Critical Infrastructure Form - Essential Elements of Information Reporting (Daily Facility Operating Status)

This protocol provides information for reporting Essential Elements of Information using the Critical Infrastructure (Daily Facility Operating Status) form within the NHSN Healthcare Preparedness Component. This form will be referred to as Daily Facility Operating Status throughout the remainder of this protocol.

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Introduction and Purpose

Within any healthcare facility, visibility into the status of critical infrastructure—both physical and operational—is essential for maintaining high-quality patient care and reliable operations. These systems include operational status, evacuation and re-entry protocols, structural integrity, power, water, and sewage systems. Critical infrastructure are foundational to healthcare delivery and ensure a stable environment for patients and healthcare personnel when intact. However, in the event of an emergency, such as a natural disaster, man-made crisis, or system failure, these critical systems may experience significant strain. Such disruptions not only threaten patient safety but also have the potential to compromise a facility's ability to provide uninterrupted medical services[1,3,6].

Healthcare resilience depends on the ability to collect, interpret, and act upon daily infrastructure data to inform resource prioritization and service continuity during crises to promote patient safety[3]. Essential data—such as power status, structural integrity, and facility operations—are imperative for all-hazards planning and must be collected consistently across jurisdictions[5].

In response to the evolving threat landscape to healthcare infrastructure in the United States, the National Healthcare Safety Network (NHSN) developed the Daily Facility Operating Status module (DFOS) within the Healthcare Preparedness Component (HPC).

This form serves as a tool for acute care and other short-term stay hospitals to report and monitor the status of critical infrastructure at their facility. These standardized essential elements of information allow for ongoing monitoring of operations and for stakeholders at federal, state, and local levels to effectively track facility readiness and support resilience-building efforts[2,4].

Settings

The Daily Facility Operating Status form is available for all facilities enrolled in the NHSN Healthcare Preparedness Component. This includes, but is not limited to general hospitals, critical access hospitals, and oncology hospitals. The form is used to report the status of multiple essential infrastructure elements, both physical and operational. Facilities should report at the individual hospital level, even if hospitals share the same CMS Certification Number (CCN).

Reporting Instructions

Completion of the Daily Facility Operating Status form is voluntary, and only individual facilities can report. An NHSN reporting plan is not required to participate in the reporting.

Data should be entered for each day of the month using the month calendar view. Facilities choosing to participate must select the reporting month and year from the calendar view for which they are reporting and indicate operational status in the webform (see Table 1). Facility's daily submission is recorded in a timestamp captured by the NHSN Application. The monthly calendar view in the NHSN Application will display the latest record entered. Data should be entered for all required and conditionally required fields, as applicable.

Reporting should occur every 12 hours, regardless of whether a facility is operating at its baseline or actively managing an event.

Group(s) to which a facility is a member will have view-only permissions, allowing them to review the reporting history for facilities within their group.

Additional details and instructions can be found in the Critical Infrastructure – Essential Elements of Information Data Form (CDC 57.802), Table of Instructions (TOI).

Important Notes
- Reporting of the Daily Facility Operating Status form does not replace regulatory reporting requirements.   - Data elements collected by this form cover several facility departments and services. To ensure accurate information, completion of this form should be a collaborative effort with others within the facility. For example, members from the facility's safety, maintenance, and operation teams, in addition to leadership and management personnel, should contribute to the completion of these data.

Table 1. Facility Operational Status

Status Indicator	Action Required
Normal, routine operational, conventional state: facility operations <u>not</u> impacted	Indicate the operational status for (1a) as 'normal, routine, operational, conventional state'. The remainder of the form will not be accessible for providing responses.
Contingency state: facility operations <u>partially</u> impacted/managed with an alternate power source	Indicate the operational status for (1a) as 'contingency state' and provide responses for the remainder of the form where required.
Emergency state: facility operations <u>fully</u> impacted	Indicate the operational status for (1a) as 'emergency state' and provide responses for the remainder of the form where required.

Summary of Data Elements

The Daily Facility Operating Status form collects 22 data elements, including the status indicator mentioned above. Complete lists of the data elements and definitions can be found in the data collection form and Table of Instructions.

Table 2. Summary of Data Elements

Category	Number of Data Elements	Data Element IDs
Facility information and date time fields: This category of data elements captures the NHSN-assigned facility ID, along with the month and calendar year for which data is being reported.	2	N/A
Facility Status indicators: This category of data elements provides critical insight into the operational status of your facility, both at baseline and during an event. They capture the overall operating status (normal, contingency, emergency) and specific statuses of critical infrastructure, including structural integrity, power, water, and sewer systems.	5	1a – 1e
Structural damage: This category of data elements was designed to standardize the collection of information regarding any structural damage sustained by your facility. It encompasses a range of incidents, from minor issues, such as fallen trees affecting ambulance routes, to severe damage, such as complete destruction from a wildfire.	1	2a

Evacuation and re-entry: This category of data elements focuses solely on patient movement within your facility (evacuation and re-entry). They aim to capture the evacuation status (planning, in-progress, fully evacuated), the type of evacuation (full, partial, shelter-in-place), and the duration of the evacuation process. ***Please be advised that the fields for <u>3c Evacuation Start Time</u> and <u>3d Evacuation End Time</u> are currently not available in the application. At this time, data for these fields** do not need to be entered**. This documentation will be updated when these fields are available for reporting .***	5	3a – 3e
Generator power status: This category of data elements captures essential information about your facility's power status, including the type of power source (commercial, generator, mixed, or no power), fuel type (diesel, gasoline, or natural gas), estimated hours of fuel remaining, and whether the HVAC power status is affected.	4	4a – 4d
Water system: This category of data elements provides insight into your facility's water supply, including the usual water supply (local drinking water/groundwater), and secondary or alternate sources such as bottled water. It also collects information on whether your facility has a water source available for dialyzing patients.	2	5a – 5b
Sewer system: This category of data elements aims to collect information regarding the functionality of your facility's sewer system and whether it has been impacted (e.g., are toilets flushing?).	1	6a
Other immediate needs: This category of data elements enables users of this module to communicate immediate needs that are affecting their ability to care for patients at the required capacity, which are not being addressed through the normal resource request process. A free text field is provided to describe the facility's immediate needs (excluding staffing or medical equipment).	2	7a – 7b

Key Terms

Term	Description
Essential Elements of Information (EEI)	EEI are defined as facility status indicators that include structural integrity, power (generator), water, sewer, evacuation status, evacuation type, evacuation time, and re-entry.
Evacuation Status	Refers specifically to the status of a patient relocation from the healthcare facility.
Evacuation Type	Refers to the specific method or extent to which patients are relocated from or within the healthcare facility.
Event Date (Reporting for Date)	Refers to the specific date and time that represents the month and year for which the facility's operating status and responses in the form apply.
Facility	NHSN defines a facility as a brick-and-mortar structure that provides inpatient medical care and services.
HVAC	Heating, ventilation, and air conditioning (HVAC) refer to the technology and systems used to control a facility's indoor environment to ensure appropriate air quality, temperature, and humidity for clinical patient care.
Immediate Needs	NHSN defines immediate needs as requests for critical resources that affect a facility's ability to care for patients at the required capacity and are not being addressed through the standard resource request process.
Operational Status	Refers to a healthcare facility's ability to operate and provide quality patient care daily.
Power Status	Refers to the type and reliability of electrical power being used by a healthcare facility, including whether the facility is operating on commercial power, generator backup, both, or is without power.
Re-entry	Refers to the phase in which a healthcare facility that previously evacuated patients allow patients to return to the facility.
Sewer Status	Refers to the functionality of the healthcare facilities wastewater and sanitation systems (e.g., ability to flush toilets).
Shelter-in-Place	Patients remaining in the facility and not evacuated during an emergency or indicated until conditions are safe.
Structural Damage	Any impairment or deterioration of a facility's physical structure that compromises its integrity, safety, or functionality. This includes damage to critical components such as load-bearing walls, roofs, and foundations, which can affect the overall stability of the building.
Structural Integrity	The physical condition and stability of a healthcare facility's building and physical structure. This assessment determines whether the structure remains sound and capable of safely supporting operations, protecting patients, and enabling clinical care during normal conditions as well as during or after events such as disasters or emergencies.
Structural Status	Refers to the physical condition and integrity of a healthcare facility's building and infrastructure.
Water Status	Refers to the current condition and source of a healthcare facility's water supply, particularly whether it remains uninterrupted and usable for clinical operations, including services like dialysis.

Appendix 1: Reporting Examples

Example 1: No event

The local emergency management agency issues a regional alert about potential power grid instability due to extreme heat. Facilities are advised to check backup systems and prepare for possible outages.

Form Field(s)	Selected Data Element(s)
Facility Operational Status	**Normal/routine operations/conventional state**: facility operations <u>not impacted</u>
Essential Elements of Information (EEI)	N/A

Action Required
Indicate the operational status for (1a) as 'normal, routine, operational, conventional state'; the remainder of the form will <u>not</u> be accessible for providing responses.   ➢ ***Rationale***: *Normal state selected since facility operations are <u>not impacted</u>. There is no event, and the hospital is operating at its baseline.*

Example 2: Wildfire

A fast-moving wildfire prompts county officials to issue a mandatory evacuation order just two hours after an initial warning. All facilities within the affected region must comply with the order.

Form Field(s)	Selected Data Element(s)
Facility Operational Status	**Contingency state**: facility operations <u>partially impacted</u>/managed with an alternate power source
Essential Elements of Information (EEI)	• **Evacuation Status (3a)**: Full evacuation; initiated for patient safety • **Re-entry Status (3e)**: Planning phase; awaiting fire clearance • **Generator Power Status (4a):** Mixed commercial and generator power • **HVAC (4d):** Yes; mixed commercial and generator power • **Immediate Needs (7a)**: None
Action Required	

Indicate the operational status for (1a) as 'contingency state' and provide responses for the remainder of the form where required, see EEI data elements above.

➢ *Rationale: Contingency state selected since facility operations are <u>partially impacted</u> by the mandatory evacuation order.*

Example 3: Hurricane

A Category 3 hurricane passes through the region, knocking out commercial power lines and causes damage to the water treatment plant, leading to unreliable water supply.

Form Field(s)	Selected Data Element(s)
Facility Operational Status	**Emergency state**: facility operations <u>fully impacted</u>
Essential Elements of Information (EEI)	**Structural Damage (2a)**: Rated as "Minor" (damage to facility exterior requiring more extensive repairs) **Evacuation Status (3a)**: Partial evacuation underway due to water and safety concerns **Generator Power Status (4a):** Generator power only **Water System (5a)**: Secondary supply; unreliable water pressure **Immediate Needs (7a, 7b)**: Yes; request sanitation support and bottled water
Action Required	

Indicate the operational status for (1a) as 'emergency state' and provide responses for the remainder of the form where required, see EEI data elements above.

> *Rationale: Emergency state selected since facility operations are <u>fully impacted</u>. The facility is operating on generator power only, has sustained exterior structural damage (integrity unaffected), and water supply is currently unreliable.*

Example 4: Adding and Editing the Daily Facility Operating Status Form in the NHSN Application

June 21ˢᵗ

A severe thunderstorm with high winds and heavy rain has started in the region where my hospital (orgID 12345) is located. The lower level of our facility began to flood shortly after, prompting the immediate relocation of affected patients to unaffected units. Additionally, the high winds caused a power outage, requiring the activation of our emergency protocols and the use of facility generators to maintain essential services.

I am working with our Emergency Response and Clinical coordinators to complete the Daily Facility Operating Status form to report essential infrastructure data and the operating status of my facility. This is the first time data has ever been entered for our facility. It is 9:15pm ET on June 21, 2025.

I am currently logged into the NHSN Healthcare Preparedness Component as 'USER1' and click the 'ADD' button for June 2025 from the summary view to open a new form:

July 2025	June 2025	May 2025	April 2025
Not Yet Available	No Data	No Data	No Data
	Add	Add	Add

I enter facility operating status as Emergency since we are running on generators and had to evacuate our lower-level units. I fill out all subsequent required fields and this information updates the summary view status, legend color, and latest record date accordingly:

July 2025

Not Yet Available

June 2025

Latest Record: **6/21/2025 - USER1**
Status: **EMERGENCY**

View   Edit

Add

May 2025

No Data

Add

April 2025

No Data

Add

However, I accidentally misreported field 3a – "*Select the option that best describes the facility evacuation status*" as we plan to shelter-in-place, not evacuate. Facility Evacuation Status was entered as PLAN when I meant to report NA.

I go to June 2025 on the Summary View, select 'EDIT' to open the most recent record and update my selection for 3a to show NA around 10:30pm ET. I am **NOT** able to change the event date month or year in 'EDIT' mode.

July 2025

Not Yet Available

June 2025

Latest Record: **6/21/2025 - USER1**
Status: **EMERGENCY**

View   Edit

Add

May 2025

No Data

Add

April 2025

No Data

Add

June 22ⁿᵈ

Since operational status is reported every 12hrs, I have logged back into the NHSN Healthcare Preparedness Component to report my hospital's status at 9:05am ET on June 22, 2025, and I click the 'ADD' button for June 2025 from the summary view to open a new form.
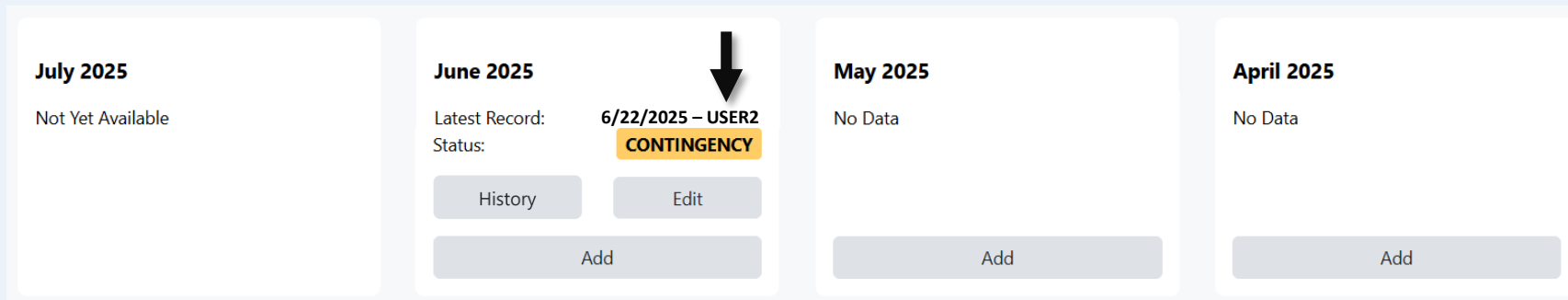
July 2025

Not Yet Available

June 2025

Latest Record: **6/21/2025 - USER1**
Status: **EMERGENCY**

[View]   [Edit]

➤ [**Add**]

May 2025

No Data

[Add]

April 2025

No Data

[Add]

I now enter facility operating status as Contingency since power has been restored and while the flooding has been contained, the affected units are not fully operational. I fill out all subsequent required fields and this information updates the summary view status, legend color, and latest record date accordingly:

July 2025

Not Yet Available

June 2025

Latest Record: **6/22/2025 - USER1**
Status: **CONTINGENCY**

[View]   [Edit]

[Add]

May 2025

No Data

[Add]

April 2025

No Data

[Add]

Before my shift ends, I orient my colleague, 'USER2', to this reporting module as they will be reporting our facility status for the next 12 hours.

Given that the affected units are still not fully operational, USER2 logs into the NHSN Healthcare Preparedness Component and reports our facility operating status as Contingency at 9:01pm ET on June 22, 2025.
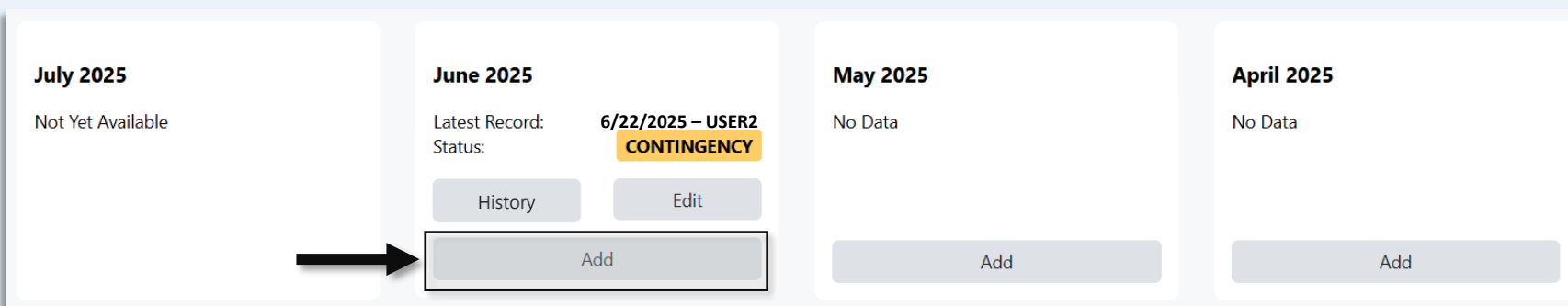
July 2025	June 2025	May 2025	April 2025
Not Yet Available	Latest Record: **6/22/2025 – USER2** Status: **CONTINGENCY** History Edit Add	No Data Add	No Data Add

June 23rd

I log back into the NHSN Healthcare Preparedness Component to report my hospital's status for the next day to ensure I am aligned with the 12-hour cadence, it is 9:05am ET on June 23, 2025, and click the 'ADD' button for June 2025 from the summary view to open a new form.

July 2025	June 2025	May 2025	April 2025
Not Yet Available	Latest Record: **6/22/2025 – USER2** Status: **CONTINGENCY** History Edit Add	No Data Add	No Data Add

I enter facility operating status as Normal since the affected lower units are back up and running. While we are no longer responding to the flooding event, I know that reporting should occur every 12 hours, regardless of whether my facility is operating at its baseline or actively managing an event.

I fill out all subsequent required fields and this information updates the summary view status, legend color, and latest record date accordingly:

July 2025	**June 2025**	**May 2025**	**April 2025**
Not Yet Available	Latest Record: **6/23/2025 - USER1** Status: **NORMAL**	No Data	No Data
	History Edit		
	Add	Add	Add

References

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2. U.S. Department of Health and Human Services. *Improving Data for Decision Making: HHS Data Collection Strategies for a Transformed Health System*. 2016.

3. Adalja AA, Watson M, Toner E, Cicero A, Inglesby TV. A Framework for Healthcare Disaster Resilience: A View to the Future. *Health Secur*. 2015;13(5):282-285. doi:10.1089/hs.2015.0038

4. U.S. Department of Health and Human Services, ASPR TRACIE. *Essential Elements of Information (EEI) for Situational Awareness*. 2020. Available at: https://asprtracie.hhs.gov/

5. Hick JL, Toner ES, Hanfling D, Biddinger PD, Lawler JV. Data and disasters: Essential information needed for all healthcare threats. *Health Secur*. 2024;22(1):3-10. doi:10.1089/hs.2023.0047

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