Patient Surge in Disasters:
A Hospital Toolkit for Expanding Resources in Emergencies

Introduction and References
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**INTRODUCTION**

For many larger hospitals, the ability to capture a truly accurate census at any given moment remains an elusive goal. Even using the latest bed tracking software and analysis tools, hospital admitting managers know they will seldom be able to fully reconcile actual bed utilization to their system reports. Change-of-shift dynamics, data entry lag time, and a multitude of other variables deriving from patient admission, discharge and transfer activities contribute to a complex bedding landscape that makes one marvel at how hospitals are able to routinely compile even relatively accurate census profiles. However, obtaining an accurate census at the outset of a mass casualty emergency is essential as vacant, supported beds will quickly be at a premium. Bed management professionals know the best way to do this is to use their electronic systems in conjunction with proven strategies, such as bed-by-bed walk-throughs, and partnering more closely with hospital staff that are able to assist with identifying and expediting discharges.

Because disasters resulting in significant medical surge can be either short- or long-term in duration, hospitals must prepare for both. Typically, increased inpatient volume due to shorter-duration incidents may be managed by activating rapid discharge protocols (though hospitals may have to engage capacity expansion strategies to cope with a commensurate increase in ambulatory patient volume). Longer-duration disasters may require hospitals to continue rapid discharge efforts while taking additional steps to expand capacity in traditional clinical, non-traditional clinical and non-clinical areas. In both cases, preparedness is key to successful response outcomes.

Currently, New York City is home to more than 57 community, specialty and tertiary hospitals that range in size from 200 to 1200 beds. Most NYC hospitals have been regular and enthusiastic participants in the jurisdiction’s Hospital Preparedness Program, and *Patient Surge in Disasters: A Hospital Toolkit for Expanding Resources in Emergencies* is a compilation of tools that have been used to help them plan and prepare for disaster surges. Each tool provides step-by-step instructions for assessing and documenting their surge staffing, facility and supply needs. Additionally, implementation strategies, along with timelines and useful forms that can be adapted to the size and services of any hospital, are included. *Patient Surge in Disasters: A Hospital Toolkit for Expanding Resources in Emergencies* is an adaptable, all-hazards resource that can help a hospital, regardless of size or available services, to prepare for and respond to virtually any emergency incident.

*Surge Tools, including working spreadsheet templates, are downloadable at:*  
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Bellevue Hospital Center
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Beth Israel Medical Center- Petrie Division
Bronx-Lebanon Hospital Center
Brookdale University Hospital and Medical Center
Calvary Hospital
Coney Island Hospital
Elmhurst Hospital Center
Flushing Hospital Medical Center
Harlem Hospital Center
Hospital for Joint Diseases
Hospital for Special Surgery
Interfaith Medical Center
Jacobi Medical Center
Jamaica Hospital Medical Center
Kings County Hospital Center
Kingsbrook Jewish Medical Center
Lenox Hill Hospital
Lincoln Medical and Mental Health Center
Long Island College Hospital
Long Island Jewish Medical Center
Lutheran Medical Center
Maimonides Medical Center
Memorial Hospital for Cancer and Allied Diseases
Metropolitan Hospital Center
Montefiore Medical Center/Children’s Hospital
Montefiore Medical Center/Moses Division
Montefiore Medical Center/Wakefield Campus
Montefiore Medical /Weiler Einstein Division
Mount Sinai Hospital
Mount Sinai Hospital of Queens
New York Community Hospital
New York Downtown Hospital
New York Eye and Ear Infirmary
New York Hospital - Queens
New York Methodist Hospital
New York University Medical Center
New York Westchester Square Medical Center
North Central Bronx Hospital
North Shore University Hospital at Forest Hills
NY Presbyterian Hospital/Allen Hospital
NY Presbyterian Hospital/Columbia University Medical Center
NY Presbyterian Hospital/Morgan Stanley Children’s Hospital
NY Presbyterian Hospital/Weill Cornell Medical Center
Queens Hospital Center
Richmond University Medical Center
St. Barnabas Hospital
St. John’s Episcopal Hospital
St. Luke’s-Roosevelt Hospital - Roosevelt Division
St. Luke’s-Roosevelt Hospital - St Luke’s Division
Staten Island University Hospital - North Campus
Staten Island University Hospital - South Campus
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VA NY Harbor Healthcare System - Brooklyn
VA NY Harbor Healthcare System - Manhattan
Woodhull Medical and Mental Center
Wyckoff Heights Medical Center
GLOSSARY OF TERMS

Additional Capacity – Additional staffed beds to accommodate sudden, unexpected upturns in demand.
Attending Physician – A doctor with admitting privileges.
Bed Board – A tool to keep track of patients, patient status and bed availability; also used to describe meetings to review patient admission, discharge, and transfer activity.
Bed Management Committee – A group of clinical and administrative bed management experts who are charged with organizing and directing activities related to inpatient admissions, discharges and transfers.
Bed Tracking Manager – An individual who maintains information on the status, location and availability of all patient beds.
Bed Tracking System – A program or system used to track patients and initiate activities such as bed turnover and patient discharge.
Emergency Census Tool – A census capture form used during emergencies to profile vacant beds, potential and definite discharges, and transfer activity in all patient care units.
Holds – Patients in an emergency department who are awaiting staffed beds.
Hospitalists – Physicians employed by hospitals.
House Staff – Hospital interns, residents and fellows.
Length of Stay – Patient-stay duration (usually calculated in number of days from time of admission to time of discharge).
Med/Surge Unit – Patient care unit (pediatric, adult, geriatric) that provides care for patients who are acutely ill or injured.
Monitored Beds – For medicine patients who require close monitoring; for surgical patients who require close postoperative follow-up.
Patient Tracking Manager – An individual who monitors and documents the location of patients at all times within the hospital’s patient care system and tracks the destination of all patients being discharged from the facility.
Rapid Discharge Tool – An NYC DOHMH-developed tool to assist emergency managers and hospital staff in accurately capturing census and creating supported, vacant beds while monitoring ongoing patient discharge status and activities.
Registered Nurse Extenders – Patient Care Unit staff (Patient Care Associates, Nursing Aides/Assistants) who provide direct support to registered nurses.
Registered Nurse/Patient Ratio – The number of patients divided by the number of registered nurses assigned to their care.
Rollover Capacity – Closed unit beds that can be made available for inpatient use within a shift.
Agency for Healthcare Research and Quality Terms

- **Adult Intensive Care Unit (ICU)** – A unit that can support critically ill or injured patients, including ventilator support.
- **Burn or Burn ICU** – Units either approved by the American Burn Association or self-designated. These beds should not be included in other ICU bed counts.
- **Licensed Beds** – The maximum number of beds for which a hospital holds a license to operate.
- **Medical/Surgical** – Regular beds throughout a hospital; also referred to as “ward” beds.
- **Negative Pressure/Isolation Units** – Units with negative airflow, providing respiratory isolation; the number of beds in this unit may represent available beds included in the counts of other types of beds.
- **Occupied Beds** – Beds that are licensed, available, staffed and occupied by patients.
- **Operating Rooms** – An operating room that is equipped and staffed, and available for patient care use in a short period of time.
- **Pediatric ICU** – The same as adult ICU, but for patients 17 years and younger.
- **Pediatrics** – A ward/unit with medical/surgical beds for patients 17 and younger.
- **Physically Available Beds** – Beds that are licensed, assembled and available for use and which are supported by services (such as food, laundry and housekeeping). These beds may or may not be staffed but are physically available.
- **Psychiatric Beds** – Ward beds on a closed/locked psychiatric unit or in areas where patients are attended by a sitter.
- **Staffed Beds** – Beds that are licensed and physically available with staff on hand to attend to patients; the count should include both occupied and vacant beds.
- **Surge Capacity** – A healthcare system’s ability to expand quickly to meet an increased demand for medical care in the event of bioterrorism or other large scale public health emergency.
- **Unstaffed Beds** – Beds that are licensed and physically available but currently have no staff on hand to attend to patients.
- **Vacant/Available Beds** – Licensed beds that are vacant and available to patients immediately. The count of such beds must include supporting space, equipment, medical material, ancillary and support services, and staff operating under normal circumstances.
### Abbreviations

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
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<tbody>
<tr>
<td>ADT</td>
<td>Admission, Discharge and Transfer</td>
</tr>
<tr>
<td>BCET</td>
<td>Bed Capacity Expansion Tool</td>
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<td>BET</td>
<td>Beds Expansion Team</td>
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<td>BMC</td>
<td>Bed Management Committee</td>
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<td>CARD</td>
<td>Cardiology</td>
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<td>CCU</td>
<td>Critical Care Unit</td>
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<td>NYC DOHMH</td>
<td>New York City Department of Health and Mental Hygiene</td>
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<td>NYS DOH</td>
<td>New York State Department of Health</td>
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<td>ECT</td>
<td>Emergency Census Tool</td>
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<td>ED</td>
<td>Emergency Department</td>
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<tr>
<td>EDCET</td>
<td>Emergency Department Capacity Expansion Tool</td>
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<td>ED-ST</td>
<td>Emergency Department Surge Team</td>
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<td>EMT/P</td>
<td>Emergency Medical Technician-Paramedic</td>
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<td>EST</td>
<td>Equipment, Supplies and Facilities Team</td>
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<td>FTE</td>
<td>Full Time Equivalent</td>
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<td>HERDS</td>
<td>Health Emergency Response Data System (NYS’ HAvBED system)</td>
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<td>HICS</td>
<td>Hospital Incident Command System</td>
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<td>ICU</td>
<td>Intensive Care Unit</td>
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<tr>
<td>ICUCET</td>
<td>Intensive Care Unit Capacity Expansion Tool</td>
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<tr>
<td>ICU-ST</td>
<td>Intensive Care Unit Surge Team</td>
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<td>ISO</td>
<td>Isolation</td>
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<tr>
<td>LPN</td>
<td>Licensed Professional Nurse</td>
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<tr>
<td>MED</td>
<td>Medicine (Department of, Unit)</td>
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<td>MICU</td>
<td>Medical Intensive Care Unit</td>
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<td>PACU</td>
<td>Post-Anesthesia Care Unit</td>
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<td>PCU</td>
<td>Patient Care Unit</td>
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<td>PEDS</td>
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<tr>
<td>PICU</td>
<td>Pediatric Care Unit</td>
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<tr>
<td>RDs</td>
<td>Rapid Discharges (confirmed discharges)</td>
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<td>RDT</td>
<td>Rapid Discharge Tool</td>
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<td>Staffing Expansion Team</td>
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<td>Surgical Intensive Care Unit</td>
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<td>SPM</td>
<td>Surge Planning Master</td>
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<td>SURG</td>
<td>Surgery/Surgical</td>
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<td>UBRDT</td>
<td>Unit-Based Rapid Discharge Team</td>
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