



TRACIE  
HEALTHCARE EMERGENCY PREPAREDNESS  
INFORMATION GATEWAY

# EXPERIENCES FROM THE FIELD: THE SIGNATURE HEALTHCARE BROCKTON HOSPITAL FIRE



*Photo Courtesy of Richard Smith, Paramedic (retired)*

## Introduction

On the morning of Tuesday, February 7th, 2023, a 10-alarm fire broke out at Signature Healthcare Brockton Hospital in an electrical room. It took the Brockton Fire Department (BFD) less than five minutes to respond. When they arrived, they discovered an arcing electrical fire in the hospital's electrical room. As firefighting efforts could not safely begin, the local power company was immediately contacted to cut power from the street. Though the fire was confined to the electrical room and surrounding areas, it caused an almost immediate failure of the hospital's electrical system, including the generators, telecommunications, and oxygen system, requiring full evacuation of the entire building. The hospital safely evacuated 162 patients in coordination with the fire department and was subsequently closed for an extended recovery period. In the ASPR TRACIE webinar [Lessons Learned from the Signature Healthcare Brockton Hospital Fire](#) the following three leaders who managed the response that day discussed the key lessons learned from the incident and how they will continue to incorporate them into their facility plans:

- Melissa DeMayo, MSN, RN, LNC, Vice President of Quality and Chief Quality Officer
- Claire Berube Sears, HEM, Emergency Management and Environmental Safety Program Manager
- Kimberly Walsh, MSN, RN, Senior Vice President of Patient Services, CNO

Throughout the response to the fire, maintaining patient and staff safety during multiple cascading system failures was paramount. During the webinar, the speakers also highlighted their experiences during the recovery phase, including keeping staff employed and continuing to serve the community during the restoration of the building. Those leaders helped draft this supplemental article which highlights successes and challenges of incident

command, communications, preparedness and response plans, and patient evacuation, transfers, and tracking during and after the incident.

## Incident Command and Leadership

### Successes

- Incident Command was activated virtually, as the Command Center was located in the building which was no longer accessible. Eventually the hospital incident command system (HICS) team moved to the free-standing Brockton Hospital School of Nursing for an afternoon briefing, and the Command Center remained in that building for several months.
- Keeping the same incident commander (Chief Nardelli) throughout the incident facilitated communication between BFD and hospital leadership.
- The hospital was split into two operating areas, each with a fire chief appointed as the lead, which helped focus on both fire-fighting operations and the evacuation process.
- BFD activated their statewide plan to call in resources in a phased approach. Close to 60 agencies responded, providing EMS resources from around the state and firefighters adequate equipment to evacuate patients in smoky hallways.
- The Massachusetts Department of Public Health (MA DPH) set up a remote command center and prioritized patient tracking.
- The MA state hazardous materials team was deployed to check the building as part of the fire department's response plan. They also helped manage the transfer of patients who were in the morgue.
- Leadership made the decision and communicated with the region and partners that they were going on Code Black to divert all ambulance traffic away from the emergency department.

### Challenges and Considerations for the Future

- Incident Command was not activated in a physical capacity due to the nature of the incident (i.e., the Command Center was in the building affected by the fire) until after the fire had been extinguished. Virtually activating the Hospital Command Center has since been added as an option to the organization's Emergency Operations Plan.
- As the response ended and staff entered the recovery process, the need for redundancy for specific HICS positions became apparent. Staff were less likely to observe this due to the "all hands on deck" feeling of the event and the fact that an incident of this magnitude had never happened.

## Communications: Internal and With Regional Partners

### Successes

- The Region 5 Health and Medical Coordinating Coalition (HMCC) coordinator (in Massachusetts) helped manage requests for information from health care organizations across the region and beyond on what resources were needed.
  - » Ultimately, responders from more than 50 towns and cities in Massachusetts brought Signature Healthcare Brockton Hospital aid, including staff and supplies (e.g., portable oxygen canisters).
- Staff used alternate communications tools during this near-complete communication outage.

- » Internally, staff served as “runners” to convey information.
- » Personal cell phones became the main form of communication; BFD, security, and maintenance staff used the few two-way radios available.
- » Hospital leadership established communication between BFD at the Incident Command post located behind the hospital.
- Staff from various services (e.g., housekeeping and cafeteria) ran supplies and equipment to facilitate patient care and evacuation. Maintenance helped BFD gain access to the hospital and worked with external agencies such as the National Grid (the hospital’s electricity provider).

### Challenges and Considerations for the Future

- The hospital lost communications capabilities quickly, including:
  - » IT systems
  - » Medical records
  - » Overhead intercom
  - » Emergency alert system for computers, “Alert Us”
- As part of the recovery process, the hospital is adding redundancy in various forms to their network to mitigate a similar situation in the future. Their information technology (IT) and telecommunication departments have created a new focused process for restoring applications when they go down in order to minimize the downstream impacts.
- Finding pharmacists who could override the Omnicells (the system Signature Healthcare Brockton Hospital uses to dispense pharmaceuticals) or had access to master keys was a challenge. In the future, the hospital will designate a director responsible for identifying facility needs and deploying staff to meet them. This will be event-dependent but will allow the maintenance and facilities teams to provide more assistance to local directors.
- The hospital was not able to contact their health care coalition effectively in the immediate aftermath of the incident due to communications failures. They remain in constant contact with the coalition, but communication within the region continues to be challenged due in part to there being multiple methods used to communicate, depending on the event/each hospital’s preference.
- Finding ways to keep cell phones and radios charged when the power is locally out is key to maintaining communication. They now have additional portable cell phone chargers and are researching linking with a regional radio network to ensure functionality during an emergency.

### Communications: External (With Patients’ Loved Ones, Community Members, and the Media)

#### Successes

- Hospital staff worked with the state to set up a phone line for patients’ loved ones to facilitate information sharing and tracking.
- Existing connections and personal relationships with staff at nearby facilities enabled the hospital intensivist to find placement for high acuity patients.



*Photo Courtesy of Richard Smith, Paramedic (retired)*

- The hospital CEO, a fire chief who was also an experienced public information officer (PIO), and the vice president of marketing and public relations briefed the community via press briefings every three hours on the day of the fire.
- The Brockton fire chief shared information consistently with the public on the department's social media accounts.
- The convening of the Joint Information Center (JIC), the number of PIOs involved, and media participation in past exercises helped significantly with communication.

### **Challenges and Considerations for the Future**

- Communicating well with facilities receiving patients when systems were out was a challenge, as was providing medical records when the electronic medical record system was down. Signature Healthcare Brockton Hospital leadership leaned on EMS and fire capabilities to confirm patient transport and reconciled the patient list with the receiving hospitals later that evening. The hospital is adjusting plans and supplies to prevent this in the future (e.g., having more two-way radios available, and training all staff in how to utilize said radios).
- People kept coming to the hospital for care despite barricades placed at the entrance and a big lighted sign that read, "hospital closed." An ambulance was parked at the ED entrance for two weeks to deter people seeking treatment.

### **Preparedness and Supplies**

#### **Successes**

- Boxes located at the front and back of the hospital contained facility maps, badge access cards, keys, and other resources for first responders. When more copies were needed, staff used copiers, printers, and fax machines at a Signature Healthcare office building, located across the street and not impacted by the fire.



- Adequate portable oxygen tanks were available in the critical care areas for initial use.
- Fire doors worked as designed and prevented the fire from spreading.
- Staff from one of the 13 hospitals in the region brought oxygen tanks from other hospitals to supplement ventilators on battery power. Staff laid empty oxygen tanks on their sides so that they were not confused with full tanks (though a different system should be used in the future to prevent tanks from rolling).
- Emergency exercises and drills, such as consistent Code Red trainings, quarterly HICS training, and multiple previous real-world events utilized as drill scenarios had prepared the hospital for patient evacuation prior to the fire. Local collaboration (e.g., with the health care coalition and other partners) contributed to the successful response. Moving forward, hospital staff plans to provide realistic information, including limitations and lessons learned, to the region as most facilities plan to simulate hospital evacuation.

### Challenges and Considerations for the Future

- Ensure the boxes containing maps, access cards, and other resources for first responders at key entrances have enough of each resource to be widely distributed.
- Oxygen is used rapidly by ventilators, and even more rapidly when performing bag-valve ventilation. Bolster internal supply as practical and develop/updated memoranda of understanding with suppliers and nearby facilities in the event of a shortage.
- The hospital had a storeroom full of supplies for emergencies requiring evacuations, however because of the location of the fire, these supplies were not accessible. In the future hospital staff will equip storerooms with evacuation supplies in various locations of the facility.
- Med sleds were not used during this incident due to lack of light and space in the stairwell; instead, EMS evacuated patients using their own evacuation tools (e.g., stretchers and stair chairs) which allowed for smoother transport directly into the waiting ambulances.
- Fire and EMS crews carried patients on backboards down the stairs to awaiting stretchers on the first floor focusing first on the critically ill and then on other non-ambulatory patients.

### Maintaining Patient Care

#### Successes

- Patient care was transferred from nurses to EMS personnel during transport from the patient's bed to the EMS stretcher.
- After the power went out, caring for patients suffering from significant behavioral health issues in the ED in the dark became a challenge. Have a plan and supplies (e.g., flashlights, batteries) in ED that can help with similar incidents.
- The morning after the fire, DPH's Drug Control Program was onsite, and the Director of Pharmacy went floor to floor throughout the hospital with Ms. DeMayo, identifying drugs for embargo. Together, they moved all the drugs into secure locations as approved by DPH.
  - » Staff worked with DPH, the insurance company, and a third-party vendor to conduct inventory and for medication transport out of the state for destruction; this took many weeks to accomplish.



## Challenges and Considerations for the Future

- One challenge faced was accessing medication for intubated and sedated ICU patients. Hospital staff were not able to locate pharmacists to access or override Omnicells.
  - » Staff are reevaluating who can override or has keys to Omnicells.

## Patient Evacuation

Evacuating 162 patients during a significant structure fire is daunting. The leaders described the evacuation process and highlighted related successes and challenges.

Available bed information was collected through multiple channels, including Centralized Emergency Medical Dispatch (or CMED), one-on-one calls and texts via personal cell phones, and WhatsApp. A request was sent to hospitals via the Health and Homeland Alert Network (or HHAN), with replies being received through these various entities. Signature Health Brockton case management and patient registration staff were responsible for patient tracking, along with the Deputy Director of Communications at the Holbrook Regional Emergency Communications Center (also known as Norfolk County Control), an external agency that responded to the fire.

Over 50 EMS agencies handled patient transport (MA is a Commonwealth comprised of 351 towns; they do not use a county system for EMS). The BFD fire chief assigned to evacuation oversaw transport. Since all systems were down, staff were unable to print patient records; patients were sent with what was available and/or written down by transporting staff.

Hospital staff used multiple tools to track patients, including a whiteboard and paper list. Receiving facilities were not able to confirm receiving most patients because there was no central phone line nor a safe onsite location that could be used to manage this type of communication. Eventually a staff member from the Department of Public Health was deployed to the hospital and staffed a patient reunification line to notify patients' loved ones of their new locations.

## Successes

- Brockton Fire Department led the evacuation using their own equipment.
- Other local hospitals delivered oxygen and supported patient transfers in other ways.
- The fire occurred during a shift change which meant staff were reporting for shifts while others ending their shifts stayed on, which helped provide more staff available to support evacuation.
- Staff identified critical patients who needed to be transferred to other facilities first.
- One nurse worked with staff to move 20 ambulatory patients down five flights of stairs in pairs. Once outside, it was very cold, so staff walked patients to the School of Nursing which was located on the hospital campus. Those were the last patients placed.
- The Hazmat team assisted with finding safe transfer for patients in the morgue.

## Challenges and Considerations for the Future

- Multiple systems failed, challenging patient evacuation and transfer, including:
  - » Normal power
  - » Generator power

- » Lighting (battery lights were limited in stairwells)
  - » Water
  - » Emergency lighting
  - » Elevators
- Staff used one stairwell for both the EMS crews going up and evacuating patients. In retrospect, if possible, staff will be encouraged to plan to use separate stairwells for ingress and egress.
  - In a power outage, it is important for units to note/be aware of which patients are out of their rooms receiving care (e.g., physical therapy) or other services (e.g., CT scans).
  - It was cold outside during the evacuation; the organization has since updated their locations of alternate care sites to further the range of availability should the weather be extreme or a particular building be impacted by a system failure.
  - Many patients that arrived at Signature Healthcare Brockton Hospital to find it closed went to other facilities without notice, stressing the community health care system.

## Patient Transfer

### Successes

- Keep evacuation route and incident command separate, but close. Patients were evacuated through the front of the hospital while BFD operated incident command behind the hospital.
- No patients were in the middle of surgery.
- Two patients in labor were transferred quickly.
- A number of patients were receiving dialysis; they were monitored closely and were prioritized for transfer.

### Challenges and Considerations for the Future

- In some cases, it was difficult to differentiate between “discharged” and “transferred” patients.
- Locating beds for children with mental illness presented another challenge. Hospital staff had to request assistance from a state-level colleague to place two teenagers who were experiencing psychosis.
- Prioritize patients to transfer before an incident occurs.
- Providing patients with food, water, and toileting while waiting to be transferred was a challenge that needs to be incorporated into future plans.

## Patient Tracking

### Successes

- A printed patient census was important early on, and copies were made across the street for tracking.
- Incident command tracked patients on a white board by hand and marker based on patient census.
- Case managers were stationed at the door to conduct a final check of patient names and destinations as Incident Command tracked patients on the white board.

- Receiving facilities were asked to electronically submit the names of people they had received to the Massachusetts Department of Public Health Office of Emergency Preparedness to confirm patient placement.

### Challenges and Considerations for the Future

- Patient records could not be accessed on site, so they were accessed off site and sent to receiving facilities. Patients were transferred without their medical records.
- That night, at another location, staff printed hard copies of patient's medical records and transferred the information to receiving facilities to provide them with treatment plans, primarily via secure fax.

## Recovery

### Successes

- There was concern that staff would find new positions while the hospital was closed. Signature Healthcare Brockton set up programs to ensure staff retention during the recovery (e.g., leasing and deploying them to other community health care organizations). This ensured they could stay employed and can staff the hospital when it reopens.

### Challenges and Considerations for the Future

- The newest part of the building was built in 1980, and other infrastructure was from the 1950's; restoring the building after the fire has been a considerable ongoing project.
- As a community safety net hospital, the ED saw 160-170 patients per day. One of the Signature Health Urgent Care facilities is seeing over 100 patients per day, so trying to meet the demand in the community as best as possible while the hospital is being brought up to code.
- In the future, there will be a predetermined external site where staff will report during an evacuation. This will help staff get an accurate headcount and determine what the needs are within the facility and how to meet them.
- Mental health support was provided in a variety of ways to staff after the event, including access to an Employee Assistance Program, in-person gatherings, and personal communications from managers and directors.
- A new building has been built to house the new electrical components. This building is fed separately from the street power to prevent future issues.

