are many lessons from Katrina—patient, cultural, operational, and personal lessons. Today I will relate some of the lessons we have learned in the context of our sizable research enterprise. As a matter of introduction, since I'm not Dr. Hollier, I am Janice Letourneau. I'm Associate Dean for Faculty and Institutional Affairs at the LSU School of Medicine here in New Orleans, Professor of Radiology and Surgery, an academic physician.

As the representative from the academic component of LSU, I'm pleased and wish to thank the members of the subcommittee, as well as those from multiple Federal agencies and our Congressional contingency, for all their support and intervention during the storm and in the aftermath. It really was an incredible disaster and, as Don has mentioned, it remains a disaster.

LSU Health Sciences Center in New Orleans is comprised of six professional schools and it serves the health care needs of 1 million patients each year. Katrina and its attendant flooding severely impacted the center, forcing us to temporarily relocate to Baton Rouge. Both the academic campus and the two major teaching hospitals were flooded. As a consequence, we continue to recover in a very strategic and global way.

Over the past 10 years, the State has invested heavily in us as an institution, its infrastructure, and also its research programs.

As a result, we were in a growing phase. We had added 100 new faculties over the 3 years preceding Katrina. With that, we saw a dramatic increase in our research programs. A good example is the addition of four new basic science department heads in the school of medicine over the last 4 years. These people did what they were supposed to do: They hired new faculty—talented people that came in with funding, developed new sources of funding; and our successes are outlined in the table that's included in the printed testimony.

Coincident with the growth in the faculty, we saw expansion of our graduate and our post-doctoral training programs and continued growth of our interdisciplinary research institutes and centers.

But the storm changed all of that. It challenged our ability to maintain our existing programs and it really arrested our ability to operate in any way that we knew from the past. Progress was basically arrested by the physical damage and the human tragedy of Katrina. For example, with this disruption of clinical services that you've heard about execution of clinical trials has become very difficult and as a consequence of that the Health Sciences Center and the school have lost \$7 million in annual revenue in comparison with last year, just on the basis of clinical trials. Additionally, 17 NIH-funded investigators have left the institution since the storm, leaving with them about \$5.5 million of funding.

Immediately following the evacuation we established ourselves operationally in Baton Rouge. The infrastructure for operations was quickly established and really miraculously we started classes within 4 weeks to the day from landfall of Katrina. Temporary administrative, teaching, and some research space was established at Pennington. But the two hugest challenges that we faced were really communication and housing. The communications strategies are outlined in the printed testimony. Housing was addressed more creatively in conjunction with an important commitment by FEMA to provide funding for a Finnjet passenger ferry and also for temporary trailer housing on the LSU campus.

After restarting our classes, we looked—we turned next to the continuity of our research programs, assuming that our campus would really not be habitable for the next 6 to 9 months. Individual investigators developed idiosyncratic strategies along with their supervisors, identifying their family needs, their laboratory needs. Some of these people wound up staying in the Baton Rouge area. Some of them went in dispersed fashion around the country to host institutions and with other scientists as they re-established their research program. There really was a diaspora of our investigators around the country and to some extent around the world.

As the city became more inhabited, temporary facilities were also established at our partner institution, the Research Institute for Children at Children's Hospital, and also at Ochsner.

This has also been a pretty productive time for our faculty for grant-writing because the labs haven't been fully operational, and the successes that we've had in grant-writing are also outlined in the testimony.

The campus was flooded with 3 to 7 feet of water and that destroyed the electrical and mechanical systems of our major buildings. Five major multistory buildings were affected on the down-

town campus, as were two major buildings on the dentistry campus. The estimated losses range at this point, with assessments still ongoing, at about \$100 million.

The content loss, particularly the losses of research animals and biomedical specimens, are particularly difficult to value.

Things are looking up. We've been back on campus now for 6 months doing research. Our buildings are mostly open. The ground floors remain closed. Now, at 9 and 10 months, classes are resuming. Administrative operations have also resumed here in downtown New Orleans. The School of Dentistry will likely remain in Baton Rouge for the entire coming year.

What are the lessons? Our immediate goal is to focus on faculty retention and continuity of our research program, but the lessons are: that a clear understanding and commitment to the institution's mission—education, discovery, and service—is critical to maintaining the loyalty and morale of students, staff, and faculty. In a disaster of this magnitude, crisis management, assessment, recovery, and even rebuilding all occur contemporaneously. Information is very dynamic in nature and communication becomes even more important than it was before, and communication pathways must be redundant.

Assessment of facility and scientific loss is extremely complicated and difficult, and our senior investigators have helped tremendously with excellent recommendations on mitigating damages and minimizing losses for the future. Retention of students and faculty is critical to restoration of successful scientific programs. The departure of scientists after Katrina is most frequently associated, not just with professional losses, but with the personal losses and frustrations that they've experienced as well. Some of the loss of funding has been counterbalanced by new opportunities and funding that's arisen.

Several factors have contributed to the survival of our research enterprise, including the investments that we've talked about before by the State and Federal Government, the resilience and creativity of our leaders, the thoughtful support and intervention of multiple agencies, as we've talked before. But the research enterprise is still very fragile, but there is an exciting set of opportunities on the horizon.

There is a new announcement today from the NIH, thanks to Dr. Zerhouni and Hitt, providing for a funded 1-year extension on R-type research grants for investigators who choose to stay in New Orleans. With these kinds of opportunities, we hope that we will emerge with a new focus and energy in the pursuit of our scientific discovery.

Thank you very much.

[The prepared statement of Dr. Letourneau follows:]

PREPARED STATEMENT OF JANICE LETOURNEAU

OVERVIEW OF GROWTH

The Louisiana State University Health Sciences Center in New Orleans (LSUHSC-NO) is the primary care provider for all citizens in the State of Louisiana. It serves 1,000,000 patients a year and is the primary educational center for health care professionals in the State, and comprises Schools of Medicine, Graduate Studies, Dentistry, Nursing, Allied Health, and Public Health. Hurricane Katrina, which struck southeastern Louisiana on Monday, August 29, 2005, has severely im-

pacted the education, service, and research mission of the Health Sciences Center, essentially requiring a temporary relocation of the Center to Baton Rouge, which is 60 miles inland from New Orleans. The two major teaching hospitals for LSUHSC in New Orleans (Charity and University Hospitals) were flooded and Charity suffered significant structural damage. There is a tremendous ongoing institutional planning effort for continued recovery of this academic medical center.

The past 10 years have witnessed a tremendous State investment in LSUHSC–NO, which has resulted in dramatic growth in its research programs. This investment included infrastructure development, research resources and the successful recruitment of new department heads, a new Dean of the School of Medicine, a new Chancellor of the Health Sciences Center and the creation of a School of Public Health. This has resulted in a true sense of mission at the Health Sciences Center, and in the recruitment of 100 new faculty members over the past 3 years. All of this progress has essentially been brought to a halt by the damage and human tragedy inflicted by Hurricane Katrina.

Within the Basic Science Departments at LSUHSC–NO, four new Heads of Departments (Genetics in 2000, Pharmacology in 2001, Physiology in 2002, Biochemistry in 2004) were recruited within the last 4 years, and LSUHSC–NO is currently recruiting a new Head for the Department of Anatomy and Cell Biology. This has resulted in the expected additional recruitment of talented, NIH funded faculty and further infrastructure development in terms of space, equipment, and core research support services. Coincident with this growth has been the significant expansion of graduate and post-doctoral research training programs and the continued growth of Centers of Excellence in Alcohol Research, Cancer, Cardiovascular Biology, Research Institute for Children, Oral Biology and Neuroscience and expansion of programs in Gene Therapy, Human Genetics, Immunobiology and Infectious Diseases.

Because of this activity, NIH supported research on campus has increased from \$18,743,273 in fiscal year 2001 to \$39,950,000 for fiscal year 2006 (through 3–1–06). The storm, however, has had a serious impact on our progress. For example, clinical trials were deeply impacted by Katrina with a loss of more than \$7,000,000 from fiscal year 2005 to fiscal year 2006. Seventeen NIH funded investigators have left the institution since the hurricane for a total loss of \$5.7M per year. Table 1 provides historical data regarding LSUHSC–NO research awards.

Table 1.—LSU Health Sciences Center in New Orleans Historical Research Awards

	FY–2001	FY–2002	FY–2003	FY–2004	FY–2005	FY–2006
NIH	18,105,247	19,503,425	21,228,872	35,738,211	37,192,393	38,950,000
NIH Subcontract	633,026	2,137,522	1,953,888	2,387,258	2,402,823	1,518,873
Other Federal	2,324,944	3,934,947	7,152,543	5,946,337	4,903,991	1,997,611
Private	3,266,902	5,950,971	3,257,737	4,111,303	4,947,378	2,582,949
State	8,061,668	8,201,246	9,810,431	8,628,646	3,833,636	2,541,984
Clinical Trial	5,948,597	11,642,094	7,805,895	7,546,581	9,013,377	1,855,564
Total	38,340,384	51,370,205	51,209,365	64,358,336	62,293,598	49,446,981
Included Above:						
NIH Supplements (15 request) ..		10 Awarded		1,192,000		
NIH Awards Since Katrina		12 New Awards		4,384,188		

The recruitment of Larry Hollier, M.D. from Mt. Sinai Medical Center as Dean of the School of Medicine in January of 2004 and his recent appointment as Chancellor of the Health Sciences Center has provided further impetus for growth and expansion. Thus, LSUHSC–NO has a group of experienced and respected leaders committed to the development of educational and research programs at the forefront of academic medical centers.

POST-KATRINA RECOVERY ACTIVITIES

Following the evacuation from New Orleans, administration and support services for the Health Sciences Center were established in Baton Rouge. An organizational center was established at the LSU systems office in Baton Rouge during the storm and this served as base camp for leadership and staff. Information was provided through the LSUHSC Web site and by using phones to answer questions from students, staff, and faculty.

The Health Sciences Center in New Orleans was temporarily relocated in Baton Rouge. Classes began on Monday, September 26 for all of its schools. Infrastructure

required for operations were quickly established (i.e. Information Technology, Human Resources, Benefits, Grants Administration). All financial systems became operational within 2 weeks of the storm and all payrolls were delivered. This was a tremendous undertaking.

One of the biggest challenges in completing the operational initiative of the Health Sciences Center when it relocated to Baton Rouge was finding housing for faculty, student, and staff. Baton Rouge doubled its population due to the influx of New Orleans evacuees. LSUHSC-NO addressed this need by providing a *FinnJet* Ferry Boat docked on the Mississippi River that housed up to 1,000 students, faculty, and staff. In addition, 400 one and two bedroom trailers were placed on LSU property in Baton Rouge as part of a University Village for faculty and students.

At the departmental level, chairs communicated with faculty immediately after the storm through text message since direct phone calls were problematic. The LSUHSC e-mail system was down for 2 weeks further complicating communications. As expected, individuals evacuated to different areas of the country to find a personal comfort zone for their families. LSUHSC-NO's priority was the personal safety of its students, faculty, and staff.

Through text messaging, limited phone connections, and alternative e-mail accounts the Health Sciences Center community was able to establish and maintain contact. The great majority of faculty and staff suffered personal loss and damage to homes to varying degrees. Many faculty, staff, and students completely lost their homes.

Our mission during this time was to provide a personal and professional anchor for individuals. LSUHSC-NO held conference calls with the faculty and also with students to bring people together for mutual support.

CONTINUITY OF RESEARCH AND EDUCATION PROGRAMS

The next step was to provide a mechanism for continuity of our research and education programs as individuals tackled the issues facing them. Due to the importance of finding a personal comfort zone, it was decided either to support faculty in Baton Rouge with lab space or to work with other universities where faculty may have found that comfort zone for the family and their specific situation. Initial anticipated timeframe of 6-9 months following Hurricane Katrina for an operational campus at LSUHSC in New Orleans, the Health Sciences Center moved aggressively to make sure that investigators in temporary locations had what they needed in terms of space, equipment, and resources.

Financial systems were made operational, and a research supply store was set up at Pennington Biomedical Research Center. In addition, each investigator was provided with a "purchasing card" so that they could buy what they needed immediately. For investigators at different universities, LSUHSC-NO covered all personnel and supply costs through LSUHSC as normal and arrangements were made for direct shipping of supplies and reagents to the investigator's laboratory.

The laboratories were made operational by sharing equipment, buying small equipment used on a daily basis, obtaining additional items from individual laboratories at the Health Sciences Center, and the graciousness of the individual institutions housing the investigators.

Graduate students beyond the first year of the program were with their mentors or collaborators as were fellows. First year students began classes in the interdisciplinary course framework of the School of Graduate Studies on Monday, September 26 in Baton Rouge and these classes started in New Orleans beginning January 2006.

In many cases, individual faculty gravitated toward the labs of established collaborators. Several faculty set up operational space at LSU affiliated schools or centers in Baton Rouge (Pennington Biomedical Research Center, LSU School of Veterinary Medicine, LSU School of Life Sciences) while others set up their laboratory at other institutions across the country.

In mid-November, laboratories were set up at Children's Research Institute at Children's Hospital and the Ochsner Clinic Foundation in New Orleans as many faculty members and staff began to return home to New Orleans.

In addition to laboratory activities, 105 grants were submitted to NIH since Hurricane Katrina hit the coast. Fifty-eight of these grants were new submissions. As of 3/1/06, 15 requests for administrative supplements (\$3,717,329) have been submitted to NIH post-Katrina; 10 of these requests have been awarded for a total of \$1,192,000.

LSUHSC-NO was contacted by multiple institutions, colleagues, and departments around the country offering space, support, and encouragement. The numerous and generous offers of lab space and support from the research community has provided

flexibility to address our challenges. All of the individual programs, investigators, and institutions that welcomed displaced investigators should be recognized for their tremendous effort, graciousness, support, and hospitality.

DAMAGE ASSESSMENT

The entire Health Sciences Center was flooded with 3–7 feet of water on the first floor of each building, which destroyed electrical cores, water pumps, and fire pumps. Five major buildings with 5–10 floors each were affected on the downtown campus and the two major buildings on the School of Dentistry campus. A full-assessment of damage to the buildings and the full extent of lost research material and damage to equipment is ongoing. A detailed report with daily updates can be monitored at <http://www.lsuhs.edu/>.

The personal damages along with the losses and disruptions of research programs are having a severe impact on career development for both new and established investigators. It should not be overlooked that this impact also includes the graduate students and post-doctoral fellows. This includes issues with manuscript generation and publication delays as well as grant submissions and grant renewals, all of which will have a lasting impact on our mission and the many contributions of the NIH and NSF supported research programs in Louisiana.

THE RETURN TO NEW ORLEANS

Less than 6 months after the floodwaters left the downtown campus, the upper floors of the Medical Education Building, the Lion's/LSU Clinic Building and the Mervin L. Trail Clinical Sciences Research Building were opened, allowing researchers to move back into their labs.

Just 9 months after Hurricane Katrina forced the institution to relocate all of its classes and operations, the majority of the downtown campus functions have returned. Classes have begun for the Schools of Allied Health Professions, Graduate Studies, Medicine, Nursing, and Public Health. The two student residence halls have reopened, along with the Library, Administration, and Resource Center.

On the Florida Avenue Campus, which sustained the worst flooding, work on the Dental School Clinical and Administration Building is ongoing. The School of Dentistry has organized its efforts in Baton Rouge and continues to educate its dental students, dental hygiene students, dental laboratory technology students, and residents. In addition, a 32-chair clinic, a student dental laboratory, and a preclinical laboratory continue to be housed in three vacant buildings made available through Louisiana State University.

SUMMARY

In summary, our immediate goal is to focus on faculty retention and continuity of our research programs. We will also concentrate on programmatic development with emphasis on program retention and institutional restoration.

Senator BURR. Thank you, Dr. LeTourneau. We are also pleased with Dr. Zerhouni's decision and I think that shows just the type of leadership we've got at the NIH.

Dr. WHELTON. Senator Burr, Senator Alexander, it's an honor to welcome you to the city and I'm very grateful that you're here to see our progress and our challenges firsthand.

In the immediate aftermath of Hurricane Katrina, I learned several valuable lessons. First I should say, faced with an overwhelming crisis, health care providers performed in an exceptional manner and they are among my heroes of Katrina.

Second, the academic community, key Federal agencies, especially for us the NIH and CDC, the local health care institutions, including Ochsner, have been unbelievably supportive.

Third, New Orleans was probably better prepared for an emergency than most cities in the United States, but certainly our city, even though better prepared, was not sufficiently prepared for an overwhelming challenge like Katrina. Before Katrina our medical group cared for approximately 50,000-odd patients per month. Immediately after the storm, they established clinics, many free clin-

ics. We reopened our health sciences buildings in October, our Tulane Lakeside Hospital in November, and our downtown university hospital in February. We've progressively increased both clinical availability and the number of inpatient beds, which, while still much lower than pre-Katrina, now we have an average daily census of about 200 and we expect to get back up to 300 to 400 in the foreseeable future.

In order to assure a cadre of well prepared public health professionals in Alabama, Arkansas, Louisiana, and Mississippi, we've worked very hard to advance our Tulane South Central Center for Public Health Preparedness. This center trains more than 17,000 front-line practitioners and public health leaders, and we've added a variety of training opportunities specific to the lessons learned from Katrina.

Talking a little bit about our research enterprise, despite Katrina-related losses of more than \$120 million in research income and facilities, we're back on our feet and I expect that our research awards during the current year will be somewhere between \$100 million and \$105 million. That is about 95 percent of our awards last year.

I want to turn for a moment to talk a little bit about my view of the current State of health care in New Orleans. Let me first talk about patients. If your schedule had permitted an opportunity to tour our facilities, you would have seen very busy clinics, overcrowded emergency rooms, and very limited capacity to meet the demand for inpatient beds. In addition, you would have noted a very high level of uncompensated care. Whereas approximately 3 percent of our inpatients at the downtown hospital lacked health insurance pre-Katrina, the corresponding rate has been as high as 47 percent post-Katrina. If insufficiently addressed, this high level of uncompensated care could well undermine the financial capacity, particularly of practitioners, but also of institutions, to meet their obligations.

Turning to infrastructure, throughout Orleans Parish there is a major shortage of clinics, of inpatient beds, and of both acute care and nursing home beds. Our progress in rebuilding an effective health care system post-Katrina is moving far too slowly to meet the needs of current citizens and temporary residents, much less the anticipated health care needs, as New Orleans continues to repopulate over the next 12 months.

This problem is being felt disproportionately in many of the areas of greatest need. As an example, there's not a single designated psychiatric bed in Orleans Parish today.

Now let me talk a little bit about providers. Approximately 3,200 physicians were practicing in the New Orleans metropolitan area prior to Katrina. Today it's not certain, but that number is thought to be somewhere between 1,400 and 1,600 physicians, of which Tulane practitioners represent about a quarter. Federal estimates suggest that New Orleans has lost 77 percent of its primary care providers, 89 percent of its practicing psychiatrists. Many of those who remain are finding it very difficult to meet their financial obligations. If we lose our remaining network of primary care physicians and the specialists, it's going to be very challenging and I might add very expensive to rebuild.

Compounding this, we've had to reduce the size of our medical residency training programs post-Katrina. If this reduction in size persists into the future, one of the most reliable pipelines for the attraction of highly skilled health care practitioners to our region will be diminished.

Today I ask for your support in reauthorizing important programs such as the Public Health, Security, and Bioterrorism Response Act. I strongly support Secretary Leavitt's recommendation that we redesign the health care system in Louisiana's Region 1. This to me is a long-term goal. In the short term, we need assistance to provide health care appropriate to the current needs of our community.

In closing, let me say that I'm again very grateful you're here, that my colleagues and I, at Tulane, are fully committed to playing a leadership role in health professional training, in health care delivery, in promotion of wellness and economic revitalization of our community. I want to thank you for the privilege for being able to testify today.

[The prepared statement of Dr. Whelton follows:]

PREPARED STATEMENT OF PAUL K. WHELTON

Mr. Chairman and members of the subcommittee, thank you for the opportunity to speak with you today regarding the public health recovery in the city of New Orleans since Hurricane Katrina's historic landfall on August 29, 2005. It is an honor to welcome you to our city. On behalf of our students, faculty, researchers, staff and patients, I would like to express our gratitude to you for coming to see our progress and challenges first-hand.

I want to thank the subcommittee for supporting public health recovery efforts in New Orleans. We are particularly appreciative of Secretary Leavitt's commitment to the long-term recovery of our region's healthcare system. The support from Federal agencies such as the National Institutes of Health, the Centers for Disease Control and Prevention, and the Department of Veterans Affairs continues to be invaluable as we recover.

We have made significant steps forward despite almost overwhelming challenges, but still have a long way to go before health care and public health preparedness in our city and region are robust enough to serve our current population—including temporary laborers and volunteers. Together, we must ensure the presence of a sustainable public health and healthcare system that meets both the routine needs of our region, as well as the needs of our population, during any future disasters.

PUBLIC HEALTH AND MEDICAL CARE: THE TULANE COMMITMENT

Tulane University was founded as a public-health-oriented medical school 172 years ago in response to community needs—epidemics of yellow fever, cholera and malaria. Except for 3 years during the American Civil War, Tulane University, which today includes its Health Sciences Center, School of Medicine, School of Public Health and Tropical Medicine, and hospitals and clinics, has served our community without interruption, including before, during and after Hurricane Katrina. Our commitment to the success of New Orleans began long before Katrina reached our shores and our resolve to be a vital part of the community's rebirth following the hurricane has never wavered. That commitment is sealed in our mission and in our hearts.

Prior to Hurricane Katrina, Tulane University was the largest private employer in Orleans Parish. Today we are the single largest employer in the Parish and we remain one of the fastest-growing economic engines in southeastern Louisiana. Before Katrina, approximately 8,000 faculty, students and staff worked at the Tulane University Health Sciences Center. With more than 350 full-time faculty members, our medical group was one of the largest in the region overseeing care for approximately 1,000 inpatients and 50,000 outpatients per month. Our medical and public health training programs were amongst the most competitive in the Nation. With annual research awards of approximately \$140 million per year, a recent three-fold increase in awards from the National Institutes of Health, and evolving partnerships with other academic institutions in our region, Tulane supported a vibrant re-

search and discovery community. We had an annual operating budget in excess of \$650 million at the Health Sciences Center and Tulane University Hospital & Clinic, along with major additional responsibilities at the Southeast Louisiana Veterans Health Care System (Tulane provided approximately 75 percent of the physician services) and the Charity System Medical Center of Louisiana, New Orleans.

Throughout and immediately after Katrina, Tulane faculty, students and staff remained to provide essential services. They performed admirably and many emerged as heroes who saved lives under extremely challenging conditions. Not a single life was lost at the Tulane University Hospital & Clinic. Our staff took whatever measures were necessary to save human lives, including hand ventilation of patients for prolonged periods when electricity was unavailable. In addition to safely evacuating all of our patients, faculty, staff, students and friends, we evacuated many of our research animals and humanely euthanized those that could not be evacuated. Moreover, we preserved key cell lines for both clinical care and research, and vital equipment—saving U.S. taxpayers millions of dollars.

In the immediate post-Katrina environment, Tulane was the largest ambulatory care provider in Orleans Parish, with clinics that remained open 7 days a week. Our medical personnel provided free care for about 400 patients per day in the absence of any formal healthcare infrastructure. The majority of those who received care were uninsured or under-insured. Our faculty provided care under awnings, in police precincts, in tents, and in parking lots. Although we are a private institution, we remained true to our mission of meeting the healthcare needs of the community. Indeed, we are still operating the Covenant House clinic in the French Quarter, one of the four free clinics that we established following Katrina. In conjunction with the Children's Health Fund we established a mobile pediatric unit, still in operation, which has allowed us to serve children in their own neighborhoods without regard to their parents' ability to pay for the services rendered. Additionally, we were able to place our clinical faculty throughout Louisiana, focusing on the sites where New Orleanians evacuated in the diaspora, such as Alexandria, Baton Rouge, Lafayette, Pineville and the New Orleans Northshore-Covington area.

The commitment of our healthcare professionals to helping the community has been extraordinary and universal amongst faculty, staff and students. As one of many examples, we, in conjunction with Common Ground, are running a special *Latino Health Outreach Project Clinic* on the West Bank section of the city. This clinic was the brainchild of Catherine Jones, a third-year student in Tulane's combined medical degree and master of public health degree program. Jones, a native of New Orleans, heard the distressing news—of uninsured, non-English-speaking day laborers—while an evacuee with her family in Texas. She immediately returned to Louisiana, and with the help of others provides free health care for up to 50 New Orleanians each day in an abandoned storefront in Algiers.

On February 14, Tulane University Hospital & Clinic (TUHC) became the first hospital to reopen in downtown New Orleans following the hurricane. TUHC serves as a vital resource for repopulation of the city. The opening of the hospital was critical to assuring the success of this year's Mardi Gras and was a sign that the city was ready to welcome back both tourists and the business community.

As reported by the Government Accountability Office in March 2006, 63 beds were staffed in February at the downtown TUHC. Today, that number is 93, which represents a 48 percent increase in 5 months, but this is still only 40 percent of our pre-Katrina 235-bed capacity. Concurrently, we have been staffing approximately 60 beds at our Tulane-Lakeside Hospital in Jefferson Parish, which we reopened in October. This represents about half of the 119-bed capacity at that hospital.

Through the summer, we have been adding outpatient clinics throughout the city and region. At our downtown campus, we have reopened emergency, urgent care, transplant and multispecialty clinics. The Tulane Cancer Center infusion and clinical treatment clinics are in the process of reopening, with cancer radiation therapy and other clinics planned to open in August.

With much appreciated help from our colleagues in south Texas, we maintained the integrity and quality of our School of Medicine training programs. Likewise, with help from the other accredited schools of public health, we provided our public health students the opportunity to continue their studies at many of the Nation's best schools. Our School of Public Health and Tropical Medicine, the oldest in the Nation, restarted its educational programs in New Orleans in January. And as of last week, all of our medical students and medical residents have returned to the city. Medical students, and especially medical residents, often decide to stay and practice where they receive their medical education and training. Returning our trainees to New Orleans is a vital step in the rebuilding of the health professions workforce for our region. Also, the public health students who are enrolled at Tulane, and the many that stay after graduation, contribute to improving the com-

munity's health through public health outreach initiatives, education endeavors and research.

While learning, our medical students and residents participate in clinical rotations and training programs that add to the clinical care resources of the city. We retained 98 percent of our medical student body. I am pleased to report that we were able to fill our residency slots for the 2006–2007 year with highly-qualified candidates—in most instances they were our first or second choices. Also, after receiving more than 7,000 applications for admission to our MD program (consistent with recent years' numbers), our incoming medical school class is among the largest in our history and has an academic profile congruent with prior entering classes. In addition to this, many have chosen Tulane because they want to participate in rebuilding the community's healthcare system. All combined, these promising results reflect the interest of young health professionals in providing care in a challenging environment.

Before the storm, the city's medical district was an epicenter for the training of healthcare professionals, including more than 1,400 medical residents. Tulane lost vital medical resident training positions due to the closure of the Charity System's Medical Center of Louisiana, New Orleans and the Southeast Louisiana Veterans Health Care System inpatient facilities in New Orleans. TUHC has helped by opening up nearly 50 additional temporary residency positions. Furthermore, we have placed medical residents at our Tulane-Lakeside Hospital in Jefferson Parish and several other hospitals in the community, including the Ochsner Medical Center, Touro Infirmary, West Jefferson Medical Center, East Jefferson General Hospital and Slidell Memorial Hospital. TUHC is negotiating a lease of approximately 40 beds to the VA—expected to become operational by October 1st. Not only will these beds help serve the needs of local veterans and their families who must now travel many miles for inpatient services, but they will serve as a vital part of our medical resident training program. Despite all of the above, it remains a challenge to find appropriate training environments for training of our medical residents.

Despite research inventory and facilities losses of more than \$120 million, Tulane University remains the region's largest research enterprise and the area's only institution to be ranked in the top 100 for receipt of awards from the National Institutes of Health. Last year the university received more than \$140 million in research awards, with more than \$110 million awarded to faculty at the Health Sciences Center, the largest in our history. I expect our health sciences faculty will end the year with awards totaling between \$100 million and \$105 million (90 to 95 percent of last year's total). Again, this is another example of our commitment to the region's economic recovery.

Our School of Public Health and Tropical Medicine has assiduously monitored public health concerns and provided information through initiatives—from recovery issues to nondisaster health maintenance, e.g., nutrition and heart disease. Specifically, faculty from the Tulane Department of Environmental Health Sciences worked alongside Federal, State and local health officials to provide real-time guidance to community residents for pressing environmental health issues—from drinking water safety and air pollution to mold remediation. The school has retained more than 80 percent of its students and already has exceeded its goals for fall enrollment, with a similar academic profile to that of previous years. An exiting development last fall was the start of our new undergraduate program in public health, one of a few in the Nation. Already, enrollment has exceeded expectations and in a few years the program will produce young, vibrant public health professionals.

PUBLIC HEALTH AND MEDICAL CARE: THE KEY CHALLENGES

Fragmented Healthcare Infrastructure

Currently, a safety net for the uninsured is lacking. The burden on hospital bed capacity, as well as the lack of financial support to care for this growing segment of the population, is seriously threatening the functioning and sustainability of what was already a fragile city public health and healthcare system. The loss of the Charity and VA system's inpatient capacity has exacerbated the situation. Accelerated in the aftermath of the storm and its related economic fallout, patient capacity to pay for health care has been greatly diminished. Before Katrina, the percentage of uninsured patients in New Orleans was already larger than the national average. At Tulane, the number of uninsured outpatients has risen from around 6 percent pre-Katrina to recent numbers of 20 percent for Tulane-Lakeside and 40 percent for Tulane University Hospital & Clinic. HHS funds to help 32 States shoulder increased medical costs attributable to Katrina had covered a fraction of Medicaid providers' costs at hospitals for claims of uninsured patients through Jan. 31. Also, the Louisiana Legislature has authorized financial support to Louisiana hospitals for

care of patients without health insurance but this assistance does not address the financial plight of the physicians who provide the care. The bottom line is that (a) the funding directed to help hospitals is insufficient and (b) support is not reaching the individual healthcare providers and many, especially physicians, have made the decision to relocate to other regions of Louisiana or to other States. Many more are considering relocation. Compensation for care of uninsured patients is a growing crisis that could lead to further deterioration of our region's healthcare infrastructure.

In addition to the financial challenges for healthcare professionals and healthcare systems, there is an acute shortage of clinics and inpatient facilities. This is disproportionately being felt in some key areas of need. For example, there is not a single designated inpatient psychiatric bed in Orleans Parish. In addition, when patients are discharged from hospitals there are few options available for homecare or institutional care, such as nursing homes. This has resulted in a prolongation of hospital stays by approximately 20 percent—further exacerbating the shortage of inpatient beds and cost of care.

Loss of a Competent Healthcare Provider Workforce

The considerably decreased patient base and permanent relocation of hundreds of physicians continues to significantly impair our community's ability to provide quality care. Repopulation cannot occur without a commensurate investment to retain and recruit physicians, nurses and other health professionals. Retention of physicians and public health professionals is already a problem and could get worse before stabilizing. This should be a very high priority. If we lose our network of medical professionals in New Orleans—which includes a mix of primary care physicians and specialists—it will be challenging and expensive to rebuild. Before Katrina, the Orleans Parish Medical Society estimated 3,200 physicians were practicing in Orleans, Jefferson and St. Bernard parishes. Today, they estimate the number is between 1,400 and 1,600 physicians, of which Tulane practitioners represent about one-fourth of those currently in practice.

Disaster Preparedness

Public health and healthcare preparedness are integral to disaster readiness. Multi-faceted challenges, such as disaster recovery and preparedness, cannot be solved with monolithic solutions. While we need to look broadly and think long-term, my biggest immediate concern is for the middle phase of recovery—simplified, I'll refer to it as Year 2. We have moved beyond the rescue and rebounding phase of Year 1. Now Federal emphasis is on long-term rebuilding starting in Year 3. I support the Department of Health and Human Services and Secretary Leavitt's redesign for Louisiana Region I. With Federal assistance, our long-term prospects look promising. My fear is for this gap between Years 1 and 3. The next 6 to 9 months are critical, and I am hoping that this subcommittee can help address this concern. By helping us now, you will further the understanding of this middle period of insecurity to the benefit of future disaster recoveries. The importance of a successful execution of this middle phase has been demonstrated internationally. For example, investment during this transition period after the Kobe, Japan disaster provided a critical foundation for subsequent long-term, sustainable recovery. Please keep our second post-Katrina year in mind and in motion.

PUBLIC HEALTH AND MEDICAL CARE: LOOKING FORWARD

Assuring a Robust Healthcare Infrastructure

In my opinion, a Federal policy for care of those without health insurance is much needed. This should be an immediate priority for New Orleans, because if unaddressed, it promises to undermine the capacity of the healthcare provider community to survive. In New Orleans, there appear to be three groups of uninsured patients: (1) residents who did not have insurance before Katrina; (2) residents who had health insurance prior to Katrina, but no longer do so, either because they lost their job or lack the resources to continue paying for their insurance; and (3) day laborers who are temporary residents and lack any form of health insurance. We need a better understanding of the relative contribution of each group and ways in which their acquisition of health care can be encouraged and facilitated.

Strengthening the Healthcare and Public Health Workforce

Healthcare providers make choices to stay or leave a distressed community. In this context, it could be valuable to have a national registry of physicians, as well as other healthcare professionals. In addition to helping patients locate their providers, such a registry could help providers from unaffected areas who want to assist in recovery efforts. This concept not only creates surge capacity in a seamless fashion nationwide, but also comports with the Federal emphasis on regional pre-

paredness. We could also utilize Public Health Service personnel to rebuild the healthcare infrastructure and to fill provider gaps as needed—current examples of need include nursing, mental health and dental health. However, while volunteers might be effective in the short-term, ultimately our community needs the stability and quality that comes from the long-term commitment of local providers.

The ability to support healthcare providers is pivotal to retaining a competent clinical staff. I am grateful to the Board of Tulane and the university administration for ensuring that payroll and benefits were covered for our faculty, clinicians and medical residents, and to our clinical partners at HCA, who did an outstanding job in evacuating patients and staff and in helping to place them in jobs at other facilities. While we benefited from a temporary relaxation of the Stark law through 2005, there needs to be consideration of a national policy which extends that time frame in the aftermath of a disaster, so that hospitals and organizations with the resources can help doctors with housing and other accommodations. We, as a Nation, also need to consider bridge-income strategies for healthcare providers, beyond SBA loans and Medicare patches, which would be effective in retaining the healthcare provider workforce. This is an ever-growing concern as the cost of living and the cost of doing business continues to increase as a result of the post-disaster regional economic environment.

Next, we need to enhance health professionals' knowledge of public health emergency preparedness. In maximizing Tulane's academic disaster expertise for public health and biodefense, starting this fall, our School of Public Health and Tropical Medicine will offer the Nation's only concentration in disaster management for a Master of Public Health or Master of Science in Public Health degree. The degrees will be offered both onsite and on-line, to help create a readiness workforce. Tulane will work to enhance the South Central Center for Public Health Preparedness and the South Central Public Health Training Center, which we launched in 2002, to serve the public health workforce in the four-state region of Alabama, Arkansas, Louisiana, and Mississippi. In the 2004–2005 year the South Central Center for Public Health Preparedness trained 17,550 and the South Central Public Health Training Center trained 6,965 professionals. For 2005–2006, the respective numbers exceeded 17,000 and 8,700. Training and education provided by these centers addressed critical disaster preparedness and response components such as *Incident Command*, *Chemical Terrorism*, and sessions specific to the lessons learned from Hurricane Katrina. Continued Federal support will help our efforts for first-time and continuous training of public health professionals and first responders: EMTs, police officers, fire fighters, nurses and doctors.

Tulane took the lead in assuring disaster preparedness. Both the School of Public Health and Tropical Medicine and the School of Medicine have in place schoolwide emergency preparedness and response plans. Parts of the plan were successfully exercised through drills this spring. Now, every faculty member, staff and student can develop a personal preparedness plan to be executed in time of disaster.

The Public Health Security and Bioterrorism Preparedness and Response Act

The Public Health Security and Bioterrorism Preparedness and Response Act is an important vehicle to solidify collaboration of public and private sector resources. Specifically, the following programs are illustrative of the synergism between academia and government to assure frontline preparedness and response:

a. CDC's public health preparedness grants for State health departments—These grants are vital mechanisms for disaster planning and response. Diminishing the commitment to this program will severely hamper Louisiana's and other States' abilities to respond to disasters.

b. Centers for Public Health Preparedness—Funded through the CDC, this program is administered by the Association of Schools of Public Health and is a proven strategy for training first responders, medical personnel, public health specialists and EMTs. Of special note is that the center, led by the Tulane University School of Public Health and Tropical Medicine, provides life-long, just-in-case and just-in-time training and education to disaster personnel in four States including Mississippi, which also shares the threats of the Gulf Coast.

c. HRSA's hospital preparedness program—Tulane participates in the regional system established by the State of Louisiana under this program. Having a primed regional hospital system will allow for critical surge capacity in times of crisis.

d. Electronic database (ESAR-VHP)—While the funds are limited, Hurricane Katrina showed the real need for a database that facilitates advanced registration of health professionals, so that they can be mobilized at a moment's notice. Tulane will participate with the State in implementing this program.

e. HRSA health professions terrorism training grant—While Louisiana was not a recipient under this grant program, the goal of the program to assure a cadre of

trained public health professionals is just what we need to respond to terrorism and assure care during disasters.

f. Expansion of the national stockpile—Tulane’s hospitals participate in the stockpile program. Hurricane Katrina has demonstrated the importance of having the appropriate supplies—both accessible and tailored to local needs.

g. City readiness initiative—The city of New Orleans currently does not participate in this initiative. However, the HELP Committee could consider the eligibility of cities like ours, even though the population size might not appear to substantiate the need. Having the funds provided through this initiative will make a difference in the readiness of our city.

PUBLIC HEALTH AND MEDICAL CARE: CONCLUSION

Reinventing New Orleans’ healthcare systems will prove vital to rebuilding the economy in New Orleans, as the two are interdependent. This is not a theory, but a proven correlation in models of developing countries. Rebuilding New Orleans’ healthcare systems is not only essential for its region’s residents, it is also valuable to Federal lessons for biodefense, as well as for re-inventing healthcare systems across the Nation.

I ask that you consider New Orleans’ impending needs for:

- Assuring we have a robust healthcare infrastructure, including provisions to help the uninsured.
- Strengthening our healthcare workforce, to allow for repopulation and economic recovery.
- Reauthorizing the Public Health Security and Bioterrorism Preparedness and Response Act and funding the programs, which will help for this and future disaster recoveries, as well as improved planning.

Despite enormous challenges and financial losses at the Tulane University Health Sciences Center, we remain committed to preserving the integrity and quality of our educational, clinical and research programs, which result in great economic opportunities for the region and State. As the leader in disaster preparedness and recovery, the Federal Government should support institutions such as ours in maintaining their missions and serving as economic engines for their communities.

The public health and medical care community in the New Orleans metropolitan area faces many serious challenges. However, with the support of the American people and through our public leaders such as those of you on this subcommittee, we will recover. My colleagues and I, at Tulane, are fully committed to the rebirth of our community and to working with you toward achieving a mutual goal of excellence in health care and disaster preparedness. Thank you.

Senator BURR. Thank you, Dr. Whelton.

Dr. Quinlan.

Dr. QUINLAN. Thank you. I’d like to open by saying that I endorse the comments made by my colleagues and especially by Dr. Whelton. I understand that the purpose of this is mainly to share our experience so that others won’t have to have quite the same experience that we all did.

With that, I’ll dispense with my submitted testimony and share some additional ideas that I think are exportable, which remains a real lesson. Some things are local in nature, but this is something where there are a number of things that I think we could apply to any disaster.

With regard to—I would say, though, parenthetically with what Paul just said, that if in fact there are 1,400–1,600 clinicians left in the region, we have 550 of them. We’re about a third. So about the sustainability question, there has been a rightful focus on redesign and improving things for the future. I think it’s not only an opportunity, it’s an obligation.

But if there’s no today, then we don’t need to plan on tomorrow. We are suffering similar losses that Paul mentioned and our institutions are similar in that we’re both private institutions, we’re both private, not-for-profit, and we don’t fit the categories of typical public assistance that some of our other colleagues do. So I would

ask you, when you return to Washington, to please address that, because we get a great deal of sympathy but very little help. We are obliged and willingly will be up for the next disaster, but our ability to do so is becoming in question. So we need to focus on the today and we can talk about that offline in the future.

As far as our perspective, we're a very large institution. We're the largest one in the State, about 1.1 million visits a year, lots of clinics, hospitals, etcetera. Our main campus is our anchor. We're about 15 minutes from this point. We're on the edge of Orleans Parish.

Often in the discussion of New Orleans we confuse Orleans Parish with greater New Orleans. There are a few hospitals that have borne the brunt of this disaster and we are one of them. The U.S. Public Health Service used our board room as the command post on day one of the recovery or day two, and that was a very instructive vantage point. So the remarks I have are borne of our success when we stayed open.

I have a good story to tell. I can speak from experience about what works and I can speak from experience from what I observed as the situation evolved with all the incoming agencies and players and what were impediments to success. I think these are some of the lessons learned.

No. 1, about communication, I think everyone knows that the way to decapitate your opponent is first to destroy their communications in wartime. The same thing happens in peacetime, but the effect is the same. We kept our communications open. We have redundant buried T1 lines into our other sites, so we have a very large network that reaches into Baton Rouge and the north shore. So we retained our Internet capability and our phones and that was invaluable to understanding how to respond to the disaster.

We also have a mature electronic medical record that knits our system together so that our patients when they did evacuate were able to get uninterrupted care. So I endorse the concept through experience of the importance of an electronic medical record.

The key to our success was culture and it's a performance-based culture with an emphasis on teamwork. We can't instill that everywhere in the country, but what you can instill it in is in the response teams from the various governmental agencies. They need to have a culture of performance and teamwork and the ability to integrate and do things differently, and we can talk about that.

We heard other testimony about the idea, which we say is: expect to be alone, plan for a worst case scenario. I think most disasters are felt to be more finite in terms of your planning. Plan for the worst and if you're not ready for the worst then don't be surprised. We did plan for the worst and fortunately we were ready for this one, but we're under no illusion that we might be ready for the next one because by definition you're surprised. Otherwise it's not a disaster. But I think that we need to prepare for that.

One of the things that we were prepared for that I would think needs to be part of all disaster preparedness is to provide for security. Fortunately, we had 20 armed guards so that our folks had a sense of security and were able to focus on their jobs at hand and not be distracted by concerns for their own safety or the safety of their colleagues or patients.

Some of these things I'm going to talk about almost sound like platitudes, but I can tell you that if you don't practice them you'll lose a huge amount of emotional energy and actually engage in counterproductive behavior. That is, practice gratitude. We witnessed so many acts of kindness and generosity and courage by our people at Ochsner for the patients and families and so many nameless volunteers and donors from around the region and country. This was the untold story. Ninety-nine percent good news, 1 percent bad news. Unfortunately, we only saw the 1 percent bad news.

Furthermore, take heart in the great number of highly competent, dedicated, and hard-working public servants at every level of government. In our focus on failures, we overlook the successes that were the product of exceptional effort and skill. At times our systems were simply not worthy of the people who served them.

This is an important one: Cultivate curiosity, particularly in times of stress. We tend to miss what we don't know or don't anticipate or we try to force things into previous experiences that just aren't right. We tend to find what we're looking for and overlook what we're not, and we tend to see and hear what we believe. Catastrophe requires that we throw out old assumptions and think anew. We just need to know that catastrophes by definition are going to be different because the environment's different. We have to have people who are alert, who ask many more questions than talk, and that they're onsite and learn rather than just react.

It's kind of a nebulous concept, but when you can see people who clearly did that they were successful. The people who came pre-loaded weren't. So it's an attitude and it gets back to the culture that we need to develop for first responders.

We need to learn to practice patience. We have a democracy, which tends to be noisy and complicated. You can write the book on that. Our governments are restrained by a host of regulations and statutes, all of which are not completely clear, as you well know. This complexity is often exacerbated by the grey areas of authority.

Not uncommonly in our lengthy experience, administrative and legislative bodies each contend that the other has the authority to act without action by the other party, resulting in gridlock or deadlock. A pressing need and a divided authority is a stressful combination, particularly for those onsite, and it requires a lot of patience and goodwill to sort this out.

The next one is the most important one: Get onsite and stay there. The proper response depends upon on-site assessments. While there are very good reasons to headquarter away from disaster, these reasons are insufficient when contrasted with the need for timely and accurate information and good leadership. You live by the principle that if you aren't there you simply don't know, and if you don't know you can't criticize, you can't judge.

I cannot tell you how many times I heard countless people rolling through on a telephone trying to get up to speed, getting it partially right, and then moving on. It took a very complex and difficult situation and made it nearly impossible. It's a small wonder that anything got done, given the fragmented nature of this approach. People, even as they become to this day knowledgeable in their particular job, be it at FEMA or anything else, sometimes you

have some very good ones and just when they're up to speed their rotation is over and we start over again. That is not the way to run a disaster of any size. That's fine for a tornado. It will not work for the next giant earthquake. It won't work for a bioterrorist incident, I promise you that.

The other is, as I mentioned, stop the revolving door. During the crisis and post-crisis, rotating assignments were common. Just as they became knowledgeable, they were replaced. Common remarks are: I just didn't understand, and there's a gulf of understanding between X and here, be it Washington or Baton Rouge. Consistency will improve a difficult situation. Inconsistency will make it worse.

The punch line here is: Use the private sector. We talked about stockpiling things. Don't bother for the most part if it's going to be of real scale. In government only the armed services are trained and configured for operations with both speed and scale. Until you've done something logistically, you don't understand. This is huge. Nobody's ready for it, and the next one could be bigger. The rest of government is best suited for maintenance and marginal change.

That's the nature of our government by choice, by training, by configuration, by temperament, and with limitations of regulations and statutes that are incapable of rapid large-scale response. We need to recognize that as the reality and plan differently.

Private enterprise was and is collectively capable of massive, timely response. We are a production economy, we are a supply chain economy. We need to tap that.

If we don't, shame on us; we won't be ready for the next one.

This was our clear experience. We suggest that a public-private partnership for a large-scale disaster response is the most successful option for the future. You need to become a manager and manage distribution. Do not get in the storage business. You won't be ready. Industry is very good at that.

We need to harness it. Do not try to reinvent it. We can't afford it, simply.

This collaboration should be formalized and built to a scale sufficient for the worst case scenarios. If we can access the capabilities of the private sector, we will achieve success.

Finally, consider the incentives and counterincentives presented to all players. Our institution, Paul's institution, others have stepped up, borne the expense, stepped in for government at every level. However, the incentives simply aren't there. In fact, when you look at it there are counter-incentives. Our business interruption insurance was greatly compromised by the fact that we fought successfully to stay open, and in response there has been nothing but thanks. Now, that's a side story, but the point is around the country if you expect private institutions to stand up, much like you will mobilize the private sector for supply and sustainability, you need to make sure that that's actually a common sense, straightforward thing to do, rather than being put in some sort of double bind where if you do the right thing you'll pay and in fact jeopardize your own existence.

So I hope those things are helpful and I think every one of those are exportable and was applicable to our situation and will be to others. Thank you.

[The prepared statement of Dr. Quinlan follows:]

PREPARED STATEMENT OF PATRICK J. QUINLAN

Good afternoon, Mr. Chairman. I am Patrick J. Quinlan, M.D., Chief Executive Officer, Ochsner Health System (OHS), in New Orleans, La. I appreciate the opportunity to speak to you and your colleagues about the current state of healthcare in the greater New Orleans area, and the potential for re-building and re-designing our healthcare sector.

For nearly 60 years, OHS has cared for residents in the greater New Orleans and Baton Rouge communities. Our main campus, including the 478 acute-care bed hospital and clinic, is located in Jefferson Parish, less than a mile from the Orleans Parish line and only a 15-minute drive to downtown New Orleans. In addition, we have 24 clinics throughout the New Orleans area and a sub-acute nursing facility/inpatient psychiatry/inpatient rehabilitation hospital two miles from our main campus. In Baton Rouge, we have three clinics, 70 physicians and 50 percent ownership of an acute care hospital. Recognized as a center for excellence in research, patient care and education, OHS is a not-for-profit, comprehensive, independent academic integrated health care system, and the largest nongovernmental employer in Louisiana. With more than 7,400 employees—including more than 600 physicians in nearly 70 medical specialties—OHS is also one of the largest nonuniversity-based physician-training centers in the country, annually hosting over 325 residents and fellows, 450 medical students and 400 allied health students.

When Hurricane Katrina hit the Gulf Coast, no one could have truly imagined the intense devastation it would leave in its wake. The wind and the rain wreaked havoc across Alabama, Mississippi and Louisiana. The health care system as we knew it in New Orleans was devastated. The universities responsible for 70 percent of the medical education in the State were closed. Knowing that the storm was headed their way, hospitals began sending home patients deemed well enough to be discharged. Those in critical condition or requiring special assistance, such as ventilator-assisted breathing, remained in the hospital. When hospital staff emergency teams arrived for work during the weekend before the storm hit, they expected it might be only a few days before they were able to return home. However, when the levees in New Orleans broke, the situation changed dramatically. We, and our colleagues in the New Orleans metropolitan area, faced a dire situation beyond our imagination.

Throughout the onslaught of Hurricane Katrina, and during its devastating aftermath, OHS remained open, caring for patients and continuing our medical education programs. This afternoon, I would like to tell you how my hospital system prepared for the storm; what our facilities did to ensure our doors remained open to provide critical health care services to our community; what we have done subsequently to ensure continued provision of all critical health care needs to the community; how we have maintained medical education for the region; and answer any questions you and your colleagues might have about our experience.

PLANNING FOR DISASTER

Hospitals routinely plan and train to deal with disaster, whether it's the derailment of a train carrying hazardous substances, a multiple-vehicle accident on a nearby interstate, a plane crash, or a natural disaster such as a hurricane or earthquake. As hospitals plan for disasters and the prospect of going without public services such as electricity and water, we prepared to be on our own for at least 72 hours, in the event it takes that long for assistance to arrive from the State or Federal Government. Our plan, which we revise after every disaster or "near-miss" event, had been revised most recently on June 1, 2005, less than 3 months before Hurricane Katrina struck.

On Friday, August 27, our entire executive leadership team had assembled in New Orleans for the first day of a 2-day leadership retreat. Late in the afternoon, we were notified that the storm had turned to the West and likely would strike the area. We immediately initiated the first phase of our disaster plan, which included notifying essential personnel and securing previously stockpiled supplies.

Under the most recent disaster plan, two teams of essential personnel, Teams A and B, were created to ensure continuity of care and relief for employees on duty at the time disaster strikes. Each team was to include staff members from all departments, e.g. security, housekeeping, dietary, nursing, physicians, house staff, IT, media relations, research, etc. Team members had been identified and committed by June 1.

From previous experience, we realized the importance of not only adequately stocking essential supplies onsite, but also creating a back-up system to ensure ad-

ditional supplies could be secured in times of an emergency. On Friday, we activated our supply chain and began to secure the additional supplies we had stockpiled off-site. Important supplies included: 400 flashlights; 100 head lamps; 2,000 batteries; 4,000 glow sticks, including 2,000 with lanyards; 600 SpectraLink wireless telephones with 1,800 batteries; 450 oscillating fans, one per patient; 250 box fans for work and sleeping areas; 20 55-gallon drums of water on each floor for commode flushing; 3000 gallons of water for drinking (we also have a deep water well on campus with a 10,000-gallon holding tank for additional water in an emergency); 60,000 gallons of diesel fuel; 10 pallets of sandbags; 8 pallets of plastic bags; 100 blue tarps; 20 dehumidifiers; 5 pallets of plywood; and 50 additional shop vacuums. We also increased our food supply. At this time, we inspected our power sources. Our emergency generators are all located above our facility's second floor and our transformers were located on the ground level, behind 10-foot floodwalls.

On Saturday, August 28, executive leadership met with the vice presidents, directors, and managers and agreed to order Team A onsite by Sunday afternoon. Staff then began discharging the appropriate patients and moving those that would be unable to leave the facility. The families of the remaining patients were given "boarding rules"—one family member per patient would be allowed to stay. Similarly, staff was discouraged from bringing family members to work unless they absolutely could not make other arrangements. All patient and personnel families were pre-registered and given "special" parking passes to access our parking garage. During previous storms, we experienced problems with people in the community attempting to use our garage to protect their cars and boats. Under the revised plan, we stationed armed guards at the entrances to the garage to ensure that hospital staff, patients and their families could access the garage, and that all entrances were kept clear.

On Sunday, "sleeping" assignments were made. Due to concerns about the predicted high winds, patients were removed from the highest floors of the hospital. Patients were also moved into hallways and rooms without windows to protect them in the event of flying glass. Because OHS is a research facility, we house numerous research animals, which were evacuated to facilities in northern Louisiana. After evacuations were complete, we settled in to wait and see what Hurricane Katrina would bring.

WEATHERING THE STORM

Ochsner's main campus survived the actual hurricane quite well. We sustained some roof and structural damage to our main facility, but overall the news was positive. Our generators functioned properly, the Internet was up and running, and our internal communications system was fully operable. Employees lost cellular phone and beeper capabilities due to damage to local cell towers; however, we had planned for such an event, and staff members were armed with SpectraLink wireless telephones. As a result, communication critical to patient care was uninterrupted. Our land-based telephones also remained in working order due to redundancy in our carrier network. Our medical record system is entirely electronic, and with power and the Internet operable, we did not have concerns about the availability of critical patient information. We had adequate supplies and believed we would be able to ride out the next few days.

However, as the situation in and around New Orleans rapidly deteriorated with the breach of the levees, conditions inside the hospital also took a turn for the worse. On the second day, one of our generators failed due to a mechanical problem, and we were forced to do without air conditioning. As a result, our Internet servers were shut down to prevent them from being damaged by the heat. Unfortunately, server shutdown meant the electronic medical record system was inoperable. We attempted to send our helicopter out to secure the needed parts for the generator, but all nongovernmental aircraft were temporarily grounded. We were, however, able to locate the necessary parts the next day to get the generator up and running again.

Conditions in our immediate area continued to worsen. Our main facility is located a few miles from the I-10/Causeway where large numbers of people attempted to make their way out of New Orleans after the storm congregated. Many of those gathered turned to the hospital for assistance on their way. However, we are a hospital, not a shelter. We tried to point people in the right direction to get the help they needed, and also dispatched medical personnel to the site to care for individuals in need, transferring those needing hospitalization back to our campus. Conditions in our neighborhood further destabilized as floodwaters began to rise; looting of nearby businesses began. At that point, we felt compelled to ask the National Guard to assist us in securing the safety of our patients and staff, and placed OCF on lockdown.

Operations inside the hospital similarly were beginning to show signs of strain. Although we had made extensive plans for securing and relieving essential personnel with the Team A and B designations, and had gone to great lengths to keep staff apprised of the situation—setting up a telephone tree as well as a dedicated Web page with information—we had difficulty securing relief staff. Many had evacuated with their families to Baton Rouge and beyond. Fortunately, we were able to locate a good portion of staff members there and bring them in by bus convoy. As the floodwaters continued to rise, the same convoys were used to evacuate exhausted staff and their families, as well as patients who could be moved and their family members, to our facilities in Baton Rouge. These same convoys were our lifelines for supplies as well, enabling us to continue functioning.

At their height, the floodwaters rose as far as the doors on one side of the hospital, but we maintained the ability to leave and enter the building from other entrances and faced no real danger. Instead, we realized that rumor and speculation were a larger threat to the internal stabilization of the hospital than the floodwaters, and created an internal communication system to keep staff and patients informed of the conditions within the hospital and the city at large. The leadership team met twice daily to be updated and then fanned out across the facility, sharing the news they had just heard and answering questions. This open and honest communication policy went a long way toward assuaging staff and patient fears, and keeping the hospital in a calm state.

Toward the end of the crisis, we began to run low on food. However, we had an ample supply of water and were able to make do until relief shipments could be brought in. We also ran low on insulin, but because our telephones had been unaffected, we were able to secure 10,000 doses donated from sanofi-aventis pharmaceutical company.

REACHING BEYOND OUR WALLS

With the situation in OHS' main facility well in-hand, our leadership team sought to inform local officials and offer assistance to other health care facilities hit harder by the storm. Since our land-based telephone system was operable, we believed this would be easy. However, we had great difficulty trying to contact other hospitals and local agencies that were not as fortunate in the quality of their communications systems. We even found it difficult to locate the proper State and Federal officials to offer our assistance.

According to our regional emergency plan, we report to the Jefferson Parish Office of Emergency Preparedness (OEP). However, the OEP system was overwhelmed and communication was impossible. When our attempts to reach the Jefferson OEP failed, we attempted to reach the Baton Rouge OEP. This was also challenging, as it appeared that the bandwidth of their system could not accommodate the high volume of incoming requests and was overloaded. We eventually successfully contacted the Orleans Parish OEP following the levee break, requesting both information, as well as assets. During this exchange, we became aware of their communications difficulties with the downtown hospitals that were in the midst of evacuating.

It was virtually impossible to coordinate air evacuation due to the various agencies involved—both military and civilian—and their lack of ability to communicate. We sent a vice president through the floodwaters downtown to the Orleans OEP with a hand radio to try and assist their coordination efforts, but were unsuccessful in reaching them. We instead found a widespread lack of coordination: police communication systems that were ineffective due to infrastructure damage and volume, and a National Guard system that was able to facilitate communications amongst guard units, but had difficulty communicating with local authorities. Of external communications, satellite systems were unreliable, and cell service, for a while, was virtually eliminated. Text messaging and Internet were the most reliable methods of communication.

Communication improved on day four when the United States Public Health Service (USPHS) arrived, and interagency daily meetings at OHS' main facility began. In addition to the USPHS, these meetings included "all" hospitals and representatives from the Jefferson and Orleans OEP health care divisions. The USPHS was able to facilitate requests through the previously frustrating channels. They were particularly helpful with things like fuel and security; however, they did not have access to many of the assets we required. Prior to the USPHS's arrival, we were so frustrated in our inability to notify authorities that we were open and able to accept patients, that we used large trash bags to spell "OPEN" on our garage roof hoping to attract the attention of the armada of helicopters flying overhead.

RECOVERY

With our Board's permission, and because of our commitment to the community, and at a great expense to Ochsner, we have kept our workforce on payroll throughout and after the immediate crisis. We have recruited to fill both professional and nonprofessional positions in order to be able to open approximately 100 additional beds to serve the needs of the community. We have leased one of our facilities, the Elmwood Medical Center to the State to be used as a Level I trauma center. Even as our indigent care discharges have nearly quadrupled and our cost of operations has escalated, we have re-dedicated ourselves to be the healthcare safety net for the region. Despite operational losses of nearly \$70M, we have maintained all of our primary, tertiary and quaternary services, including state-of-the-art cancer treatment, solid organ transplant, and cardiovascular interventions. We have received virtually no financial relief for our efforts and to offset our losses. Because we are a private not-for-profit institution, we have not been eligible to directly receive loans from the Community Disaster Loan program. HRSA grants, similar to what was offered to NYC institutions following the 9/11 disaster, have not been made available to us.

We have also become the academic safety net for the region. Shortly after the hurricane, we invited investigators from both Tulane and Louisiana State Universities to use our research laboratory facilities in order that their research could continue uninterrupted. This has allowed numerous investigators from both universities to not only maintain their NIH funded work, but also to secure additional funding.

Our teaching programs have continued uninterrupted. We had a very successful match for our residencies programs this year. Despite, our concerns of top students not wanting to continue their training in New Orleans, all of our programs filled at approximately the same or improved level from prior years. We even increased our match numbers by 5 this year, despite the State offering a \$10,000 bonus to students who matched into the competing University programs.

Since we have an extensive infrastructure for academic activities, we have offered to host additional LSU and Tulane-based residents and medical students at our facilities. We are doubling the number of medical student rotations to over 900 annually. At this time, it appears we will have 50 to 75 additional residents training at our institutions. We are doing this even though it imposes a significant financial risk to us. The April ruling by CMS for temporary transfers of CAP FTEs during a disaster intends to ameliorate the financial burden. However, there are two aspects that significantly adversely affect our ability to host the residents. The ruling that the additional CAP transfer positions must be averaged over a 3-year period will have us not breaking even until the third year. At this time, when our cash flow is a significant issue, given our operating losses secondary to the hurricane, it is problematic that we will be able to continue to host the residents. Additionally, the 3-year maximum time period is significantly short of the time it will take for LSU and Tulane to restore their teaching facilities.

The training of these house staff is critical to the New Orleans region being able to maintain an adequate public health workforce. Prior to the hurricane, the Louisiana Medical Education Commission has reported that Louisiana was in a relatively steady state in regards to the training and establishing of new physician practices relative to the number of physicians leaving practice. With large numbers of physicians having left New Orleans after the hurricane, any threat to the New Orleans region training programs will significantly affect the public health workforce and the ability to care for the healthcare needs of citizens in this region. Therefore, it is extremely important that the 3-year rolling average be abolished and the 3-year maximum time limit for this emergency ruling be extended.

As you undoubtedly will learn from the LSU and Tulane presentations, the universities will be scrutinized extensively this summer by their accrediting bodies. Both the Accreditation Council for Graduate Medical Education (ACGME) and the Liaison Committee for Medical Education (LCME) will evaluate the respective residency training programs and medical school curricula. It is imperative that the medical schools demonstrate adequate teaching sites and supervision for both the residents and the students. If not, they will lose accreditation, faculty will leave, and students and residents will not be trained in their programs locally. The development and deployment of an appropriate public health workforce will not occur. This will result in the worsening of what already is a crisis.

One of the success factors for Ochsner during and immediately after the hurricane has been our electronic medical record. This is the only fully functioning electronic medical record in the region. This was and continues to be a life saver for our patients. No matter where they arrived after the hurricane, their health record was available to them. This type of record is of paramount importance for all of our residents, whether in the midst of a disaster or in the course of their routine care. Be-

cause we recognize this, we have been working with local and State groups in the planning of health information technology for the region. We offer the use of our electronic medical record to be used by other institutions and patients in the region. The ability to make this available will require funding to adapt it to other institutions' platforms.

SUMMARY AND CONCLUSION

Ochsner Health System is a nonprofit (501c3) independent academic integrated health care system. We have stayed open during the hurricane and expanded our ability to care for patients and maintain the academic programs in New Orleans. This has occurred at great financial impact to us. We have as of yet received no significant financial assistance to offset our losses. Our academic activities have allowed the two universities to return to New Orleans, and so far to remain in compliance with their accrediting bodies. Our electronic medical record is unique in the region and has been the lifeline for our patients.

As you help to plan and oversee the rebuilding of healthcare in this region, we ask you to consider:

- Stabilizing the public healthcare workforce by asking CMS to amend its April Emergency Ruling to void the 3-year rolling average and 3-year time limit on the Cap transfer positions;
- Securing the availability of necessary healthcare services by assisting us in identifying funding to offset our hurricane-related operating losses;
- Ensuring the availability of patients' medical records during a disaster, as well as, for routine care by assisting the implementation of our electronic record for all providers regionally.

We look forward to working with this committee and staff to forge ahead toward a shared goal of improving the healthcare in New Orleans.

Senator BURR. Dr. Quinlan, thank you, and let me assure you that your points on logistics has been a primary focus of the subcommittee as we've looked at what the future should look like, and I wish I could assure you that I had all the answers. Logistics will always be a challenge, but we have heeded everybody's advice that the private sector must be included in that process or it will not work, and I agree.

Dr. Rouse.

Dr. ROUSE. Thank you. I'm a 31-year-old psychiatrist, born and raised in New Orleans. I'm not here to detail grand recovery plans or report on any comprehensive programs that I oversee, because I don't oversee anything. I'm a whistleblowing psychiatric foot soldier and my sole intent today is to report accurately what I have seen and experienced from the very front lines of the medical and psychiatric response to Hurricane Katrina and to ask of you three things.

When the storm hit, I had already evacuated with my wife and two small children to Houston. But when I saw the images of my home town on television I had to get back. I rushed back to Baton Rouge, volunteered in the extraordinary field hospital set up on LSU's campus. Then with medical supplies, my backpack, and frankly my firearm, I broke back into my home town and offered medical and psychiatric assistance to the members of the New Orleans Police Department, and I was quickly commandeered.

Along with a Homeland Security medic, we set up a medical and respite clinic for NOPD and Federal law enforcement personnel in the gift shop of the Sheraton Hotel downtown, using whatever supplies we could scrounge. We worked for a week straight, nights and days, providing badly needed medical support to the rescue workers who braved the rancid flood waters.

However, we were starkly alone. Promises of medical reinforcement from the United States Public Health Service were only promises. Nearly a week after the storm, while the Baton Rouge field hospital was closing down, volunteer doctors were being turned away by FEMA, while we were still screaming for assistance. Scientologists, Tom Cruse's cult, were in New Orleans providing massages before we saw any organized Federal medical help with the NOPD. In my sleep-deprived eyes, there was a crisis and organized help was merely a wish.

Now, 10 months after the storm, I'm not working any more as an ad hoc emergency room doctor, but as the deputy psychiatric coroner for Orleans Parish. What that means is under Louisiana law I provide medical-legal oversight over involuntary psychiatric commitments and I assist families in getting treatment for persons potentially dangerous to themselves or others because of psychiatric illness.

I can state unequivocally that now, with respect to mental health, we are in no less of a crisis than I faced in that week after the storm. In fact, mental health is the chief public health problem facing our area in my somewhat shrill opinion right now.

Let me present to you the grim facts regarding our mental health situation in the greater New Orleans area. The suicide rate spiked dramatically after the storm. In Orleans Parish, conservative estimates suggest a tripling of the per capita suicide rate through the end of 2005. Estimates from nearby Jefferson Parish also suggest increased suicide rates and attempted suicides during this time period. Most of these people had no previous history of emotional or psychiatric difficulties.

My boss, the Orleans Parish coroner, Dr. Frank Minyard, estimates that the effects of ongoing psychological stress account for as many deaths as the direct effects of Katrina. This is especially relevant to our elderly population and locals will tell you that the obituary pages in our newspaper are noticeably longer.

At the coroner's office we are committing more patients per capita than we ever did before the storm, and as the months tick on more and more of these patients we deem especially dangerous, such as having access to weapons or a history of fighting with law enforcement. Unfortunately, local law enforcement has been forced to use deadly force three times on the psychiatrically ill since the storm, something that was virtually unheard of before the storm.

The NOPD and other local law enforcement agencies are spending an inordinate amount of time handling calls for service regarding the mentally ill. This overwhelming demand on our law enforcement community drains precious resources at a time when proactive community policing is most necessary. Every officer that sits in an emergency room for hours and hours with a psych patient is one less officer available to my community, to my wife, and my two small children at home.

Hospital security at several of the institutions represented before you today refused to take custody of these patients on arrival to the emergency room, in my nonlegal opinion a likely violation of State and Federal law.

Studies have shown that increased use of illegal drugs and alcohol is rampant in our communities, and we've lost about 89 percent

of our psychiatrists, as you've already heard. Budget cuts have forced both Tulane and LSU departments of psychiatry to lay off about half of their faculty at this time of greatest need. The remaining local outpatient psychiatric providers have seen dramatically increased caseloads and they have been heroic and creative in finding ways to deliver quality mental health care under the current circumstances. However, the treatment options for the suicidal, the drug addicted, or the violent psychiatric patient are a most critical need.

The metropolitan New Orleans area had approximately 450 psychiatric inpatient beds before the storm and now we have about 80. Tulane DePaul Hospital, a large Columbia HCA-managed psychiatric hospital in uptown New Orleans, lies mostly undamaged, but empty, reportedly because of financial concerns. Patients now wait in emergency rooms for psychiatric placement for days and days, often confined to isolation rooms with medication treatment only. Emergency rooms are inundated with these psych patients. Veterans with need for psychiatric hospitalization to this day are shipped as far away as Houston, and there are no public detoxification services currently available for drug addiction in the local area. We have a critical psychiatric bed shortage. We are now New York without Bellevue, Washington, DC., without St. Elizabeth's, and North Carolina without John Olmstead in Butner.

Now, in this time of greatest need I paint this picture to ask you three simple things. No. 1, for the sake of my State and for any communities affected by future disasters, please amend the Stafford Act. As it's written, FEMA is prohibited from funding any direct mental health activities that are considered psychiatric treatment. I think we've learned that a disaster of this magnitude demands a Federal response flexible enough to assist all of its citizens in all capacities, including the mental health effects that I just listed.

As specified in the Stafford Act, the provision of, quote, "crisis counseling" by those without mental health training, it's simply not sufficient. If a dirty bomb contaminates Manhattan or San Francisco experiences a major earthquake, you can be assured that our experience of a post-Katrina mental health crisis will unfortunately be repeated. Please remove this arbitrary prohibition. We lost many of our local health workers due to budget cuts when we needed them most, because of this limitation.

No. 2, if you are going to have a strategic national stockpile, please add psychiatric medication to it. It's not in there currently and inevitably you will have people who need continuation of existing psychiatric medication as well as assistance in basic things such as sleep and anxiety reduction during this stressful time.

Then finally, on behalf of the mental health, the law enforcement, the criminal justice, and the emergency room communities of this area, I ask the subcommittee to put its full weight of its power to force the State of Louisiana Department of Health and Hospitals, the LSU Health Care Services Division, and the Office of Mental Health to abide by its moral and legal obligation to re-open its full-scale acute psychiatric emergency room for the New Orleans metropolitan area. There's already a Federal consent decree known as the Adam A decree issued in the early 90s. This forced the State

to have a behavioral health emergency room. This 25-bed psychiatric emergency room on the third floor of Charity ensured timely and appropriate mental health treatment for the acutely psychiatrically ill and for those suffering from drug abuse. First responders could bring patients there and be back out on the streets within 15 minutes.

Now the New Orleans area is faced with a behavioral public health emergency of unprecedented magnitude and we do not have the capacity to care for the suicidal and the psychotically violent. The third floor of Charity or DePaul Hospital, in my frank opinion, could be reopened right now with these two keys right in front of me and the current mental health crisis in my home town would be dramatically and rapidly mitigated.

We're a year after Katrina. Current plans from the State with regards to a psychiatric emergency room remain tentative at best, likely underfunded, and call for as few as six beds.

There are six psychiatric patients waiting in the halls of just one local emergency room right now.

As I felt during the immediate aftermath of the storm, there is still a crisis in my home town and organized health remains merely a wish. Please put pressure on this issue from the top down and enforce the full spirit of the Adam A consent decree. For future disasters, I urge you to maximize and augment psychiatric care and learn from the bitter lesson we are still enduring. It's a matter of public health, public safety, and society's obligation to care for its ill, including the mentally ill.

Thank you.

Senator BURR. Dr. Rouse, thank you, not just for your testimony but for the way you responded personally to the disaster here. It was our intent as we introduced the public health legislation that the Stafford Act would be one of those areas we would address. Washington is a strange town jurisdictionally and sometimes it's tougher when you produce legislation that crosses different committee jurisdictions. It will not be part of this effort, but let me assure you the committee is working with those two committees of jurisdiction to make sure we look at that issue very seriously.

Dr. ROUSE. Thank you.

Senator BURR. Mr. Barry.

Mr. BARRY. Thank you. First of all, I'd like to thank the subcommittee for traveling here to Louisiana to conduct your hearings here. We appreciate that very much. For me it's a personal privilege to appear before you this afternoon to share what I might regarding what Katrina and Rita have taught us about our vulnerabilities.

As you mentioned, I am President and CEO of Blue Cross-Blue Shield of Louisiana. We're the manager of medical benefits for just over 1 million people in the State of Louisiana, which represents about half of those who do have private health insurance.

Unlike my colleagues on the panel, I want to make it clear I was not involved in any on-the-ground operations related to patient care during or after the hurricane. My observations are drawn primarily from the vantage point of assisting those 1 million Blue Cross members in securing the health care services that they need-

ed during the immediate crisis and what has proved to be a very long and painful aftermath.

But that has meant working closely not just with those members, but, just as importantly, with care providers. We've also worked closely with their employers and with the agents and brokers who serve them.

I'd like to speak briefly about the public health side of Hurricanes Katrina and Rita. We've all seen those televised images of the hurricanes' physical and emotional toll on the citizens of our State. Those are seared into our consciousness and the comprehensive histories of Katrina and Rita have already been written and they need no embellishment here. But from a public health standpoint, as you've heard from my colleagues, there is a very important aspect of Katrina's and Rita's legacy which, while less obvious, is perhaps even more important. And that legacy is that of people's inability to access critical health care services when needed and the inability of caregivers to provide the care that is most appropriate.

While these issues existed to some degree before the hurricanes, they turned extraordinarily acute after the hurricanes, teaching us what I see as four very important lessons, lessons which, as you've already heard, continue to this day taking an immense toll on public health. We are still learning these lessons.

Lesson one, that a metropolitan area's health care capacity is easily overwhelmed. We've spoken already about the surge on health care demand, and it wasn't simply the loss of hospital infrastructure. As you've heard from other people on our panel, a number of doctors and nurses have also left the area and, while the area is smaller in population than it was before in terms of residents who have left and have still gone, by our reckoning looking at our claims data doctors and nurses have left the area in even greater proportions.

We would also indicate that, based upon what we're seeing, that about three-quarters of the physicians who had been practicing in the New Orleans area are no longer submitting claims to us, so that they clearly have left this area, leaving it grossly underserved in our view.

Lesson two, something you've also heard a little bit about already: that logistical and communication issues make it difficult to even properly use what limited health care capacity has remained. In the period immediately following Hurricane Katrina, many needed and willing medical professionals already within the area or coming into the area were not engaged due to credentialing and licensing issues, fears of professional liability, or lack of centralized coordination.

There was also obviously a loss of contact between physicians and the ill patients that they were attending prior to the hurricanes, rendering appropriate clinical follow-up with these patients impossible. Normal referral patterns among independent practitioners have also been thoroughly disrupted with the migration of so many doctors, leading to disruptions and patient care.

Surprisingly, there is no centralized information or database from which patients or referring physicians can even determine or public health planners can determine which nurses or which doctors have remained in or have returned to the affected areas.

Resource shortages in certain key areas within the system are creating bottlenecks in the care continuum, for example, the inability to discharge hospitalized patients due to shortage of home health care nurses needed for follow-up; the excess demand on area emergency departments due to shortages in primary care.

Lesson three, the widespread loss of patient records put large numbers of patients at risk. Dr. Cerise had spoken about that in his remarks. There were efforts made to help remedy that situation immediately after the hurricanes. Through katrinahealth.org, our own organization quickly put together a patients claim-based health record which has a lot of valuable information for attending physicians to use in the care of those patients who left their communities or even left the State.

In practice, those efforts and those capabilities did not garner as much physician uptake as one would have hoped and we believe the reason is that we were missing the requisite provider awareness and education that's required to utilize these tools. So we need to anticipate not just having those types of tools available, but using tools such as that have to become part of clinical practice for them to be effective.

Lesson four, and I'd like to spend just a little bit of time on this because I think it's a point that can't be overstressed, although a number of my colleagues have made comments with respect to it, and that is that the normal methods of reimbursement which health care providers rely on are very easily disrupted in an event such as Hurricanes Katrina and Rita. For example, during the height of the emergency and its aftermath, providers were pre-occupied with meeting immediate patient needs and not with gathering patient documentation which would later be needed to submit claims, particularly in the case of Medicaid patients and the uninsured.

Some of the unique aspects of health care financing in Louisiana, particularly the dependence on the, quote, "charity system" for indigent care and our heavy dependence on Medicaid and disproportionate share of funding, created unanticipated systemic vulnerabilities. Closure of LSU's Big Charity Hospital left LSU Health Services and Tulane and LSU Schools of Medicine without their normal revenue source. Charity's closure significantly increased the percentage of uninsured and Medicaid patients treated by other hospitals in the area, which are not normally compensated for providing those services, or at least not on the same basis.

We're seeing that prolonged impatient lengths of stay due to these difficulties in discharging are creating losses on Medicare-based DRGs. Independent physicians, particularly those serving the Medicaid population, face difficulties maintaining their practices due to the dispersion of their former patients and lack of critical mass in most neighborhoods for developing new patient bases, which makes it difficult for them to come back.

Surprisingly, we've seen that private insurance has so far remained resilient to Katrina-induced demographic and economic disruption. Of more than—we have more than 800,000 of our members who are covered under group insurance plans and so far we've only seen a loss of about 30,000 because of people who have lost their employer-provided coverage. We expect that is going to con-

tinue to go up as some businesses who are struggling to maintain operations over time may not be able to do so.

One of the things that we found worked with regard to the privately insured process is that we granted a 90-day grace period for premium payments, and we continue to pay full reimbursement for all medical services provided to all of our patients regardless of whether premiums were paid, and we saw that that provided a very important bridge to those customers to be able to live through the crisis and, surprisingly, the great majority of those who suspended those premium payments came through and made those payments in December. So there has been much more resilience in that private insurance customer base than we would have thought, which has been helpful in helping to support the remaining capacity that we have in the New Orleans area.

However, we are seeing that our claim level in the New Orleans area has been somewhat modestly reduced, which is testimony to the compression that exists within the health care system because of the excess demands being placed on it and the lack of full access to privately insured patients is further compromising the financial integrity of the system that remains.

We're also seeing a lot of workers who are coming in and the rebuilding efforts are not covered, not only for private health insurance, but they don't have workers compensation coverage, and those uninsured workers who have come into the area are also creating a burden for our hospital infrastructure.

I do have a set of several recommendations. In the interest of time, I would just like to emphasize, I think a lot of these issues that we've pointed to do have solutions, but they require thoughtful solutions. Some of those need immediate attention. One of the recommendations as we think about emergency preparedness that would be easily overlooked is the need to have a quick response in the immediate aftermath of the disaster, to have a coherent public policy response that involves public sector and private sector to deal with the emerging immediate issues that no one can anticipate on the heels of such a devastating event, so that we get in front of these issues and that the toll does not linger to the degree that it has here in our area.

Thank you very much.

[The prepared statement of Mr. Barry follows:]

PREPARED STATEMENT OF GERY BARRY

INTRODUCTION

First, I'd like to thank the subcommittee for traveling to Louisiana and for conducting your hearings here. Being on the ground and witnessing first hand our long road to recovery will itself provide you with invaluable insights as you think about how to protect our communities from large-scale external threats to public health and healthcare. It's a privilege for me to appear before you this afternoon to share what Katrina and Rita have taught us about our vulnerabilities.

I'm President and CEO of Blue Cross Blue Shield of Louisiana. I moved to Louisiana from Connecticut to assume this position just 10 months before the hurricanes hit. More recently, I have served as chair of the Health Systems Redesign Workgroup under the Louisiana Recovery Authority. This effort has now evolved into the LA Healthcare Redesign Collaborative chaired by Dr. Fred Cerise, Secretary of Department of Health and Hospitals.

To give you context for my observations, let me take a minute to give you some background on our company. We are a traditional Blue Cross organization. By that I mean we are an exclusive statewide Blue Cross Blue Shield licensee, governed by

a local board of directors. We are a not-for-profit, but tax paying organization owned by our policyholders. We employ about 1,400 Louisianians. We are the manager of medical benefits for just over 1 million of Louisiana's 4.4 million residents, representing just about half of those with private health insurance.

My observations are drawn from the vantage point of assisting our one million members in securing the healthcare services they needed during the immediate crises and this long and continuing aftermath. This has meant working closely with not just these members, but just as importantly, their care providers. We have also worked closely with their employers and with our agents and brokers who serve them. Having said that, my observations are personal ones and do not necessarily reflect those of our company or of the Redesign Collaborative.

The Public Health Side of Hurricanes Katrina and Rita

Televised images of the hurricanes' physical and emotional toll on the citizens of South Louisiana are already seared into our consciousness. Comprehensive histories of Katrina and Rita and their immediate aftermath have already been documented and need no embellishment here. However, from a public health standpoint, there is an aspect of Katrina's and Rita's legacy which, while less obvious, is even more important. This legacy is that of peoples' inability to access critical healthcare services when needed and the inability of caregivers to provide care that is most appropriate.

While these issues existed to some degree before the hurricanes, they turned extraordinarily acute after the hurricanes, teaching us four very important lessons.

LESSON 1.—A METROPOLITAN AREA'S HEALTHCARE CAPACITY IS EASILY OVERWHELMED

- Pre-Katrina, the New Orleans area, by almost any measure, appeared to have excess clinical capacity, at least in terms of in-patient beds, nursing home beds, and clinical specialists. Katrina's decimation of the health system created an unexpected shortage.
- Katrina's toll on the healthcare capacity in the New Orleans area was swift and deep. Only 3 out of the 15 or so hospitals in the area remained open throughout the ordeal.
- Shortly after the hurricane, shock waves of excess demand for healthcare services spread quickly throughout the State as evacuees from the affected areas arrived, many in need of care.
- Today, most of the hospitals in the New Orleans area remain closed, including Big Charity. Those few that have since reopened (e.g., Tulane) are operating at reduced capacity.
- While many area residents left and are still gone, doctors and nurses who had been practicing in the New Orleans area left in even greater proportions. Based on Blue Cross Blue Shield of Louisiana claims data, about three quarters of the some 4 thousand independent physicians who were practicing in Orleans, Jefferson or St. Bernard parishes prior to Katrina remain unaccounted for, i.e., have not submitted claims since the hurricane.
- According to many service providers on the ground in the New Orleans area, the per capita need for healthcare has increased significantly due to hurricane-related causes (mental health, accidental injury and stress-induced increases in morbidity). This surge occurred without the spike from potential hurricane-related disease outbreaks that some had feared. Thank goodness.

LESSON 2.—LOGISTICAL AND COMMUNICATION ISSUES MAKE IT DIFFICULT TO PROPERLY USE THE LIMITED HEALTHCARE CAPACITY AVAILABLE

- In the period immediately following Hurricane Katrina, many needed and willing medical professionals already within the area or coming into the area were not engaged due to credentialing or licensing issues, fear of professional liability and the lack of centralized coordination.
- Loss of contact between physicians and the ill patients they were attending prior to the hurricanes rendered appropriate clinical follow-up with these patients impossible.
- Normal referral patterns among independent providers have been thoroughly disrupted, leading to disruptions in patient care itself.
- There is no centralized information or database from which patients or referring physicians can determine which nurses and doctors have remained in or have returned to the affected areas.
- Resource shortages in certain key areas cause bottlenecks throughout the care continuum, e.g., the inability to discharge hospitalized patients due to the shortage of home healthcare nurses needed for follow-up.

LESSON 3.—THE WIDESPREAD LOSS OF PATIENT RECORDS PUT LARGE NUMBERS OF PATIENTS AT RISK

- Paper medical records housed in affected physician offices were entirely destroyed.
- Many ill patients who evacuated left without their medications or prescriptions.
- Doctors and hospitals in surrounding areas who were seeing many patients for the first time had little or no patient medical history or other pertinent information to go on as they were treating these patients.
- Post-hurricane efforts to reconstruct meaningful medical record proxies either through claim histories (as done for Blue Cross Blue Shield of Louisiana members) or through pharmacy data (as done collaboratively through katrinahealth.org) were technically successful; in practice, they did not garner much uptake at the time as the requisite provider awareness and education could not be achieved in a timely manner.

LESSON 4.—THE NORMAL METHODS OF REIMBURSEMENT WHICH HEALTHCARE PROVIDERS RELY ON ARE EASILY DISRUPTED

- During the height of the emergency and its aftermath, providers were pre-occupied with meeting immediate patient needs and not with gathering patient documentation which would later be needed to submit claims, particularly in the case of Medicaid patients and the uninsured.
- Some of the unique aspects of healthcare financing in Louisiana, particularly the dependence on the “Charity” system for indigent care and our heavy dependence on Medicaid and “Disproportionate Share” funding, have created unanticipated systemic vulnerabilities. Some examples:
 - Closure of LSU’s Big Charity Hospital left LSU Health Services and Tulane and LSU Schools of Medicine without significant revenue sources.
 - Charity’s closure significantly increased the percentage of uninsured and Medicaid patients treated by other hospitals in the area which are not normally compensated for providing those services.
- Prolonged inpatient lengths-of-stay due to difficulties in discharging are creating losses on Medicare-based DRGs.
- Independent physicians, particularly those serving the Medicaid population, face difficulties maintaining their practices due to the dispersion of their former patients and the lack of critical mass in most neighborhoods for developing new patient bases.
- Private insurance has so far remained resilient to Katrina-induced demographic and economic disruption. Of the more than 800,000 whose group insurance is provided by Blue Cross Blue Shield of Louisiana, about 30,000 have lost their employer-provided coverage. Lapse rates in individually purchased coverage have been lower than normal. However, per capita claims levels in the immediate hurricane-affected areas have remained somewhat lower (10 percent) than expected, due apparently to the compression on the healthcare delivery system for the reasons stated above. For providers, this reduction in services to privately-insured patients, while modest, adds to their financial strain.
- Many new workers in the New Orleans area are arriving at hospitals needing medical attention, but are uninsured even for workers’ compensation.

CONCLUSION

To respond appropriately to a major communitywide or regional disaster, whether natural or man-made, we must overcome the systemic weaknesses exposed by Katrina and Rita. In redesigning our health system in Louisiana following the hurricanes, we have the opportunity to build a new system that is sufficiently flexible and adaptable in the face of disasters. Specifically, we need to:

- Insure reliable, real time communication capabilities exist among first responders, government officials and the many involved in the management and delivery of healthcare for the immediate and surrounding area;
- Establish plans in advance for networking with other clinical resources, both those in the area and those from out of the area, to establish capacity for dealing with a surge in demand following a disaster-induced shut down in clinical capacity in the immediately affected area;
- Better communicate and integrate the efforts of all parties, public and private into the immediate emergency response;
- Quickly and effectively coordinate public policy follow-up to resolve acute and structural issues associated with the aftermath of the disaster;
- Establish electronic patient health records for everyone;

- Maintain a real time electronic registry of healthcare professionals in the area with complete tracking of those moving into or leaving the area;
- Redesign public reimbursements for health care services to make sure they work for all providers delivering care during and following a disaster;
- Consider requiring businesses involved in the affected area's redevelopment to provide workers' compensation and health insurance benefits to their workers;
- Provide temporary support to people losing their employer-provided health insurance through a mechanism such as the Health Coverage Tax Credit available to those losing their jobs under international trade agreements.

Thank you for your kind attention. I would be happy to respond to any questions you might have.

Senator BURR. Mr. Barry, thank you, and thank you, to all the witnesses, not only for your information, but for your ability to modify the schedule that we had and to accommodate a much shorter period. I can assure you that I think each one of you and every member who's here from the U.S. Senate could spend a day together with you sharing the first-hand information that you've gone through.

It strikes me just how well each one of you has a handle on what you've been through, where you are today, but more importantly where you need to get to. That has not gone unnoticed, I will assure you.

I wish I could sit here today and tell you that we could produce one piece of legislation in Washington that would address all of the issues that you have raised, and if I said that you would know it to be disingenuous. We can't do that. But we're attempting to begin the process and over some period of time we will hopefully be able to address the meat of what has been raised.

Those that will benefit from it are not only New Orleans or Louisiana; it will be communities that are faced with very similar degree of disasters and tragedies in the future that won't have the challenges that you have had here.

This is an official hearing and for that reason I will assure you all written testimony will be made a part of the record without objection.

It's important that you know, in addition to Senator Landrieu, myself, and Senator Alexander, we're joined today by over 50 staff members from additional members of the HELP Committee in Washington. Typically we would take a period of time to pose questions to you and solicit those answers. For the purposes of this truncated process, I'm going to ask all of you, if you would, to be open to written questions. Give us the opportunity to go back with the testimony that you've provided for us. It would help us to ask questions that might be of more value to both of us. And if you would, in as timely a fashion as you find it able to do, respond to those questions for the committee.

I want to once again thank Senator Landrieu and Senator Vitter. If it wasn't for these two individuals I'm not sure that Washington would have had the attention. I reminded Mary as I came up, North Carolina had a rather significant storm, I think now 6 years ago. It involved a tremendous amount of flooding. This year we put the last people into permanent housing, 6 years later.

I don't want to suggest that I know the magnitude of what you've gone through. I know how the next crisis of the day overshadows the last one, and when you're in the community that was affected everybody forgets and focuses on what just happened. What your

Senators have been able to do is to keep Washington focused on the fact that there was a disaster, there is still a problem, and there continues to be a need for Washington to address on an ongoing basis the challenges that you're faced with. Let me assure you that we do recognize that need.

Once again, I thank the Senators for joining me. I thank you for testifying.

Senator LANDRIEU. May I ask just one question?

Senator BURR. You may certainly.

OPENING STATEMENT OF SENATOR LANDRIEU

Senator LANDRIEU. Thank you all so much for your patience today, but also the forcefulness in which and the professionalism in which you give this testimony. This is a story that must be told. And I know you've told it many times and you've told it again today, but we need to continue to tell it so that we can get the response that we need: No. 1, to continue to address the nightmare that many of us, all of us, are still going through here; to help the people that are in this region and this city and this State.

But as you all stated, we don't want to see this ever happen to anyone again. So the testimony that you're giving will help all the government structures, all the private sector structures, all the faith-based organizations, all the professionals, to know what needs to be done so that we can try to prevent this kind of suffering and catastrophe from happening again. So I just wanted to thank you all very much.

OPENING STATEMENT OF SENATOR ALEXANDER

Senator ALEXANDER. Let me add my thank-you, and I'm going to preside over the transition from Health to Education.

But if all of you will permit me a personal word first, this is a very distinguished panel and I know you all are extremely busy. You had other things to do today and because of our schedule you had to change yours. We thank you for that. We understand how busy you are.

Second, the personal note is this: Literally 40 years ago this moment, I was a law clerk to Judge John Minor Wisdom in this building. I was actually a messenger. He already had a law clerk and he wanted two, so he promised to treat me as a law clerk. And I lived here for a year on Felicity Street, and I was making so little money that I played in a washboard band on Bourbon Street at Your Father's Moustache, which burned down about 15 years ago, which may have had something to do with the music there.

But this brings back a lot of memories to me. I believe this was the old Wildlife Fisheries Building at one time, and I came here every single day. So this brings back a lot of memories.

Thank you very much for coming, and now I'd like to invite, apparently—

Senator BURR. Lamar, before you do that. Without objection, I would ask that the record be kept open for 10 days for additional questions and answers.

Senator ALEXANDER. Now we will shift from Senator Burr's subcommittee to the Subcommittee on Education and Childhood Devel-

opment. I believe the entire first panel that was to be here at 9:30 has waited until now, so I'd like to invite them to come forward to the table and we'll begin with them.

[Whereupon, at 3:05 p.m., the subcommittee was adjourned.]

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