Hospital Surge Capacity for Mass Casualty Events

Arthur L Kellermann, MD, MPH
Emory University

Surge Capacity Workshop: June 10-11, 2009
1. Form Follows Finance
Surge Capacity? What Surge Capacity?

- 90% of level 1 TCs and hospitals >300 beds “at or above capacity” (Lewin Group, ’02)
- ½ million ambulances diverted in 2003 (CDC, 2005)
- Lack of ICU beds the most common cause of diversions (GAO, ’03)
- Large urban hospitals most likely to divert EMS (CDC, ’06)
- Wait times for emergent pts. >2X guidelines (GAO, 09)
“Boarding” Benefits Hospitals

- Elective admissions get priority because they pay higher margins and keep referral docs happy
- OR “block time” keeps surgeons happy
- Holding admitted patients in the ER keeps ward nurses happy
- “Two admissions for the price of one” keeps administrators happy
2. Practice How You Play
Hospital Actions to Augment Surge Capacity

Immediate

- Move patients out of the emergency department
  - Send all admitted patients to the floors
  - Uncertain disposition: admit
  - Know going home: delay care until event over and move to waiting room

- Increase the number of ED screening areas
- Cancel elective procedures and admissions
- Accept admitted patients from the ED into “hallway” beds
- Convert private rooms to double occupancy
3. Trust, but Verify

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“Who you gonna believe, me, or your lying eyes?

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Quality of Telephone Advice

- Pustules on the face, arms and legs with lesions in the same stage of development: – *No one suggested isolating the pt. or using PPE*
- Classic symptoms of bubonic plague: “*Go back to bed*” (*b/c no similar cases reported that day*)
- Symptoms suggestive of botulism: “*You’re right, it does sounds like botulism. I wouldn’t worry too much if I were you.*”

Source: Dausey DJ, Lurie N, Diamond A. Public Health Response to Urgent Case Reports. Health Affairs, August 2005
4. Prepare for the “Predictable Surprise”

Murrah Federal Building, Oklahoma City, OK
### ER Capacity of Hospitals with Level I Trauma Centers in 7 U.S. Cities:

4:30 PM, Tuesday, March 25, 2008

<table>
<thead>
<tr>
<th>City</th>
<th># Patients Being Treated</th>
<th>ER Treatment Spaces (Capacity)</th>
<th>% of Capacity Being Used in ERs</th>
<th>Available Treatment Spaces</th>
</tr>
</thead>
<tbody>
<tr>
<td>New York City</td>
<td>943</td>
<td>829</td>
<td>114%</td>
<td>56</td>
</tr>
<tr>
<td>Los Angeles</td>
<td>286</td>
<td>246</td>
<td>116%</td>
<td>6</td>
</tr>
<tr>
<td>Washington, D.C.</td>
<td>135</td>
<td>63</td>
<td>214%</td>
<td>0</td>
</tr>
<tr>
<td>Chicago</td>
<td>203</td>
<td>152</td>
<td>134%</td>
<td>8</td>
</tr>
<tr>
<td>Houston</td>
<td>123</td>
<td>154</td>
<td>80%</td>
<td>32</td>
</tr>
<tr>
<td>Denver</td>
<td>81</td>
<td>88</td>
<td>92%</td>
<td>8</td>
</tr>
<tr>
<td>Minneapolis</td>
<td>52</td>
<td>57</td>
<td>91%</td>
<td>5</td>
</tr>
</tbody>
</table>

Source: Majority Staff, House Committee on Oversight and Government Reform. *Hospital Emergency Surge Capacity: Not Ready for the “Predictable Surprise”* May, 2008
5. “Don’t Get Stuck on Stupid”

LTG Russel Honore, USA-Ret
Surge System

Key Components

**Stuff** (supplies and equipment)

**Staff** (personnel)
- Behavioral issues
- Will staff come to work?
- Skill sets

**Structure** (2 components)
- Physical space
- Management infrastructure
  - Incident Command System
We can, and must, do better…