Hospital Bypass System-Overview

- Provides a secure, web-based system allowing IDPH, EMS Systems, hospitals, and other stakeholders to monitor, in real time, the bypass status of hospital facilities statewide.

- Helps to ensure adequate resources for patient care are available during a disaster or other large-scale crisis.

- Part of Illinois’ emergency response support infrastructure.
Hospital Bypass System-Overview (continued)

- Accessible through the IDPH Web Portal https://www.idphnet.illinois.gov
- Primary function is to track critical hospital capacity indicators, including bypass/peak census status and bed/resource counts
- All users of the system, primarily Hospitals and IDPH, may view the status of hospitals statewide
Hospital Bypass System – Hospital Status

What are the Hospital/ACS Status categories?

- **Bypass** – the hospital requests that ambulances “bypass” the hospital and take patients to other facilities. Also called “diversion”

- **Peak Census** – the hospital may advise ambulances and/or nearby hospitals that they are nearing the point of being overwhelmed

- **Open** – normal operations

- **Closed** – Alternate Care Sites only
Hospital Bypass System – Hospital Status

Bypass information facilitates:

- Defining the geographic scope of problem areas
  - A single hospital
  - A group of hospitals (e.g., a city or EMS region affected by an accident or natural disaster)

- Information flow
  - A communication tool for use within entities (e.g., a hospital, EOC, or health department)
  - A common reference point among entities (real time nature of system makes all users aware of trends simultaneously)
Hospital Bypass System – Hospital Status

- The system includes some basic features to help spot trends and identify patterns
  - Sorting
    - Available throughout the application, allowing users to more readily identify problem areas
    - Example: On the hospital status page users may sort by hospital name, city, status, type of hospital, & EMS region
  - Mapping
    - Provides a view of hospitals and their statuses on a statewide map
Some trend-spotting features, continued

- Automated email notifications
  - All hospitals are notified of changes in their own status
  - Users have a menu of other notification options tied to geographic thresholds, such as multiple instances of bypass:
    - Within a 25 mile radius
    - Within a given region
    - Statewide

- Options are configured administratively
Some trend-spotting features, continued

- Types of optional email notifications
  1) **Regional Bypass Threshold Notification**—occurs when the number of hospitals in one or more selected regions are on bypass at the same time meets or exceeds the threshold. Threshold level varies from 2 to 4, depending on the region.

  2) **Statewide Bypass Threshold Notification**—occurs when 8 or more hospitals within the state are on bypass at one time.

  3) **Hospital Proximity Bypass Threshold Notification**—occurs when three or more hospitals with a 25-mile radius are on bypass at the same time.

  4) **Peak Census Notification**—occurs when any hospital in one or more selected regions declares a Peak Census status (this is a pre-condition for a hospital going to bypass status).
Email Notification Setup Screen

Status:
- Active
- Inactive

Name:
Dan Lee

Email Address:
daniel.lee@illinois.gov

Type:
- Email
- Text

Alerts:
- Statewide Proximity Bypass Threshold
- Hospital Proximity Bypass Threshold
- Statewide Bypass Threshold

Regional Bypass Threshold and Peak Census:
- All
  - 1
  - 2
  - 3
  - 4
  - 5
  - 6
  - 7
  - 8
  - 9
  - 10
  - 11

[Buttons: Cancel, Delete, Update Notification]
Hospital Bypass System – Hospital Status

More on email notifications

- An HBS user may elect to receive all, some, or none of the categories of optional email notifications.

- If no notification type checkboxes are checked on the notification setup screen, a user will only receive email notifications related to her/his hospital, such as to notify when bypass status has been changed or to warn that it will be automatically expiring soon.
# Main Hospital Status Screen

## Illinois Department of Public Health - Hospital Bypass System

**Hospital Status**

- Hospital Status
- MCI Medical Surge
- Notifications
- Administration
- Exit

### Hospital Status Table

<table>
<thead>
<tr>
<th>Hospital</th>
<th>City</th>
<th>Status</th>
<th>Hospital Type</th>
<th>Peds</th>
<th>Region</th>
<th>Userid</th>
<th>Last Updated</th>
</tr>
</thead>
<tbody>
<tr>
<td>Abraham Lincoln Memorial Hospital</td>
<td>Lincoln</td>
<td>Open</td>
<td>Associate</td>
<td>None</td>
<td>3</td>
<td>IDPH</td>
<td>01/17/09 03:32PM</td>
</tr>
<tr>
<td>Adventist Bolingbrook Hospital</td>
<td>Bolingbrook</td>
<td>Open</td>
<td>Associate (Trauma)</td>
<td>None</td>
<td>8</td>
<td>IDPH</td>
<td>04/17/08 11:25AM</td>
</tr>
<tr>
<td>Advocate Christ Medical Center</td>
<td>Oak Lawn</td>
<td>Open</td>
<td>Resource (Pod)</td>
<td>PCCC</td>
<td>7</td>
<td>SGREEN1</td>
<td>01/27/09 08:48PM</td>
</tr>
<tr>
<td>Advocate Condell Medical Center</td>
<td>Libertyville</td>
<td>Open</td>
<td>Resource (Trauma)</td>
<td>EDAP</td>
<td>10</td>
<td>RSCHWICH</td>
<td>04/14/08 10:59PM</td>
</tr>
<tr>
<td>Advocate Good Samaritan Hospital</td>
<td>Downers Grove</td>
<td>Open</td>
<td>Resource (Trauma)</td>
<td>EDAP</td>
<td>8</td>
<td>SDRECHEN</td>
<td>06/09/08 10:14PM</td>
</tr>
<tr>
<td>Advocate Good Shepherd Hospital</td>
<td>Barrington</td>
<td>Open</td>
<td>Associate (Trauma)</td>
<td>EDAP</td>
<td>9</td>
<td>LBOLAND</td>
<td>01/28/09 09:05AM</td>
</tr>
</tbody>
</table>

8/27/2015
Hospital Status Map

- Open
- Peak
- Bypass

Layers:
- Hospitals
- Major Highway
- Secondary Highway
- Major Highway Shield
- Local Health Depts
- Zip
- Water
- Land Use B
- Land Use A
- Counties
Hospital Bypass System - Contacts

- The system assists with finding appropriate hospital contacts
  - By clicking on the name of the hospital on the status page
  - By using the “information tool” in the mapping portion of the application (example follows)

- Contact information is managed by end users (hospitals), not IDPH
Contact Information Displayed Via Map

ST. JAMES AND HILTH CTROLYMPIA FLDS
20201 S. CRAWFORD
OLYMPIA FIELDS, IL 60461

number 0157
Status at: 2007 07 05 11:03
PEAK CENSUS

-- Contacts --

KRISTINE OOMS
Emergency Dept Manager
Phone: None Listed
Pager: 708-242-0311
Kristine.Ooms@sofhs.org

PETER MURPHY
Hospital Administrator
Phone: None Listed
Pager: 708-242-6919
Peter.Murphy@sofhs.org

TIMOTHY CONLEY
EMS System Coordinator
Phone: None Listed
Pager: 708-242-4100
Hospital Bypass System – MCI Medical Surge

- During certain situations, an MCI (Mass Casualty Incident) Medical Surge can be declared, which sets all hospital to an “open” status and prevents them from going to bypass
  - An example of an MCI event was Hurricane Katrina
  - An MCI might also be declared during a bioterrorism event
- During an MCI Medical Surge, email alerts are sent out, and the MCI Medical Surge alert appears in the upper left
MCI Medical Surge Alert on Status Screen

<table>
<thead>
<tr>
<th>Hospital/ACS</th>
<th>City</th>
<th>Status</th>
<th>Hospital Type</th>
<th>Peds</th>
<th>Region</th>
<th>Userid</th>
<th>Last Updated</th>
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</thead>
<tbody>
<tr>
<td>ABRAHAM LINCOLN MEMORIAL HOSPITAL</td>
<td>LINCOLN</td>
<td>OPEN</td>
<td>ASSOCIATE</td>
<td>NONE</td>
<td>3</td>
<td>IDPH</td>
<td>08/12/08 12:48PM</td>
</tr>
<tr>
<td>ADVENTIST BOLINGBROOK HOSPITAL</td>
<td>BOLINGBROOK</td>
<td>OPEN</td>
<td>ASSOCIATE (TRAUMA)</td>
<td>NONE</td>
<td>8</td>
<td>IDPH</td>
<td>08/12/08 11:49AM</td>
</tr>
<tr>
<td>ADVOCATE CHRIST MEDICAL CENTER</td>
<td>OAK LAWN</td>
<td>OPEN</td>
<td>RESOURCE (POD)</td>
<td>PCCC</td>
<td>7</td>
<td>IDPH</td>
<td>03/17/08 01:21PM</td>
</tr>
<tr>
<td>ADVOCATE CONDELL MEDICAL CENTER</td>
<td>LIBERTYVILLE</td>
<td>OPEN</td>
<td>RESOURCE (TRAUMA)</td>
<td>EDAP</td>
<td>10</td>
<td>HBSTEST1</td>
<td>01/02/08 01:55PM</td>
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</table>
Hospital Bypass System – MCI Inventory Items

- Items, such as bed and critical supply counts are updated by hospitals daily
- On the MCI page, items inventoried by the hospitals are displayed
  - Users can sort by individual items, and by hospital name or region, to help identify the location of critical resources
  - Regional and statewide totals for individual items are also available through the system
MCI Inventory Item Counts, by Hospital

<table>
<thead>
<tr>
<th>Hospital</th>
<th>Region</th>
<th>Total Available Beds</th>
<th>Unstaffed Beds</th>
<th>Adult ICU</th>
<th>Burn Care</th>
<th>Peds ICU</th>
<th>Peds ICU (Non ICU)</th>
<th>Psychiatric</th>
<th>Psychiatric Emergency Department</th>
<th>Negative Pressure</th>
<th>Other Staffed</th>
<th>Neonatal ICU</th>
<th>Other</th>
<th>O Negative Blood</th>
<th>Decontamination Facility</th>
<th>Ventilators</th>
<th>OR Beds</th>
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<td></td>
</tr>
<tr>
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</table>
# MCI Inventory Item Counts - By EMS Region

<table>
<thead>
<tr>
<th>Region</th>
<th>Total Available Beds</th>
<th>Unstaffed Beds</th>
<th>Adult ICU</th>
<th>Medical &amp; Surgical</th>
<th>Burn Care</th>
<th>Peds ICU</th>
<th>Pediatrics (Non ICU)</th>
<th>Psychiatric</th>
<th>Emergency Department</th>
<th>Negative Pressure</th>
<th>Other Staffed</th>
<th>Neonatal ICU</th>
<th>O Negative Blood</th>
<th>Decontamination Facility</th>
<th>Ventilators</th>
<th>O.R. Beds</th>
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<tbody>
<tr>
<td>1</td>
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<td>79</td>
<td>3</td>
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<td>0</td>
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<td>54</td>
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<td>80</td>
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<td>36</td>
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<td>167</td>
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<td>36</td>
<td>20</td>
<td>109</td>
<td>14</td>
<td>16</td>
<td>0</td>
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<td>1359</td>
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<td>117</td>
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<td>51</td>
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<td>72</td>
<td>25</td>
<td>468</td>
<td>309</td>
<td>280</td>
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</tr>
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<td><strong>Total</strong></td>
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<td><strong>4,723</strong></td>
<td><strong>566</strong></td>
<td><strong>2,612</strong></td>
<td><strong>7</strong></td>
<td><strong>116</strong></td>
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<td><strong>724</strong></td>
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<td><strong>1,968</strong></td>
<td><strong>2,137</strong></td>
<td><strong>1,213</strong></td>
<td><strong>548</strong></td>
</tr>
</tbody>
</table>
Hospital Bypass System – Additional Inventory Items

- The Department can add inventory items in real time
  - If a specific item needed to be inventoried, such as during a bioterrorism event, this item could be added by the IDPH System Administrator
  - Other hospitals can view these items and enter counts for them into the system
  - During the May 2012 NATO Summit in Chicago multiple temporary categories were added to support surveillance efforts.
Hospital Bypass System - Reports

- Although HBS is primarily a real-time tool for assessing and managing critical hospital resources at various levels of aggregation (i.e., city, region, state), it also has the capacity to produce limited historical data via a reports module.

- Reports may be printed from the application or exported in Excel, Word, PDF, RTF, and Crystal Reports formats.
Hospital Bypass System - Reports

- Currently there are more than a dozen reports available, including:
  - Status history for one or more hospitals for a specified date range
  - Hospital compliance with the Department’s daily bed/resource count update policy
  - A statewide snapshot of hospitals’ bed/resource counts at a specified point in time
  - The percentage of time a hospital was on bypass, over a user-specified time interval
Hospital Bypass System - Summary

- This system provides a way to monitor, in real time, the bypass status of Illinois hospitals, as well as their respective bed and supply counts, statewide.
- The system includes features to help spot trends and identify patterns, as well as to obtain selected historical data.
- It is a part of Illinois’ emergency response support infrastructure.
Question or suggestions?

Dan Lee
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Office of Preparedness and Response
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daniel.lee@illinois.gov