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HOSPITAL EMERGENCY SURGE CAPACITY: NOT READY FOR THE "PREDICTABLE SURPRISE"

PREPARED FOR
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EXECUTIVE SUMMARY

On March 11, 2004, on the eve of a major election in Spain, an attack on commuter trains in Madrid killed 177 instantly and injured more than 2,000. Nearly one thousand patients were transported to 15 hospitals. In less than three hours, 270 patients arrived at a single hospital in Madrid.

The Centers on Disease Control and Prevention says that a terrorist bombing in the United States like the one in Madrid is a “predictable surprise.” According to the CDC, the 2004 Madrid bombing is an appropriate standard for assessing whether the emergency care system in the United States is prepared to respond to a terrorist attack.

At the request of Chairman Henry A. Waxman, the majority staff of the Committee conducted a survey of Level I trauma centers in seven major U.S. cities to assess whether they have the capacity to respond to the level of casualties experienced in the Madrid attack. The survey included five of the cities considered at highest risk of a terrorist strike: New York City, Los Angeles, Washington, D.C., Chicago, and Houston. It also included Denver and Minneapolis, where the 2008 Democratic and Republican conventions will be held.

The Level I trauma centers surveyed are not the only providers of emergency care in the seven cities, but they are the hospitals that can provide the highest levels of injury care and would be the preferred destinations for casualties in the event of a terrorist attack involving conventional explosives. Severely injured patients treated at Level I trauma centers have a significantly lower risk of death than patients treated at hospitals that are not trauma centers.

The survey was conducted on Tuesday, March 25, 2008, at 4:30 p.m. local time in each of the seven cities. The survey was designed to determine the real-time capacity of the emergency rooms at the Level I trauma centers to absorb a sudden influx from a mass casualty event. Thirty-four of the 41 Level I trauma centers in these cities participated in the survey.

The results of the survey show that none of the hospitals surveyed in the seven cities had sufficient emergency care capacity to respond to an attack generating the number of casualties that occurred in Madrid. The Level I trauma centers surveyed had no room in their emergency rooms to treat a sudden influx of victims. They had virtually no free intensive care unit beds within their hospital complex. And they did not have enough regular inpatient beds to handle the less severely injured victims. The shortage of capacity was particularly acute in Los Angeles and Washington, D.C.

The survey found that on March 25, 2008, at 4:30 p.m. local time, emergency room crowding was severe in the hospitals surveyed:

- **More than half of the emergency rooms in the Level I trauma centers surveyed were operating above capacity.** When an emergency room reaches “capacity,” new patients can be accommodated only in overflow spaces, such as hallways, waiting rooms, or administrative offices. Of the 34 Level I trauma centers surveyed, 20 (59%) were operating over capacity, meaning they had no available treatment space in the emergency room to accommodate new patients. The average emergency room was operating at 115% of capacity in the Level I trauma centers in the seven cities.
- **The total number of available emergency room treatment spaces in each of the seven cities was less than the number treated at a single Madrid hospital.** After the Madrid attack, 966 victims were transported to 15 hospitals, and 270 victims arrived at a single hospital for emergency care. Not one of the seven cities had sufficient treatment spaces in emergency rooms of their Level I trauma centers to handle the volume of victims seen at a single Madrid hospital. Across all hospitals surveyed in New York City, the city with the most available emergency room space, there were only 56 emergency room treatment spaces available in the Level I trauma centers. All the other cities had even less available emergency room treatment space in their Level I trauma centers.
- **In Los Angeles, three of the five hospitals surveyed were on diversion.** Because Level I trauma centers represent such a vital resource for trauma patients, these hospitals are not supposed to divert ambulances unless they are dangerously overcrowded. On the afternoon of the survey, however, three of the five Level I trauma centers in Los Angeles were on diversion. Together, these five Level I trauma centers had only six vacant treatment spaces available in their emergency rooms at the time of the survey.
- **In Washington, D.C., there were no available spaces in the emergency rooms of the two Level I trauma centers surveyed.** Two of the three Level I trauma centers in the nation’s capital responded to the survey: the Washington Hospital Center and the George Washington University Medical Center. The emergency rooms in both hospitals were severely overcrowded at the time of the survey, with no available treatment spaces. The emergency room at the Washington Hospital Center was operating at 286% of capacity, making it the single most overcrowded hospital surveyed.

Surge capacity depends on more than sufficient space in the emergency room. A hospital must also be able to provide sufficient critical care resources, such as space in intensive care units, and inpatient beds. If these beds are not available, patients who require hospitalization are frequently “boarded” in the emergency room until they can be moved to an intensive care unit or inpatient bed. On the day of the survey, there were such severe shortages of critical care and inpatient beds that many of the hospitals we surveyed were already “boarding” admitted patients in their emergency room. The survey found:

- **None of the Level I trauma centers surveyed had enough critical care capacity available for seriously injured casualties from a Madrid event.** After the Madrid attack, 29 patients arrived at one hospital in critical condition. None of 34 Level I trauma centers surveyed had sufficient critical care capacity to handle this volume of severely injured victims. On average, the trauma centers surveyed had only five intensive care unit beds available. Six hospitals (18%) had no available intensive care unit beds.
- **None of the Level I trauma centers surveyed had a sufficient number of regular inpatient beds available to absorb the casualties from a Madrid event.** In Madrid, a single hospital received 89 casualties that required admission to an inpatient bed. No Level I trauma center surveyed had sufficient available beds to accommodate a surge of this size. On average, the Level I trauma centers had only 24 beds available.

After conducting the “snapshot” survey on March 25 at 4:30 p.m., the Committee staff sent follow-up questionnaires to the hospitals surveyed. Twenty-three of the hospitals responded to the questionnaire. Their responses indicate that the level of emergency care they can provide is likely to be further compromised by three new Medicaid regulations, the first of which takes effect on May 26, 2008. According to these hospitals, the new Medicaid regulations will reduce federal payments to their facilities by \$623 million per year. If the states choose to withdraw their matching funds, the hospitals could face a reduction of about \$1.2 billion. The hospitals told the Committee that these funding cuts will force them “to significantly reduce services” in the future and that “loss of resources of this magnitude inevitably will lead to curtailing of critical health care safety net services such as emergency, trauma, burn, HIV/AIDS, neonatology, asthma care, diabetes care, and many others.”

I. INTRODUCTION

Conventional explosives are regarded by many experts as the most likely type of terrorist attack in the United States. The Director of National Intelligence testified before the Senate Select Committee on Intelligence on February 5, 2008, that “we judge use of a conventional explosive to be the most probable al-Qa’ida attack scenario because the group is proficient with conventional small arms and improvised explosive devices and is innovative in creating capabilities and overcoming security obstacles.”¹ According to the Centers on Disease Control and Prevention, “a terrorist bombing in the United States would be a ‘predictable surprise.’”²

Emergency rooms and trauma centers are a key resource in responding to such a bomb attack. The CDC estimates that “federal resources should not be expected to arrive sooner than 72 hours from the time of the explosion.”³ This is too long for many critically injured victims. Experts call the first hour following a major trauma the “golden hour” because of the importance of immediate and definitive care. Only local emergency and trauma care capacity will be available to treat the mass casualties in the early hours following a conventional explosives attack.

In a 2007 report, the CDC used the 2004 Madrid bombing as a standard for assessing mass casualty preparedness following an explosive attack.⁴ The Madrid bombing was selected because it generated the type of surge of wounded victims expected after a terrorist attack. In the Madrid attack, which occurred on March 11, 2004, ten terrorist explosions occurred almost simultaneously on commuter trains in Madrid, killing 177 people instantly and injuring more than 2,000. That day, 966 patients were taken to 15 hospitals. Within just 2.5 hours of the explosions, more than 270 patients arrived at Gregorio Maranon University General Hospital (GMUGH), the closest facility and the largest public hospital in Madrid.⁵ Among the casualties arriving at this single hospital, 89 required hospital admission and 29 required critical care.⁶

At the request of Chairman Henry A. Waxman, this report assesses whether the emergency care facilities at major hospitals in large U.S. cities would be able to respond to a Madrid event. This is the first report to measure our nation’s hospital emergency surge capacity using Madrid as a standard.

¹ Senate Select Committee on Intelligence, Testimony of J. Michael McConnell, Director of National Intelligence, *Annual Threat Assessment* (Feb. 5, 2008).

² CDC, *At a Moment’s Notice: Surge Capacity for Terrorist Bombings* (Apr. 2007).

³ *Id.*

⁴ *Id.*

⁵ *Id.* A total of 312 casualties were eventually treated at GMUGH, but 272 casualties arrived immediately following the attack, between 8 a.m. and 10:30 a.m.

⁶ Gutierrez de Ceballos, et al., *11 March 2004: The terrorist bomb explosions in Madrid, Spain — an analysis of the logistics, injuries sustained and clinical management of casualties treated at the closest hospital*, *Critical Care* (Feb. 2005).

II. METHODOLOGY

To evaluate the preparedness of the nation's hospital emergency care capacity, the majority staff of the Committee conducted a survey of the Level I trauma centers in seven major American cities. The survey includes five cities that are at highest risk of a terrorist strike according to the Department of Homeland Security: New York City, Los Angeles, Washington, D.C., Chicago, and Houston.⁷ The other two cities in the survey are Denver and Minneapolis, the cities in which the 2008 Democratic and Republican conventions will be held.

Hospitals with Level I trauma centers were selected because they serve as regional referral centers for persons with the most serious injuries. To be designated as a Level I trauma center, a hospital must have "immediate availability of trauma surgeons, anesthesiologists, physician specialists, nurses, and resuscitation equipment."⁸ Because Level I trauma centers have a greater ability to treat critical injuries, the most severely injured victims of mass casualty events are often preferentially routed to these centers. According to a study funded by the CDC, severely injured patients treated at hospitals with Level I trauma centers have a 25% lower risk of death than patients treated at a nontrauma center.⁹ In the seven cities surveyed, there are 41 Level I trauma centers. The survey excluded Level I trauma centers that treat pediatric patients only.¹⁰

To assess the preparedness of the Level I trauma centers in these seven cities for a mass casualty event, the staff administered a snapshot survey to determine the capacity of the facilities at a single point in time. The snapshot survey was modified from a protocol used to generate a 2003 Government Accountability Office report on emergency room crowding.¹¹ In designing the survey, the staff received comments from GAO and multiple professional organizations and experts. The survey was then pilot tested with three separate emergency department physicians. The survey instrument is reproduced in Appendix H.

In conducting the survey, the Committee staff collected point-in-time data by telephone at 4:30 p.m. local time on Tuesday, March 25, 2008. The survey was conducted by a physician on Committee staff with the assistance of two fourth-year medical student fellows.

The Committee also sent a follow-up questionnaire to the administrators of each of the hospitals surveyed. The questionnaire was distributed with the assistance of the National

⁷ Department of Homeland Security, Tier I Urban Area Security Initiative Jurisdictions (online at www.dhs.gov/xlibrary/assets/grants-2007-program-overview-010507.pdf).

⁸ MacKenzie EJ, et al. National Inventory of Hospital Trauma Centers. *JAMA*. 2003; 289:1515-1522. Specific criteria for "Level I" hospitals vary by metropolitan area. For purposes of this report, all city-designated "Level I" or "regional" trauma centers are referred to as "Level I trauma centers."

⁹ MacKenzie EJ, et al. A National Evaluation of the Effect of Trauma-Center Care on Mortality. *NEJM* 2006;354:366-378.

¹⁰ Survey respondents were asked to limit capacity estimates to adult patients where possible.

¹¹ GAO, *Hospital Emergency Departments: Crowded Conditions Vary among Hospitals and Communities* (Mar. 2003).

Association of Public Hospitals, the Association of Academic Medical Centers, and the American Hospital Association. The questionnaire is reproduced in Appendix I.

III. FINDINGS

Of the 41 Level I trauma centers in the selected cities, 34 (83%) participated in the hospital snapshot survey, representing over a fifth of the total emergency care capacity across the seven cities.¹² The results from these hospitals show that none of the surveyed facilities had sufficient capacity to respond to a Madrid event. Even if the emergency care resources of the Level I trauma centers were pooled in each surveyed city, none of the seven cities had sufficient capacity to manage the number of casualties that sought care at a single hospital emergency room in Madrid in the first few hours following the terrorist bombings there.

A. Emergency Room Capacity as Compared to Madrid

At the time of the survey, 20 of the 34 emergency rooms surveyed (59%) were functioning at or over capacity. Across all 34 Level I trauma centers, the emergency rooms in the survey were operating at 115% of capacity. See Table 1. This means that at the time of the survey, 15% of the patients were being treated in overflow spaces such as hallways, waiting rooms, or administrative offices. Patients waiting in an emergency room to see a health care provider are not included in these estimates.¹³

According to one facility, overcrowding has been such a severe problem that when mentally disabled adults were recently evacuated from a nearby care center, they had to be treated in the bus that brought them to the hospital because there were no available treatment spaces inside the emergency room.

In Madrid, 270 of the 2,000 total casualties arrived at the emergency room of a single hospital, GMUGH, in the first 2.5 hours after the attack. In the emergency rooms of the Level I trauma centers surveyed, there would not be enough capacity to accommodate a similar surge of injured patients unless other seriously ill or injured patients were displaced. Nearly all of these casualties would have to be treated in overflow spaces such as hallways and offices, assuming these overflow spaces were not already in use.

Not a single Level I trauma center emergency room had enough available capacity to accommodate more than 10% of the 270 casualties that arrived at a single emergency room after the Madrid attack. In the Level I trauma centers surveyed in Washington, D.C., there were no available treatment spaces; in the Level I trauma centers in Los

¹² According to data from the American Hospital Association's 2006 Annual Survey of Hospitals, there were a total of 10,051,161 emergency room visits across all of the hospitals in the regions included in the survey; of these, 2,138,092 (21%) occurred in the 34 hospitals responding to our survey.

¹³ According to survey respondents, the number of people waiting to see a health care provider represent an additional 45% of emergency room capacity across the hospitals surveyed.

Angeles, there were only six available spaces. In New York City, the city with the most available treatment spaces, there were no available spaces in 10 of the 16 Level I trauma centers surveyed. There were 56 available spaces in remaining 6 Level I trauma centers. See Appendix A.

On the day of the Madrid bombing, 966 casualties were taken to hospitals across the city, more than eight times the total number of standard treatment spaces available in all 34 surveyed Level I trauma centers in seven cities. The survey is not a comprehensive examination of the surge capacity in each of the seven cities, but a sampling of the institutions most likely to play a major role in the response to any terrorist attack.

Table 1:
Emergency room capacity at Level I trauma centers, by city
(4:30 p.m., Tuesday, March 25, 2008)

City	Patients Being Treated	Treatment Spaces (Capacity)	% of Capacity Being Treated in ER	Available Treatment Spaces	Available Treatment Spaces, as % of Surge at One Madrid Hospital (270 Casualties)
New York City	943	829	114%	56	21%
Los Angeles	286	246	116%	6	2%
Washington, D.C.	135	63	214%	None	0%
Chicago	203	152	134%	8	3%
Houston	123	154	80%	32	12%
Denver	81	88	92%	8	3%
Minneapolis	52	57	91%	5	2%

Overcrowding was particularly severe in Los Angeles and Washington, D.C. In Los Angeles, three of the five Level I trauma centers were “on diversion” at the time of the survey. This means they were too full to accept new patients and were directing ambulances to alternative sites. Because Level I trauma centers represent such an important resource for patients with serious injuries, these hospitals have a high threshold for going “on diversion.” Diversions can also have a ripple effect, as patients redirected from one hospital increase the crowding at nearby institutions. In total, there were just six available emergency room treatment spaces in the five Level I trauma centers in Los Angeles.

In Washington, D.C., there were no available spaces in the emergency rooms of the Level I trauma centers surveyed. Two of the three Level I trauma centers in our nation’s capital responded to the survey: the Washington Hospital Center and the George Washington University Medical Center.¹⁴ On the date of the survey, the emergency rooms of both

¹⁴ The only Level I trauma center in Washington, D.C. that did not respond is Howard University Hospital. According to the regional EMS authorities in Washington, D.C., Howard University Hospital was on diversion on March 25, 2008, at 4:30 p.m.

hospitals were severely overcrowded, with no available treatment spaces in either emergency room. The emergency room at the Washington Hospital Center was operating at 286% of capacity, making it the single most overcrowded hospital the Committee surveyed. See Appendix A.

As part of the survey, the respondents, primarily physicians in the emergency department, were asked about the impact on health of overcrowding and delays in emergency care treatment. Over 44% of those surveyed reported that the respondent personally knew of a patient who had been harmed by the delays in medical intervention resulting from emergency room overcrowding. One respondent reported that because of a recurring inability to see patients in a timely fashion, the hospital set up a medication dispensing machine in the waiting room in an effort to control pain and nausea in patients facing long waits to see a health care provider.

B. Inpatient Capacity as Compared to Madrid

Surge capacity depends on more than just the emergency room. It also requires that a hospital have sufficient inpatient resources, including accessible intensive care units (ICUs).

When a hospital is full, severely ill and injured emergency room patients cannot be moved out of the emergency room into a hospital bed. This bottleneck creates “boarders”: patients admitted to the hospital who remain in the emergency room because no hospital bed is available. Because these patients require space, equipment, and the ongoing attention of the emergency room staff, they limit the resources available to incoming emergency room patients and exacerbate crowding.

On the day of the survey, boarders occupied a quarter of the total capacity (25%) in the emergency rooms of the 34 trauma centers surveyed. Eight hospitals reported that some of their boarders had been waiting for an inpatient bed for 24 hours or more. At Winthrop University Hospital in New York City, one boarder had been waiting more than four days for an inpatient bed. See Appendix D.

Boarding was particularly problematic in New York City and Washington, D.C. Six of the eight hospitals with boarders waiting 24 hours or more for an inpatient bed were in New York City. In Washington, D.C., boarders occupied 60% of the total emergency room capacity in the two surveyed Level I trauma centers.

On the day of the Madrid train bombings, of the 270 patients who came to the emergency room of a single hospital, 89 patients required admission to an inpatient hospital bed. None of the 34 Level I trauma centers surveyed had 89 inpatient beds available. On average, the hospitals surveyed had approximately 20 inpatient beds available. See Appendix B. Four of the seven cities (Washington, D.C., Houston, Denver, and Minneapolis) did not have enough inpatient beds available across the Level I trauma centers surveyed to accommodate the 89 patients who required admission to a single hospital after the Madrid bombing.

Critical care capacity is a crucial resource in addressing a mass casualty event because the most severely injured patients require treatment in an intensive care unit to survive. The Madrid hospital that received the largest share of victims had 29 patients who required critical care following the bombings.

At the time of the Committee’s survey, the Level I trauma centers had on average five intensive care unit beds available. Five hospitals (18%) had no available intensive care unit beds. No Level I trauma center included in the survey had the intensive care unit capacity to accommodate the 29 patients who required critical care at one Madrid hospital after the train bombings. See Appendix C. Five cities in the Committee’s survey (Los Angeles, Washington, D.C., Houston, Denver, and Minneapolis) had less than 29 critical care beds available across all participating trauma centers. See Table 2.

Table 2:
Intensive Care Unit (ICU) surge capacity at Level I trauma centers, by city
(4:30p.m., Tuesday, March 25, 2008)

City	Intensive Care Unit Beds (Capacity)	Available Intensive Care Unit Beds	Available Intensive Care Unit Beds as % of Surge at One Madrid Hospital (29 Casualties)
New York City	797	79	272%
Los Angeles	371	9	31%
Washington, D.C.	160	12	41%
Chicago	217	37	128%
Houston	263	11	38%
Denver	146	9	31%
Minneapolis	48	3	10%

C. Creating Additional Capacity

In the event of a terrorist attack, hospitals will create some additional capacity by rapidly discharging ambulatory patients and transferring others wherever possible. At the hospital in Madrid that received 270 victims after the bombing attacks, 123 patients were sent home from the emergency room and 161 hospitalized patients were discharged home from inpatient beds in under two hours, about 9% of the 1,800 beds at that hospital.¹⁵

It is unlikely that similar resources can be “freed up” in a typical U.S. Level I trauma center. In its report, the CDC noted that excess capacity is difficult to create in this country due to the fact that “the U.S. health care system has systematically and

¹⁵ Gutierrez de Ceballos, et al., *11 March 2004: The terrorist bomb explosions in Madrid, Spain — an analysis of the logistics, injuries sustained and clinical management of casualties treated at the closest hospital*, Critical Care (Feb. 2005).

deliberately eliminated capacity because unused capacity is an additional expense.”¹⁶
The Institute of Medicine’s June 2006 report on the future of emergency care states:

In many cities, the hospitals and trauma centers have problems dealing with a multiple car highway crash, much less a major mass casualty event. With many hospitals operating at or near capacity, most hospitals do not have the capacity to handle the volume of patients likely to result from a large-scale disaster. In emergencies, there are a number of things that hospitals can do to free up capacity and extend their resources. But there are serious physical limits to such expansions.¹⁷

Moreover, even if the Level I trauma centers could discharge and transfer as many patients as occurred at the hospital in Madrid, the trauma centers would still lack sufficient space to accommodate the surge of victims that received emergency care at the Madrid hospital.

D. Conditions as Compared to Other Days

The survey was conducted at one specific time, 4:30 p.m., on a single weekday, Tuesday, March 25, 2008. To assess whether the hospital conditions at the time of the survey were representative, the Committee staff obtained data for the seven cities on hospital diversions. This data is maintained by the providers of ambulance and related emergency medical services (EMS), who are notified whenever a hospital in a city goes on diversion so that they can divert patients elsewhere.

The diversion data indicates that the conditions at the time of the survey were not unusual. For most of the cities, the overall rate of diversion for the month prior to the survey was comparable to the rate of diversions on March 25. In some instances, conditions appeared less crowded on the date of the survey than other days. The data from the Los Angeles EMS system showed that Los Angeles hospitals were on diversion an average of 28% of the time during the prior month, a higher rate of diversion than the 21% rate on March 25. Only two cities (Washington, D.C. and Minneapolis) had significantly more diversions on March 25 than over the previous month. See Appendix E.

E. The Impact of Medicaid Regulations

In a follow-up questionnaire, the hospitals were asked what impact three pending changes to Medicaid regulations would have on the ability of the hospitals to provide emergency response. Twenty-three of the hospitals responded to the questionnaire. They indicated that the regulations would result in large financial losses for these critical institutions and result in further strain in emergency room care. See Appendix I.

¹⁶ CDC, *At a Moment’s Notice: Surge Capacity for Terrorist Bombings* (Apr. 2007).

¹⁷ Institute of Medicine. *Hospital-Based Emergency Care: At the Breaking Point*. National Academies Press, Washington, D.C. (2006).

During 2007, the Centers for Medicare & Medicaid Services (CMS) proposed seven regulations that would make major, wide-ranging changes in federal Medicaid policy.¹⁸ Three of these regulations would significantly reduce federal Medicaid funding for public and teaching hospitals that are major providers of emergency care in many communities. More specifically, one would limit Medicaid payments to public providers;¹⁹ another would bar Medicaid payment for graduate medical education;²⁰ and the third would limit the scope of outpatient hospital services for which Medicaid pays.²¹

Across all seven cities, the Level I trauma centers estimated a potential annual loss between \$623 million and \$654 million in federal Medicaid funds from the three regulations. See Table 3. Nationally, federal Medicaid payments represent between 50% and 75% of total Medicaid payments to hospitals, depending on the state. The remaining funding is contributed by individual states. If the states also elect to withdraw their own funding because it would no longer be matched, the Level I trauma centers could lose a total of about \$1.2 billion per year.²²

Table 3:
Estimated annual loss of federal Medicaid funds to Level I trauma centers, by city (in millions)

City	Cost Limit Rule	GME Rule	Outpatient Hospital Rule	Total Funding
New York City	116	234	35	384
Los Angeles	85	18	2	104
Chicago	25 - 35	4	1	30-40
Houston	70-81	4	0.2	74-85
Denver	30 - 40	0.4	NS	30 - 40
Total Nationwide*	326-357	260	38	623-654

*Totals may not add up by column due to rounding.

¹⁸ For further information, see Committee on Oversight and Government Reform, Majority Staff, *The Administration's Medicaid Regulations: State-by-State Impacts* (March 2008).

¹⁹ Centers for Medicare & Medicaid Services, Medicaid Program; Cost Limit for Providers Operated by Units of Government and Provisions to Ensure the Integrity of the Federal-State Financial Partnership, 72 Fed. Reg. 29748 (May 29, 2007)(final rule with comment period). This regulation limits Medicaid payments to public hospitals for inpatient services to the cost of treating Medicaid patients, thereby denying these facilities assistance in financing the costs of treating uninsured patients admitted through the emergency room

²⁰ Centers for Medicare & Medicaid Services, *Medicaid Program; Graduate Medical Education*, 72 Fed. Reg. 28930 (May 23, 2007)(proposed rule). This regulation would prohibit federal Medicaid matching funds for payment for the costs of GME programs, through which residents are trained to become doctors by providing inpatient or outpatient hospital services to Medicaid and uninsured patients.

²¹ Centers for Medicare & Medicaid Services, *Medicaid Program; Clarification of Outpatient Clinic and Hospital Facility Services Definition and Upper Payment Limit*, 72 Fed. Reg. 55158 (Sept. 28, 2007) (proposed rule). This regulation narrows the scope of outpatient hospital services for which federal Medicaid matching funds are available to those services for outpatient hospital services for which Medicare pays.

²² Hospitals reported to the Committee the total funding at risk as a result of these regulations. The Committee staff used the applicable federal Medicaid matching rate to determine the amount of federal funds at risk.

The Level I trauma centers surveyed could lose on average about \$27 million annually in federal Medicaid funds as a result of the regulations. This amount is approximately 5% of the hospitals' annual budget. If states choose to also reduce contributions, the loss could be nearly twice as great.

Some of the hospitals would face a particularly large impact. Ben Taub General Hospital in Houston estimated that \$49 million to \$61 million in federal dollars would be at risk as a result of these three regulations. In New York City, New York Presbyterian estimated that about \$63 million in federal funds was at risk. Three hospitals (Jacobi Medical Center in New York City, Lincoln Medical and Mental Health Center in New York City, and John H. Stroger Hospital of Cook County in Chicago) estimate that the federal funds at risk account for over 10% of their annual budget. See Appendix F.

Some respondents offered comments regarding the impact of the regulations on emergency services. According to the John H. Stroger Hospital of Cook County in Chicago, "loss of resources of this magnitude inevitably will lead to curtailing of critical health care safety net services such as emergency, trauma, burn, HIV/AIDS, neonatology, asthma care, diabetes care, and many others." The USC Medical Center reported that "the impact of these regulations will undoubtedly result in reduced inpatient and outpatient services in Los Angeles County. Decreased access will result in further impacts to emergency rooms already overwhelmed by increasing patient volumes."

Others commented on the broad effects of the regulations. Denver Health responded that "the impact of these regulations, if implemented, will be to devastate the Colorado safety net system requiring Colorado's safety net hospitals to substantially decrease care to the uninsured." Ben Taub General Hospital in Houston said that, if the regulations go into effect, "the hospital district will have to significantly reduce services to the uninsured and indigent patients ... in order to bring the cost of services provided in line with funds available." Administrators from several hospitals with low projected fiscal impacts noted "significant indirect financial impact[s]" as reductions in funding to public hospitals "result in shifts in the indigent patient population to the other ... safety net hospitals." Additional comments are presented in Appendix G.

Appendix A: Emergency room capacity at Level I trauma centers, by hospital (4:30 p.m., Tuesday, March 25, 2008)

Hospital Name	Metro Area	Patients Being Treated	Treatment Spaces (Capacity)	% of Capacity Being Treated in ER	Available Treatment Spaces	Available Treatment Spaces, as % of Surge at One Madrid Hospital (270 Casualties)
Bellevue Hospital Center	NYC	71	34	209%	None	0%
Brookdale Hospital Medical Center	NYC	26	34	76%	8	3%
Elmhurst Hospital Center	NYC	64	56	114%	None	0%
Harlem Hospital Center	NYC	17	40	43%	23	9%
Jacobi Medical Center	NYC	60	48	125%	None	0%
Jamaica Hospital Medical Center	NYC	50	24	208%	None	0%
Kings County Hospital Center	NYC	47	67	70%	20	
Lincoln Medical and Mental Health Center	NYC	63	64	98%	1	0.4%
New York Presbyterian Hospital	NYC	110	103	107%	None	0%
St. Barnabas Hospital	NYC	49	52	94%	3	1%
St. Lukes Roosevelt Hospital	NYC	83	47	177%	None	0%
Staten Island University Hospital	NYC	49	30	163%	None	0%
Stony Brook University Hospital	NYC	68	64	106%	None	0%
St. Vincents Manhattan	NYC	62	47	132%	None	0%
Winthrop University Hospital	NYC	59	53	111%	None	0%
The University Hospital	NYC	65	66	98%	1	0.4%
Washington Hospital Center	DC	83	29	286%	None	0%
George Washington University Medical Center	DC	52	34	153%	None	0%

Appendix A: Emergency room capacity at Level I trauma centers, by hospital (4:30 p.m., Tuesday, March 25, 2008) (Continued)

Hospital Name	Metro Area	Patients Being Treated	Treatment Spaces (Capacity)	% of Capacity Being Treated in ER	Available Treatment Spaces	Available Treatment Spaces, as % of Surge at One Madrid Hospital (270 Casualties)
Advocate Illinois Masonic Hospital	Chicago	33	41	80%	8	3%
John H. Stroger Hospital of Cook County	Chicago	84	60	140%	None	0%
Mount Sinai Hospital and Medical Center	Chicago	38	23	165%	None	0%
Northwestern Memorial Hospital	Chicago	48	28	171%	None	0%
Ben Taub General Hospital	Houston	56	73	77%	17	6%
Memorial Hermann Hospital	Houston	38	37	103%	None	0%
University of Texas Medical Branch	Houston	29	44	66%	15	6%
Hennepin County Medical Center	Minneapolis	52	57	91%	5	2%
St. Anthony Central Hospital	Denver	19	18	106%	None	0%
Denver Health Medical Center	Denver	31	33	94%	2	0.7%
Swedish Medical Center	Denver	31	37	84%	6	2%
Cedars-Sinai Medical Center	LA	57	41	139%	None	0%
Harbor UCLA Medical Center/LAC	LA	60	61	98%	1	0.4%
USC Medical Center	LA	102	81	126%	None	0%
UCLA Medical Center	LA	37	28	132%	None	0%
UCI Medical Center	LA	30	35	86%	5	2%

**Appendix B: Inpatient hospital bed capacity at Level I trauma centers, by hospital
(4:30 p.m., Tuesday, March 25, 2008)**

Hospital Name	Metro Area	Total Hospital Beds (Capacity)	Available Hospital Beds	Available Hospital Beds, as % of Surge at One Madrid Hospital (89 Casualties)
Bellevue Hospital Center	NYC	390	13	15%
Brookdale Hospital Medical Center	NYC	310	42	47%
Elmhurst Hospital Center	NYC	267	27	30%
Harlem Hospital Center	NYC	175	20	23%
Jacobi Medical Center	NYC	234	6	2%
Jamaica Hospital Medical Center	NYC	244	29	32%
Kings County Hospital Center	NYC	309	9	9%
Lincoln Medical and Mental Health Center	NYC	207	52	58%
New York Presbyterian Hospital	NYC	1404	70	79%
St. Barnabas Hospital	NYC	350	17	19%
St. Lukes Roosevelt Hospital	NYC	316	4	5%
Staten Island University Hospital	NYC	319	19	25%
Stony Brook University Hospital	NYC	380	30	34%
St. Vincents Manhattan	NYC	260	8	9%
Winthrop University Hospital	NYC	471	8	9%
The University Hospital	NYC	455	16	18%
Washington Hospital Center	DC	644	29	33%
George Washington University Medical Center	DC	302	18	20%
Advocate Illinois Masonic Hospital	Chicago	188	38	43%
John H. Stroger Hospital of Cook County	Chicago	298	19	21%
Mount Sinai Hospital and Medical Center	Chicago	172	3	3%
Northwestern Memorial Hospital	Chicago	504	58	65%
Ben Taub General Hospital	Houston	447	46	28%
Memorial Hermann Hospital	Houston	535	17	35%
University of Texas Medical Branch	Houston	555	4	10%
Hennepin County Medical Center	Minn.	231	29	33%
St. Anthony Central Hospital	Denver	215	22	3%
Denver Health Medical Center	Denver	257	2	17%
Swedish Medical Center	Denver	255	12	10%
Cedars-Sinai Medical Center	LA	588	26	7%
Harbor UCLA Medical Center/LAC	LA	367	48	24%
USC Medical Center	LA	520	26	31%
UCLA Medical Center	LA	321	42	7%
UCI Medical Center	LA	198	0	0%

**Appendix C: Intensive Care Unit (ICU) capacity at Level I trauma centers, by hospital
(4:30 p.m., Tuesday, March 25, 2008)**

Hospital Name	Metro Area	Total ICU Beds (Capacity)	Available ICU Beds	Available ICU Beds, as % of Surge at One Madrid Hospital (29 Casualties)
Bellevue Hospital Center	NYC	56	5	17%
Brookdale Hospital Medical Center	NYC	30	8	28%
Elmhurst Hospital Center	NYC	29	3	10%
Harlem Hospital Center	NYC	16	2	7%
Jacobi Medical Center	NYC	44	2	7%
Jamaica Hospital Medical Center	NYC	24	3	10%
Kings County Hospital Center	NYC	40	5	17%
Lincoln Medical and Mental Health Center	NYC	30	7	24%
New York Presbyterian Hospital	NYC	208	16	55%
St. Barnabas Hospital	NYC	26	3	10%
St. Lukes Roosevelt Hospital	NYC	40	2	7%
Staten Island University Hospital	NYC	42	10	34%
Stony Brook University Hospital	NYC	54	7	24%
St. Vincents Manhattan	NYC	42	0	0%
Winthrop University Hospital	NYC	56	0	0%
The University Hospital	NYC	60	6	21%
Washington Hospital Center	DC	112	9	31%
George Washington University Medical Center	DC	48	3	10%
Advocate Illinois Masonic Hospital	Chicago	34	7	24%
John H. Stroger Hospital of Cook County	Chicago	70	8	28%
Mount Sinai Hospital and Medical Center	Chicago	21	1	3%
Northwestern Memorial Hospital	Chicago	92	21	72%
Ben Taub General Hospital	Houston	70	5	17%
Memorial Hermann Hospital	Houston	115	6	21%
University of Texas Medical Branch	Houston	78	0	0%
Hennepin County Medical Center	Minn.	48	3	10%
St. Anthony Central Hospital	Denver	60	6	21%
Denver Health Medical Center	Denver	44	2	7%
Swedish Medical Center	Denver	42	1	3%
Cedars-Sinai Medical Center	LA	144	2	7%
Harbor UCLA Medical Center/LAC	LA	42	6	21%
USC Medical Center	LA	72	0	0%
UCLA Medical Center	LA	68	1	3%
UCI Medical Center	LA	45	0	0%

Appendix D: Emergency room capacity being used to treat “boarders” at 4:30 p.m., March 25, 2008

Hospital Name	Metro Area	Boarders Being Treated	Treatment Spaces (Capacity)	% of Capacity Occupied by Boarders	Longest Waiting Time for a Boarder (in hours)
Bellevue Hospital Center	NYC	20	34	59%	16
Brookdale Hospital Medical Center	NYC	1	34	3%	1
Elmhurst Hospital Center	NYC	12	56	21%	12
Harlem Hospital Center	NYC	2	40	5%	9
Jacobi Medical Center	NYC	17	48	35%	20
Jamaica Hospital Medical Center	NYC	11	24	46%	5
Kings County Hospital Center	NYC	10	67	15%	19
Lincoln Medical and Mental Health Center	NYC	2	64	3%	2
New York Presbyterian Hospital	NYC	35	103	34%	28
St. Barnabas Hospital	NYC	6	52	12%	3
St. Lukes Roosevelt Hospital	NYC	19	47	40%	30
Staten Island University Hospital	NYC	31	30	103%	40
Stony Brook University Hospital	NYC	3	64	5%	9
St. Vincents Manhattan	NYC	17	47	36%	24
Winthrop University Hospital	NYC	39	53	74%	100
The University Hospital	NYC	13	66	20%	48
Washington Hospital Center	DC	30	29	103%	33
George Washington University Medical Center	DC	8	34	24%	5
Advocate Illinois Masonic Hospital	Chicago	5	41	12%	0
John H. Stroger Hospital of Cook County	Chicago	4	60	7%	1
Mount Sinai Hospital and Medical Center	Chicago	11	23	48%	15
Northwestern Memorial Hospital	Chicago	5	28	18%	1
Ben Taub General Hospital	Houston	6	73	8%	5
Memorial Hermann Hospital	Houston	5	37	14%	22
University of Texas Medical Branch	Houston	9	44	20%	11
Hennepin County Medical Center	Minneapolis	5	57	9%	7
St. Anthony Central Hospital	Denver	0	18	0%	0
Denver Health Medical Center	Denver	7	33	21%	22
Swedish Medical Center	Denver	3	37	8%	5
Cedars-Sinai Medical Center	LA	3	41	7%	2
Harbor UCLA Medical Center/LAC	LA	14	61	23%	26
USC Medical Center	LA	22	81	27%	19
UCLA Medical Center	LA	10	28	36%	17
UCI Medical Center	LA	8	35	23%	18

Appendix E: Citywide percent of hospitals on EMS Diversion (requesting ambulances to go elsewhere)

City	Overall Rate of Diversion for Previous Month	Rate of Diversion at 4:30 PM on March 25, 2008
New York City	4%	5%
Los Angeles	28%	21%
Washington D.C.	8%	22%
Chicago	8%	8%
Houston	15%	13%
Denver	6%	8%
Minneapolis	2%	7%

Appendix F: Estimated annual loss of federal Medicaid funds to Level I trauma centers, by hospital (in millions)

Hospital Name	City	Cost Limit Rule	GME Rule	Outpatient Hospital Rule	Total Federal Funding at Risk	Total Federal Funding at Risk, as % FY07 Budget
Bellevue Hospital Center	NYC	24	28	8	59	10%
Elmhurst Hospital Center	NYC	17	19	6	42	9%
Harlem Hospital Center	NYC	11	14	4	29	9%
Jacobi Medical Center	NYC	19	25	6	50	11%
Kings County Hospital Center	NYC	21	24	7	52	9%
Lincoln Medical and Mental Health Center	NYC	15	25	5	45	11%
New York Presbyterian Hospital	NYC	None	63	NS	63	2%
St. Lukes Roosevelt Hospital	NYC	None	9	None	9	1%
Staten Island University Hospital	NYC	None	6	NS	6	1%
Stony Brook University Hospital	NYC	9	8	NS	16	2%
St. Vincents Manhattan	NYC	None	13	NS	13	3%
Winthrop University Hospital	NYC	None	1	NS	1	0.2%
John H. Stroger Hospital of Cook County	Chicago	25-35	4	NS	29-39	8% -11%
Northwestern Memorial Hospital	Chicago	None	None	1	1	0.1%
Ben Taub General Hospital	Houston	49-61	None	None	49-61	6%
Memorial Hermann Hospital	Houston	None	None	NS	NS	NS
University of Texas Medical Branch	Houston	20	4	0.2	25	4%
Denver Health Medical Center	Denver	30-40	0.4	NS	30 - 40	6% - 8%
Cedars-Sinai Medical Center	LA	None	None	NS	NS	0.6%
Harbor UCLA Medical Center/LAC	LA	20	1	NS	21	5%
USC Medical Center	LA	40	11	NS	51	5%
UCLA Medical Center	LA	12	4	1	17	2%
UCI Medical Center	LA	13	2	1	15	3%
Total*		326-357	260	38	623-654	

*Totals may not add up by column due to rounding. “None” indicates that the hospital did not believe that rule would have a financial impact. “NS” indicates “not specified”, meaning that no answer was provided.

Appendix G: Hospital comments on financial impact

I. New York Presbyterian Hospital, New York:

“This order of reductions threaten hospitals' ability to fund replacement of existing equipment and future capital projects, let alone routine operations. At NYPH, excluding investment returns, the hospital's margin was under 2% on close to \$3 billion in operations.”

II. John H. Stroger Hospital of Cook County, Chicago:

“Stroger Hospital is, by far, the largest public hospital in the State and the region; loss of resources of this magnitude inevitably will lead to curtailing of critical health care safety net services such as emergency, trauma, burn, HIV/AIDS, neonatology, asthma care, diabetes care, and many others; Stroger Hospital is the regional cornerstone of specialty care access for both Medicaid and uninsured patients in the metropolitan area - loss of revenues from the rule(s) would lead to diminished specialty care access for those most in need; In all, the public health of the community will be adversely affected by many measures...”

III. Ben Taub General Hospital, Houston:

“The Hospital district will have to significantly reduce services to the uninsured and indigent patients of Harris County in order to bring the cost of services provided in line with funds available.”

IV. Denver Health Medical Center, Denver:

“The impact of these regulations, if implemented, will be to devastate the Colorado safety net system requiring Colorado's safety net hospitals to substantially decrease care to the uninsured.”

V. USC Medical Center, Los Angeles:

“The impact of these regulations will undoubtedly result in reduced inpatient and outpatient services in Los Angeles County. Decreased access will result in further impacts to emergency rooms already overwhelmed by increasing patient volumes.”

Appendix H: Emergency Department Survey

UNITED STATES HOUSE OF REPRESENTATIVES COMMITTEE ON OVERSIGHT AND GOVERNMENT REFORM EMERGENCY DEPARTMENT SURVEY

The Committee on Oversight and Government Reform is conducting a survey of level I trauma centers in seven metropolitan areas: New York City, Washington D.C., Chicago, Houston, Denver, Minneapolis, and Los Angeles. This survey will help to assess the current state of emergency department capacity across the country, and the potential impact of these policy changes on emergency care.

Please complete Part IIA of the following survey, and return your answers to the Committee on Oversight and Government Reform on or before March 25th, 2008. Part IIB of the survey will be completed by telephone on Tuesday, March 25th, 2008. Please review these questions and be prepared to provide data for your hospital and emergency department. **Some of questions may require input from a nursing coordinator or bed-board administrator.**

Consistent with the Committee's policy on transparency, the answers you provide should not be considered to be confidential. If you have any questions regarding this survey, please feel free to contact Stephen Cha, M.D. of the Committee staff at (202) 225-5056.

PART A

Hospital Name: _____
Survey Respondent Name: _____
Survey Respondent Title: _____

1. In your emergency department (ED), how many standard treatment spaces do you have? *Standard treatment spaces include beds or treatment spaces specifically designed for ED patients to receive care, not including overflow spaces.* _____
2. In your hospital, what is the total number of available trauma bays in the emergency department? *Available beds are beds that are licensed, set up and available for use. Available beds may or may not be staffed.* _____
3. Does your hospital have a burn unit? _____
What is the total number of available burn unit beds? _____
4. Is your hospital a sponsor or major affiliate for an emergency medicine residency training program? _____
If yes, how many total residents are currently training in this program? _____
5. Does your hospital have other residency programs (*e.g. internal medicine, general surgery*) whose residents rotate through your emergency department? _____
6. Do you personally know of patients in your emergency department who have been harmed by excessive crowding or wait times? If you would like to share a personal anecdote, please attach

additional page(s). _____

7. In the past year, what is the most unusual treatment space you have used to care for an emergency room patient? _____

The following question may require input from a nursing coordinator or bed-board administrator.

8. In your hospital, what is the total number of available acute care beds? *Please do not include obstetric, pediatric, or psychiatric beds in your response.* _____

Regular “ward” beds _____

Telemetry or “step-down” beds _____

Intensive care/critical care beds _____

PART B

For this survey, “currently” means at 4:30 p.m. on March 25th, 2008.

1. How many patients are currently undergoing evaluation and treatment in the ED? _____

How many of your current ED patients are being treated in an overflow treatment space? *Overflow spaces include chairs, stretchers in hallways, or other spaces not specifically designed for ED patients to receive care.* _____

2. How many ED patients are currently waiting to see a physician, physician assistant or nurse practitioner? _____

3. How many ED boarders do you currently have? *Boarders are patients for whom the final decision to admit or transfer to another hospital has been made, but who have not yet left the ED.* _____

4. Among your current boarders, what is the longest period of time that a patient has been boarding? _____

5. In your emergency department, how many trauma bays are currently vacant, staffed and available? _____

6. Can your hospital go on diversion? *“On diversion” means that your ED or hospital has requested that ambulances bypass your ED and transport patients you would normally have been capable of seeing to another medical facility.* _____

7. Is your hospital currently on diversion? _____

8. Why is your hospital currently on diversion:

Lack of trauma capacity

Lack of critical care capacity

Lack of acute care bed care capacity

Other _____

9. In the preceding week, how many hours did your hospital spend on diversion for any reason?

10. How many of the following personnel are currently staffing the ED?

Total registered nurses?

Registered nurses providing direct patient care?

Attending physicians?

Nurse practitioners?

Physician assistants?

11. How many residents/interns are currently on duty in the ED?

The following questions may require input from a nursing coordinator or bed-board administrator.

12. In your hospital, how many total beds are currently vacant, staffed and available? *Please do not include obstetric, pediatric or psychiatric beds.*

Regular “ward” beds

Telemetry or “step-down” beds

Intensive care/critical care beds

Burn unit beds

13. At the current time, how many patients are waiting for an ICU bed? *These patients may be waiting in the ER, PACU, recovery room, or other units not normally used to provide inpatient ICU care.*

Appendix I: Financial Impact Survey

**UNITED STATES HOUSE OF REPRESENTATIVES
COMMITTEE ON OVERSIGHT AND GOVERNMENT REFORM
FINANCIAL IMPACT SURVEY**

Name of Institution: _____

Name of Individual Completing Survey: _____

Title of Individual Completing Survey: _____

For the purposes of this survey, we ask that you assume that the proposed Medicaid regulations¹ will take effect. Consistent with the Committee's policy on transparency, the answers you provide should not be considered to be confidential.

1. Please provide projected one-year estimates for the total amount of funding (federal and state) for your institution that would be put at risk by the following. If necessary, please include the range of funding at risk.

Cost Limit Final Rule (public providers only) _____

GME Rule (if applicable) _____

Outpatient Rule _____

Total _____

2. The total projected funding at risk, as described above, would translate to what percentage of your FY07 total budget?

3. Is there anything else we should know about the projected financial impact of these Medicaid regulations for your hospital?

Thank you for your participation.

¹ The Cost Limit for Public Providers Rule (CMS 2258-FC, 72 FR 29748) narrows the definition of a public provider and limits payments to public providers to the cost of treating Medicaid patients.

The Payments for Graduate Medical Education (GME) Rule (CMS 2279-P, 72 FR 28930) prohibits federal matching funds for costs of GME programs as part of Medicaid reimbursement for inpatient or outpatient hospital services.

The Outpatient Hospital Services Rule (CMS 2213-P, 72 FR 55158) narrows the scope of Medicaid outpatient hospital services to Medicare outpatient hospital services paid on a prospective basis and excludes other outpatient Medicaid services from coverage.

Further information can be found at <http://oversight.house.gov/documents/20080303111450.pdf>.