### Novel Solutions to Novel Influenza

*Eric A. Weiss, MD, FACEP*  
Stanford University School of Medicine

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#### Estimated Capacity for Hospital and ICU Beds by Week for a Hypothetical 12-Week Wave of Influenza Pandemic, Santa Clara County

<table>
<thead>
<tr>
<th>Week</th>
<th>Avail Hosp beds</th>
<th>Avail ICU beds</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>920</td>
<td>204</td>
</tr>
<tr>
<td>2</td>
<td>229</td>
<td>76</td>
</tr>
<tr>
<td>3</td>
<td>-461</td>
<td>-51</td>
</tr>
<tr>
<td>4</td>
<td>-1,150</td>
<td>-205</td>
</tr>
<tr>
<td>5</td>
<td>-1,841</td>
<td>-358</td>
</tr>
<tr>
<td>6</td>
<td>-2,301</td>
<td>-486</td>
</tr>
<tr>
<td>7</td>
<td>-2,301</td>
<td>-538</td>
</tr>
<tr>
<td>8</td>
<td>-1,841</td>
<td>-486</td>
</tr>
<tr>
<td>9</td>
<td>-1,150</td>
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<td>10</td>
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<tr>
<td>12</td>
<td>920</td>
<td>204</td>
</tr>
</tbody>
</table>

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Crowded Waiting Rooms

- 120 Million ED Visits each year in the US
- Pandemic will add 18-42 Million visits
- IOM - “National threat to public health”

ED Crowding

Patient Dissatisfaction
Poor Clinical Outcomes
Diminished Disaster Response Capacity

Surge Capacity - Where?
SARS in Toronto

- 224 Cases (50% HCW's)
- 9 HCW's contracted SARS despite using PPE
- 2/3 of hospitals had SARS pts.
- 4 hospitals closed
- 44 Deaths

Outdoor Triage of Patients
Drive-Thru Triage!

How do you know where to go?

Parking Garages
Advantages
Disadvantages
A study to compare the efficiency and accuracy of disposition decisions for patients with influenza-like illness treated via the traditional Walk-Through ED, compared with simulated patients with the same complaint who went through a Drive-Through ED.
### PATIENT INFORMATION

- **Name:**
- **Patient Tracking Number:**
- **Date/Time of Triage Assessment:**

### HISTORY AND PHYSICAL EXAM

#### Characteristic Points

- **Age:**
- **Sex:**
- **Co-morbid conditions:**
  - Chronic Lung Disease
  - Asthma
  - Heart Disease
  - Heart Failure
  - Severe immunosuppr.
  - Pregnancy
  - Renal Failure
  - Neoplastic Disease
  - Diabetes I/II
  - Severe anemia
  - Neuromuscular disorder compromising respiratory function
  - Liver Disease
  - HIV/AIDS
  - h/o organ transplant
  - Other

#### General Appearance:

- 10 pts for significant co-morbid condition

#### Blood Pressure:

- 20 pts if SBP < 90

#### Pulse:

- 20 pts if HR > 125

#### Respiratory Rate:

- 20 pts if RR > 30

#### Pulse Oximetry:

- 20 pts if O2 sat < 90%

#### Flu Vaccine:

- Anti-Virals:
- Antibiotics:

### ASSESSMENT OF FUNCTION

- Able to care for self in home, or has caregiver at home? Yes/No
- Able to get transportation back to ICC if condition worsens? Yes/No

### ASSESSMENT OF MEDICAL NEEDS

- Needs IV fluids to maintain hydration? Yes/No
- Needs IV antibiotics? Yes/No

### OVERALL ASSESSMENT and DISPOSITION

- d/c to home

### HEALTH CARE PROVIDER INFORMATION

- **Provider:**
- **Signature:**

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### Guideline for Mandating a Secondary Assessment

<table>
<thead>
<tr>
<th>High Risk Gruoup</th>
<th>History</th>
<th>Physical Exam</th>
</tr>
</thead>
<tbody>
<tr>
<td>Co-morbid condition</td>
<td>Any patient with a co-morbid condition</td>
<td></td>
</tr>
<tr>
<td>Physical Exam</td>
<td>Results that suggest secondary assessment may be required</td>
<td></td>
</tr>
<tr>
<td>Temperature</td>
<td>&gt;38°C or &lt;32°C</td>
<td></td>
</tr>
<tr>
<td>Pulse</td>
<td>New arrhythmia (irregular pulse)</td>
<td></td>
</tr>
<tr>
<td>Blood Pressure</td>
<td>&lt;90 mmHg systolic</td>
<td></td>
</tr>
<tr>
<td>Respiratory Rate</td>
<td>&gt;25/min (tachypnea)</td>
<td></td>
</tr>
<tr>
<td>Mental Status</td>
<td>Any altered mental status or change in neurologic function</td>
<td></td>
</tr>
<tr>
<td>Function</td>
<td>Inability to function independently</td>
<td></td>
</tr>
<tr>
<td>Oxygen Saturation</td>
<td>&lt;95% room air</td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td>Unable to care for self at home</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Unable to get transportation back if condition worsens</td>
<td></td>
</tr>
</tbody>
</table>

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Results

- Mean reduction in length of stay with the DTED was 86 minutes (95% CI)
- Physicians in the DTED had 100% diagnostic accuracy compared with the WTED dispositions
SHC/LPCH ED Patients with ILI per week

Triggers

TOTAL PATIENTS WITH ILI DIAGNOSIS

<table>
<thead>
<tr>
<th></th>
<th>Baseline</th>
<th>11 Jul</th>
<th>18 Jul</th>
<th>25 Jul</th>
<th>2 Aug</th>
</tr>
</thead>
<tbody>
<tr>
<td>Patients</td>
<td>113</td>
<td>194</td>
<td>214</td>
<td>153</td>
<td>160</td>
</tr>
</tbody>
</table>

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