University Hospital Staff for Life Helicopter Down Drill

After-Action Report/Improvement Plan
October 6, 2013

The After-Action Report/Improvement Plan (AAR/IP) aligns exercise objectives with preparedness doctrine to include the National Preparedness Goal and related frameworks and guidance. Exercise information required for preparedness reporting and trend analysis is included; users are encouraged to add additional sections as needed to support their own organizational needs.
**EXERCISE OVERVIEW**

<table>
<thead>
<tr>
<th>Exercise Name</th>
<th>University Hospital Staff for Life Helicopter Down Drill</th>
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<tbody>
<tr>
<td>Exercise Dates</td>
<td>October 6, 2013</td>
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<tr>
<td>Scope</td>
<td>This was a functional exercise involving a variety of local public safety agencies to respond to a simulated crash of the Staff for Life helicopter.</td>
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<td>Mission Area(s)</td>
<td>Response</td>
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<tr>
<td>Core Capabilities</td>
<td>• Operational Coordination</td>
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<td></td>
<td>• Search &amp; Rescue</td>
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<td></td>
<td>• Operational Communications</td>
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<td>• Public Health and Medical Services</td>
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<tr>
<td>Objectives</td>
<td>• Establish and utilize a unified and coordinated command throughout the incident</td>
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<td></td>
<td>• Utilize available resources to conduct an efficient and coordinated search to located the downed helicopter</td>
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<td>• Maintain accountability and communication links with all first responders assigned to the incident</td>
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<td>• Conduct rapid triage, treatment, and transport for any injured persons</td>
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<tr>
<td>Scenario</td>
<td>At 1330 hours, Staff for Life receives a request for pediatric transport from Bothwell Regional Hospital back to Women’s &amp; Children’s Hospital (WCH). Shortly after lifting off from WCH, Staff for Life transmits a MAYDAY call to Air Comm with minimal further information. Local public safety agencies are dispatched to locate the crash site and rescue, treat, and transport any injured persons.</td>
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<tr>
<td>Sponsor</td>
<td>Air Methods - Staff for Life Helicopter</td>
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<tr>
<td>Participating Organizations</td>
<td>University Hospital and Clinics, Air Methods, Boone County Fire Protection District, Boone County Sheriff’s Department, Public Safety Joint Communications, University Ambulance</td>
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<tr>
<td>Point of Contact</td>
<td>Inquiries regarding the involvement of the Boone County Fire District should be directed to:</td>
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<tr>
<td></td>
<td>Josh Creamer</td>
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<td></td>
<td>573-268-6228</td>
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<td></td>
<td><a href="mailto:jcreamer@bcfdmo.com">jcreamer@bcfdmo.com</a></td>
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</table>
**EXERCISE TIMELINE**

The original exercise was scheduled to take place on Saturday, October 6, 2013 at 1300 hours. However, due to a multitude of unforeseen circumstances (weather, mechanical malfunction) the exercise was postponed until Sunday, October 6th. Due to real-life incidents and transports, the exercise did not officially start until approximately 1400 hours. What follows is an approximate timeline of events for the exercise. Any exercise inject or artificiality has been noted to separate the exercise design from responders actions.

1400 – [INJECT] Staff for Life helicopter issues a MAYDAY call to Air Comm. Air Comm relays the MAYDAY information to Public Safety Joint Communications for dispatch to local first responders.

1405 – Units from the Boone County Fire Protection District, University Ambulance, and the Boone County Sheriff’s Department respond to the incident.

1405 – The Responding IC (Capt 815) requests the MO Highway Patrol helicopter and the last known location from Air Comm. PSJC attempts to fulfill requests.

1410 – Responding IC arrives on scene, establishes a Command Post and a tactical frequency (White).

1415 – Command requests contact information for Air Comm. PSJC relays information that MOHP helicopter is out of service mechanical (real life) and that Air Comm did not have any further location information.

1417 – [INJECT] Call received at PSJC from a resident in the Cascades Subdivision of a helicopter flying low southwest of his residence.

1425 – Command requests activation of Civil Air Patrol and request to US Air Force for any information regarding Emergency Locator Transmitters (ELT’s) in the area.

1430 – [INJECT] Air Comm receives call from crew member cell phone. Crew gives description of surroundings (lots of trees, house with gray roof) and attempts to give Lat/Long of crash site (Lat = 38° 51’) but cell service cuts out. Air Comm gives information to PSJC who relays to responders.

1440 – [INJECT] ELT location information received and transferred to Command. Incident location is 38° 51’ 28”, -92° 24’ 08” (USNG coord = 15S WD 51860 01171)

1450 – Command establishes a Search Division and assigns Lt. Dunkin as the Division Supervisor on the JCIC frequency.

1500 – BCSD Deputy is flagged down by a boy on a 4-wheeler on Warren School Rd. Information relayed to Command.

1505 – Units make access to the downed aircraft behind the residence at 8200 Warren School Rd.

1525 – Patients are packaged, incident is marked under control.
ANALYSIS OF CORE CAPABILITIES

Aligning exercise objectives and core capabilities provides a consistent taxonomy for evaluation that transcends individual exercises to support preparedness reporting and trend analysis. Table 1 includes the exercise objectives, aligned core capabilities, and performance ratings for each core capability as observed during the exercise and determined by the evaluation team.

<table>
<thead>
<tr>
<th>Objective</th>
<th>Core Capability</th>
<th>Performed without Challenges (P)</th>
<th>Performed with Some Challenges (S)</th>
<th>Performed with Major Challenges (M)</th>
<th>Unable to be Performed (U)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Establish and utilize a unified and coordinated command throughout the incident</td>
<td>Operational Coordination</td>
<td>X</td>
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<tr>
<td>Utilize available resources to conduct an efficient and coordinated search to located the downed helicopter</td>
<td>Search and Rescue</td>
<td>X</td>
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<tr>
<td>Maintain accountability and communication links with all first responders assigned to the incident</td>
<td>Operational Communications</td>
<td></td>
<td>X</td>
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<tr>
<td>Conduct rapid triage, treatment, and transport for any injured persons</td>
<td>Public Health and Medical Services</td>
<td>X</td>
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</table>

Ratings Definitions:
- **Performed without Challenges (P):** The targets and critical tasks associated with the core capability were completed in a manner that achieved the objective(s) and did not negatively impact the performance of other activities. Performance of this activity did not contribute to additional health and/or safety risks for the public or for emergency workers, and it was conducted in accordance with applicable plans, policies, procedures, regulations, and laws.
- **Performed with Some Challenges (S):** The targets and critical tasks associated with the core capability were completed in a manner that achieved the objective(s) and did not negatively impact the performance of other activities. Performance of this activity did not contribute to additional health and/or safety risks for the public or for emergency workers, and it was conducted in accordance with applicable plans, policies, procedures, regulations, and laws. However, opportunities to enhance effectiveness and/or efficiency were identified.
- **Performed with Major Challenges (M):** The targets and critical tasks associated with the core capability were completed in a manner that achieved the objective(s), but some or all of the following were observed: demonstrated performance had a negative impact on the performance of other activities; contributed to additional health and/or safety risks for the public or for emergency workers; and/or was not conducted in accordance with applicable plans, policies, procedures, regulations, and laws.
- **Unable to be Performed (U):** The targets and critical tasks associated with the core capability were not performed in a manner that achieved the objective(s).

Table 1. Summary of Core Capability Performance

The following sections provide an overview of the performance related to each exercise objective and associated core capability, highlighting strengths and areas for improvement.
Core Capability #1 – Operational Coordination

Objective: Establish and utilize a unified and coordinated command throughout the incident

The strengths and areas for improvement for each core capability aligned to this objective are described in this section.

Strengths

The full capability level can be attributed to the following strengths:

**Strength 1:** The Fire Incident Commander was able to quickly integrate the Law Incident Commander into the Unified Command Post. Both Commanders had the tools they needed to communicate with crews in the field but were also able to share and coordinate information between themselves. In particular, the resident knowledge of each IC was valuable in maintaining accountability of assigned personnel as the number formats between jurisdiction is slightly different.

**Strength 2:** A Command Aide was quickly appointed by the Fire Incident Commander. The Command Aide was located in the Command Post vehicle with the Fire Incident Commander and was able to monitor all dispatch traffic to Command on the JCIC frequency. As incidents escalate, it may even be best to assign a second aide to focus on other command issues (accountability, staging, etc)

Areas for Improvement

The following improvements could be made to increase capability in the future:

**Area for Improvement 1:** Utilization of an expanded Command Post

**Reference:** No current applicable policies/procedures

**Analysis:** Given the timeframe for the exercise and the limited scope of participants, the utilization of two pickup trucks as command vehicles did not appear to hinder the incident operations. However, had the event been allowed to unfold longer or had more participants been involved in the response, the resources available to coordinate the incident would have been deficient. In the event that an incident has the potential to require any more than just a few command staff personnel, responders should quickly request PSJC to dispatch Command 2. Command 2 will allow for better coordination between the Unified Command, better accountability of assigned personnel, upgraded mapping capability, and a more robust communication infrastructure.

**Area for Improvement 2:** Quicker utilization of geographic divisions and/or functional groups to maintain span of control and better coordinate assigned resources.

**Reference:** NIMS/ICS

**Analysis:** As the search boundaries and search crews began to increase during the exercise, it placed additional burden on Command to maintain span of control.
Core Capability #2 – Search and Rescue
Utilize available resources to conduct an efficient and coordinated search to located the downed helicopter

Strengths
The full capability level can be attributed to the following strengths:

**Strength 1:** Command was very quick at requesting appropriate resources (MOHP helicopter, ELT transmitter beacon from USAF, Civil Air Patrol, Air Comm contact information) early in the incident. These resources can greatly assist first responders in locating targets during a real incident.

**Strength 2:** Command utilized the tools that they had available to them at the time (map books with Lat/Long & USNG, cell phones & smart technology for mapping) to quickly conduct a Hasty search of the area to quickly locate the downed helicopter.

**Strength 3:** Command was able to utilize BCSD Deputies to quickly cover target areas in their patrol cars. Their vehicles were able to more quickly cover a target area compared to use of fire apparatus (had this been a real event, current protocol includes dispatch of 2 grass rigs that could also be used as a more ‘quick response’ vehicle).

Areas for Improvement
The following areas require improvement to achieve the full capability level:

**Area for Improvement 1:** Documentation of search completion

**Reference:** US&R Wide Area Search Protocol

**Analysis:** Command was working to maintain awareness of which areas had been covered by search crews utilizing the BCFPD Map Book. Had the initial hasty search been unable to locate the downed helicopter, it would have been difficult to transfer the initial search data into a usable electronic format. Utilization of GPS’s and track logs may prove valuable in determining search completion and priority areas for additional crews.

**Area for Improvement 1:** Utilization of lone individuals in search vehicles could present safety issues as responders are tasked with driving, searching, and communicating.

**Reference:** BCFPD Emergency Vehicle Operations Policy

**Analysis:** Responders reported during the Hotwash that the utilization of POV’s and staff vehicles in search operations were a tremendous asset. However, individuals who were alone in their vehicles during the search felt uncomfortable having to focus on all of the tasks necessary to complete their objectives (drive the vehicle, search both sides of the road, communicate via radio with the Incident Commander, etc).
Core Capability #3 – Operational Communications

Maintain accountability and communication links with all first responders assigned to the incident

The strengths and areas for improvement for each core capability aligned to this objective are described in this section.

Strengths

The partial capability level can be attributed to the following strengths:

**Strength 1:** Unified Command was quickly established which allowed for coordinated communications between disciplines.

**Strength 2:** Command utilized the BCFPD Command Board to account for all fire personnel operating on the incident.

**Strength 3:** Command established a tactical frequency for the incident immediately after establishing the Incident Command Post. All units operating on the incident scene (Fire & Law Enforcement) used the tactical frequency for communications.

Areas for Improvement

The following improvements could be made to increase capability in the future:

**Area for Improvement 1:** Tactical communications with search crews was lost for a short time period

**Reference:**

**Analysis:** Due to the wide geographic area and hilly terrain covered by the incident, there was a short time period where tactical communications were lost with operating personnel. The gap in communications occurred on an unrepeated tactical radio frequency (White). After a few attempts to contact search crews with no response, Command was able to re-establish communications on the repeated JCIC (dispatch) frequency. Command also decided to relocate the Incident Command Post to be closer to search crews and improve radio coverage.

In future events covering a large or hilly area, it may be beneficial to use a repeated tactical frequency such as JCIC or Boone Comm. This will ensure uninterrupted communication with tactical crews. Use of these channels may need to be approved by the PSJC supervisor to ensure it isn’t being utilized by other agencies. As an additional method to ensure communication links, a mobile radio should be utilized when possible to achieve the best radio penetration.

**Area for Improvement 2:** Need to establish communication link with MOHP helicopter.

**Reference:**

**Analysis:** While not utilized in this exercise, suggestions were made during the hotwash to establish communications with the MOHP helicopter. One suggestion was to put a BCSD Deputy in the helicopter in order to create a link with Command and other responders. Otherwise, communications can occur on State Sheriff.
Core Capability #4 – Public Health and Medical Services

Conduct rapid triage, treatment, and transport for any injured persons.

The strengths and areas for improvement for each core capability aligned to this objective are described in this section.

Strengths

The full capability level can be attributed to the following strengths:

   **Strength 1:** Crews were able to quickly triage and assess patients still located in the helicopter.

   **Strength 2:** Crews were able to package the patients and prepare them for transport without issue.

   **Strength 3:** Both the Law and Fire Incident Commander verbally announced concern regarding patient contamination with jet fuel from the helicopter before the patients were removed. While patient decontamination was not included within the scope of this exercise, it would definitely be required in a real incident as evidenced by the last helicopter incident. Unified Command was prepared for decontamination had the exercise scope allowed.

CONCLUSION

Participants were able to successfully complete all of the objectives established for the exercise without major incident. Exercise participants took appropriate actions in response to injects given during the exercise. All players participated in the exercise debrief immediately following the exercise. The strengths and areas for improvement identified in this document are a result of their feedback and suggestions. The effort put in by the exercise participants and outlined in this document should ensure a seamless response to a real life event.