

HOSPITAL/HEALTH SYSTEM GUIDANCE: IMPLEMENTATION OF NEW HOSPITAL SURGE INDICATOR AND SURGE BEHAVIOR INDICATOR QUESTIONS

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Purpose: With the recent rise in COVID-19 cases, it is critical that hospitals and the broader community have mechanisms in place to monitor not only the number of hospitalized COVID-19 patients and available beds, but also to manage current and anticipated patient surges. The indicators described below—which were developed with significant member input and testing—will meet that purpose.

Background: Based on lessons learned during the unprecedented spring surge, hospitals across New York have significantly adjusted their patient surge plans for both the Emergency Department (ED) and inpatient units. Seeking to maintain normal operations and services for urgent and emergent cases for as long as possible, hospitals have developed phased surge plans, repurposing and adding surge beds as needed, while simultaneously redeploying staff and using other surge staffing resources to meet demand. Additionally, health systems plan to employ load balancing strategies to move patients from system hospitals experiencing higher levels of surge to ones with more resources.

Necessity of Additional Data Collection: While hospitals and health systems are already providing a significant amount of data to the New York State Department of Health (DOH) and the Department of Health and Human Services, these systems do not currently collect information about hospital surge operations. GNYHA has approached this expanded data collection effort with sensitivity to the additional burden it places on members. We believe the information gathered will be critical to the ongoing response to COVID-19.

Indicator Launch: GNYHA will begin using these new hospital surge indicators on November 20. GNYHA asks all hospitals that participate in the Sit Stat 2.0 program to complete these indicators on a daily basis; the Hospital Surge Indicator (HSI) is requested twice daily (including weekends) at 10:00 a.m. and 4:00 p.m.

Indicator Access and Use: Sit Stat 2.0 is a shared situational awareness platform that provides important and actionable information to the hospital community and response agencies. Data entered into the system will be visible to other participating hospitals and City and State response agencies, including the New York City Department of Health and Mental Hygiene, NYC Emergency Management, the New York City Fire Department (FDNY), and DOH. With key metrics from DOH's daily Health Electronic Response Data System (HERDS) platform (hospitalized COVID-19 patients, hospitalized COVID-19 patients in the intensive care unit [ICU], intubated hospitalized COVID-19 patients in the ICU, available staffed beds, and available staffed ICU beds), these data will be used to monitor the stress level on particular institutions and the hospital community as a whole. These data will inform outreach to facilities and health systems and broader response efforts.

Use by FDNY EMS: FDNY's Bureau of Emergency Medical Services (EMS) eventually will integrate the HSI into existing ambulance destination algorithms. In addition to other inputs regarding hospital service availability and distance, the HSI will enable FDNY to slightly adjust ambulance patterns, with the goal of reducing the ambulance flow to hospitals that are under significant stress. GNYHA and FDNY will provide New York City facilities with additional details before integration of the HSI indicator. Initial HSI reporting will be used primarily by GNYHA and will not impact existing FDNY EMS algorithm.



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HOSPITAL SURGE INDICATOR

The HSI is a four-level self-reported measure of hospital patient volume: 1) normal (green), 2) elevated surge (yellow), 3) significant surge (orange), and 4) critical surge (red). The measure is defined in the Sit Stat 2.0 system as: *Compared to a regular day, this status best describes the patient volume your hospital is experiencing – normal, elevated, significant, or critical.*

Underlying Components

While the HSI is a qualitative measure, it has a quantitative foundation composed of six surge components—three related to the ED and three to acute care inpatient units. The components and color ranges were developed based on significant member input and testing. *Please see the grid below.*

Completion of the Indicator

Hospitals are asked to update the HSI measure each morning at 10:00 a.m. (which coincides with the HERDS reporting time-frame) and again at 4:00 p.m. in GNYHA’s Sit Stat 2.0 system. The hospital must determine which role/department should complete the indicator.

The role or department completing the indicator must have access to the various data systems tied to the involved surge components. For health systems, transfer center staff are ideally positioned to pull the necessary data and calculate the day’s indicator. For independent hospitals, GNYHA suggests assigning the task to an individual in the Hospital Command Center who likely already reviews these data.

Hospitals and health systems are encouraged to carefully review all documentation about the indicator and resources provided by GNYHA in advance to help develop an internal process to pull and validate the data and calculate the HSI value. GNYHA has developed a detailed [Instruction Worksheet](#) and [Excel Spreadsheet](#) to help hospitals complete the indicator. Within Sit Stat, a comment will be requested if orange or red is the selected indicator color.

Please note that the denominator for all percentages detailed below includes any surge beds/spaces that have been added due to the activation of facility surge plans. These may include repurposed beds (i.e., rehab beds that are now being used as medical/surgical beds) or new beds (i.e., adding a second bed to a single room).

Facility/Health System Latitude

Other Sit Stat 2.0 users will only see an institution’s overall HSI color each time data is entered; no underlying data from the six components will be shared. While GNYHA encourages institutions to follow the provided guidance as closely as possible, it is understandable if a facility needs to make small adjustments given the known patterns or particularities of an institution.

Surge Component	Green (Normal) Range	Yellow (Elevated) Range	Orange (Significant) Range	Red (Critical) Range
1. ED Volume (# of occupied spaces/total # of ED spaces)	Less than 90%	90% to less than 95%	95% to 100%	Greater than 100%
2. ED Boarding (# of patients awaiting an inpatient bed/total # of ED spaces)	Less than 10%	10% to less than 15%	15% to 20%	Greater than 20%
3. Volume of Intubated Patients in ED (# of intubated patients in ED/total # of ED spaces)	Less than 8%	8% to less than 10%	10% to 12%	Greater than 12%

Surge Component	Green (Normal) Range	Yellow (Elevated) Range	Orange (Significant) Range	Red (Critical) Range
4. Inpatient Volume: Adult Medical-Surgical (# of occupied adult medical-surgical beds/total # of adult medical-surgical beds)	Less than 85%	85% to less than 90%	90% to 95%	Greater than 95%
5. Inpatient Volume: Adult Critical Care (# of occupied adult critical care beds/total # of adult critical care beds)	Less than 85%	85% to less than 90%	90% to 95%	Greater than 95%
6. Volume of Intubated Adult Patients in Critical Care (# of intubated adult patients/total # of adult critical care beds)	Less than 25%	25% to less than 35%	35% to 50%	Greater than 50%

The denominator for all percentages presented above includes any surge beds that have been added due to the activation of facility surge plans. These may include repurposed beds (i.e., rehab beds that are now being used as medical-surgical beds) or new beds (i.e., adding a second bed to a single room).

ADDITIONAL SURGE BEHAVIOR INDICATOR QUESTIONS

On November 20, GNYHA also will launch four additional questions that probe operational behaviors tied to surge plans. The questions and response options are detailed below. Participating hospitals will be asked to answer these questions each morning by 10:00 a.m. GNYHA suggests that the same role/department completing the HSI measure also complete these questions.

Question	Response Options
Please think about the normal number of staffed inpatient beds your facility operates. Is your facility currently operating staffed beds above your normal capacity? If so, approximately how much is your facility surging above your normal capacity?	<ul style="list-style-type: none"> • Not surging (white): Not surging above normal capacity • Surging <10% (green): Surging <10% above normal capacity • Surging 10-25% (yellow): Surging 10%-25% above normal capacity • Surging >25%-50% (orange): Surging >25%-50% above normal capacity • Surging >50% (red): Surging greater than 50% above normal capacity
Does your facility have plans to redeploy staff from their usual care setting to within your acute care facility so that you can adequately staff your ICUs and medical/surgical units? If yes, to what extent are you currently redeploying staff?	<ul style="list-style-type: none"> • No (green): Not currently redeploying staff • Small number redeployed (yellow) • Medium number redeployed (orange) • Large number redeployed (red)
In the last 24 hours, have you transferred any patients out of your facility to another acute care facility due to concerns about available capacity? Please only think about transfers for concerns about capacity, not transfers for clinical reasons.	<ul style="list-style-type: none"> • No (green): Did not transfer patients • Yes (yellow): Transferred a normal volume of patients (normal load balancing) • Yes (red): Transferred a higher than normal volume of patients (higher than normal load balancing)
In the next 24 hours, do you anticipate transferring patients out of your facility to another acute care facility due to concerns about available capacity? Please only think about transfers for concerns about capacity, not transfers for clinical reasons.	<ul style="list-style-type: none"> • No (green): No plans to transfer patients • Yes (yellow): Plan to transfer a normal volume of patients (normal load balancing) • Yes (red): Plan to transfer a higher than normal volume of patients (higher than normal load balancing)

Thank you in advance for your participation in this important data collection effort. If you have questions or suggestions regarding the HSI, the Surge Behavior Indicator questions, or Sit Stat 2.0, please contact Jenna Mandel-Ricci (jmandel-ricci@gnyha.org) or Samia McEachin (smceachin@gnyha.org).