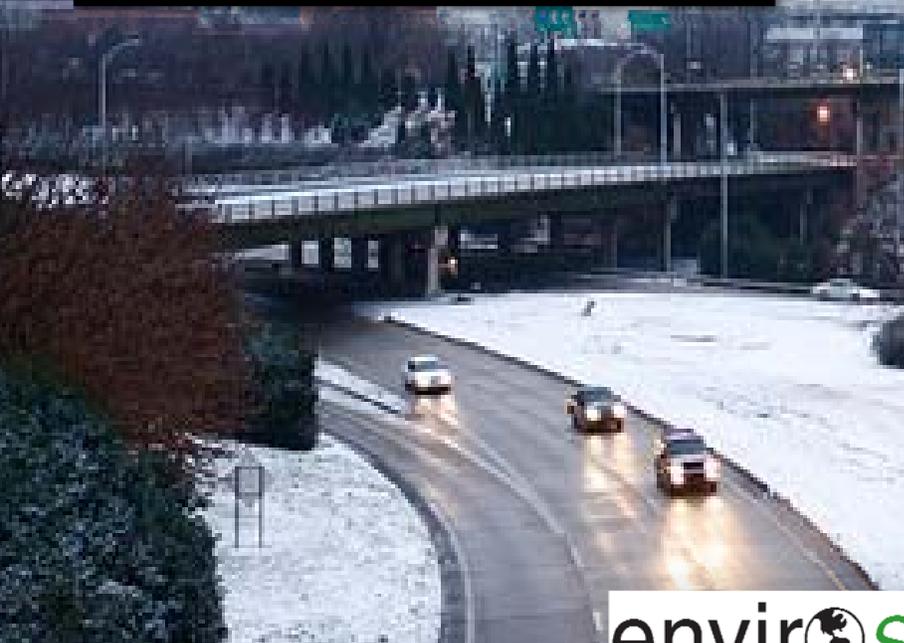


After Action Report

Full Scale Exercise

Metrolina Trauma Advisory Committee

Exercise Dates: 13 April 2011



PUBLISHING DATE: MAY 2011



HANDLING INSTRUCTIONS

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EXECUTIVE SUMMARY

The Metrolina Trauma Advisory Committee (MTAC) full scale exercise was designed to establish a learning environment for players to exercise their plans and procedures for responding to a region-wide winter weather event. The primary focus was to evaluate and identify capabilities as they pertain to Regional Communications, On Site Incident Management, and Emergency Operations Management. The exercise planning team was composed of numerous and diverse agencies from throughout the MTAC Region. The planning team discussed at great length the issues involved in dealing with a winter weather incident. This type of scenario was chosen because it would have a great impact on the MTAC Region, involving all facilities; thus taxing critical resources. Some of the issues discussed were the communication flow between individual hospitals, government agencies and other players as well as processes for ordering and managing resources. In preliminary planning meetings, the scenario was designed to test all agencies involved with plausible challenges. The exercise objectives were chosen to meet the needs of as many of the participating agencies as possible. Based on the exercise planning team's deliberations, the following objectives were developed for the Full Scale Exercise:

- Objective 1:** Evaluate current processes in place to manage resources needed during a region wide winter weather event.
- Objective 2:** Identify current capabilities to manage operations during a region wide winter weather event.
- Objective 3:** Evaluate systems in place to maintain continuity of data accessibility.
- Objective 4:** Evaluate the effectiveness of information sharing amongst internal and external partners during a region wide winter weather event.
- Objective 5:** Identify essential functions needed when staffing levels and facility accessibility is limited.
- Objective 6:** Evaluate the effectiveness of communication interoperability between partners during a region wide winter weather event.
- Objective 7:** Identify liability concerns related to responding to a region wide winter weather event (i.e. human resources, limiting services, surge of community for sheltering, etc)

The purpose of this report is to analyze exercise results, identify strengths to be maintained and built upon, identify potential areas for further improvement, and support development of corrective actions.

Major Strengths

Major strengths identified during this exercise are as follows:

- Familiarity of facility specific plans and procedures for managing a regional disaster event as a result of continuous training.
- The amount of resources (equipment) available to deal with the response to a severe winter weather event.
- Collaboration and coordination among internal and external partners enhanced through the progressive formation of relationships.

Major Areas for Improvement

- Viper Radio Capability
- Streamline usage of WebEOC for updated information and interagency communication
- Documentation of events and resource information
- Reassessment of capabilities for staff and pet housing and transportation
- Resource guide or inventory
- Clear understanding of agency and personnel roles and capabilities.
- Revision or restructuring of ICS
- Training and education in Emergency Operation procedures and use of equipment

The MTAC Regional Full Scale Exercise was a success. Each of the participating agencies was able to test various parts of their organizations' plans in accordance with Joint Commission Standards. Although there are some areas of improvement, the goal is for each organization to form an improvement plan that will assign responsibility to those areas with a completion date for finalization. After the completion of the improvement plan, the agency will be ready to test their abilities once again. If an event of the nature and magnitude described in the scenario were to occur today, there is no doubt that MTAC agencies are ready and able to respond.

SECTION 1: EXERCISE OVERVIEW

Exercise Details

Exercise Name

MTAC Regional Full Scale Exercise

Type of Exercise

Full Scale Exercise

Exercise Start Date

13 April 2011

Exercise End Date

13 April 2011

Duration

~ 4 hours

Location

Agencies throughout the MTAC Region

Sponsor

Metrolina Trauma Advisory Committee

Program

North Carolina Hospital Preparedness Assistant Secretary of Response and Preparedness Grant

Mission

Respond and Recover

Capabilities

Communications
Onsite Incident Management
Emergency Operations Management

Scenario Type

Winter Weather

Exercise Planning Team

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Participating Organizations

• Anson Community Hospital
• Burke County EMS
• Cabarrus County EMS
• Carolinas Healthcare System
• Carolinas Rehabilitation
• Catawba County EMS
• Catawba Valley Medical Center
• Charlotte FD/SMAT 3
• Cleveland County EMS
• Cleveland County Public Health
• Cleveland Regional Medical Center
• CMC-Main
• CMC-Lincoln
• CMC-Mercy
• CMC-NorthEast
• CMC-Pineville and Steele Creek
• CMC-Union
• CMC-University
• CR-Mt. Holly
• Gaston County EMS
• Gaston Memorial Hospital
• Grace Hospital
• Kings Mountain Hospital
• Lake Norman Regional Medical Center
• Lincoln County EM
• Lincoln County EMS

• Lincoln County Public Health
• Lutheran Nursing Home—Stanly County
• Presbyterian Hospital-Charlotte
• Presbyterian Hospital-Huntersville
• Presbyterian Hospital-Matthews
• Presbyterian Hospital-Orthopedic
• Scotland Hospital
• Stanly County E-911
• Stanly County EM
• Stanly County EMS
• Stanly County Public Health
• Stanly Manor
• Stanly Regional Medical Center
• Union County EMS
• Valdese Hospital
• Woodhaven Court/Albemarle House—Stanly County
• Metrolina Trauma Advisory Committee
• NC Office of Emergency Medical Services
• NC Division of Emergency Management

Number of Participants

- Players ~400
- Controllers 2
- SIMCELL Operators 4
- Evaluators 15
- Observers Not counted

SECTION 2: EXERCISE DESIGN SUMMARY

Exercise Purpose and Design

The purpose of this exercise was to provide participants an opportunity to identify skills that regional partners currently possess. Participants were evaluated in their response capabilities for a winter weather event, communication compromise, patient surge, sheltering in place, and other responses resulting from an event of this magnitude. In performing exercise tasks, they were expected to follow their policies, procedures, and protocols. The exercise focused on local emergency responder and hospital command and control coordination, critical decisions, notifications, and the integration of state and local assets necessary to save lives and protect public health and safety.

Exercise Capabilities and Objectives

Capabilities-based planning allows for exercise planning teams to develop exercise objectives and observe exercise outcomes through a framework of specific action items that were derived from the Target Capabilities List (TCL). The capabilities listed below form the foundation for the organization of all objectives and observations in this exercise. Additionally, each capability is linked to several corresponding activities and tasks to provide additional detail.

Based upon the identified exercise objectives below, the exercise planning team has decided to demonstrate the following capabilities during this exercise:

Capabilities

- Communications
- Onsite Incident Management
- Emergency Operations Management

Exercise Objectives

Objective 1: Evaluate current processes in place to manage resources needed during a region-wide winter weather event.

Objective 2: Identify current capabilities to manage operations during a region-wide winter weather event.

Objective 3: Evaluate systems in place to maintain continuity of data accessibility.

Objective 4: Evaluate the effectiveness of information sharing amongst internal and external partners during a region-wide winter weather event.

Objective 5: Identify essential functions needed when staffing levels and facility accessibility is limited.

Objective 6: Evaluate the effectiveness of communication interoperability between partners during a region-wide winter weather event.

Objective 7: Identify liability concerns related to responding to a region-wide winter weather event (i.e. human resources, limiting services, surge of community for sheltering, etc)

Scenario Summary

The scenario of the Full Scale Exercise was conducted over a one day period on 13 April 2011. The exercise began 11 April with pre exercise injects being disseminated to the MTAC Region. These initial injects “set the stage” for a winter storm approaching the region determined to bring a chance of snow/ ice. On day one if the event, another inject was disseminated to heighten the chance of winter weather and begin showing physical signs, validating the forecast. On 13 April, exercise play began at 0900 hours with injects developed around a blanket of snow and ice covering the region over the previous night.



SECTION 3: ANALYSIS OF CAPABILITIES

This section of the report reviews the performance of the exercised capabilities. The information used to complete this portion of the AAR comes from individual site-specific evaluator notes and observations. Since this exercise was focused primarily on the capabilities of hospitals and health facilities, the Exercise Evaluation Guides (EEG's) were developed using the seven critical areas for preparedness outlined by the Joint Commission as approved for use by the Metrolina Trauma Advisory Committee. Those areas evaluated are as follows:

- Emergency Operations Planning
- Communications
- Resources and Assets
- Safety and Security
- Staffing
- Utilities
- Clinical Activities



Blue Ridge Health

CAPABILITY: EMERGENCY OPERATIONS PLANNING

Activity 4.12.1- 4.12.7

Capability Summary: A successful response relies upon planning around the management of six critical areas: communications; resources and assets; safety and security; staffing; utilities; and clinical activities. It is important for hospitals to develop a comprehensive Emergency Operations Plan (EOP) as documentation to help guide the hospital in its emergency response and recovery efforts. While the Emergency Operations Plan can be formatted in a variety of ways, it must address these six critical areas to serve as a blueprint for managing care and safety during an emergency.

Strengths:

- It was observed during the course of the exercise that all participants within the EOC were knowledgeable in terms of their respective areas of responsibility utilizing the Hospital Incident Command System (HICS).
- The Incident Commander established and maintained a clear environment of order and control, resulting in excellent flow of communication between them and the EOC staff.
- Injects given through the exercise control were efficiently addressed in the order in which they were received and by the appropriate functional sections in accordance with HICS.

Areas for Improvement:

- Though copies of the Hospital Emergency Operations Plan were present throughout the EOC, it was not observed that staff referenced the plan at any time.
- When remaining consistent with HICS procedures, it is crucial to develop an Incident Action Plan. This planning action provides operational objectives, benchmarks as well as resource allocation efforts for the proceeding operational period.
- Take more direct efforts to meet incident objectives.
- More follow up on status of delegated activities as they relate to the overall incident objectives.

General Summary and Recommendations: While observing this activity, it was noted that information flow, organization and system control were particularly strong. It would be prudent to consider referencing the Emergency Operations Plan an established priority when developing incident objectives and selecting tasks to meet those objectives. In addition to referencing the plan, it is recommended that checklists be provided for each designated job function. Organizational charts were displayed within the EOC and tasks were correctly delegated, however, without clear defined job responsibilities, inconsistency can exist with validating response tactics. This can become a problem, especially if secondary or tertiary

personnel are present. In conclusion, it is imperative that continuous review and update of the Hospital Emergency Operations Plan take place to ensure vulnerabilities are mitigated with capabilities prior to an actual event taking place.



CAPABILITY: COMMUNICATIONS

Activity 4.13.1- 4.13.14

Capability Summary: In our everyday life of carrying out our responsibilities on the job communication is by far one of the most important. During exigent circumstances those communication tools that are available to us become all that more important and even more important is the fact that personnel understand their use. Sometimes even the simple things such as operating an unfamiliar phone line can cause problems in communicating very important information. In this section hospital were evaluated on fourteen key areas. The following are the results:

Strengths:

- All participants demonstrated a great deal of awareness of the existence of the various communication systems available.
- Knowledge of HICS procedures and standards allowed for respective section chiefs to maintain effective communication with staff. This allowed information to flow and assignment of tasks to proceed without the direct oversight of the Hospital Incident Commander.
- Functions of each communication system were very well understood by the security section allowing for ease of operation.

Areas for Improvement:

- When communicating procedures of managing an incident, it is important to reference the EOP.

General Summary and Recommendations: Player dialogue suggests a strong awareness that there are plans/procedures in place to handle the scenarios/injects as they were delivered, and section chiefs were clearly observed addressing problems in their respective areas without prompting from the HIC. It is recommended that the organization continue to exercise and test capabilities to handle communications and flow of information as specified in the Emergency Operations Plan.



CAPABILITY: RESOURCES AND ASSETS

Activity 4.14.1- 4.14.11

Capability Summary: During emergencies, health care organizations that continue to provide care, treatment, and services to their patients must sustain essential resources, materials, and facilities. The emergency operation plan should identify how resources and assets will be solicited and acquired from a range of possible sources, such as vendors, neighboring health care providers, other community hospitals, state affiliates, or a regional parent company. To address emergencies of long duration or broad geographic scope, the hospital's plan must proactively identify, locate, acquire, distribute and account for critical resources and supplies. The plan should also recognize the risk that some assets may not be available from planned sources and that contingency plans will be necessary for critical supplies. This situation may occur when multiple hospitals are vying for a limited supply from the same vendor.

Strengths:

- Excellent discussion from the EOC concerning staffing lead to further discussion about the possible need to review and potentially revise the current "code green" status designation. This identification shows progression in evaluating current vulnerabilities and developing mitigation efforts to improve.
- Participants identified the benefit of evaluating staff skill sets in order to cross train and place staff in areas to fit their individual strengths, therefore improving operations.

Areas for Improvement:

- Consider coordination with external resources for sustained operations of medical supplies management and distribution.
- Maintaining communications with transportation vendors during distribution of medical supplies.

General Summary and Recommendations: This exercise proved that the group chosen to perform in the EOC is superb. Each time the IC presented injects, the appropriate representative immediately recognized the issue relative to them and assumed responsibility for its resolution. Through difficult and rapid injects, each player demonstrated their ability to remain calm, establishing an atmosphere respectful to the command structure, leading to an efficient flow of communication in the room. Players identified possible staffing problems that may result based on this activation level, resulting in the decision to evaluate current staff positions throughout the system to identify personnel cross-trained in multiple disciplines. The evaluation of staff in this manner will assist in maintaining operations with a significantly reduced labor pool in a disaster situation; allowing staff to function in multiple roles and fill essential areas needed. Additional issues related to childcare for both employees and potentially for incoming patients need to be revisited. It is recommended that plans/procedures relevant to this issue be immediately revisited and potentially revised. This particular activity generated useful discussion that could be addressed in more detail through the reference of the Emergency Operations Plan.

CAPABILITY: SAFETY AND SECURITY**Activity 4.15.1- 4.15.7**

Capability Summary: Controlling the movement of individuals into, throughout, and out of the hospital during an emergency is essential to the safety of patients and staff, and to the security of critical supplies, equipment, and utilities. The hospital determines the type of access and movement to be allowed by staff, patients, visitors, emergency volunteers, vendors, maintenance and repair workers, utility suppliers, and other individuals when emergency measures are initiated. Factors influencing access and movement vary depending upon the type of emergency and local conditions (i.e. the decision by the hospital to shelter staff families, the allowance for or prohibition against firearms, mutual aid agreements with nearby facilities or vendors, etc.).

Strengths:

- Inject pertaining to a brine exposure with multiple patients immediately generated good discussion relevant to adequately handling the situation
- Players correctly identified potential need for hazmat information
- Security section personnel demonstrated good knowledge of potential security

Areas for Improvement:

- Plan for Public Safety and Security Response During Large-Scale, All-Hazards Events
 - Review plans for decontamination sites and access to decontamination equipment, including personal protective equipment (PPE) for responders.
 - Review existing protocols, and develop protocols as appropriate, for the operation of decontamination sites and out-processing areas.
 - Review and improve existing planned evacuation routes and staging areas to determine sufficient public safety resources required to establish and maintain perimeters, safety zones, and public order as well as facilitate evacuations and/or sheltering-in-place activities.
- Determine Appropriate Training and Exercises Necessary to Address Gaps
 - Develop a training strategy for all personnel.
 - Identify gaps in personnel training at the awareness and first response operational level, including familiarity with the expectations of and demands on public safety responders as set forth in agency plans, protocols, and procedures for a crisis response.

General Summary and Recommendations: Players are aware of procedures for handling the areas of focus in this activity, but again, more validation through reference to the EOP will likely guarantee knowledge of event procedures. An example of validation was needed during the inject pertaining to a chemical exposure, related to a reported MVA with multiple victims. Referencing the EOP would have revealed an appropriate HazMat or like annex or section, thus providing information pertaining to Emergency Response Guides and preparing ED staff for

potential incoming mass casualties. Security personnel demonstrated preparedness and knowledge of potential concerns, but only from an internal perspective. This level of preparedness is sufficient, however, only under the assumption that internal resources will be adequate given a disaster scenario. More detailed understanding and familiarity with handling large-scale incidents is necessary, and could be accomplished by training and familiarizing players in the relevant section(s) of the EOP.



CAPABILITY: STAFFING

Activity 4.16.1- 4.16.4

Capability Summary: To provide safe and effective patient care during an emergency, staff roles are well defined; staff are oriented and trained in their assigned responsibilities; and staff maintains their competencies over time. Staff roles in emergencies are determined largely by the priority emergencies defined in the Hazard Vulnerability Analysis, and the reporting relationships in the command and control operations of the hospital. As such, staff must stand ready to adjust to changes in patient volume or acuity, work procedures or conditions, and response partners within and outside the hospital. (Note: Standards in the Medical Staff chapter define the processes for accepting independent practitioners as volunteers.) Staff roles and responsibilities may be documented in the EOP using a variety of formats: job action sheets, checklists, flow charts, etc.

Strengths:

- It was observed during the course of exercise conduct that all participants within the EOC were knowledgeable in terms of their respective areas of responsibility utilizing the Hospital Incident Command System (HICS).
- HIC identifies and requests additional resources as requested/necessary.
- Staff is exceptionally capable of handling problems relevant to their role and associated job duties, and nearly always managed to produce a solution to problems as they arose.
- Despite this facility's modification of the exercise format (from FSE to TTX), the EOC and EOC/HICS players demonstrated clear NIMS/ICS/HICS compliant identification methods

Areas for Improvement:

- It was not observed that the hospital addressed how it communicates to licensed independent practitioners their roles in emergency response and to whom they report during an emergency.
- IC and staff should consider delegating responsibilities more. HIC was capable of understanding a wide variety of problem areas. However, focusing on the details of each problem can distract from the overall large picture of emergency response.

- Relevant HEOC players are extremely knowledgeable in terms of overall awareness of how their daily roles are to adjust in the setting of a disaster, which suggests that the step up to full comprehension of EOP-based job responsibilities would require minimal additional training and exercises. However, the additional focus on preparedness would assist with an even more efficient response process.

General Summary and Recommendations: Staff is exceptionally capable of handling problems related to their role and associated job duties, and nearly always managed to produce a solution to problems as they arose. Players demonstrated clear, NIMS/ICS/HICS compliant identification methods, and their equipment/identification methods were prepared and waiting for them promptly at the beginning of the exercise upon HEOC activation. Performance could be improved by delegating tasks more frequently so as to involve the entire Incident Management Staff as well as more frequent references to the EOP.



CAPABILITY: UTILITIES

Activity 4.17.1- 4.17.5

Capability Summary: Different types of emergencies can have the same detrimental impact on a hospital's utility systems. For example, brush fires, ice storms, and industrial accidents can all result in a loss of utilities required for care, treatment, services, related transport and building operations. Hospitals, therefore, must have alternative means of providing for essential utilities, whether through: negotiated relationships with the primary suppliers; Memoranda of Understanding (MOUs) with other hospitals in the community; alternative equipment at the hospital; or provision through a parent entity, etc. Hospitals should determine how long they expect to remain open to care for [patients, and plan for their utilities accordingly. Because some emergencies may be regional in scope or of long duration, hospitals should not rely solely on single source providers in the community. Where possible, hospitals should identify other suppliers outside of the local community in case the communities' infrastructure is severely compromised and unable to support the hospital.

Strengths:

- Injects relevant to fuel needs, generator capabilities, etc. were all addressed and handled immediately following time of inject by expected players

Areas for Improvement:

- Identify an alternative means of providing for the following utilities in the event that their supply is compromised or disrupted: other essential utility needs (for example, ventilation, medical gas/vacuum systems, etc.).
- Establish procedures for billing and reimbursement of the medication/equipment/supplies that are dispensed.
- Exercise demonstrated a need for additional training and regular testing of all back-up systems and capabilities.

General Summary and Recommendations: The injects relevant to this activity dealt mainly with questions about generator capabilities and fuel supply. Overall, these injects were presented by the HIC in a timely manner in the order received and were immediately handled or assumed by the players(s) who were expected to field each issue.

Reference to the EOP could have mitigated the inefficiency that followed a few of the initial responses to exercise injects. Player dialogue loosely identified mutual aid agreements between Grace and surrounding facilities, therefore it was felt that vague familiarity existed regarding the specifics of external resources and their availability.

In addition to the awareness and knowledge of back-up and alternative supply capabilities, it is noted that additional training and exercises may be necessary in order to confirm that all hospital personnel (and especially the players in the EOC) have a broad understanding and familiarity with the resources and processes outlined in the EOP for handling alternative supply issues. Issues related to billing, accountability, and tracking of supplies and vendors used during such disaster situations emerged during the exercise, and could have been handled more promptly through reference to the EOP.



CAPABILITY: CLINICAL ACTIVITY

Activity 4.18.1- 4.18.6

Capability Summary: The fundamental goal of emergency management planning is to protect life and prevent disability. The manner in which care, treatment, and services are provided may vary by type of emergency. However, certain clinical activities are so fundamental to safe and effective care that the hospital should determine how it will re-schedule or manage patient clinical needs even under the most dynamic situations or in the most austere care environments

Strengths:

- HEOC players immediately identified and established areas within the facility that could be repurposed during a disaster for use as secondary triage areas
- HEOC staff were knowledgeable in facility capabilities (in terms of bed capacity, and areas that could be repurposed for surge capacities), and identified the potential for handling overflow patients from within areas of Grace, as well as overflow from surrounding facilities

Areas for Improvement:

- Consider the discussion of plans to manage the following during emergencies: clinical services for vulnerable populations served by the hospital, including patients who are pediatric, geriatric, disabled, or have serious chronic conditions or addictions; the mental health service needs of its patients; and mortuary services.

General Summary and Recommendations: Grace Hospital is fortunate to have as its Command Center staff a cadre of players who bring a deep level of knowledge and experience with this hospital's operation to the table. This veteran-like experience base allowed players to handle much of the issues within this activity. This grouping of varying experiences can tend to lead into discussions beyond the task at hand. It is imperative that the group consider focusing on establishing and maintaining incident objectives throughout the incident. It is a confident assumption that the EOC players would have identified and attempted to address the patient populations and the needs and services pertaining to this activity, given enough time. It is especially important to point out the observation of a level of caring present in player discussions which demonstrated their determined, unwavering commitment to caring for and ensuring the safety of the patients within this facility.

OVERALL SUMMARY: Blue Ridge Health

Failure to reference the EOP to ensure response accuracy and efficiency is the foremost area for improvement. The exercise also revealed other modest but notable errors such as responsibility delegation. The exceptionally capable and knowledgeable group that serves as Grace's HCIS staff ultimately recognized staffing, personnel, supply chain, communications system, and other areas that were either in need of updating, required additional information, or inappropriate for managing future events. It was a pleasure to observe these thought processes as they emerged from the various discussions, occasionally resulting in the discovery of an issue in need of development. The importance of additional training and testing when it comes to effective utilization of the EOP cannot be overemphasized.



Catawba Valley Medical Center

CAPABILITY: EMERGENCY OPERATIONS PLANNING

Activity 4.12.1- 4.12.7

Capability Summary: A successful response relies upon planning around the management of six critical areas: communications; resources and assets; safety and security; staffing; utilities; and clinical activities. It is important for hospitals to develop a comprehensive Emergency Operations Plan (EOP) as documentation to help guide the hospital in its emergency response and recovery efforts. While the Emergency Operations Plan can be formatted in a variety of ways, it must address these six critical areas to serve as a blueprint for managing care and safety during an emergency.

Strengths:

- The hospital demonstrated thorough knowledge of a detailed EOP plan.
- All tasks and objectives were met.
- The plan showed an efficient and effective incident command structure.

Areas for Improvement:

- The Alternate Care Site Plan or plans should be referenced in the EOP.

General Summary and Recommendations: Overall hospital staff demonstrated thorough knowledge of the EOP, all tasks were accomplished. It is recommended that the EOP make relevant references to the Alternate Care Site Plan so that actors will be familiar with the process of determining need for an ACF and initiating set-up.



CAPABILITY: COMMUNICATIONS

Activity 4.13.1- 4.13.14

Capability Summary: In our everyday life of carrying out our responsibilities on the job communication is by far one of the most important. During demanding circumstances those communication tools that are available to us become all that more important and even more important is the fact that personnel understand their use. Sometimes even the simple things such as operating an unfamiliar phone line can cause problems in communicating very important information. In this section hospital were evaluated on fourteen key areas. The following are the results:

Strengths:

- Overall communication, both internal and external, was excellent.

Areas for Improvement:

- VIPER in the EOC will not allow for uninterrupted service with the VIPER in the ED. This creates both a risk and an aversion to using this highly beneficial system

General Summary and Recommendations: All tasks and requirements based on the Exercise Evaluation Guide for communications were met. Test and review VIPER communications between the EOC and ED and make changes to allow for uninterrupted service. Instate necessary drills and exercises to ensure that this level of communications capability is maintained, update contact lists, and train all new personnel on the use of communication tools and systems.

**CAPABILITY: RESOURCES AND ASSETS****Activity 4.14.1- 4.14.11**

Capability Summary: During emergencies, health care organizations that continue to provide care, treatment, and services to their patients must sustain essential resources, materials, and facilities. The emergency operation plan should identify how resources and assets will be solicited and acquired from a range of possible sources, such as vendors, neighboring health care providers, other community hospitals, state affiliates, or a regional parent company. To address emergencies of long duration or broad geographic scope, the hospital's plan must proactively identify, locate, acquire, distribute and account for critical resources and supplies. The plan should also recognize the risk that some assets may not be available from planned sources and that contingency plans will be necessary for critical supplies. This situation may occur when multiple hospitals are vying for a limited supply from the same vendor.

Strengths:

- The hospital demonstrated sufficient preparation in acquiring and managing medications.
- Though the scenario did not allow players to access their warehouse, it is noted that the hospital has an additional 4-day supply of food on top of the identified 2-day supply on site.
- Though the hospital is reliant on an outside vendor their laundry needs, steps were initiated to reduce usage during the shortage.

Areas for Improvement:

- It was not determined whether the hospital had sufficient plans in place for acquiring, preparing, or serving food.

- It was not determined whether the hospital had sufficient plans in place for the collection, cleaning, and distribution of laundry and clean linen.

General Summary and Recommendations: Plans for acquiring medications in an emergency were well-rehearsed but there was some evidence that emergency plans for food acquisition and laundry services were somewhat overlooked. The plan should be reviewed to ensure that it contains sufficient procedures for acquiring food and cooking staff in the event of an emergency, including facilities to store food. Laundry services should be reviewed as well, especially capabilities on alternate care sites.

CAPABILITY: SAFETY AND SECURITY

Activity 4.15.1- 4.15.7

Capability Summary: Controlling the movement of individuals into, throughout, and out of the hospital during an emergency is essential to the safety of patients and staff, and to the security of critical supplies, equipment, and utilities. The hospital determines the type of access and movement to be allowed by staff, patients, visitors, emergency volunteers, vendors, maintenance and repair workers, utility suppliers, and other individuals when emergency measures are initiated. Factors influencing access and movement vary depending upon the type of emergency and local conditions (i.e. the decision by the hospital to shelter staff families, the allowance for or prohibition against firearms, mutual aid agreements with nearby facilities or vendors, etc.).

Strengths:

- Unable to determine strengths of the safety/security plan, provisions were not discussed.

Areas for Improvement:

- Evaluation of safety-security plan.

General Summary and Recommendations: An adequate safety/security plan should address the following tasks: identifying the role of community service agencies and procedures for coordination; management of hazardous materials; decontamination of radioactive, biological, or chemical hazards; controlling entrances into and out of the facility; controlling public movement within the health care facility; and controlling traffic accessing the facility during emergencies.



CAPABILITY: STAFFING

Activity 4.16.1- 4.16.4

Capability Summary: To provide safe and effective patient care during an emergency, staff roles are well defined; staff are oriented and trained in their assigned responsibilities; and staff maintains their competencies over time. Staff roles in emergencies are determined largely by the priorities defined in the Hazard Vulnerability Analysis, and the reporting relationships in the command and control operations of the hospital. As such, staff must stand ready to adjust to changes in patient volume or acuity, work procedures or conditions, and response partners within and outside the hospital. (Note: Standards in the Medical Staff chapter define the processes for accepting independent practitioners as volunteers.) Staff roles and responsibilities may be documented in the EOP using a variety of formats: job action sheets, checklists, flow charts, etc.

Strengths:

- All tasks and requirements were achieved.

Areas for Improvement:

- None identified.

General Summary and Recommendations: The staffing plans accomplish all necessary tasks of defining roles for critical areas, offering sufficient training to fulfill these assigned roles, providing for communication to independent practitioners concerning their roles in emergencies, and establishing a process for identifying care providers assigned to particular areas. Consider adopting plans to maintain current staffing capabilities through training, updated contact lists, and updated agreements with all potential surge staff.



CAPABILITY: UTILITIES

Activity 4.17.1- 4.17.5

Capability Summary: Different types of emergencies can have the same detrimental impact on a hospital's utility systems. For example, brush fires, ice storms, and industrial accidents can all result in a loss of utilities required for care, treatment, services, related transport and building operations. Hospitals, therefore, must have alternative means of providing for essential utilities, whether through: negotiated relationships with the primary suppliers; Memoranda of Understanding (MOUs) with other hospitals in the community; alternative equipment at the hospital; or provision through a parent entity, etc. Hospitals should determine how long they expect to remain open to care for patients, and plan for their utilities accordingly. Because some emergencies may be regional in scope or of long duration, hospitals should not rely solely on single source providers in the community. Where possible, hospitals should identify other suppliers outside of the local community in case the communities' infrastructure is severely compromised and unable to support the hospital.

Strengths:

- All tasks and requirements were achieved.

Areas for Improvement:

- No areas of improvement were identified.

General Summary and Recommendations: All tasks were accomplished in the area of utilities.

CAPABILITY: CLINICAL ACTIVITY**Activity 4.18.1- 4.18.6**

Capability Summary: The fundamental goal of emergency management planning is to protect life and prevent disability. The manner in which care, treatment, and services are provided may vary by type of emergency. However, certain clinical activities are so fundamental to safe and effective care that the hospital should determine how it will re-schedule or manage patient clinical needs even under the most dynamic situations or in the most austere care environments

Strengths:

- All tasks and requirements were achieved.

Areas for Improvement:

- Re-evaluate Morgue plan

General Summary and Recommendations: All tasks were accomplished in the area of utilities but the evaluator felt it useful to review the morgue plan to ensure that sufficient provisions were made to accommodate a large-scale and/or long-term event.

**OVERALL SUMMARY: Catawba Valley Medical Center**

Catawba Valley Medical Center showed excellent performance in the areas of communications, staffing, and utilities. Only a few relevant details concerning Emergency Operations Planning, Resource Management, and security activities were identified. These plans include those that have to do with ACS, laundry services, and the morgue plan. All of these tasks were given insufficient attention by actors for evaluators to determine their proficiency. These plans should be reviewed and tested in future exercises.

CMC- Main

CAPABILITY: EMERGENCY OPERATIONS PLANNING

Activity 4.12.1- 4.12.7

Capability Summary: A successful response relies upon planning around the management of six critical areas: communications; resources and assets; safety and security; staffing; utilities; and clinical activities. It is important for hospitals to develop a comprehensive Emergency Operations Plan (EOP) as documentation to help guide the hospital in its emergency response and recovery efforts. While the Emergency Operations Plan can be formatted in a variety of ways, it must address these six critical areas to serve as a blueprint for managing care and safety during an emergency.

Strengths:

- It was observed through the exercise that the hospital's Emergency Operations Plan is well constructed and appropriately addresses areas consistent with activity.
- All personnel within the ICC brought a copy of the EOP to the exercise.

Areas for Improvement:

- Ensure that job descriptions are placed within the EOP.
- Consider delegating tasks more frequently.

General Summary and Recommendations: It should be noted that activation for this event was the first activation for the Incident Commander and some of the section chiefs. Even with this in mind, the entire staff performed extremely well. Recommendations include written checklists and job descriptions within the EOP. Continued training on the EOP will lead to a more seamless assignment of tasks and delegation of responsibilities to respective positions throughout the EOC.



CAPABILITY: COMMUNICATIONS

Activity 4.13.1- 4.13.14

Capability Summary: In our everyday life of carrying out our responsibilities on the job communication is by far one of the most important. During exigent circumstances those communication tools that are available to us become all that more important and even more important is the fact that personnel understand their use. Sometimes even the simple things such as operating an unfamiliar phone line can cause problems in communicating very important information. In this section hospital were evaluated on fourteen key areas. The following are the results:

Strengths:

- The Public Information Officer sent multiple messages and news releases out to patients and the general public.
- Decisions regarding capacity and allocation for general public were thoroughly analyzed and discussed.

Areas for Improvement:

- It is important for the facility to have backup systems in place for communications, more specifically the VIPER system.
- Consideration for repairs of the paging system should be noted.
- Assigning a scribe early on will aid in documentation of actions taken during ICC activation.
- There may be a need for a contact list of essential personnel.

General Summary and Recommendations: IC took all measures to keep employees and the public informed of situational updates. It was also noted that the hospital took extra care to make public education and awareness announcements regarding safety during a winter weather event. Communication can be improved by ensuring a consistent message is flowing among the staff and the PIO. Email systems were observed to be slow in transmitting messages of importance. Measures should be instated to continuously update communication lists and systems.

**CAPABILITY: RESOURCES AND ASSETS****Activity 4.14.1- 4.14.11**

Capability Summary: During emergencies, health care organizations that continue to provide care, treatment, and services to their patients must sustain essential resources, materials, and facilities. The emergency operation plan should identify how resources and assets will be solicited and acquired from a range of possible sources, such as vendors, neighboring health care providers, other community hospitals, state affiliates, or a regional parent company. To address emergencies of long duration or broad geographic scope, the hospital's plan must proactively identify, locate, acquire, distribute and account for critical resources and supplies. The plan should also recognize the risk that some assets may not be available from planned sources and that contingency plans will be necessary for critical supplies. This situation may occur when multiple hospitals are vying for a limited supply from the same vendor.

Strengths:

- Adequate plans in place for maintaining inventory.

Areas for Improvement:

- Consider the need for a master resource list of all internal and external resources available.

General Summary and Recommendations: The facility showed that planning for resources is a top priority by having systems in place to manage and allocate equipment, medications and supplies. It is recommended that a master list of all resources available be compiled for quick reference during ICC activation.

**CAPABILITY: SAFETY AND SECURITY****Activity 4.15.1- 4.15.7**

Capability Summary: Controlling the movement of individuals into, throughout, and out of the hospital during an emergency is essential to the safety of patients and staff, and to the security of critical supplies, equipment, and utilities. The hospital determines the type of access and movement to be allowed by staff, patients, visitors, emergency volunteers, vendors, maintenance and repair workers, utility suppliers, and other individuals when emergency measures are initiated. Factors influencing access and movement vary depending upon the type of emergency and local conditions (i.e. the decision by the hospital to shelter staff families, the allowance for or prohibition against firearms, mutual aid agreements with nearby facilities or vendors, etc.).

Strengths:

- It was observed that the security function of the facility demonstrated a thorough and workable plan for actions taken during an event of this magnitude.
- All doors were locked from the outside except the main door to allow general public access
- Security personnel were placed throughout the facility.
- Hospital has internal decontamination unit if needed.

Areas for Improvement:

- Many security personnel arrived to work without being requested.

General Summary and Recommendations: It was evident throughout the exercise that the security function is a priority to the facility. This was proven through rapid response and detailed procedures. The only recommendation for this capability is to have a system in place for informing personnel when it is necessary for them to report to work. When considering staffing based on the potential of limited availability during an event such as a winter storm, it is important to have well rested personnel on a structured shift rotation. If all personnel arrive to work, it burdens the system with extra liability and limits personnel resources for extended operational periods.

CAPABILITY: STAFFING**Activity 4.16.1- 4.16.4**

Capability Summary: To provide safe and effective patient care during an emergency, staff roles are well defined; staff are oriented and trained in their assigned responsibilities; and staff maintains their competencies over time. Staff roles in emergencies are determined largely by the priority emergencies defined in the Hazard Vulnerability Analysis, and the reporting relationships in the command and control operations of the hospital. As such, staff must stand ready to adjust to changes in patient volume or acuity, work procedures or conditions, and response partners within and outside the hospital. (Note: Standards in the Medical Staff chapter define the processes for accepting independent practitioners as volunteers.) Staff roles and responsibilities may be documented in the EOP using a variety of formats: job action sheets, checklists, flow charts, etc.

Strengths:

- Staff is properly trained and ready to perform their individual functions during an emergency event.
- Personnel were properly identified with photo cards.
- The ICC had an adequate number of appropriate vests.

Areas for Improvement:

- Ensure that job descriptions are developed and placed within the EOP.

General Summary and Recommendations: Staff is exceptionally capable of handling problems relevant to their role and associated job duties, and nearly always managed to produce a solution to problems as they arose. Players demonstrated clear NIMS/ICS/HICS compliant identification methods. Considering most were new to their respective positions, this response was highly commendable.

**CAPABILITY: UTILITIES****Activity 4.17.1- 4.17.5**

Capability Summary: Different types of emergencies can have the same detrimental impact on a hospital's utility systems. For example, brush fires, ice storms, and industrial accidents can all result in a loss of utilities required for care, treatment, services, related transport and building operations. Hospitals, therefore, must have alternative means of providing for essential utilities, whether through: negotiated relationships with the primary suppliers; Memoranda of Understanding (MOUs) with other hospitals in the community; alternative equipment at the hospital; or provision through a parent entity, etc. Hospitals should determine how long they expect to remain open to care for [patients, and plan for their utilities accordingly. Because some

emergencies may be regional in scope or of long duration, hospitals should not rely solely on single source providers in the community. Where possible, hospitals should identify other suppliers outside of the local community in case the communities' infrastructure is severely compromised and unable to support the hospital.

Strengths:

- Fuel process allows for recirculation and filtering, ensuring quality product
- Adequate 96 hour supply of fuel and water.
- Facility has a backup system composed of 2 wells for water storage and distribution.
- Facility has 3 separate water lines for intake.

Areas for Improvement:

- None noted

General Summary and Recommendations: The hospital appears to take great measures to ensure backup utility systems. All are identified and in place. This nearly guarantees continuity of operations in the likelihood that primary services are disrupted.



CAPABILITY: CLINICAL ACTIVITY

Activity 4.18.1- 4.18.6

Capability Summary: The fundamental goal of emergency management planning is to protect life and prevent disability. The manner in which care, treatment, and services are provided may vary by type of emergency. However, certain clinical activities are so fundamental to safe and effective care that the hospital should determine how it will re-schedule or manage patient clinical needs even under the most dynamic situations or in the most austere care environments

Strengths:

- Plans are developed to ensure continuity of services for various populations of patients and incoming residents from the general public.

Areas for Improvement:

- None noted.

General Summary and Recommendations: No recommendations needed for this activity.

OVERALL SUMMARY: CMC Charlotte

Overall, it was observed that this facility has a well-organized and very proficient ICC. Each participant responded and performed with the utmost professionalism and knowledge. Consideration should be given to the physical location of the ICC. The need for additional staff and personnel grows with the complexity of the event. If there is not adequate space provided to work, physical limitations may compromise performance. This tends to lead to frustration and demoralizing work environments, taking focus away from the objective of mitigating the event. Though the space in the ICC is a concern, staff members showed thorough knowledge of procedures and use of equipment. It may be beneficial to consider the utilization of overhead projectors and digital capturing systems to ensure proper documentation of all tasks addressed within the activation period. Again, the response from this facility was well orchestrated; continued training of NIMS and internal processes will ensure quality response in the future.



CMC- Mercy

CAPABILITY: EMERGENCY OPERATIONS PLANNING

Activity 4.12.1- 4.12.7

Capability Summary: A successful response relies upon planning around the management of six critical areas: communications; resources and assets; safety and security; staffing; utilities; and clinical activities. It is important for hospitals to develop a comprehensive Emergency Operations Plan (EOP) as documentation to help guide the hospital in its emergency response and recovery efforts. While the Emergency Operations Plan can be formatted in a variety of ways, it must address these six critical areas to serve as a blueprint for managing care and safety during an emergency.

Strengths:

- Mercy Hospital has a written emergency operations plan (EOP) that describes an “all-hazards” command structure for the hospital during an emergency
- Mercy established an incident command structure that is integrated into and consistent with the Hospital System they serve
- The staff reported to the hospital’s incident commander. Staffmembers knew their roles and responsibilities and utilized their job action sheets to ensure everything was getting completed.
- Had a scribe keep up with the information that was coming into and going out of the EOC

Areas for Improvement:

- Need to use an IAP to establish incident objective and to document the command structure (along with any other needed documentation).

General Summary and Recommendations: Overall the Emergency Management Activity was well addressed. The hospital established an Incident Command System with clearly defined roles and responsibilities that were understood by each member of the staff. Developing an Incident Action Plan is critical when managing an incident to ensure that attainable objectives are established, monitored and updated for a more organized approach.



CAPABILITY: COMMUNICATIONS

Activity 4.13.1- 4.13.14

Capability Summary: In our everyday life of carrying out our responsibilities on the job communication is by far one of the most important. During exigent circumstances those

communication tools that are available to us become all that more important and even more important is the fact that personnel understand their use. Sometimes even the simple things such as operating an unfamiliar phone line can cause problems in communicating very important information. In this section hospital were evaluated on fourteen key areas. The following are the results:

Strengths:

- Mercy has plans for notifying staff when emergency responses are initiated.
- Mercy has plans for ongoing communication of information and instructions to its staff once emergency response measures are initiated. They also have back up means in the event that primary communication system fails by utilizing the internal communication system and portable radios.
- Mercy has plans for communicating with purveyors of essential supplies, services, and equipment once emergency measures are initiated. They maintain supplies for the hospital for 96 hours at a minimum for linen, water, food and medicines. They have MOUs with these vendors to ensure services and supplies will be available as needed.
- Mercy has plans for communicating with identified alternate care sites and understands their procedures for continuing services to dialysis patients when water supply is compromised.

Areas for Improvement:

- Consideration should be given to modifying the notification system.

General Summary and Recommendations: Mercy demonstrated adequate plans for notification and communication during this type of event. Though backup systems are in place, the primary notification system should be reviewed for potential updates. Items observed to require review include: overhead pages not being heard by some of the staff, lack of overhead speakers in portions of the facility, delay in paging personnel, lack of clarity as to who should be paged initially and essential personnel not being paged. These items can be addressed by simply testing the paging system on a regular basis to ensure updates are made and systems operate properly.



CAPABILITY: RESOURCES AND ASSETS

Activity 4.14.1- 4.14.11

Capability Summary: During emergencies, health care organizations that continue to provide care, treatment, and services to their patients must sustain essential resources, materials, and facilities. The emergency operation plan should identify how resources and assets will be solicited and acquired from a range of possible sources, such as vendors, neighboring health care providers, other community hospitals, state affiliates, or a regional parent company. To address

emergencies of long duration or broad geographic scope, the hospital's plan must proactively identify, locate, acquire, distribute and account for critical resources and supplies. The plan should also recognize the risk that some assets may not be available from planned sources and that contingency plans will be necessary for critical supplies. This situation may occur when multiple hospitals are vying for a limited supply from the same vendor.

Strengths:

- Mercy has plans for obtaining supplies that will be required at the onset of emergency response. Logistics knew exactly where the supplies could be obtained immediately as the incident developed. Each department was very knowledgeable about supplies on hand and how to obtain more as needed.
- Mercy has plans for: managing staff support activities including housing, transportation, incident stress debriefing, etc. They had plans for rest areas in the hospital and had a transport plan for staff and patients and their families.

Areas for Improvement:

- None noted.

General Summary and Recommendations: The facility showed that planning for resources is a top priority by having systems in place to manage and allocate equipment, medications and supplies.



CAPABILITY: SAFETY AND SECURITY

Activity 4.15.1- 4.15.7

Capability Summary: Controlling the movement of individuals into, throughout, and out of the hospital during an emergency is essential to the safety of patients and staff, and to the security of critical supplies, equipment, and utilities. The hospital determines the type of access and movement to be allowed by staff, patients, visitors, emergency volunteers, vendors, maintenance and repair workers, utility suppliers, and other individuals when emergency measures are initiated. Factors influencing access and movement vary depending upon the type of emergency and local conditions (i.e. the decision by the hospital to shelter staff families, the allowance for or prohibition against firearms, mutual aid agreements with nearby facilities or vendors, etc.).

Strengths:

- Mercy has an established internal security and safety system that was utilized once emergency measures were initiated. Security was on hand in the EOC to provide support. There was good communication through two way radios.
- VIPER test worked well for the first time according to staff.
- Mercy established processes for controlling entrance into and out of the hospital during emergencies.

Areas for Improvement:

- Information regarding the disaster was not relayed between all agencies on the hospital campus

General Summary and Recommendations: It was evident through this activity that the security function is a priority to the facility. It is recommended that plans be developed for communicating information throughout the hospital campus safely.

**CAPABILITY: STAFFING****Activity 4.16.1- 4.16.4**

Capability Summary: To provide safe and effective patient care during an emergency, staff roles are well defined; staff are oriented and trained in their assigned responsibilities; and staff maintains their competencies over time. Staff roles in emergencies are determined largely by the priority emergencies defined in the Hazard Vulnerability Analysis, and the reporting relationships in the command and control operations of the hospital. As such, staff must stand ready to adjust to changes in patient volume or acuity, work procedures or conditions, and response partners within and outside the hospital. (Note: Standards in the Medical Staff chapter define the processes for accepting independent practitioners as volunteers.) Staff roles and responsibilities may be documented in the EOP using a variety of formats: job action sheets, checklists, flow charts, etc.

Strengths:

- Mercy's staff roles and responsibilities are defined in the Emergency Operations Plan for all critical areas (communications, resources and assets, safety and security, utilities and clinical activities).
- The incident commander and the operation section chief did a great job with understanding their roles and demonstrating their experience.
- Responsibilities and expectations were known.
- Vests were used to identify personnel in specific roles.
- Briefings were conducted to keep personnel as well as the main hospital updated.
- Mercy's staff is trained for their assigned roles during emergencies and had job action sheets available for all positions if needed.

Areas for Improvement:

- Size of EOC is not adequate and distance from main operations could be a problem.
- Technology available for the facility was not accessible in the EOC.

General Summary and Recommendations: Staff is exceptionally capable of handling problems relevant to their role and associated job duties, and nearly always managed to produce

a solution to problems as they arose. Players demonstrated clear NIMS/ICS/HICS compliant identification methods. Areas of consideration should be given to the physical location of the ICC. The need for additional staff and personnel grows with the complexity of an event. If there is not adequate space provided to work, physical limitations can compromise performance. This tends to lead to frustration and demoralizing work environments, taking focus away from the objective of mitigating the event.



CAPABILITY: UTILITIES

Activity 4.17.1- 4.17.5

Capability Summary: Different types of emergencies can have the same detrimental impact on a hospital's utility systems. For example, brush fires, ice storms, and industrial accidents can all result in a loss of utilities required for care, treatment, services, related transport and building operations. Hospitals, therefore, must have alternative means of providing for essential utilities, whether through: negotiated relationships with the primary suppliers; Memoranda of Understanding (MOUs) with other hospitals in the community; alternative equipment at the hospital; or provision through a parent entity, etc. Hospitals should determine how long they expect to remain open to care for [patients, and plan for their utilities accordingly. Because some emergencies may be regional in scope or of long duration, hospitals should not rely solely on single source providers in the community. Where possible, hospitals should identify other suppliers outside of the local community in case the communities' infrastructure is severely compromised and unable to support the hospital.

Strengths:

- Mercy has identified an alternative means of providing for the following utilities in the event that their supply is compromised or disrupted: electricity via generator.
- Staff knew how long they could run on generator power without being refueled.
- Mercy has identified an alternative means of providing for the following utilities in the event that their supply is compromised or disrupted: water needed for consumption and essential care activities. They have two main lines of water coming into the hospital. They keep drinking water on hand and have access to potable water should both water lines break.

Areas for Improvement:

- None noted

General Summary and Recommendations: The hospital appears to take great measures to ensure backup utility systems are identified and in place. This nearly guarantees a continuity of operations in the likelihood that primary services are disrupted.

CAPABILITY: CLINICAL ACTIVITY

Activity 4.18.1- 4.18.6

Capability Summary: The fundamental goal of emergency management planning is to protect life and prevent disability. The manner in which care, treatment, and services are provided may vary by type of emergency. However, certain clinical activities are so fundamental to safe and effective care that the hospital should determine how it will re-schedule or manage patient clinical needs even under the most dynamic situations or in the most austere care environments

Strengths:

- Mercy has plans to manage the following during emergencies: the clinical activities required as part of patient scheduling, triage, assessment, treatment, admission, transfer, discharge, and evacuation.
- Non-essential services were cancelled and patients who could be discharged were discharged early prior to the mass accumulations of ice and snow.
- Transportation services were utilized during the snow and ice to help get patients home or to an alternative location.
- Mercy has plans to manage the following during emergencies: clinical services for vulnerable populations served by the hospital, including patients who are pediatric, geriatric, disabled, or have serious chronic conditions or addictions. This may be accomplished through the use of physician services and faith based agencies.
- Mercy has plans to manage the following during emergencies: personal hygiene and sanitation needs of its patients. When the water main broke, they had a plan to handle the situation. They manual added water to the toilets to keep up the sanitation.

Areas for Improvement:

- None noted.

General Summary and Recommendations: No recommendations needed for this activity.



OVERALL SUMMARY: CMC Mercy

Overall, it was observed that this facility has a well-organized and very proficient ICC. Each participant responded and performed with extensive experience and knowledge. As previously noted, consideration should be given to the physical location of the ICC. The need for additional staff and personnel grows with the complexity of the event. If there is not adequate space provided to work, physical limitations can compromise response. This tends to lead to frustration and demoralizing work environments, taking focus away from the objective of mitigating the event. Again, the response from this facility was well orchestrated. Continued training of NIMS and internal processes will ensure quality response in the future.

CMC Lincoln

CAPABILITY: EMERGENCY OPERATIONS PLANNING

Activity 4.12.1- 4.12.7

Capability Summary: A successful response relies upon planning around the management of six critical areas: communications; resources and assets; safety and security; staffing; utilities; and clinical activities. It is important for hospitals to develop a comprehensive Emergency Operations Plan (EOP) as documentation to help guide the hospital in its emergency response and recovery efforts. While the Emergency Operations Plan can be formatted in a variety of ways, it must address these six critical areas to serve as a blueprint for managing care and safety during an emergency.

Strengths:

- Emergency food plan was implemented immediately with a one week supply of food available.
- The plan identified alternative care sites for overflow and special needs patients.

Areas for Improvement:

- There was some confusion as to whether or not an evacuation plan was included in the Emergency Activation Plan.
- EOC members were, at times, unfamiliar with the provisions of the emergency response plan, including those for instating alternate utility sources.

General Summary and Recommendations: EOC members took prompt action in implementing the emergency response plan. Actors seemed familiar with the majority of the plan but there were several provisions that not all EOC personnel were aware of. The confusion over the hospital's emergency evacuation policy was eventually settled as it was located on the intra-net and displayed on the power point for review. There was a misconception that an alternative utilities agreement existed with the local fire department when there was no agreement. The exercise itself worked to familiarize all relevant players with the provisions of the plan, but further review is always beneficial, especially with secondary and substitute EOC staff. With regards to streamlining operations, EOC cheat sheets for all video equipment and set-up procedures would be helpful in the event of personnel substitutes.

CAPABILITY: COMMUNICATIONS**Activity 4.13.1- 4.13.14**

Capability Summary: In our everyday life of carrying out our responsibilities on the job communication is by far one of the most important. During exigent circumstances those communication tools that are available to us become all that more important and even more important is the fact that personnel understand their use. Sometimes even the simple things such as operating an unfamiliar phone line can cause problems in communicating very important information. In this section hospital were evaluated on fourteen key areas. The following are the results:

Strengths:

- Emergency Room Staff was familiar with VMN and received training in VMN operations the week prior to the exercise. Portable VMN radios are available in limited quantities for the hospital.
- The hospital initiated public notification of the hazards of carbon dioxide poisoning and requested an emergency broadcast message through all available media outlets.

Areas for Improvement:

- The EOC realized half an hour into the exercise that emergency phone calls were inadvertently being directed to voice mail and potentially critical information might be lost or ignored.
- The VMN in the EOC and the portable VMN in the emergency room proved inoperable two hours into the exercise.

General Summary and Recommendations: The hospital quickly notified staff, outside agencies, and other health care facilities of all relevant emergency information. The hospital also initiated public notification of potential hazards. They quickly established contact with vendors and purveyors of essential supplies. The EOC is equipped with video conferencing and other community partners have the same capabilities but this was not used during the exercise. Other parts of the hospital campus are also equipped with video conferencing. There was some confusion regarding the status of exercise participants which was quickly cleared up but the hospital should take care not to rely on email or text messaging correspondence that is sent to one individual, especially in an emergency situation. It was not observed whether the hospital had sufficient plans in place for communicating with alternative care sites or how many back up communication plans and systems were in place.



CAPABILITY: RESOURCES AND ASSETS

Activity 4.14.1- 4.14.11

Capability Summary: During emergencies, health care organizations that continue to provide care, treatment, and services to their patients must sustain essential resources, materials, and facilities. The emergency operation plan should identify how resources and assets will be solicited and acquired from a range of possible sources, such as vendors, neighboring health care providers, other community hospitals, state affiliates, or a regional parent company. To address emergencies of long duration or broad geographic scope, the hospital's plan must proactively identify, locate, acquire, distribute and account for critical resources and supplies. The plan should also recognize the risk that some assets may not be available from planned sources and that contingency plans will be necessary for critical supplies. This situation may occur when multiple hospitals are vying for a limited supply from the same vendor.

Strengths:

- Withers is a valuable resource for supply and logistics.
- Command staff worked quickly to identify additional areas available for employee housing.
- Agreements and plans for transportation of patients and staff were implemented quickly.
- Communication with supply distribution centers was initiated to determine availability and delivery conditions.
- Resource plans in the event of utility disruptions were in place and implemented immediately.

Areas for Improvement:

- It was not determined whether the plan provided for the shelter and needs of the families of hospital personnel.
- It was not determined whether the hospital's emergency transportation plan included the movement of critical patient information.

General Summary and Recommendations: The plan maintained that linens, towels, etc. would have been delivered and on hand to prepare for this type of event. The hospital believes they would have requested enough linen from the distribution center to last for one week. The EOC had several staff members who were highly adept resources for settling problems of supply and logistics. All logistical plans were thorough and implemented immediately. There were only a few tasks that were not observed in the course of the exercise to be reviewed and confirmed, such as attending to the families of personnel and the transport of patient information.

CAPABILITY: SAFETY AND SECURITY**Activity 4.15.1- 4.15.7**

Capability Summary: Controlling the movement of individuals into, throughout, and out of the hospital during an emergency is essential to the safety of patients and staff, and to the security of critical supplies, equipment, and utilities. The hospital determines the type of access and movement to be allowed by staff, patients, visitors, emergency volunteers, vendors, maintenance and repair workers, utility suppliers, and other individuals when emergency measures are initiated. Factors influencing access and movement vary depending upon the type of emergency and local conditions (i.e. the decision by the hospital to shelter staff families, the allowance for or prohibition against firearms, mutual aid agreements with nearby facilities or vendors, etc.).

Strengths:

- Decontamination stations were set up in the Emergency Room.
- Security is capable of locking down the Emergency Room and restricting access to employees only. The hospital security staff consists of five officers, and 14 local law enforcement officers part time.

Areas for Improvement:

- The hospital does not have a standing agreement providing law enforcement staffing in the event of this type of emergency, but have had great response in the past.
- The hospital is in the process of creating an emergency response locker where law enforcement officers could locate maps, door swipe cards, and phone contacts.
- It was not determined whether the hospital plan accounts for traffic control into and out of the hospital facility.

General Summary and Recommendations: Sergeant Campbell, who was in charge of security, assured the ICC that his entire work staff would be on site and visible in the public access areas to address any security issues that might arise. The hospital dealt with all security concerns immediately and took appropriate safety precautions with hazardous waste. The hospital does not have a standing agreement with local law enforcement to supply at least one officer for security in the event of civil unrest. For any large scale event, the hospital would be a primary location for citizens to seek refuge and essential supplies for life sustaining needs. A law enforcement officer should be on hand for a show of authority and to respond to disturbances. The security emergency response locker should prove highly beneficial in managing the hospital population during an emergency. It is recommended that the plan's provisions for traffic control be reviewed and confirmed.

CAPABILITY: STAFFING**Activity 4.16.1- 4.16.4**

Capability Summary: To provide safe and effective patient care during an emergency, staff roles are well defined; staff are oriented and trained in their assigned responsibilities; and staff maintains their competencies over time. Staff roles in emergencies are determined largely by the priority emergencies defined in the Hazard Vulnerability Analysis, and the reporting relationships in the command and control operations of the hospital. As such, staff must stand ready to adjust to changes in patient volume or acuity, work procedures or conditions, and response partners within and outside the hospital. (Note: Standards in the Medical Staff chapter define the processes for accepting independent practitioners as volunteers.) Staff roles and responsibilities may be documented in the EOP using a variety of formats: job action sheets, checklists, flow charts, etc.

Strengths:

- “Code Green” directed all employees to report early and be prepared to remain at work for an extended period.

Areas for Improvement:

- There were concerns regarding overstaffing.
- It was assumed that all alternate care facilities were appropriately staffed. Staffing concerns were not identified as a potential reason for relocation.
- There was some concern regarding staff documentation, tracking, and employee accountability.

General Summary and Recommendations: “Code Green” proved effective in notifying staff of the situation. The EOC automatically assumed that the skilled nursing facility would supply nursing staff to take care of their patients and did not consider that the reason for relocation might be due to a lack of personnel. They also failed to realize the impact of assigning their back-up nursing staff to care for these patients and how multiple shifts could extend their ability to effectively care for patients as the hospital admits additional clients. It was not determined whether the hospital has an established process for identifying care providers and other personnel assigned to particular areas during emergencies.



CAPABILITY: UTILITIES

Activity 4.17.1- 4.17.5

Capability Summary: Different types of emergencies can have the same detrimental impact on a hospital's utility systems. For example, brush fires, ice storms, and industrial accidents can all result in a loss of utilities required for care, treatment, services, related transport and building operations. Hospitals, therefore, must have alternative means of providing for essential utilities, whether through: negotiated relationships with the primary suppliers; Memoranda of Understanding (MOUs) with other hospitals in the community; alternative equipment at the hospital; or provision through a parent entity, etc. Hospitals should determine how long they expect to remain open to care for [patients, and plan for their utilities accordingly. Because some emergencies may be regional in scope or of long duration, hospitals should not rely solely on single source providers in the community. Where possible, hospitals should identify other suppliers outside of the local community in case the communities' infrastructure is severely compromised and unable to support the hospital.

Strengths:

- The hospital had several alternative plans for providing utilities in the event of failure or disruption.
- The hospital routinely maintains a week supply of oxygen based on peak usage.

Areas for Improvement:

- There was no generator heat for the MOB area proposed for employee housing.
- There is limited washer and dryer capability (residential and not commercial machines).
- It was revealed, in the course of the exercise that supposed agreements with the Boger Fire Department to deliver water by pump truck did not actually exist.
- It was not determined whether the hospital has sufficient plans in place for replenishing fuel required for building operations or essential transport.

General Summary and Recommendations: The plan has detailed alternatives for all utilities in the event of failure. The hospital has two generators, either of which is capable of sustaining the hospital. If one fails, there is a back-up. The majority of the EOC was unfamiliar with back-up water resupply plans. It was assumed that there were standing agreements with both the Boger Fire Department and a local farmer to supply alternate water but these agreements have not been confirmed. It is recommended that the plan be reviewed to ascertain whether all alternatives are viable and whether the plan makes sufficient provisions for fuel.

CAPABILITY: CLINICAL ACTIVITY**Activity 4.18.1- 4.18.6**

Capability Summary: The fundamental goal of emergency management planning is to protect life and prevent disability. The manner in which care, treatment, and services are provided may vary by type of emergency. However, certain clinical activities are so fundamental to safe and effective care that the hospital should determine how it will re-schedule or manage patient clinical needs even under the most dynamic situations or in the most austere care environments

Strengths:

- The EOC informed all relevant personnel of probable clinical cases (such as hypothermia).
- Spaces were identified to house non-patient civilians so as not to interfere with clinical activity.
- The hospital was able to maintain normal specialized services, such as pediatric services, despite the emergency.

Areas for Improvement:

- There were some issues with patient documentation, such as finding out whether certain equipment was vital to certain patients or merely supplemental (EOC staff were trying to determine the use of a CPAP machine to a particular patient).
- It was not determined whether the hospital was equipped to manage the mental health service needs of its patients.
- It was not determined whether the hospital retained sufficient plans for documenting and tracking patient clinical information.

General Summary and Recommendations: The hospital maintained clinical services for vulnerable populations and sufficient staff and alternative utility plans to service the needs of its patients. A few points in the plan, such as mental health capabilities and alternative documentation systems (in the event of system failure or interruption) were not observed. The hospital should confirm the existence and effectiveness of these plans. Also, confirmation of alternate utility sources (such as Boger Fire Department) is important to ensure that patient care is not interrupted.



OVERALL SUMMARY: CMC Lincoln

The EOC automatically assumed that the skilled nursing facility would supply nursing staff to take care of their patients and did not consider that the reason for relocation might be due to a lack of personnel. They also failed to realize the impact of assigning their back-up nursing staff to care for these patients and how multiple shifts could extend their ability to effectively care for patients as the hospital admits additional clients.

The hospital should not rely on email or text messaging correspondence that is sent to one individual. A lot of information may not be received or may be misinterpreted. Video conferencing was available throughout the hospital and also with community partners, but it was not utilized. Technical expertise for the use of this equipment would increase communication capabilities.

The EOC was unfamiliar with their back-up water resupply plans. The hospital does not have a standing agreement with local law enforcement to supply at least one officer for security in the event of civil unrest. For any large scale event, the hospital would be a primary location for citizens to seek refuge and essential supplies for life sustaining needs. A law enforcement officer should be on hand for a show of authority and to respond to any disturbances.

Apart from these few areas that require attention, the Lincoln EOC staff members proved resourceful and knowledgeable concerning the emergency plan. Public notification, identification of alternate care facilities, and confirmation of supply sources were accomplished with great efficiency.



CMC NorthEast

CAPABILITY: EMERGENCY OPERATIONS PLANNING

Activity 4.12.1- 4.12.7

Capability Summary: A successful response relies upon planning around the management of six critical areas: communications; resources and assets; safety and security; staffing; utilities; and clinical activities. It is important for hospitals to develop a comprehensive Emergency Operations Plan (EOP) as documentation to help guide the hospital in its emergency response and recovery efforts. While the Emergency Operations Plan can be formatted in a variety of ways, it must address these six critical areas to serve as a blueprint for managing care and safety during an emergency.

Strengths:

- The EOP plan includes a pre-determined priority for restoration of services.
- There is an on-site inventory of supplies for 5 days.
- Arriving HCC staff was well-informed of the current situation.

Areas for Improvement:

- HCC attempted to contact county EM coordinator and were instead transferred to the EMS office.
- It would be beneficial to review the chain of command and points of contact and update county lists.
- Task 4.12.6 was not observed. Task 4.12.6 ensures that the EOP/IAP identifies the hospital's capabilities and establishes response efforts when the hospital cannot be supported by the local community for at least 96 hours in the six critical areas.

General Summary and Recommendations: The CMC NorthEast EOP adequately addresses such areas as restoration of normal clinical services and clear documentation of resources. The plan prioritizes timely restoration of normal clinical activity, provides for extensive inventory of resources and identifies transportation assets for moving patients. It was ensured that all new-comers were well-informed of the situation and current events and provisions of the plan were communicated to all participants. However, there was some confusion regarding contact information for major community players which impeded the communication necessary for effective emergency operations planning. It is recommended that the lines of communication and list of contacts, especially for external partners in public safety, undergo updates and confirmation. The omission of Task 4.12.6 could be explained by the fact that the CMC NorthEast EOP does not cover evacuation and use of Alternate Care Facilities (ACF).

CAPABILITY: COMMUNICATIONS**Activity 4.13.1- 4.13.14**

Capability Summary: In our everyday life of carrying out our responsibilities on the job communication is by far one of the most important. During exigent circumstances those communication tools that are available to us become all that more important and even more important is the fact that personnel understand their use. Sometimes even the simple things such as operating an unfamiliar phone line can cause problems in communicating very important information. In this section hospital were evaluated on fourteen key areas. The following are the results:

Strengths:

- Demonstrated good planning and processes for notifying staff, external authorities, patients and families.

Areas for Improvement:

- Servers for critical functions have for the most part been consolidated at the CMC Charlotte site. There is potential vulnerability between the NorthEast site and the Charlotte site that could lead to a loss of connection with the remote servers.
- The IC manager (Nursing Services AOC) did not have access to hospital emergency management email site and was unable to monitor incoming emails.
- Some HCC personnel were not available when called to the HCC.
- HCC facility was fairly well organized and equipped with TVs, phones, fax and status boards. However, if the incident had lasted days or weeks instead of hours, it would have become cramped for lack of space. Suggest looking at a larger site within the hospital for use as an HCC.

General Summary and Recommendations: Overall, the NorthEast EOP makes adequate provisions for extensive and easy communication. The plan was last revised in 2010 and since has undergone minimal changes. The hospital demonstrated effective use of emergency communication plans and identified all relevant parties for notification, including external authorities. However, there is some concern that a loss of connection between the Charlotte and NorthEast sites could result in failure of remote access and the inability to access and process vital information (patient records, communication equipment, printers, phones, etc.). It is recommended that back-up systems, additional redundancy, or alternative methods be considered to ensure server access or effective communication of updated information. All HCC personnel should be granted appropriate points of access to email or information systems. It is useful to identify a list of at least three alternatives for each HCC role in the event that certain personnel are unreachable and also to review the list of required personnel to ensure that all potential needs are met (such as a scribe for documentation). The IC manager approves all local news releases. This process can (at some point) be transferred to the Charlotte site as needed. PIOs were in touch with other PIOs within the system. It was also noted that the HCC site was well-staffed and supplied but there were concerns that a prolonged or larger incident would result in a very

crowded HCC . It would be beneficial to review a list of potential HCC sites that might better address the need for space.



CAPABILITY: RESOURCES AND ASSETS

Activity 4.14.1- 4.14.11

Capability Summary: During emergencies, health care organizations that continue to provide care, treatment, and services to their patients must sustain essential resources, materials, and facilities. The emergency operation plan should identify how resources and assets will be solicited and acquired from a range of possible sources, such as vendors, neighboring health care providers, other community hospitals, state affiliates, or a regional parent company. To address emergencies of long duration or broad geographic scope, the hospital's plan must proactively identify, locate, acquire, distribute and account for critical resources and supplies. The plan should also recognize the risk that some assets may not be available from planned sources and that contingency plans will be necessary for critical supplies. This situation may occur when multiple hospitals are vying for a limited supply from the same vendor.

Strengths:

- The hospital's plan for obtaining supplies is thorough.
- Contracts are in place to ensure medical supplies, pharmaceuticals; non-medical supplies, etc. are replenished.
- The plan also covers support resources for staff and family as well as the sharing of resources.
- There is an emergency supply order for automatic shipments if the hospital has not been heard from in 48 hours.

Areas for Improvement:

- Printers proved to be extremely slow when staff decided to test them for printing patient records.
- Printed records were several months old (August, 2010 from downtime solutions). This appeared to be tied to the remote server issue. This would be problematic should the facility have to be evacuated to an ACF, or to maintain continuity of operations.

General Summary and Recommendations: Overall, the hospital plan covers the areas in this activity. Supplies are ensured by supplementary plans and contracts which include provisional support for all potential populations in the facility, including staff and family. The plan also takes care to ensure that supply chains will not be interrupted should communications fail. However, a few technical issues stand to impede operations. There was a concern that remote server access at the two facilities affected the ability to print patient records and that the lack of a secondary printing system would become a problem in the event of relocation to an Alternate Care Facility. Task 4.14.9 in the Emergency Evaluation Guide ensures that the hospital has plans for evacuating (both horizontally and, when required by circumstances, vertically)

when the environment cannot support care, treatment, and services. It was not determined whether the EOP fulfilled this requirement. Task 4.14.11 in the Emergency Evaluation Guide ensures that the hospital plans for transporting pertinent information, including essential clinical and medication-related information, for patients to an alternative care site or sites when the environment cannot support care, treatment, and services. It was not conclusively determined whether the EOP made adequate provisions for this task.



CAPABILITY: SAFETY AND SECURITY

Activity 4.15.1- 4.15.7

Capability Summary: Controlling the movement of individuals into, throughout, and out of the hospital during an emergency is essential to the safety of patients and staff, and to the security of critical supplies, equipment, and utilities. The hospital determines the type of access and movement to be allowed by staff, patients, visitors, emergency volunteers, vendors, maintenance and repair workers, utility suppliers, and other individuals when emergency measures are initiated. Factors influencing access and movement vary depending upon the type of emergency and local conditions (i.e. the decision by the hospital to shelter staff families, the allowance for or prohibition against firearms, mutual aid agreements with nearby facilities or vendors, etc.).

Strengths:

- There is an ID system in place for personnel.
- Security personnel are on hand to control movement of the general public.

Areas for Improvement:

- There was a question raised as to whether the hospital trash compacter was on the emergency power circuit.

General Summary and Recommendations: Overall, the plan makes adequate provisions for facility security. Staff and personnel are given appropriate clearance into non-public areas through automated identification systems that can be quickly updated as needed. Security personnel were on hand to direct and control movement through public areas. However, task 4.15.4 of the Exercise Evaluation Guide (EEG) requires that the plan identify means for radioactive, biological, and chemical isolation and decontamination. It was not determined whether the hospital trash compacter, used for this type of disposal, would run on emergency power. It would be beneficial to ensure that all necessary waste disposal systems were guaranteed under emergency power.

CAPABILITY: STAFFING**Activity 4.16.1- 4.16.4**

Capability Summary: To provide safe and effective patient care during an emergency, staff roles are well defined; staff are oriented and trained in their assigned responsibilities; and staff maintains their competencies over time. Staff roles in emergencies are determined largely by the priority emergencies defined in the Hazard Vulnerability Analysis, and the reporting relationships in the command and control operations of the hospital. As such, staff must stand ready to adjust to changes in patient volume or acuity, work procedures or conditions, and response partners within and outside the hospital. (Note: Standards in the Medical Staff chapter define the processes for accepting independent practitioners as volunteers.) Staff roles and responsibilities may be documented in the EOP using a variety of formats: job action sheets, checklists, flow charts, etc.

Strengths:

- Staff members participating in the exercise were aware of their roles and responsibilities.

Areas for Improvement:

- Suggest development of Standard Operating Procedures to support the plan(s) along with position specific checklist.
- More training is needed for relief personnel, administrative staff, and support staff.
- Checklist would help with “just in time” training issues by providing focus and a reminder of critical tasks.

General Summary and Recommendations: It is imperative that all participants are aware of their capabilities and responsibilities. The observed staff members demonstrated thorough understanding of their duties and the ability to perform all tasks required in the EOP plan. It should be noted that only the core group was observed and so it was not determined whether this strength applies to all alternative staff members who may have to substitute in the event of staff absences. Making sure that all alternative staff members are familiar with the plan and with the duties of the primary staff member would ensure uninterrupted staffing, even in averse conditions. Development of a Standard Operation Procedures guide would assist in this area, as well as training for relief personnel. Task 4.16.3 in the Exercise Evaluation guide asks for hospital personnel and administrators to communicate their roles to licensed independent practitioners in emergency response and to whom they report during an emergency. It was not determined whether the plan fulfilled this task to ensure that any potential substitutes would be aware of their responsibilities. There was also some indication of specific key roles and functions which may not have sufficient backup personnel assigned. In the event of extended emergency or prolonged operations, this lack of substitutes for key functions could prove highly problematic.

CAPABILITY: UTILITIES**Activity 4.17.1- 4.17.5**

Capability Summary: Different types of emergencies can have the same detrimental impact on a hospital's utility systems. For example, brush fires, ice storms, and industrial accidents can all result in a loss of utilities required for care, treatment, services, related transport and building operations. Hospitals, therefore, must have alternative means of providing for essential utilities, whether through: negotiated relationships with the primary suppliers; Memoranda of Understanding (MOUs) with other hospitals in the community; alternative equipment at the hospital; or provision through a parent entity, etc. Hospitals should determine how long they expect to remain open to care for [patients, and plan for their utilities accordingly. Because some emergencies may be regional in scope or of long duration, hospitals should not rely solely on single source providers in the community. Where possible, hospitals should identify other suppliers outside of the local community in case the communities' infrastructure is severely compromised and unable to support the hospital.

Strengths:

- The Facilities Manager is experienced in providing power and water needs to the hospital.
- Emergency power system appears to be adequate for hospital needs.

Areas for Improvement:

- Better communication is needed between the Facilities Manager and the Emergency Operations Center staff.
- Clarification of the roles and reporting structure of Facilities Management and Logistics Chief
- It was not determined whether there were sufficient supplementary plans for supplying water to surgery, food preparation, laboratory functions, etc.

General Summary and Recommendations: The hospital appears to have a well-thought-out plan for providing emergency utilities and critical resources during an incident that may disrupt power. The facilities manager showed knowledge and experience with hospital systems and in dealing with emergency situations. The emergency power systems were tested and proven to fulfill all hospital needs. However, it was revealed in the course of the exercise that the HCC staff did not have the most updated Facilities information. Communication between administrative staff, key personnel, and Facilities is imperative for informed decision-making during emergency operations, especially with regards to water and power supply. There was some need for clarification with regards to the roles of Facilities Management and Logistics Chief. It would be useful to reevaluate what resources these two individuals are responsible for, and the procedures necessary for acquiring them. There was also a question as to whether there is a supplementary emergency plan to supply water for certain vital functions (surgery, food preparation, etc) in case of long-term problems or relocation.

CAPABILITY: CLINICAL ACTIVITY

Activity 4.18.1- 4.18.6

Capability Summary: The fundamental goal of emergency management planning is to protect life and prevent disability. The manner in which care, treatment, and services are provided may vary by type of emergency. However, certain clinical activities are so fundamental to safe and effective care that the hospital should determine how it will re-schedule or manage patient clinical needs even under the most dynamic situations or in the most austere care environments

Strengths:

- The EOP included a process for managing various patient groups, including pets, geriatric, special needs, etc.
- The plan also included a process for prioritizing activities and curtailing those activities that were not a high priority.

Areas for Improvement:

- HCC staff indicated successful patient tracking within the ED but were unsure of how well patients could be tracked on the various hospital floors.
- There was a question regarding patient tracking responsibility.

General Summary and Recommendations: Overall, the plan made adequate provisions for continuing patient care in the event of an emergency. The plan took into account the needs of all relevant patient groups, including children, pets, special needs, etc. There was also a system to ensure that patient priorities were maintained and that lower priority tasks were accomplished, but not at the expense of critical functions. Tracking within the ED proved highly effective, although there were some concerns about system performance on other hospital floors. Extensive review of the system in all areas would provide certainty. Also, an emergency paper process to supplement computer functions would account for emergencies involving extended loss of power or evacuation to an ACF with remote server difficulties. There are a number of tasking items that need to be reviewed for the purpose of providing clarity on roles and responsibilities. There was also some duplicity regarding role responsibility in patient tracking. ICS forms placed it under Operations while the HICS.org chart assigned it to the Planning Section (Situation Unit Leader). Also, clinical activity would depend upon several concerns in other capabilities such as emergency power for waste systems and supplementary emergency plans for water and power to critical functions (surgery, food preparation, etc.)



OVERALL SUMMARY: CMC-Northeast

The Hospital Plan and HCC operations appeared to be well organized and very functional. There obviously has been a great deal of planning and preparation performed in anticipation of potential incidents. The staff was engaged in the exercise from the beginning and provided beneficial insight into issues encountered. Overall, there was exceptional teamwork demonstrated throughout the exercise.

There is a lot of institutional knowledge vested in a few individuals. Should they be unavailable during a major incident, operations could be significantly affected. They rely heavily on their Emergency Manager. Staffing at all positions needs to be expanded with appropriate training.



CMC- Pineville

CAPABILITY: EMERGENCY OPERATIONS PLANNING

Activity 4.12.1- 4.12.7

Capability Summary: A successful response relies upon planning around the management of six critical areas: communications; resources and assets; safety and security; staffing; utilities; and clinical activities. It is important for hospitals to develop a comprehensive Emergency Operations Plan (EOP) as documentation to help guide the hospital in its emergency response and recovery efforts. While the Emergency Operations Plan can be formatted in a variety of ways, it must address these six critical areas to serve as a blueprint for managing care and safety during an emergency.

Strengths:

- EOP was recently updated and readily available onsite in hard copy as well as electronically.
- The EOP was in-depth and covered all of the objectives.
- Capabilities of the facility to be self-sustaining were outlined in a spread sheet within the EOP in an easy- to-read format.
- Primary lead staff for each area was well versed in the capabilities and vulnerabilities of the facility.

Areas for Improvement:

- There is a concern that if key personnel are not available during a crisis that other employees are not as familiar with the EOP and that the implementation of the Incident Action Plan would be hampered.
- There is a need for secondary persons to practice and familiarize themselves with the EOP and implementation of the Command Structure during a crisis situation.

General Summary and Recommendations: Implementation of the Command Structure was accomplished quickly and efficiently. The response kit brought to the command center including dedicated laptops, clip boards with guidelines and check sheets for individual areas of responsibility, and the Poly Com conference phone made the establishment of the Command Structure an almost effortless process.

CAPABILITY: COMMUNICATIONS**Activity 4.13.1- 4.13.14**

Capability Summary: In our everyday life of carrying out our responsibilities on the job communication is by far one of the most important. During exigent circumstances those communication tools that are available to us become all that more important and even more important is the fact that personnel understand their use. Sometimes even the simple things such as operating an unfamiliar phone line can cause problems in communicating very important information. In this section hospital were evaluated on fourteen key areas. The following are the results:

Strengths:

- The EOP/IAP communications plan for the facility was excellent in house as well as with other CMC facilities through a variety of communications systems.
- There was a clear plan as to communicate circumstances in place within the facility as well as to the corporate Command Structure.

Areas for Improvement:

- The Viper Radio was not functioning and staff was concerned that only a minimal number of personnel know how to operate the radio.
- There is no backup handheld VIPER.
- There was a question as to when to notify local Emergency Responders when there are problems at the facility such as the disruption of water service.
- There was minimal communication with healthcare facilities outside the CMC structure. Consideration should be given to include conference calls to other facilities similar to the conference calls held with CMC facilities.
- Regular testing of the Viper system as well as verifying the compatibility of standby generators with UPS was an area of concern discussed.

General Summary and Recommendations: Overall communications was excellent. The facility overcame real world problems with digital paging services during the exercise and had in-depth discussions on areas they have concerns with and possible solutions should there be a catastrophic failure of their communications systems.

**CAPABILITY: RESOURCES AND ASSETS****Activity 4.14.1- 4.14.11**

Capability Summary: During emergencies, health care organizations that continue to provide care, treatment, and services to their patients must sustain essential resources, materials, and facilities. The emergency operation plan should identify how resources and assets will be solicited and acquired from a range of possible sources, such as vendors, neighboring health care

providers, other community hospitals, state affiliates, or a regional parent company. To address emergencies of long duration or broad geographic scope, the hospital's plan must proactively identify, locate, acquire, distribute and account for critical resources and supplies. The plan should also recognize the risk that some assets may not be available from planned sources and that contingency plans will be necessary for critical supplies. This situation may occur when multiple hospitals are vying for a limited supply from the same vendor.

Strengths:

- The staff was well prepared in ordering extra supplies upon advance notice of the impending event and was well informed of sustainability based on given supplies
- Staff was also quick to verify with vendors as to the availability of potentially needed supplies and their ability to deliver them as needed.
- Certain staff members were well versed on finding MOAs for vendors for various supplies within the EOP.
- Transportation was addressed prior to the exercise and was in place.

Areas for Improvement:

- Training of additional staff, as to locating MOAs within the EOP would be beneficial.
- Planning for housing and family support needs was accomplished but there are concerns as to being to meet all needs required in this area.

General Summary and Recommendations: As a whole, all needs were met and or provisions made to meet them. However the facility may be quickly overwhelmed by the needs of off duty staff and family members in need of support services.



CAPABILITY: SAFETY AND SECURITY

Activity 4.15.1- 4.15.7

Capability Summary: Controlling the movement of individuals into, throughout, and out of the hospital during an emergency is essential to the safety of patients and staff, and to the security of critical supplies, equipment, and utilities. The hospital determines the type of access and movement to be allowed by staff, patients, visitors, emergency volunteers, vendors, maintenance and repair workers, utility suppliers, and other individuals when emergency measures are initiated. Factors influencing access and movement vary depending upon the type of emergency and local conditions (i.e. the decision by the hospital to shelter staff families, the allowance for or prohibition against firearms, mutual aid agreements with nearby facilities or vendors, etc.).

Strengths:

- The internal security and safety measures and emergency procedures were activated immediately.

- Extra personnel were called in at the onset of the event.
- Processes for handling radioactive, biological and chemical isolation and decontamination were outlined within the EOP.

Areas for Improvement:

- The roles of outside security agencies were unclear with regards to what outside security resources were available to the facility, who would request them, and when.
- There was a concern that on-site security would quickly become overwhelmed with the influx of personnel seeking shelter.
- It was unclear as to how the facility would be secured, including controlling entrance traffic and movement of non-employees within the facility during the emergency.

General Summary and Recommendations: Overall the personnel responded to and overcome obstacles presented during the emergency but there is a concern that a major event could overwhelm the on-site security personnel, especially with a large influx of community members seeking shelter at the facility.



CAPABILITY: STAFFING

Activity 4.16.1- 4.16.4

Capability Summary: To provide safe and effective patient care during an emergency, staff roles are well defined; staff are oriented and trained in their assigned responsibilities; and staff maintains their competencies over time. Staff roles in emergencies are determined largely by the priority emergencies defined in the Hazard Vulnerability Analysis, and the reporting relationships in the command and control operations of the hospital. As such, staff must stand ready to adjust to changes in patient volume or acuity, work procedures or conditions, and response partners within and outside the hospital. (Note: Standards in the Medical Staff chapter define the processes for accepting independent practitioners as volunteers.) Staff roles and responsibilities may be documented in the EOP using a variety of formats: job action sheets, checklists, flow charts, etc.

Strengths:

- The roles and responsibilities of staff members were clearly outlined in the EOP and the use of clipboards with flow charts, guidelines and objectives, as well as check off sheets for personnel greatly aided them in accomplishing their various functions.
- The staff was well trained and very capable in their various roles and responsibilities.

Areas for Improvement:

- The procedure for identifying care providers and other personnel assigned to particular areas was not discussed during the exercise.

General Summary and Recommendations: Overall the staff functioned exceptionally during the exercise and quickly adapted and overcame any problems presented.



CAPABILITY: UTILITIES

Activity 4.17.1- 4.17.5

Capability Summary: Different types of emergencies can have the same detrimental impact on a hospital's utility systems. For example, brush fires, ice storms, and industrial accidents can all result in a loss of utilities required for care, treatment, services, related transport and building operations. Hospitals, therefore, must have alternative means of providing for essential utilities, whether through: negotiated relationships with the primary suppliers; Memoranda of Understanding (MOUs) with other hospitals in the community; alternative equipment at the hospital; or provision through a parent entity, etc. Hospitals should determine how long they expect to remain open to care for [patients, and plan for their utilities accordingly. Because some emergencies may be regional in scope or of long duration, hospitals should not rely solely on single source providers in the community. Where possible, hospitals should identify other suppliers outside of the local community in case the communities' infrastructure is severely compromised and unable to support the hospital.

Strengths:

- The facility was well prepared to overcome the loss or disruption of any of the primary utilities.
- Staff members in the various departments had contingency plans for providing needed services in the event of any disruptions and were prepared to move patients to other facilities if necessary.

Areas for Improvement:

- Transportation of patients was the only major concern, due to outside resources being taxed during an emergency.

General Summary and Recommendations: The facility was well prepared to overcome any disruption of utilities and utilities managers were aware of the sustainability in the failure or disruption of primary systems.



CAPABILITY: CLINICAL ACTIVITY

Activity 4.18.1- 4.18.6

Capability Summary: The fundamental goal of emergency management planning is to protect life and prevent disability. The manner in which care, treatment, and services are provided may vary by type of emergency. However, certain clinical activities are so fundamental to safe and

effective care that the hospital should determine how it will re-schedule or manage patient clinical needs even under the most dynamic situations or in the most austere care environments

Strengths:

- The facility was well prepared to provide all necessary services
- The facility was also prepared to go to paper versions of electronic tracking should there be a catastrophic loss of computer and technology services.
- Contingencies for providing for the hygiene and sanitation needs were well established within the EOP.

Areas for Improvement:

- There was a concern that not all staff members were thoroughly versed in the paper processes for tracking patients and services that might become necessary during the event of an emergency resulting in the loss of some or all information technology services.

General Summary and Recommendations: The staff was well prepared to manage all of the primary responsibilities of the facility and had plans for putting various services on hold or relegating them to an emergency-only basis if needed. They moved quickly and efficiently to prepare for the transition to paper tracking and documentation and had services in place for both mental health and mortuary needs.



OVERALL SUMMARY: CMC-Pineville

This facility was well versed with their EOP and the incident command structure and implementation. The staff transitioned smoothly into an emergency mode and had a well-established command center with more than adequate resources to function as such; including multiple telephones, dedicated computers, television and other needed resources. The staff was not intimidated by the EOP or incident command system. The staff worked well together and was very effective at brainstorming and collaborating in problem-solving as various issues arose. There are some areas of improvement needed, particularly in communicating with agencies outside the CMC system and with the Viper radio system. There is also a concern about the facility having adequate security personnel and who and when to call external sources to provide for security concerns. The staff on hand was very well versed in finding policies and procedures within the EOP and was not afraid to call for clarification when needed.



CMC University

CAPABILITY: EMERGENCY OPERATIONS PLANNING

Activity 4.12.1- 4.12.7

Capability Summary: A successful response relies upon planning around the management of six critical areas: communications; resources and assets; safety and security; staffing; utilities; and clinical activities. It is important for hospitals to develop a comprehensive Emergency Operations Plan (EOP) as documentation to help guide the hospital in its emergency response and recovery efforts. While the Emergency Operations Plan can be formatted in a variety of ways, it must address these six critical areas to serve as a blueprint for managing care and safety during an emergency.

Strengths:

- The CMC University COOP plan is well-developed, thorough, and provides sufficient detail to inform actions.
- ICC members are given explicit instructions on necessary actions, time frames, and procedures.

Areas for Improvement:

- It was noted that the EOP/IAP plan depended upon the corporate EOC's initiation of the response and recovery phase.

General Summary and Recommendations: Task 4.12.4 of the Exercise Evaluation Guide asks that the EOP/IAP describe processes for initiating and terminating the response and recovery phases, including who has the authority to activate those phases. Evaluators noted that this process was somewhat dependent on the judgment of corporate EOC to begin response and/or recovery actions. It is recommended that CMC University review this portion of their plan to ensure that this procedure meets the facilities' needs. However, the process did not appear to affect emergency response or recovery operations during the exercise. The hospital takes appropriate steps with regards to suspending elective surgery to manage patient care during loss of community support. The hospital also maintains MOA's with other hospitals and facilities to provide acceptable alternative sites for patient care, as needed. ICC members were aware of all of these provisions of the plan and their own roles for accomplishing each task.



CAPABILITY: COMMUNICATIONS

Activity 4.13.1- 4.13.14

Capability Summary: In our everyday life of carrying out our responsibilities on the job communication is by far one of the most important. During exigent circumstances those communication tools that are available to us become all that more important and even more important is the fact that personnel understand their use. Sometimes even the simple things such as operating an unfamiliar phone line can cause problems in communicating very important information. In this section hospital were evaluated on fourteen key areas. The following are the results:

Strengths:

- Plan includes appropriate communication/coordination procedures and means.
- The new ASCOM system provides internal and external communications to support land line and/or cell phone networks.

Areas for Improvement:

- ICC staff should improve their familiarity with VMN.

General Summary and Recommendations: The plan for communication (internal and external) is thorough. However, an equally thorough knowledge of back-up and support communication systems is necessary for emergency response. More specific training for ICC staff with VMN and other alternate communications means is recommended. It was also noted that the plan makes allowances for coordination directly with other health care organizations. However, the CMC corporate EOC is responsible for managing information regarding the emergency command structures and control center locations for the facility. This did not adversely affect emergency response but it is important that local personnel are also knowledgeable of these procedures.



CAPABILITY: RESOURCES AND ASSETS

Activity 4.14.1- 4.14.11

Capability Summary: During emergencies, health care organizations that continue to provide care, treatment, and services to their patients must sustain essential resources, materials, and facilities. The emergency operation plan should identify how resources and assets will be solicited and acquired from a range of possible sources, such as vendors, neighboring health care providers, other community hospitals, state affiliates, or a regional parent company. To address emergencies of long duration or broad geographic scope, the hospital's plan must proactively identify, locate, acquire, distribute and account for critical resources and supplies. The plan should also recognize the risk that some assets may not be available from planned sources and

that contingency plans will be necessary for critical supplies. This situation may occur when multiple hospitals are vying for a limited supply from the same vendor.

Strengths:

- The procedures for replenishing essential medications, supplies and services are very detailed.
- The ICC staff is well-versed and proactive in ensuring availability of resources.

Areas for Improvement:

- It was not determined whether the hospital plans accounted for potential sharing of resources with health care organizations outside of the community in the event of a regional or prolonged emergency.
- It was not determined whether the hospital has established procedures in place for the transportation of relevant patient information to an alternate care site.

General Summary and Recommendations: ICC staff was proactive in determining current needs and requesting essential supplies and services. Internal transportation assets were limited, so it was confirmed that patient relocation would be supplemented by EMS, CATS, and/or other sources. Plan for pharmaceuticals, food, water, ice, oxygen, fuel, linens, etc, are well known by ICC staff. Task 4.14.8 in the Exercise Evaluation guide assesses the procedures established for potential sharing of resources and assets with health care organizations outside of the community in the event of a regional or prolonged disaster. These procedures were not observed. It is recommended that the hospital review the established agreements for long-term resource needs. Task 4.14.11 of the Exercise Evaluation Guide asks that the hospital plan for the transportation of pertinent information, including essential clinical and medication-related information, for patients to an alternative care site or sites when the environment cannot support care, treatment, and services. CMC University may consider reviewing procedures to ensure that all patient information needed for effective treatment is included in checklists for relocation to an alternate care facility.

**CAPABILITY: SAFETY AND SECURITY****Activity 4.15.1- 4.15.7**

Capability Summary: Controlling the movement of individuals into, throughout, and out of the hospital during an emergency is essential to the safety of patients and staff, and to the security of critical supplies, equipment, and utilities. The hospital determines the type of access and movement to be allowed by staff, patients, visitors, emergency volunteers, vendors, maintenance and repair workers, utility suppliers, and other individuals when emergency measures are initiated. Factors influencing access and movement vary depending upon the type of emergency and local conditions (i.e. the decision by the hospital to shelter staff families, the

allowance for or prohibition against firearms, mutual aid agreements with nearby facilities or vendors, etc.).

Strengths:

- ICC staff implemented the security plan as soon as “Code Green-Weather” condition was established.

Areas for Improvement:

- It was not determined whether the hospital plan accounts for the management of hazardous materials and waste during emergency response.
- It was not determined whether the hospital has a plan for controlling traffic accessing the health care facility during emergencies.

General Summary and Recommendations: Security of the facility was addressed by ICC staff early in the exercise and steps were taken to control access into the hospital facility and to increase security in the Emergency Room. As the exercise progressed, steps were taken to set up the mass casualty tent (with heaters) to handle individuals who presented, but did not require medical treatment. The plan for requesting additional support from CMPD was discussed by not implemented. Personnel were familiar with the presence and implementation of this back-up security option. Task 4.15.3 of the Exercise Evaluation Guide requires that the hospital identify a process used for managing hazardous materials and waste once emergency measures are initiated. This process was not observed during the exercise, so it would be beneficial for relevant staff to review this portion of the plan to ensure that it meets clinical needs and that a supplementary process is in place for an extended disaster situation or in the event of relocation to an alternate care facility. Task 4.15.7 of the Exercise Evaluation Guide asks that the hospital establish a process for controlling traffic access to the health care facility during emergencies. This process was also not explicitly identified or discussed in the course of the exercise. It would also be beneficial for relevant personnel to familiarize themselves with this procedure if it is present, or to develop a traffic control plan if it does not already exist.



CAPABILITY: STAFFING

Activity 4.16.1- 4.16.4

Capability Summary: To provide safe and effective patient care during an emergency, staff roles are well defined; staff are oriented and trained in their assigned responsibilities; and staff maintains their competencies over time. Staff roles in emergencies are determined largely by the priority emergencies defined in the Hazard Vulnerability Analysis, and the reporting relationships in the command and control operations of the hospital. As such, staff must stand ready to adjust to changes in patient volume or acuity, work procedures or conditions, and response partners within and outside the hospital. (Note: Standards in the Medical Staff chapter define the processes for accepting independent practitioners as volunteers.) Staff roles and

responsibilities may be documented in the EOP using a variety of formats: job action sheets, checklists, flow charts, etc.

Strengths:

- ICC staff was well aware of their roles and responsibilities and proactive in carrying them out.
- There were methods in place for credentialing and providing identification for non-resident physicians, volunteers, and additional staff.

Areas for Improvement:

- It was not determined whether or not the hospital communicates to licensed independent practitioners their roles in emergency response and to whom they report during an emergency.

General Summary and Recommendations: The ICC staff was familiar with procedures for contacting, credentialing, and identifying independent practitioners. A daily check-in is required of all non-CMS-University staff and a color-coded sticker (different color each day) will be affixed to their id badges. Task 4.16.3 in the Exercise Evaluation guide requires that the hospital communicate to licensed independent practitioners their roles in emergency response and to whom they report during an emergency. Hospital policy in this area was not observed during the course of the exercise. The procedure for informing independent practitioners of their roles, responsibilities, and chain of command during an emergency should be reviewed and made known to personnel responsible for emergency staffing.



CAPABILITY: UTILITIES

Activity 4.17.1- 4.17.5

Capability Summary: Different types of emergencies can have the same detrimental impact on a hospital's utility systems. For example, brush fires, ice storms, and industrial accidents can all result in a loss of utilities required for care, treatment, services, related transport and building operations. Hospitals, therefore, must have alternative means of providing for essential utilities, whether through: negotiated relationships with the primary suppliers; Memoranda of Understanding (MOUs) with other hospitals in the community; alternative equipment at the hospital; or provision through a parent entity, etc. Hospitals should determine how long they expect to remain open to care for [patients, and plan for their utilities accordingly. Because some emergencies may be regional in scope or of long duration, hospitals should not rely solely on single source providers in the community. Where possible, hospitals should identify other suppliers outside of the local community in case the communities' infrastructure is severely compromised and unable to support the hospital.

Strengths:

- ICC staff was proactive in identifying the availability of alternative sources of electrical power, fuel, and water.

Areas for Improvement:

- No areas for improvement were identified.

General Summary and Recommendations: ICC staff coordinated with internal staff units to determine resources on hand and to make sufficient provisions to fulfill facility need. Supplementary plans in the event of a long-term or regional disaster or relocation to an alternate care site were in place. All relevant utility needs were identified including electricity, ventilation, fuel, transport, water for hygiene and food preparation, and water for clinical activities. Several alternative sources for all relevant utilities were also identified and personnel displayed thorough knowledge procedures for providing utilities through the primary and supplementary systems.

**CAPABILITY: CLINICAL ACTIVITY****Activity 4.18.1- 4.18.6**

Capability Summary: The fundamental goal of emergency management planning is to protect life and prevent disability. The manner in which care, treatment, and services are provided may vary by type of emergency. However, certain clinical activities are so fundamental to safe and effective care that the hospital should determine how it will re-schedule or manage patient clinical needs even under the most dynamic situations or in the most austere care environments

Strengths:

- The hospital planned for resupply of clean linens.
- The hospital planned to switch to well water when city water was interrupted.

Areas for Improvement:

- It was not determined whether the hospital has sufficient plans for documenting and tracking patients' clinical information.

General Summary and Recommendations: ICC staff-members were proactive in coordinating needed resources to ensure that essential functions and clinical services were continued in the face of staff shortages, utility interruptions, and reduced communication. Task 4.18.6 in the Exercise Evaluation Guide stipulates that the hospital must maintain clinical activities through the documentation and tracking of patients' clinical information during an emergency situation. Policy regarding documentation of patient clinical information was not discussed in this exercise. It is recommended that the facility ensure that sufficient plans are in place for patient documentation in the event of an emergency, in the event of transport to an alternate care facility, and in the event of network failure.

OVERALL SUMMARY: CMC University

Overall, CMC University personnel showed thorough knowledge of the emergency response plan and of their roles and responsibilities. Efficient internal communication and coordination aided in response. Hospital departments were responsive to ICC requests for information and status reports. The area of improvement that would most increase preparedness for the facility would be VMC communication system training for the ICC staff. The identification of a scribe to keep track of decisions, directives, requests for resources, reports submitted, expenses, etc. would also aid in the delivery of updated status information to all relevant departments and actors. Several ICC staff members suggested that future exercises involve more hospital staff at the hands-on level so that the majority of personnel would be familiar with emergency procedure.



Gaston Memorial

CAPABILITY: EMERGENCY OPERATIONS PLANNING

Activity 4.12.1- 4.12.7

Capability Summary: A successful response relies upon planning around the management of six critical areas: communications; resources and assets; safety and security; staffing; utilities; and clinical activities. It is important for hospitals to develop a comprehensive Emergency Operations Plan (EOP) as documentation to help guide the hospital in its emergency response and recovery efforts. While the Emergency Operations Plan can be formatted in a variety of ways, it must address these six critical areas to serve as a blueprint for managing care and safety during an emergency.

Strengths:

- Gaston Memorial Hospital (GMH) has developed and implemented necessary pre-plans in accordance with emergency preparedness standards as well as the joint commission.
- Most staff is experienced with emergencies, and NIMS compliant ICS training is evident.
- The appointment of the hospital Emergency Management Director with dedicated emergency preparedness duties is prudent practice.
- Administrative staff responded to and demonstrated knowledge and ability to function in the hospital EOC.

Areas for Improvement:

- Not all administrative staff has the same level of emergency response experience therefore; additional Incident Management Team (IMT) training for less experienced staff would prove to be beneficial.
- Additionally, not all staff was familiar with EOC primary, secondary, and tertiary locations as well as their respective functionality.

General Summary and Recommendations: Other than the minor ICS position specific training needs, GMH capabilities were great. A sound emergency management preparedness program was in place including training, equipment, and resources. Overall performance was admirable.



CAPABILITY: COMMUNICATIONS

Activity 4.13.1- 4.13.14

Capability Summary: In our everyday life of carrying out our responsibilities on the job communication is by far one of the most important. During exigent circumstances those

communication tools that are available to us become all that more important and even more important is the fact that personnel understand their use. Sometimes even the simple things such as operating an unfamiliar phone line can cause problems in communicating very important information. In this section hospital were evaluated on fourteen key areas. The following are the results:

Strengths:

- Most communications appeared to function well.
- Multiple forms of communication were noted such as portable landlines, cell phones, fax, intranet, and internet.
- The 3N system proved to be very effective in getting important notifications out promptly.
- The importance of communications was observed during the situational briefing conducted by section chiefs during the exercise.

Areas for Improvement:

- Code announcements were not audible in the EOC. In order to hear the announcements being made, someone had to open the door to the EOC and try to listen.
- Consider making the communications plan available for reference to the IC and other Section Chiefs

General Summary and Recommendations: The formal breakout of section chiefs for situational briefings with their respective branch directors and unit leaders was observed. This was an excellent idea and a productive method of following and utilizing the NIMS compliant Hospital Incident Command System. This enhanced the internal communications process. Also, during the situational briefings, weaknesses and (or) potential communication equipment failures/limitations was identified. This enabled the section chief to report back to planning on anticipated needs. Overall, internal communications seemed to flow well. As the PA system is being utilized as a communications tool and is not audible in the EOC, consider equipping the EOC with a loudspeaker or designating an individual to listen to announcements, document, and report back to EOC staff.



CAPABILITY: RESOURCES AND ASSETS

Activity 4.14.1- 4.14.11

Capability Summary: During emergencies, health care organizations that continue to provide care, treatment, and services to their patients must sustain essential resources, materials, and facilities. The emergency operation plan should identify how resources and assets will be solicited and acquired from a range of possible sources, such as vendors, neighboring health care providers, other community hospitals, state affiliates, or a regional parent company. To address emergencies of long duration or broad geographic scope, the hospital's plan must proactively

identify, locate, acquire, distribute and account for critical resources and supplies. The plan should also recognize the risk that some assets may not be available from planned sources and that contingency plans will be necessary for critical supplies. This situation may occur when multiple hospitals are vying for a limited supply from the same vendor.

Strengths:

- Most every aspect of Activity 4.14 preplanning was addressed in the GMH emergency operations plan.
- As situations presented themselves during the exercise, the EOC staff discussed many specific options regarding resources, supplies, and facility sustainability.
- The Hospital EM Director advised the group that GMH must be able to sustain all resources without external help for a minimum of 96 hours.

Areas for Improvement:

- Most every aspect of the plan had been addressed. Due to the inherent dynamics of emergency preparedness/sustainability plans, it is recommended that the development of a preventive maintenance program that ensures essential resources, materials, and facilities be implemented.

General Summary and Recommendations: Overall, a good fundamental plan was in place for medium term sustainability at GMH. Through discussions and observations, it was noted that most every aspect of sustainable preparedness had been addressed. It is highly recommended that a litany of realistic scenarios be presented to critical departments for feedback on areas of anticipated resource problems.



CAPABILITY: SAFETY AND SECURITY

Activity 4.15.1- 4.15.7

Capability Summary: Controlling the movement of individuals into, throughout, and out of the hospital during an emergency is essential to the safety of patients and staff, and to the security of critical supplies, equipment, and utilities. The hospital determines the type of access and movement to be allowed by staff, patients, visitors, emergency volunteers, vendors, maintenance and repair workers, utility suppliers, and other individuals when emergency measures are initiated. Factors influencing access and movement vary depending upon the type of emergency and local conditions (i.e. the decision by the hospital to shelter staff families, the allowance for or prohibition against firearms, mutual aid agreements with nearby facilities or vendors, etc.).

Strengths:

- GMH has a superior security camera system to assist with site and facility safety and security issues.
- GMH has a trained security department capable of assisting with facility security issues as well.
- Additionally, there is a credentialing / badge swipe system in place that allows limited access to secured areas of the GMH facility.
- It was observed that badge access was required for entrance into the Hospital EOC. The security of GMH's EOC is to be commended.

Areas for Improvement:

- During a large scale event GMH security has limited staffing and capabilities.
- Relying on outside agencies such as Gaston PD and Gaston SD may be problematic.
- Meeting with respective agencies and determining more defined response and support times would be prudent.

General Summary and Recommendations: Overall, GMH has a sound safety and security program in place. Ensuring that a realistic plan for law enforcement mutual aid is developed, implemented, and reviewed on a regular basis is vital to continuous improvement for GMH.



CAPABILITY: STAFFING

Activity 4.16.1- 4.16.4

Capability Summary: To provide safe and effective patient care during an emergency, staff roles are well defined; staff are oriented and trained in their assigned responsibilities; and staff maintains their competencies over time. Staff roles in emergencies are determined largely by the priority emergencies defined in the Hazard Vulnerability Analysis, and the reporting relationships in the command and control operations of the hospital. As such, staff must stand ready to adjust to changes in patient volume or acuity, work procedures or conditions, and response partners within and outside the hospital. (Note: Standards in the Medical Staff chapter define the processes for accepting independent practitioners as volunteers.) Staff roles and responsibilities may be documented in the EOP using a variety of formats: job action sheets, checklists, flow charts, etc.

Strengths:

- The GMH staff roles and responsibilities are defined in the EOP and, as previously mentioned; most staff demonstrated they had been trained. This was evidenced by their display of competencies as it related to HICS.
- The initial usage of the HICS Job Action Sheets (JAS) was observed. Utilization of a JAS is a necessary part of HICS.
- Also, it was observed that GMH has a “top-notch” EOC facility with multiple forms of communication, technology, and HICS related forms and displays.

Areas for Improvement:

- Continued customization of the Job Action Sheets towards GMH facilities and operations will make for a more applicable task checklist. This will also ensure a more streamlined process when a new person fills the position.

General Summary and Recommendations: Overall, training and staff responsibilities seemed to be well addressed. With attention to further customization of Job Action Sheets and other relative forms, policies, and (or) procedures, GMH can move towards continuous improvement.

**CAPABILITY: UTILITIES****Activity 4.17.1- 4.17.5**

Capability Summary: Different types of emergencies can have the same detrimental impact on a hospital's utility systems. For example, brush fires, ice storms, and industrial accidents can all result in a loss of utilities required for care, treatment, services, related transport and building operations. Hospitals, therefore, must have alternative means of providing for essential utilities, whether through: negotiated relationships with the primary suppliers; Memoranda of Understanding (MOUs) with other hospitals in the community; alternative equipment at the hospital; or provision through a parent entity, etc. Hospitals should determine how long they expect to remain open to care for [patients, and plan for their utilities accordingly. Because some emergencies may be regional in scope or of long duration, hospitals should not rely solely on single source providers in the community. Where possible, hospitals should identify other suppliers outside of the local community in case the communities' infrastructure is severely compromised and unable to support the hospital.

Strengths:

- The GMH EOP addresses the potential loss of primary utilities.
- During the exercise, several discussions ensued regarding power and water. They were notionally addressed and the responses were adequate.
- It was noted that water is supplied to GMH by more than one source

Areas for Improvement:

- Ensure that all departments responsible for maintaining facility services are certain they have more than adequate backup plans which follow the "All Hazards" approach.

General Summary and Recommendations: Overall, power and water sustainability seemed to be accounted for. GMH has a well-developed plan for addressing utilities. It is necessary to continue follow-up with each responsible department to ensure a minimum of 96

hour sustainability of utilities is possible. Continue to address Alternate Care Facility (ACF) plans as advised by GMH Emergency Management Director.



CAPABILITY: CLINICAL ACTIVITY

Activity 4.18.1- 4.18.6

Capability Summary: The fundamental goal of emergency management planning is to protect life and prevent disability. The manner in which care, treatment, and services are provided may vary by type of emergency. However, certain clinical activities are so fundamental to safe and effective care that the hospital should determine how it will re-schedule or manage patient clinical needs even under the most dynamic situations or in the most austere care environments

Strengths:

- Planning for each section of this activity was addressed. As it applied, there was notional discussion during the exercise.

Areas for Improvement:

- Continue to re-evaluate the activities listed in 4.18.

General Summary and Recommendations: For the most part, this activity was limited in observation due to the scenario. However, there was relevant discussion on most of the areas observed. The evaluator concluded that each of the activities has been adequately addressed in the overall GMH EOP.



OVERALL SUMMARY: Gaston Memorial

GMH is well-prepared for crisis situations. GMH demonstrated many strengths during the simulated exercise held on April 13th, 2011. The identified strengths were derived from observation of multiple areas. GMH is obviously dedicated to the emergency preparedness program. This was evidenced by the appointment of a GMH system-wide Emergency Management Director. The support for this position and the emergency preparedness program is paramount to the overall success of GMH during a crisis situation. GMH has supported the development and maintenance of a state-of-the-art Emergency Operations Center, has good written plans with clearly defined codes, follows full implementation of HICS, and has well trained staff. With attention to the minor issues noted under the areas for improvement in each activity, GMH is in better crisis preparedness position than many hospitals in the state.

Lake Norman Regional Medical Center

CAPABILITY: EMERGENCY OPERATIONS PLANNING

Activity 4.12.1- 4.12.7

Capability Summary: A successful response relies upon planning around the management of six critical areas: communications; resources and assets; safety and security; staffing; utilities; and clinical activities. It is important for hospitals to develop a comprehensive Emergency Operations Plan (EOP) as documentation to help guide the hospital in its emergency response and recovery efforts. While the Emergency Operations Plan can be formatted in a variety of ways, it must address these six critical areas to serve as a blueprint for managing care and safety during an emergency.

Strengths:

- Effective EOP / HICS team response
- Effective communication and collaboration

Areas for Improvement:

- Increase ICS training / exercises for additional levels of the organization –directors, managers, supervisors
- Use HICS forms to document events
- Create a formal IAP at established interval

General Summary and Recommendations: Overall, LNMC has a responsive incident command that included an all hazards approach with mitigation, preparedness, response and recovery considered.



CAPABILITY: COMMUNICATIONS

Activity 4.13.1- 4.13.14

Capability Summary: In our everyday life of carrying out our responsibilities on the job communication is by far one of the most important. During exigent circumstances those communication tools that are available to us become all that more important and even more important is the fact that personnel understand their use. Sometimes even the simple things such as operating an unfamiliar phone line can cause problems in communicating very important information. In this section hospital were evaluated on fourteen key areas. The following are the results:

Strengths:

- LNMC assessed communications capabilities quickly, identified best alternate methods.
- Used viper channel to establish / maintain external communication with MTAC / state agencies.

Areas for Improvement:

- Consider establishing coordination with ham radio operators in the area
- Add more 800 MHz radios and establish effective training & practice opportunity
- Add “Red/Black” phones at strategic locations

General Summary and Recommendations: Communications were established and remained effective throughout the exercise. Command over operational areas was good. External communication was slow at first but was effectively established. LNMC HICS participants noted the need for additional radios, more training to improve familiarity, placement of additional POTS lines and a published contacts list.

**CAPABILITY: RESOURCES AND ASSETS****Activity 4.14.1- 4.14.11**

Capability Summary: During emergencies, health care organizations that continue to provide care, treatment, and services to their patients must sustain essential resources, materials, and facilities. The emergency operation plan should identify how resources and assets will be solicited and acquired from a range of possible sources, such as vendors, neighboring health care providers, other community hospitals, state affiliates, or a regional parent company. To address emergencies of long duration or broad geographic scope, the hospital’s plan must proactively identify, locate, acquire, distribute and account for critical resources and supplies. The plan should also recognize the risk that some assets may not be available from planned sources and that contingency plans will be necessary for critical supplies. This situation may occur when multiple hospitals are vying for a limited supply from the same vendor.

Strengths:

- Ability to assess resources responsibly.
- Used conservation methods and alternate sources of certain needs (snow melted into water).
- Pharmacy crisis plan was activated

Areas for Improvement:

- Increase collaboration with community & regional hospitals.
- Consider establishing a pre-arranged mutual aid/sheltering agreement.
- Reevaluate LNMC Loss of Water Plan in light of issues identified during exercise.

General Summary and Recommendations: Overall, great capture of available resources and rapid identification of gaps. Conservation of resources plan was good and complemented 96 hour planning concepts. Staffing and surge plans were in place and adjusted to the impact of the event.



CAPABILITY: SAFETY AND SECURITY

Activity 4.15.1- 4.15.7

Capability Summary: Controlling the movement of individuals into, throughout, and out of the hospital during an emergency is essential to the safety of patients and staff, and to the security of critical supplies, equipment, and utilities. The hospital determines the type of access and movement to be allowed by staff, patients, visitors, emergency volunteers, vendors, maintenance and repair workers, utility suppliers, and other individuals when emergency measures are initiated. Factors influencing access and movement vary depending upon the type of emergency and local conditions (i.e. the decision by the hospital to shelter staff families, the allowance for or prohibition against firearms, mutual aid agreements with nearby facilities or vendors, etc.).

Strengths:

- Good ID system - HICS vests, Observer & Evaluator vests, badges
- Quick hazmat decon response- LNMC noted 30 + certified decon staff.
- Very effective briefing when command /section leaders left & entered the Command Center.

Areas for Improvement:

- None noted.

General Summary and Recommendations: Overall, security was controlled at LNMC. ID vests and badges were used. Access was limited without an escort.



CAPABILITY: STAFFING

Activity 4.16.1- 4.16.4

Capability Summary: To provide safe and effective patient care during an emergency, staff roles are well defined; staff are oriented and trained in their assigned responsibilities; and staff maintains their competencies over time. Staff roles in emergencies are determined largely by the priority emergencies defined in the Hazard Vulnerability Analysis, and the reporting

relationships in the command and control operations of the hospital. As such, staff must stand ready to adjust to changes in patient volume or acuity, work procedures or conditions, and response partners within and outside the hospital. (Note: Standards in the Medical Staff chapter define the processes for accepting independent practitioners as volunteers.) Staff roles and responsibilities may be documented in the EOP using a variety of formats: job action sheets, checklists, flow charts, etc.

Strengths:

- Demonstrated strong ICS with participation by executive management.
- Observed staff knew roles and connectivity in order to flow information to command.

Areas for Improvement:

- Consider medical staff attendee(s) in command when possible.
- Create a formal Incident Action Plan (IAP) at an established interval.

General Summary and Recommendations: LNMC command understands its mission during emergent events and establishes an effective command process. Some medical staff involvement (check-in) but again, should be considered to have involvement with the command functions.



CAPABILITY: UTILITIES

Activity 4.17.1- 4.17.5

Capability Summary: Different types of emergencies can have the same detrimental impact on a hospital's utility systems. For example, brush fires, ice storms, and industrial accidents can all result in a loss of utilities required for care, treatment, services, related transport and building operations. Hospitals, therefore, must have alternative means of providing for essential utilities, whether through: negotiated relationships with the primary suppliers; Memoranda of Understanding (MOUs) with other hospitals in the community; alternative equipment at the hospital; or provision through a parent entity, etc. Hospitals should determine how long they expect to remain open to care for [patients, and plan for their utilities accordingly. Because some emergencies may be regional in scope or of long duration, hospitals should not rely solely on single source providers in the community. Where possible, hospitals should identify other suppliers outside of the local community in case the communities' infrastructure is severely compromised and unable to support the hospital.

Strengths:

- Utilities planning / 96 hour plan assumptions for various systems – good.
- Thought through alternatives when faced with problems to ID best solution.
- Knowledgeable Plant Operations lead.
- Good use of relationships with local Fire Department for quick water availability.

Areas for Improvement:

- Water mitigation - Adjust water contract for quicker response.
- Consider water purification technology.

General Summary and Recommendations: Overall, LNMC displayed good utility response. In place is a knowledgeable management team with the ability to critically think through tough conditions to achieve the best solution. The facility connected well with external suppliers & vendors to maximize utility systems sustainability.

**CAPABILITY: CLINICAL ACTIVITY****Activity 4.18.1- 4.18.6**

Capability Summary: The fundamental goal of emergency management planning is to protect life and prevent disability. The manner in which care, treatment, and services are provided may vary by type of emergency. However, certain clinical activities are so fundamental to safe and effective care that the hospital should determine how it will re-schedule or manage patient clinical needs even under the most dynamic situations or in the most austere care environments

Strengths:

- Incoming patients and residents were properly processed.
- Command and operations assured treatment and bed availability for evacuated residents.
- Special populations (SMNS citizens) were taken care of.

Areas for Improvement:

- Work with public health in jurisdiction to address community response to SMNS type victims to ID where SMN shelters might already exist and to address individuals that may not meet admission criteria.
- Negotiate the evacuation/relocation process with the hospitals and other partners to address resources that support the transfer.

General Summary and Recommendations: Overall, the clinical admissions, treatment, surge, disposition process in this event went well. Bed assessments and subsequent planning led to maintained available beds and adequate staffing during the event. A crucial opportunity exists to collaborate with external partners to refine process.

OVERALL SUMMARY: LAKE NORMAN REGIONAL MEDICAL CENTER

LNMC responded well to the winter weather event exercise. The HICS command was established rapidly and participants demonstrated skills necessary to make the command process work. Internal collaboration was good and demonstrated a good flow between command and the operational & tactical response efforts. Expanding the ICS training and exercises for additional LNMC staff is suggested.

Communication worked well. Deployment of radios and effective use of other communications systems provided adequate communication. Opportunities exist to improve communications by strategically adding more radios and POTS lines and providing a routine training opportunity to enhance familiarity with the devices. Additional gains can be realized by enhancing call back lists or information.

External connectivity was good. Public information efforts were notable with cruise messaging including public service announcements, community information (shelter availability) and coordination with the community Joint Information Center. Command established connection with community agencies and vendors, NTAC and other agencies (through the sim-cell). Stand-alone capabilities were tested that impacted water, electricity, fuel, linen, pharmacy, and med surge supplies simulating a thorough test of the 96 hour assumptions.

The clinical response to the event was good. LNMC received ongoing regular patients including 2 MVAs (one with a hazmat element) and 16 event-related evacuated residents from a nursing care facility were tracked. The hazmat decon unit was established to decontaminate identified patients before treatment. All incoming were assessed, treated and admitted or discharged as appropriate. The surge plan and bed availability kept up with the event injects.



Presbyterian Charlotte/ Orthopedic

CAPABILITY: EMERGENCY OPERATIONS PLANNING

Activity 4.12.1- 4.12.7

Capability Summary: A successful response relies upon planning around the management of six critical areas: communications; resources and assets; safety and security; staffing; utilities; and clinical activities. It is important for hospitals to develop a comprehensive Emergency Operations Plan (EOP) as documentation to help guide the hospital in its emergency response and recovery efforts. While the Emergency Operations Plan can be formatted in a variety of ways, it must address these six critical areas to serve as a blueprint for managing care and safety during an emergency.

Strengths:

- Emergency Operations Plan (EOP) was used and in place in the EOC.
- The EOP has “all hazards coverage” and staff members used the EOP to reference the established protocols that were in place.
- Great teamwork and good communication in the EOC
- The EOC worked very well to ensure that all personnel were notified of the current events. Incident command briefings, press releases, the use of phone trees, and emails were used in every department to reach out for better communications. This reduced the amount of emails and calls into the EOC by following the communications plan.

Areas for Improvement:

- Staff members were reviewing the EOP to ensure that the tasks were being completed. Due to the amount of time it took the staff to review the EOP, task checklists could be developed to assist staff with prioritizing key tasks.
- Having a task level checklist in the EOP would assist in meeting all the objectives and limit the amount of time of reviewing the entire document.

General Summary and Recommendations: The new Emergency Operations Center (EOC) was used as the incident command center for the first time. It was a great opportunity for hospital staff to become familiar with the new location. The room provided a table at which all HICS staff was centrally located with additional equipment to be installed after the completion of the EOC room. All HICS staff members were clearly identified with HICS ICS vests. The incident commander briefed her staff and everyone reviewed the job action sheets for their HICS position. The EOC had excellent teamwork and communication throughout the exercise.

CAPABILITY: COMMUNICATIONS**Activity 4.13.1- 4.13.14**

Capability Summary: In our everyday life of carrying out our responsibilities on the job communication is by far one of the most important. During exigent circumstances those communication tools that are available to us become all that more important and even more important is the fact that personnel understand their use. Sometimes even the simple things such as operating an unfamiliar phone line can cause problems in communicating very important information. In this section hospital were evaluated on fourteen key areas. The following are the results:

Strengths:

- Early communication with market leaders.
- Guest Services and Chaplain staff made rounds throughout the hospital. Staff and families were updated and very helpful in providing information throughout the hospital.
- The F wing was used as an alternative care unit. 6F was opened as an additional care unit when the exercise inject was given that 16 patients in a nursing home facility would be transferred due to the power outage.
- Video conferencing was completed as directed by the Incident Commander. All information from Matthews was relayed by the Presbyterian Downtown 800 MHz radio.
- PIO worked with the public to ask for volunteer assistance and four wheel drive transportation for hospital staff.
- Provider Based Practices were contacted for a labor pool count.

Areas for Improvement:

- Need to update staff's cellular phone numbers. The current list in the Incident Command Center has incorrect numbers.
- Need additional 800 MHz for Matthews
- Need additional training on Viper 800 MHz radios for all personnel.
- Presbyterian Hospital – Orthopedic did not receive the first hour of emails. The email coding excluded the initial communication. These were quickly noted in the EOC and during the remainder of the exercise all emails were received.
- Additional IT support staff is needed in the HICS Incident Command Center.
- Need to capture all ICS staff names and contact numbers quickly to aid in communications to other hospitals.

General Summary and Recommendations: The command staff in the Emergency Operations Center (EOC) conducted a briefing for all staff members. Early communication with market leaders provided essential information for the EOC. Provider Based Practices were contacted for a labor pool count. Early work on the labor pool allowed the EOC to complete a staff schedule for the event. The staff used email and video conferencing to update all locations of their current status. The PIO/Marketing staff worked with the public to ask for volunteer assistance and four wheel drive transportation for hospital staff. During the video conferencing

each hospital's staff communicated briefings on their current goals, overall status, and everyone was able to communicate their immediate needs.



CAPABILITY: RESOURCES AND ASSETS

Activity 4.14.1- 4.14.11

Capability Summary: During emergencies, health care organizations that continue to provide care, treatment, and services to their patients must sustain essential resources, materials, and facilities. The emergency operation plan should identify how resources and assets will be solicited and acquired from a range of possible sources, such as vendors, neighboring health care providers, other community hospitals, state affiliates, or a regional parent company. To address emergencies of long duration or broad geographic scope, the hospital's plan must proactively identify, locate, acquire, distribute and account for critical resources and supplies. The plan should also recognize the risk that some assets may not be available from planned sources and that contingency plans will be necessary for critical supplies. This situation may occur when multiple hospitals are vying for a limited supply from the same vendor.

Strengths:

- Staff could carry out their duties with the surety their families were provided for. During the first operational period, extended child care was provided and all staff was emailed those arrangements.
- Transporting patients, medications, and other supplies would be handled though the EOC and county emergency management. The transportation section under the operations coordinated possible transportation needs when an alternative care site opened. The transportation section was assisting staff transportation needs using a volunteer pool for four wheel drive vehicles.
- In the event of severe weather, all departments would stock additional medical and pharmaceutical supplies. The replenishing of medical and pharmaceutical supplies would be handled under pre-arranged agreements and MOU's with vendors. The hospital had all needed agreements in place.

Areas for Improvement:

- Presbyterian Hospital – Orthopedic only had a 36 hour food supply. Presbyterian Hospital – Charlotte assisted with food supply due to shortage. 96 hour sustainability of essential resource is required to reduce critical resources being transferred from Presbyterian Hospital – Charlotte.

General Summary and Recommendations: Presbyterian Hospital – Charlotte had MOU's with vendors for additional supplies. The hospital had additional supplies available which reduced the needs the EOC had to address. At each video conference briefing, all areas were reviewed and if any issues were discussed, the incident commander assigned it as an action item

to handle. At the next briefing, the incident commander confirmed that all previous action items were complete. Excellent job performed by the incident commander and operations section with resource management.



CAPABILITY: SAFETY AND SECURITY

Activity 4.15.1- 4.15.7

Capability Summary: Controlling the movement of individuals into, throughout, and out of the hospital during an emergency is essential to the safety of patients and staff, and to the security of critical supplies, equipment, and utilities. The hospital determines the type of access and movement to be allowed by staff, patients, visitors, emergency volunteers, vendors, maintenance and repair workers, utility suppliers, and other individuals when emergency measures are initiated. Factors influencing access and movement vary depending upon the type of emergency and local conditions (i.e. the decision by the hospital to shelter staff families, the allowance for or prohibition against firearms, mutual aid agreements with nearby facilities or vendors, etc.).

Strengths:

- Presbyterian Hospital – Charlotte established internal security and safety operations that will assist in all emergencies.
- Additional security staffing was provided upon initiating emergency measures for the severe weather event.
- At 10:35am, the hospital was notified that they would receive patients contaminated with the chemical brine. Upon notification, the decontamination was handled by the first receiver decontamination team. All patients were “clean” before entering the hospital.
- Hospital safety staff also requested additional ice melt at the decontamination area to ensure the walking surfaces were safe for patients and staff.

Areas for Improvement:

- Communications between departments within the facility is vital. A communications plan is needed for each department in the event of a complete phone failure.
- The communications plan did not have adequate resources if the cellular phone and/or landline phone service fails.
- Written communication with runners in the EOC would allow the EOC to communicate with all departments.
- Duplicate note forms would allow EOC staff to communicate in written form. The duplicate forms allow staff to send a copy of the message and leave a copy in the EOC for reference.

General Summary and Recommendations: Safety and Security are obviously top priority for the facility and there are many plans in place to support these efforts. Revisiting the concept of a communications plan is critical for progression. When communicating internally beyond the use of technology, it may be helpful to consider written communication with runners in the EOC to allow the EOC to communicate with all departments as well as duplicate note forms to record messages delivered during activation.



CAPABILITY: STAFFING

Activity 4.16.1- 4.16.4

Capability Summary: To provide safe and effective patient care during an emergency, staff roles are well defined; staff are oriented and trained in their assigned responsibilities; and staff maintains their competencies over time. Staff roles in emergencies are determined largely by the priority emergencies defined in the Hazard Vulnerability Analysis, and the reporting relationships in the command and control operations of the hospital. As such, staff must stand ready to adjust to changes in patient volume or acuity, work procedures or conditions, and response partners within and outside the hospital. (Note: Standards in the Medical Staff chapter define the processes for accepting independent practitioners as volunteers.) Staff roles and responsibilities may be documented in the EOP using a variety of formats: job action sheets, checklists, flow charts, etc.

Strengths:

- Presbyterian Hospital – Charlotte had each staff role established in the EOP.
- The EOP was referenced multiple times during the event and was divided into sections for quick reference for code responsibilities and proper actions.
- Most staff in the EOC had HICS training and previous experience in the EOC.
- HICS vests were used by all personnel and the HICS reference book was used in the EOC for job action sheets and roles.
- Staff members worked as a team and transferred information to the appropriate HICS role when needed.
- The key departments (i.e. emergency department, admissions, and security) adjusted staff when increased patient volume was recognized. The EOC identified an increase in the number of patients and requested additional care providers to be called in using the call phone list. Transportation was also arranged due to travel in the area becoming dangerous.

Areas for Improvement:

- Task level checklists for each section of the EOP would allow for a quicker reference of each task. The EOP was used frequently but checklists or additional training on the EOP would allow EOC staff to become proficient in the EOP.

- Some staff had to reference the EOP for long periods of time to obtain all the needed information for their role. Key components of the EOP could be transferred on reference sheets that could be accessed electronically

General Summary and Recommendations: Staff roles and responsibilities are defined in the Emergency Operations Plan (EOP). The use of job action sheets in the EOC was very useful. Independent practitioners could assist with additional staffing if needed. In the security plan, all practitioners' credentials would be verified and all staff would be indentified in patient care areas. The PIO had a great communications plan to include external partners. The press releases and emails communicated to all outside personnel provided the location of the EOP, job action sheets, and other protocols that could be located for their discipline



CAPABILITY: UTILITIES

Activity 4.17.1- 4.17.5

Capability Summary: Different types of emergencies can have the same detrimental impact on a hospital's utility systems. For example, brush fires, ice storms, and industrial accidents can all result in a loss of utilities required for care, treatment, services, related transport and building operations. Hospitals, therefore, must have alternative means of providing for essential utilities, whether through: negotiated relationships with the primary suppliers; Memoranda of Understanding (MOUs) with other hospitals in the community; alternative equipment at the hospital; or provision through a parent entity, etc. Hospitals should determine how long they expect to remain open to care for [patients, and plan for their utilities accordingly. Because some emergencies may be regional in scope or of long duration, hospitals should not rely solely on single source providers in the community. Where possible, hospitals should identify other suppliers outside of the local community in case the communities' infrastructure is severely compromised and unable to support the hospital.

Strengths:

- Facility called for additional medical gas and medical supplies prior to the onset of the winter storm.
- Water supply was adequate and bottled water was available in supply.
- Medical supplies from the operating room were transferred to the general supply.

Areas for Improvement:

- Presbyterian Hospital – Orthopedic needs additional food storage. During the exercise the hospital only had a 36 hour supply of food. Presbyterian Hospital – Charlotte assisted with food supply due to shortage. 96 hour sustainability of essential resource is required to reduce critical resources being transferred from Presbyterian Hospital – Charlotte.

- Presbyterian Hospital – Charlotte should consider addressing their linen supply. With additional staff staying at the hospital for 4-7 days and the possibility of a surge of patients; the hospital's linen supply may not cover all areas.

General Summary and Recommendations: Presbyterian Hospital – Charlotte EOC called for briefings hourly. Fuel, food, medical gases, and medical supplies were assessed at the onset of the winter storm. Prior to the storm, medical supplies and medical gases were stocked by all vendors to prepare for the storm. All EOC's were advised to monitor their supplies and if any supplies were needed it was relayed during the video conferencing. All locations were advised by the incident commander to transfer any medical supplies to the general supply. Since elective procedures were cancelled, the extra operating room supplies were moved to the general supply. The water supply was adequate and bottled water was available as a back-up. The EOC staff worked very well together planning for a possible 7-10 day event. After travel become dangerous it was important to conserve supplies and all essential resources were evaluated at each EOC briefing.



CAPABILITY: CLINICAL ACTIVITY

Activity 4.18.1- 4.18.6

Capability Summary: The fundamental goal of emergency management planning is to protect life and prevent disability. The manner in which care, treatment, and services are provided may vary by type of emergency. However, certain clinical activities are so fundamental to safe and effective care that the hospital should determine how it will re-schedule or manage patient clinical needs even under the most dynamic situations or in the most austere care environments

Strengths:

- At the onset of the exercise, Presbyterian Hospital – Charlotte and Presbyterian Hospital – Orthopedic stopped all elective surgeries and procedures. The additional staff in those areas assisted with managing the additional surge of patients.
- Hospital staff set up a patient triage area for the Emergency Department.
- All admissions, transfers, and discharges were updated hourly and the EOC received the bed availability
- Hospital staff had sleeping areas as wells as their families. Personal hygiene for all patients and staff was evaluated each shift.
- Presbyterian Hospital – Charlotte provided mental health services to patients and staff.
- Critical Incident Stress teams were placed on stand-by to assist the mental health professionals on site if needed.

Areas for Improvement:

- During normal operations, tracking patient's clinical information is accomplished by computer systems in the clinical areas. If the computer system fails, information may become difficult to access. At 11:15am, an exercise inject was given that key

computer/IT equipment may be shutting down. Concern from the staff was given that they may not have adequate paperwork in the event of an IT failure. Electronic paperwork is used for day-to-day operations. Additional planning is needed to ascertain whether sufficient hard copies of the paperwork are provided in clinical areas.

General Summary and Recommendations: Additional planning should be considered for the event of Information Technology disruption. In addition to planning, it is recommended that follow up training and evaluation be made in order to ensure seamless operation.



OVERALL SUMMARY: PRESBYTERIAN CHARLOTTE/ ORTHOPEDIC

It was a great opportunity for hospital staff to use and become familiar with the new Emergency Operations Center (EOC). The EOC had excellent teamwork and communication throughout the entire exercise. The command staff in the Emergency Operations Center (EOC) conducted a briefing for all staff members. Early communication with market leaders provided essential information for the EOC. Early work on the labor pool allowed the EOC to complete a staff schedule for the event. The staff used email and video conferencing to update all locations of their current status. The hospital had additional supplies available which reduced the amount of issues the EOC had to address. The incident commander and operations section with resource management did an excellent job. Safety and Security are obviously a top priority for the facility. Staff roles and responsibilities are defined in the Emergency Operations Plan (EOP). The press releases and emails communicated to all outside personnel provided the location of the EOP, job action sheets, and other protocols that could be located for their discipline. Presbyterian Hospital – Charlotte EOC called for briefings hourly. Fuel, food, medical gases, and medical supplies were assessed at the onset of the winter storm. The water supply was adequate and bottled water was available as a back-up. The EOC staff worked very well together planning for a possible 7-10 day event. After travel become dangerous it was important to conserve supplies and all essential resources were evaluated at each EOC briefing.

Revisiting the concept of a communications plan is critical for progression. When communicating internally beyond the use of technology, it may be helpful to consider written communication with runners in the EOC to allow the EOC to communicate with all departments as well as duplicate note forms to record messages delivered during activation. Independent practitioners could assist with additional staffing if needed. Additional planning should be considered for the event of Information Technology disruption. In addition to planning, it is recommended that follow up training and evaluations are made in order to ensure seamless operation.

Presbyterian Huntersville

CAPABILITY: EMERGENCY OPERATIONS PLANNING

Activity 4.12.1- 4.12.7

Capability Summary: A successful response relies upon planning around the management of six critical areas: communications; resources and assets; safety and security; staffing; utilities; and clinical activities. It is important for hospitals to develop a comprehensive Emergency Operations Plan (EOP) as documentation to help guide the hospital in its emergency response and recovery efforts. While the Emergency Operations Plan can be formatted in a variety of ways, it must address these six critical areas to serve as a blueprint for managing care and safety during an emergency.

Strengths:

- The staff has plans in place for such events.
- Staff responded promptly to the emergency situation and carried out assignments in a timely fashion
- IC was updated on all actions taken.

Areas for Improvement:

- ICC was overstaffed at certain critical points.
- Excessive traffic into and out of the ICC during emergency operations inhibited movement and communication.

General Summary and Recommendations: The Incident Commander immediately called for Dept. Heads to respond to the ICC for briefing and assignments. The staff responded accordingly, were given assignments, and deployed to carry them out in a timely fashion. The ICC displayed impressively quick and efficient management of personnel. The staff understood their roles and carried out their assignments effectively. Issues regarding traffic through the ICC and crowded control centers were addressed and resolved quickly and did not grow to impede response. It is recommended that staff review the chain of command, communication options, and procedures for reporting to the ICC to avoid this problem in future.



CAPABILITY: COMMUNICATIONS

Activity 4.13.1- 4.13.14

Capability Summary: In our everyday life of carrying out our responsibilities on the job communication is by far one of the most important. During exigent circumstances those communication tools that are available to us become all that more important and even more important is the fact that personnel understand their use. Sometimes even the simple things such

as operating an unfamiliar phone line can cause problems in communicating very important information. In this section hospital were evaluated on fourteen key areas. The following are the results:

Strengths:

- The hospital was proactive in contacting sister hospital facilities for sharing needs.
- The hospital promptly contacted outside agencies such as law enforcement and other agencies to assist as needed.

Areas for Improvement:

- No areas for improvement were identified

General Summary and Recommendations: Hospital staff proved extremely effective in prompt communication with outside agencies, public notification, staff notification, and in getting information to patients, patients' families, public safety, and with other health care organizations in the area. Communication systems contributed to a highly effective response. No areas were identified for special attention or review.



CAPABILITY: RESOURCES AND ASSETS

Activity 4.14.1- 4.14.11

Capability Summary: During emergencies, health care organizations that continue to provide care, treatment, and services to their patients must sustain essential resources, materials, and facilities. The emergency operation plan should identify how resources and assets will be solicited and acquired from a range of possible sources, such as vendors, neighboring health care providers, other community hospitals, state affiliates, or a regional parent company. To address emergencies of long duration or broad geographic scope, the hospital's plan must proactively identify, locate, acquire, distribute and account for critical resources and supplies. The plan should also recognize the risk that some assets may not be available from planned sources and that contingency plans will be necessary for critical supplies. This situation may occur when multiple hospitals are vying for a limited supply from the same vendor.

Strengths:

- Sister facilities shared information for trading equipment, services, drugs, etc.,
- National Guard was contacted and requested to stand by should the hospital require assistance with patient transportation.
- Arrangements were made for a fire department tanker truck to be dispatched in case of water loss.
- The hospice center was contacted and a vacant racing company building secured for overflow of patients or families. Both facilities were equipped with a back-up power supply.

- All needed supplies were inventoried.
- All required supplies, such as drugs, linens, and fuel; were obtained.

Areas for Improvement:

- No areas for improvement were identified

General Summary and Recommendations: The staff was highly prepared for this type of emergency and very proactive in procuring potential needs and ensuring that there were several methods to obtain resources in case of a prolonged event or system failure. IC staff showed great initiative in securing facilities for possible evacuation or relocation in the event of patient surge or for patient family members. All relevant agencies, such as the National Guard, that could assist with procuring essentials were contacted and made aware of the situation. Overall, all procedures regarding resources and assets were well-planned and carried out.



CAPABILITY: SAFETY AND SECURITY

Activity 4.15.1- 4.15.7

Capability Summary: Controlling the movement of individuals into, throughout, and out of the hospital during an emergency is essential to the safety of patients and staff, and to the security of critical supplies, equipment, and utilities. The hospital determines the type of access and movement to be allowed by staff, patients, visitors, emergency volunteers, vendors, maintenance and repair workers, utility suppliers, and other individuals when emergency measures are initiated. Factors influencing access and movement vary depending upon the type of emergency and local conditions (i.e. the decision by the hospital to shelter staff families, the allowance for or prohibition against firearms, mutual aid agreements with nearby facilities or vendors, etc.).

Strengths:

- Hospital was placed on lock down with entry limited to main entrance.
- Local police were called and asked to assist with unruly population seeking entrance to hospital for heat and food. They were not turned away but were assured assistance and admittance in an orderly manner.
- Emergency accommodations were established for surge patients and population seeking shelter.

Areas for Improvement:

- No areas for improvement were identified

General Summary and Recommendations: This facility's staff practices and plans for such incidents. Planning was thorough and all procedures were carried out. The hospital provided for a reasonable amount of order and security while ensuring care for current patients

and for community members seeking aid. Plans for controlling public traffic through the facility were immediately implemented and appeared to be effective. The plan took into account the disposal of hazardous materials and decontamination of the main facility and any alternate care facilities in the event of prolonged emergency operations.



CAPABILITY: STAFFING

Activity 4.16.1- 4.16.4

Capability Summary: To provide safe and effective patient care during an emergency, staff roles are well defined; staff are oriented and trained in their assigned responsibilities; and staff maintains their competencies over time. Staff roles in emergencies are determined largely by the priority emergencies defined in the Hazard Vulnerability Analysis, and the reporting relationships in the command and control operations of the hospital. As such, staff must stand ready to adjust to changes in patient volume or acuity, work procedures or conditions, and response partners within and outside the hospital. (Note: Standards in the Medical Staff chapter define the processes for accepting independent practitioners as volunteers.) Staff roles and responsibilities may be documented in the EOP using a variety of formats: job action sheets, checklists, flow charts, etc.

Strengths:

- Personnel were well trained and showed a thorough knowledge of their roles and responsibilities.
- The IC was proactive in obtaining physician compliance to assist. Additional staff was obtained through a pre-established arrangement to provide assistance in the event of an emergency.

Areas for Improvement:

- No areas for improvement were identified.

General Summary and Recommendations: The ICC proved effective in procuring doctors with and without hospital privileges to assist in emergency situations. All personnel were familiar with their duties and performed them in a thorough and timely manner. All staff appeared to have had sufficient training to accomplish their tasks. Additional staff, especially assisting physicians, was already aware of their capabilities through prior communication.



CAPABILITY: UTILITIES**Activity 4.17.1- 4.17.5**

Capability Summary: Different types of emergencies can have the same detrimental impact on a hospital's utility systems. For example, brush fires, ice storms, and industrial accidents can all result in a loss of utilities required for care, treatment, services, related transport and building operations. Hospitals, therefore, must have alternative means of providing for essential utilities, whether through: negotiated relationships with the primary suppliers; Memoranda of Understanding (MOUs) with other hospitals in the community; alternative equipment at the hospital; or provision through a parent entity, etc. Hospitals should determine how long they expect to remain open to care for [patients, and plan for their utilities accordingly. Because some emergencies may be regional in scope or of long duration, hospitals should not rely solely on single source providers in the community. Where possible, hospitals should identify other suppliers outside of the local community in case the communities' infrastructure is severely compromised and unable to support the hospital.

Strengths:

- All possible needs were requested in advance in anticipation of power outages, communication loss, etc.

Areas for Improvement:

- No areas for improvement were identified

General Summary and Recommendations: All potential needs and system failures were anticipated and maintenance of patient care was ensured through supplemental plans and precautions. A fire department tanker truck for emergency water supply and extra fuel were requested before system failure so that patient care would be uninterrupted. A back-up phone system was in place (red phones) in the event of main line phone outages. Overall, the plan showed initiative in anticipating all possible scenarios and made allowances for effective emergency response in any event. ICC staff was quick to initiate supplementary emergency plans and were aware of all procedures necessary to carry them out.

**CAPABILITY: CLINICAL ACTIVITY****Activity 4.18.1- 4.18.6**

Capability Summary: The fundamental goal of emergency management planning is to protect life and prevent disability. The manner in which care, treatment, and services are provided may vary by type of emergency. However, certain clinical activities are so fundamental to safe and effective care that the hospital should determine how it will re-schedule or manage patient clinical needs even under the most dynamic situations or in the most austere care environments

Strengths:

- Medical specialists were contacted and brought in as needed.
- Emergency transportation was scheduled quickly for any patients with conditions requiring special treatment.
- A major and minor triage area was established for incoming patients.

Areas for Improvement:

- No areas for improvement were identified

General Summary and Recommendations: All necessary physicians were requested to respond insofar as they were able. Some specialists were on standby and arrangements were in place to transport them to the facility as needed. Local police and National Guard were requested through emergency management to assist with transport of patients if needed. Clinical activity continued with minimal interruption and allowances were made for most extraordinary circumstances, including transportation of patients and staff and care for specific population groups such as pediatric and the disabled. Procedures for proper sanitation, addressing mental health needs, maintaining records, and all other normal clinical activities were presented and followed effectively.

**OVERALL SUMMARY: Presbyterian Huntersville**

Evaluators were impressed with the preparedness of the Huntersville Staff. All personnel took training seriously and performed their duties in a very professional manner. All were primarily concerned with serving the community and ensuring that the hospital fulfilled all of its necessary functions during the emergency. They showed great initiative, not only in maintaining their own patient care, but also in communicating with sister facilities to ensure that all health centers in the region had sufficient equipment, staff, beds and other essentials. The Incident Commander had an excellent system of support staff to assist with briefing all Department Heads and assigning tasks, which were carried out in a prompt and thorough manner. This hospital staff showed experience in quick, effective decision-making. Huntersville contact, Terry Fair, paid special attention to the preparedness of the IC staff. The support personnel were extremely innovative in brainstorming resources to assist in this emergency.



Presbyterian Matthews

CAPABILITY: EMERGENCY OPERATIONS PLANNING

Activity 4.12.1- 4.12.7

Capability Summary: A successful response relies upon planning around the management of six critical areas: communications; resources and assets; safety and security; staffing; utilities; and clinical activities. It is important for hospitals to develop a comprehensive Emergency Operations Plan (EOP) as documentation to help guide the hospital in its emergency response and recovery efforts. While the Emergency Operations Plan can be formatted in a variety of ways, it must address these six critical areas to serve as a blueprint for managing care and safety during an emergency.

Strengths:

- Extensive pre planning for unusual occurrences has been conducted. This included ICS training as well as out of state EM training for staff.
- Staff is familiar with SOP as well as ICS procedures.
- Upper management is attuned to needs for unusual occurrences.
- EOP/IAP includes numerous standing MOU's with community resources to fill various potential needs.
- Personnel work extremely well as a team.
- SOP for this facility is to maintain several days of consumable supplies on hand at any time (meds, food, etc.).
- Facility maintains a minimum of two weeks fuel for generators on site.

Areas for Improvement:

- Communications is the one significant area for improvement.
- Real world failure of VIPER system occurred during exercise. Facility could only receive, not transmit. NOTE: Staff adapted to problem by use of teleconferencing system. This was not efficient, but was functional.
- Expand on training to ensure ICS positions can be staffed by several different individuals (to accommodate unavailability of some staff).

General Summary and Recommendations: Other than communications issues, performance was exceptional. Resources and assets are very good NOTE: This facility is not equipped as a trauma center and maintains a 117 bed capacity. It is a "community hospital" by design. Staffing is good; safety and security is well addressed; emergency utilities appear above average and clinical activities are well managed. Their mission of service was apparent in observing their operations. Training of personnel was obvious. Overall, performance was impressive.

CAPABILITY: COMMUNICATIONS**Activity 4.13.1- 4.13.14**

Capability Summary: In our everyday life of carrying out our responsibilities on the job communication is by far one of the most important. During exigent circumstances those communication tools that are available to us become all that more important and even more important is the fact that personnel understand their use. Sometimes even the simple things such as operating an unfamiliar phone line can cause problems in communicating very important information. In this section hospital were evaluated on fourteen key areas. The following are the results:

Strengths:

- An excellent infrastructure is well established at this facility.
- Most area hospitals are “sister” facilities and communication is ongoing and routine.
- Staff is knowledgeable as to the capabilities and limitations of other facilities.
- Real world communication activities / events were observed.
- Importance of communication was projected by personnel.

Areas for Improvement:

- Improvements in communication capabilities are essential.
- Backup systems exist but are limited in scope and availability.
- Internal communications is adequate; but should be supplemented by additional internal radio or direct connect type system.
- Media contacts / procedures should be expanded.
- The PIO component needs to be clarified NOTE: as has been observed at other facilities in the past, this position was more of a liaison than a PIO. This was not viewed as a significant problem.

General Summary and Recommendations: Most emergency communication strategies are good. Pre planning is obvious in most of these areas. Emergency notification measures for staff are in place (including phone trees); plans are in place for patient / family notifications; communications with various suppliers is planned-for as well as other facilities. Planning has anticipated many potential communication needs depending on the event. Names and numbers for contacts are recorded and accessible. The only communication concern revolves around the current available equipment. It was noted that hospital administration was already aware of some concerns and are seeking solutions. VIPER radio issues exist at various points in the area.



CAPABILITY: RESOURCES AND ASSETS**Activity 4.14.1- 4.14.11**

Capability Summary: During emergencies, health care organizations that continue to provide care, treatment, and services to their patients must sustain essential resources, materials, and facilities. The emergency operation plan should identify how resources and assets will be solicited and acquired from a range of possible sources, such as vendors, neighboring health care providers, other community hospitals, state affiliates, or a regional parent company. To address emergencies of long duration or broad geographic scope, the hospital's plan must proactively identify, locate, acquire, distribute and account for critical resources and supplies. The plan should also recognize the risk that some assets may not be available from planned sources and that contingency plans will be necessary for critical supplies. This situation may occur when multiple hospitals are vying for a limited supply from the same vendor.

Strengths:

- Practically every segment of this activity has been specifically addressed in advance, through pre-planning.
- Multiple sources for supplies are listed.
- Various items are routinely maintained in a stockpile on premises.
- Their EOP provides for advance acquisition of additional supplies when weather or other critical / unusual events are forecasted or anticipated. This was done (notionally) in response to advance data provided for the exercise.
- Preparations to accommodate staff and patient needs are also addressed in their EOP; knowledge of these plans was routinely displayed by staff.

Areas for Improvement:

- May need to clarify specific plans for sharing of resources. Although this area of potential need is acknowledged and recognized, specific plans are apparently dealt with on an as-needed basis. NOTE: This was not seen by this evaluator as a significant problem, as it was addressed in response to an inject during the exercise.

General Summary and Recommendations: This facility was well prepared in their planning phase to address the various segments of this activity. Resources were well managed. The in-house EOC was equipped with visual aids in the form of ICS staffing chart; posted phone / radio list; incident task list; hospital command center time line; over all staffing chart; and hospital census chart. Regular internal briefings with section reports were conducted. NOTE: A real world activity was observed and incorporated into the exercise. Each morning a briefing is conducted to address any issues facing the facility. It requires a brief report from all components within the hospital. Organization was impressive. The facility EOP is well planned and executed. I would recommend only that staff maintains and updates the EOP regularly (to continue the current exceptional level they enjoy).

CAPABILITY: SAFETY AND SECURITY**Activity 4.15.1- 4.15.7**

Capability Summary: Controlling the movement of individuals into, throughout, and out of the hospital during an emergency is essential to the safety of patients and staff, and to the security of critical supplies, equipment, and utilities. The hospital determines the type of access and movement to be allowed by staff, patients, visitors, emergency volunteers, vendors, maintenance and repair workers, utility suppliers, and other individuals when emergency measures are initiated. Factors influencing access and movement vary depending upon the type of emergency and local conditions (i.e. the decision by the hospital to shelter staff families, the allowance for or prohibition against firearms, mutual aid agreements with nearby facilities or vendors, etc.).

Strengths:

- The facility employs an in-house uniformed security unit. Contact with them indicated this staff is trained and professional.
- Design of the hospital allows for establishing good physical controls to access.
- Credentialing is standard and required.
- Matthews Police Department will be first response for additional security. An established working relationship exists with that agency NOTE: a real world ER event was observed requiring assistance from MPD.
- Though limited in scope due to the size of the hospital, plans for isolation and decontamination exist.

Areas for Improvement:

- Controls on traffic access to the facility are limited. This is largely due to the physical location and accessibility to the hospital and surrounding facilities.
- The buildings are located adjacent to a four lane divided roadway.
- Acquiring portable barricades to restrict access to parking lots may be an option.
- Employee parking is protected by an entry card admission system restricting outside entry.
- Security personnel are equipped and present a good image, but they are unarmed (i.e.: firearms). It is recommended that consideration be given to requesting LEO presence at the facility during any unusual occurrence, especially if the event may be of extended duration NOTE: this is recognizing hospitals as a community focal point during emergencies.

General Summary and Recommendations: Generally, planning addresses safety and security issues within the hospital. These issues were observed as being acknowledged and addressed during the course of the exercise. Security and safety of staff and patients was routinely addressed during the exercise.

CAPABILITY: STAFFING**Activity 4.16.1- 4.16.4**

Capability Summary: To provide safe and effective patient care during an emergency, staff roles are well defined; staff are oriented and trained in their assigned responsibilities; and staff maintains their competencies over time. Staff roles in emergencies are determined largely by the priority emergencies defined in the Hazard Vulnerability Analysis, and the reporting relationships in the command and control operations of the hospital. As such, staff must stand ready to adjust to changes in patient volume or acuity, work procedures or conditions, and response partners within and outside the hospital. (Note: Standards in the Medical Staff chapter define the processes for accepting independent practitioners as volunteers.) Staff roles and responsibilities may be documented in the EOP using a variety of formats: job action sheets, checklists, flow charts, etc.

Strengths:

- The facility EOP is well developed in this area.
- Staff is obviously well trained and versed in their roles both professionally and under emergency operations.
- The ability to adjust and adapt as needed was projected as a routine occurrence during the exercise.
- Patient care and community service was the obvious mission of the staff. This was coupled with the recognized necessity in addressing the needs of the staff in order to maintain their competency under adverse conditions.

Areas for Improvement:

- It is recommended that additional cross training for certain (ICS) positions be expanded (to ensure the continued high level of efficiency noted).

General Summary and Recommendations: Staff roles and responsibilities are clearly established and defined in the EOP. Personnel were aware of these roles and frequently demonstrated their adaptability. Check lists and flow charts are utilized and pre-formatted.

**CAPABILITY: UTILITIES****Activity 4.17.1- 4.17.5**

Capability Summary: Different types of emergencies can have the same detrimental impact on a hospital's utility systems. For example, brush fires, ice storms, and industrial accidents can all result in a loss of utilities required for care, treatment, services, related transport and building operations. Hospitals, therefore, must have alternative means of providing for essential utilities, whether through: negotiated relationships with the primary suppliers; Memoranda of Understanding (MOUs) with other hospitals in the community; alternative equipment at the

hospital; or provision through a parent entity, etc. Hospitals should determine how long they expect to remain open to care for [patients, and plan for their utilities accordingly. Because some emergencies may be regional in scope or of long duration, hospitals should not rely solely on single source providers in the community. Where possible, hospitals should identify other suppliers outside of the local community in case the communities' infrastructure is severely compromised and unable to support the hospital.

Strengths:

- Once again, the organized pre planning activities of this facility were most impressive.
- At any time, in-house supplies and emergency utility functions for several days exist as SOP.
- Emergency power alone is available on site to operate the facility for a minimum of two weeks.
- MOU's exist for a variety of supplies and resources.

Areas for Improvement:

- Re examine existing MOU's to determine if further expansion is needed for resources.

General Summary and Recommendations: Presbyterian Matthews is prepared to address all sections under activity 4.17. Few facilities of their kind have the ability to maintain their own power supply for a two week period. Pre planning of staff is admirable.



CAPABILITY: CLINICAL ACTIVITY

Activity 4.18.1- 4.18.6

Capability Summary: The fundamental goal of emergency management planning is to protect life and prevent disability. The manner in which care, treatment, and services are provided may vary by type of emergency. However, certain clinical activities are so fundamental to safe and effective care that the hospital should determine how it will re-schedule or manage patient clinical needs even under the most dynamic situations or in the most austere care environments

Strengths:

- The facility has conducted extensive pre-planning to address each segment under activity 4.18.
- The need to continue patient services by adapting to existing conditions was well recognized by the staff.
- Prioritization of needs was displayed as a common practice.
- Adjustments to accommodate clinical needs of all categories of patients seemed routine.

- Plans for record documentation and tracking patient were in place, with secondary manual backup methods

Areas for Improvement:

- Continue training and frequent reevaluation of methods

General Summary and Recommendations: Presbyterian Matthews addressed each of the six sub groupings under this activity. Planning is obviously a priority for this institution.



OVERALL SUMMARY: Presbyterian Matthews

Presbyterian Matthews is a facility exceptionally well-prepared for unusual occurrences. Throughout the exercise, all personnel remained engaged. At no time was there a sense of chaos in their operation. Frustrations were kept at a minimum. Cooperation among the staff was excellent. Emergency management principles were displayed by many of the staff. The critical importance of advanced planning is obviously recognized by hospital administration.

The facility is well designed. The EOC is equipped and the hospital EOP shows great preparation. The only significant issue involves communications. Administration is addressing this issue; however both primary and secondary systems are currently weak. The problem is in the physical equipment itself. In addition, it is recommended that both internal and external communications systems be evaluated and improved. It appears that this may be a fairly widespread problem among hospitals throughout the region.

One suggestion for improvement of the EOC is to consider adding a basic satellite TV system in order to maintain continued monitoring of news/ weather events. Cable is currently utilized, but would be unserviceable in the event of downed lines. Strive to maintain the current level of efficiency through continued training.



Non-Medical Organizations

The proceeding evaluations come from partnering agencies that participated in the MTAC Regional Full Scale Exercise. Their primary focus may not be hospitalized medical treatment. Examples of these agencies include County Emergency Operations Centers. Emergency Operations Centers with representation from local hospitals were evaluated through the guidance of the Exercise Evaluation Guides in accordance with Joint Commission. However, those who were not represented directly within the EOC were evaluated based on the observations and experiences of the assigned evaluator. Therefore, it should be noted that the following observations may or may not be of the same format as previously documented evaluations.



Burke County EMS

Strengths:

- Opened EOC for winter weather event
- Successfully notified telephone company of cable damage, received estimated repair time
- Notified Red Cross to open College St. Rec center for shelter,
- Requested that local fire/rescue departments man their stations for emergency contacts and temporary sheltering
- Contacted local radio and TV stations for public notification
- Made arrangement for hospital sleepovers to be transported to shelter
- Contacted public works to check fuel supply and made contingency plans
- Auto crashes given to EMS, rescue squad and hospitals alerted for backup ambulances
- Made contact with local firefighters to help transport nurses
- Acquired special transport vans for transporting nursing home patients to shelter

Areas for Improvement:

- Failed to connect to hospital with NCMCIN radio
- It was not determined whether Burke County EMS has sufficient back up communication plans in place
- It was not determined whether Burke County has sufficient plans to acquire and manage resources
- It was not determined whether Burke County EMS has sufficient plans for back up utilities such as fuel, water, and electricity.
- It was not determined whether Burke County has sufficient plans in place to transport, shelter, and supply the families of EMS personnel.

OVERALL SUMMARY: Burke County EMS

The actions of the Burke County EMS representative in the EOC were recorded for analysis but did not include an Exercise Evaluation Guide. Overall, Burke County EMS responded in an efficient and timely fashion to the disaster scenario, showing thorough knowledge of emergency plans. The majority of the areas for improvement listed above were issues not discussed during the response process and should be reviewed to ensure that sufficient provisions are included in the county EOP.



Charlotte Fire Department

Charlotte Fire Dept was contacted for deployment of the Medical Support Unit in response to firefighter rehab on a large commercial fire. The request went into CFD Alarm (Dispatch Center). All information was given to Alarm and within five minutes Alarm called back that the mission had been approved by Chief Jeff Dulan with CFD. Within 15 minutes after the request a call was received by CFD EMS Coordinator Danny West that the unit was ready to deploy with personnel and Paramedics being deployed by MEDIC with the unit

Cleveland County

Participating Agencies: CRMC (Cleveland Regional Medical Center), KMH (Kings Mountain Hospital), MTAC Regional Emergency Response & Recovery, SFD (Shelby City Fire Department), Cleveland County Health Department, Cleveland County Communications, CCEMS (Cleveland County EMS)

Strengths:

- Maintained communication trailer with land line power loss
- Lost Cleveland county 800 system as front line equipment, switched to alternative
- Loss of 340 (hospital radio frequency) as front line equipment, switched to alternative
- Loss of VMN as front line equipment, switched to alternative
- Loss of MCMN as front line equipment, switched to alternative
- Loss of NC Viper and front line equipment, switched to alternative
- Loss of VHF as front line equipment, switched to alternative
- Loss of CRMC Police Internal as front line equipment, switched to alternative
- Loss of SMAT Radios as front line equipment, switched to alternative
- Combined agencies as needed to each work channel

Areas for Improvement:

- Failed to request additional sources of communication support
- KMH-not able to Transmit on VMN
- A few issues with the generator that maintains the communication trailer

- Ping-Pong effect-Poss. Antennas
- More practice with combining agencies to work channels
- Keep up facility equipment

OVERALL SUMMARY: Cleveland County EMS

Overall Cleveland County agencies demonstrated a thorough communications plan and all staff members appeared to have sufficient knowledge both of the preliminary systems in the plan and all back-up systems. The most serious problem reported by participants was the ping-pong effect that disrupted communications. Further system testing for this reason and for practice in combining agencies to work channels would develop communications capabilities.

Lincoln County Emergency Operations Center

During the exercise, the following agencies were involved in the set-up and management of Lincoln County EOC: CMC Lincoln, Lincoln County Emergency Management, Lincoln County EMS, Lincoln County 911 Communications, Lincoln County Fire Marshal's Office, Red Cross, Lincoln County Fire and Rescue Association, Lincoln County Public Health, Lincoln County Department of Social Services, Lincoln Fire Department, and General Devices

CAPABILITY: EMERGENCY OPERATIONS CENTER MANAGEMENT

Activity 1.1- 3.3

Capability Summary: Emergency Operations Center (EOC) management is the capability to provide multi-agency coordination (MAC) for incident management by activating and operating an EOC for a pre-planned or no-notice event. EOC management includes: EOC activation, notification, staffing, and deactivation; management, direction, control, and coordination of response and recovery activities; coordination of efforts among neighboring governments at each level and among local, regional, State, and Federal EOCs; coordination of public information and warning; and maintenance of the information and communication necessary for coordinating response and recovery activities. Similar entities may include the National (or Regional) Response Coordination Center (NRCC or RRCC), Joint Field Offices (JFO), National Operating Center (NOC), Joint Operations Center (JOC), Multi-Agency Coordination Center (MACC), Initial Operating Facility (IOF), etc.

ACTIVITY 1: Activate EOC/MACC/IOF

Activity Summary: In response to activation, perform incident notifications, recall essential personnel, and set in motion EOC/MACC/IOF systems to provide a fully staffed and operational EOC/MACC/IOF.

Task 1.1: Activate, alert, and request response from EOC/MACC/IOF personnel.

Task 1.2: Brief incoming personnel.

Task 1.3: Activate EOC/MACC/IOF.

Strengths:

- Tremendous amounts of communication took place within the EOC among partners.
- Agency representatives within the EOC seemed very familiar with plans and procedures that would be activated during an event such as the scenario presented.
- Radio communication backup systems in place to provide outside agencies with interoperable equipment during activation.

Areas for Improvement:

- Technology seems to be outdated within the EOC.
- Though adequate for this particular response, consideration for expanding the EOC's physical location may prove beneficial. If expansion is not an option, consider break out rooms. The need for additional resources and personnel increases exponentially with the complexity of the incident. Adequate work space reduces stress that can lead to low morale and diminished productivity.



ACTIVITY 2: Direct EOC/MACC/IOF Tactical Operations

Activity Summary: Following activation of the EOC/MACC/IOF system, staff and organize the EOC/MACC/IOF in accordance with the comprehensive emergency management plan (CEMP) and the requisite policies, procedures, and directives.

Task 2.1: Establish organization/operation of EOC/MACC/IOF.

Task 2.2: Ensure that all emergency support functions (ESFs) are staffed.

Task 2.3: Ensure safety and security measures are included in EOC/MACC/IOF management activities.

Task 2.4: Coordinate management of EOC/MACC/IOF with other ICS operations.

Task 2.5: Arrange for shelter, housing, and supplies for responders and personnel supporting the operation per the emergency plan, as applicable.

Task 2.6: Arrange for shelter, housing, and feeding for displaced responder families and general population.

Strengths:

- Assignments were delegated to ensure proper documentation of events taking place within the operations of the EOC.
- Scheduled delivery of Situation Reports took place every hour.

- EOC staff felt comfortable regarding their ability to manage resources. This was evident through discussions and actions presented when faced with resource management injects.

Areas for Improvement:

- Review of the current message flow system should take place. The current system allows for duplication of messages and resource requests for record; however the process appears to be labor intensive. This can be addressed with an electronic resource and message tracking system similar to WebEOC.
- Local partners needing access to NCOEMS SMARTT system should consider inquiring how to gain permission to the system.
- EOC Management identified the need for a master resource list to be compiled for future events.
- Consideration should be given to training additional County and local agency staff in the subject area of Emergency Operations to supplement a shortage of personnel.
- Consideration should be made to designating a staff member to filter phone calls into the EOC. This position could also be filled by a volunteer.
- EOC staff identified the need to address housing plans for staff and families during protracted events.



ACTIVITY 3: Gather and Provide Information

Activity Summary: Upon establishing EOC/MACC/IOF operations, gather, organize, and document incident situation and resource information from all sources to maintain situational awareness within the EOC/MACC/IOF, and horizontally and vertically within the National Incident Management System (NIMS).

Task 3.1: Verify that all participating public safety-related Communication Centers, serving the EOC/MACC/IOF directly or indirectly, have established communication links with the EOC/MACC/IOF.

Task 3.2: Ensure appropriate notifications are made.

Task 3.3: Coordinate emergency management efforts among local, county, regional, State, and Federal EOC/MACC/IOF.

Strengths:

- All EOC partners verbalized that plans are reviewed, updated and practiced on a regular basis.
- Agency representatives within the EOC seemed very familiar with plans and procedures that would be activated during an event such as the scenario presented.

Areas for Improvement:

- None were identified



OVERALL SUMMARY: Lincoln County EOC and Participants

Lincoln County EM seemed very intent on making any necessary changes based on lessons learned from this exercise. They are currently in a difficult position, as they are waiting for a contractor to begin EOC renovation/expansion as well as IT upgrades, all of which will greatly enhance their capabilities. Communications capabilities and interoperability in the EOC are vitally important to incident management. It was obvious from the very beginning of the exercise that this is a close group and that working relationships were strong among all the key players. This group seems progressive in their preparedness efforts and should continue to exercise, train and update all plans and procedures to continue fostering strong working relationships and understanding of response concepts.

Stanly County Emergency Operations Center

During the exercise, the following agencies were involved in the set-up and management of Stanly County EOC: Stanly Regional Medical Center, Stanly County Public Health, Mecklenburg County Public Health, Spring Arbor Assisted Living, Woodhaven Court/Albemarle House, Lutheran Nursing Home, Stanly Manor, Stanly County E-911 Communications, Stanly County EMS

CAPABILITY: EMERGENCY OPERATIONS CENTER MANAGEMENT

Activity 1.1- 3.3

Capability Summary: Emergency Operations Center (EOC) management is the capability to provide multi-agency coordination (MAC) for incident management by activating and operating an EOC for a pre-planned or no-notice event. EOC management includes: EOC activation, notification, staffing, and deactivation; management, direction, control, and coordination of response and recovery activities; coordination of efforts among neighboring governments at each level and among local, regional, State, and Federal EOCs; coordination of public information and warning; and maintenance of the information and communication necessary for coordinating response and recovery activities. Similar entities may include the National (or Regional) Response Coordination Center (NRCC or RRCC), Joint Field Offices (JFO), National Operating Center (NOC), Joint Operations Center (JOC), Multi-Agency Coordination Center (MACC), Initial Operating Facility (IOF), etc.

ACTIVITY 1: Activate EOC/MACC/IOF

Activity Summary: In response to activation, perform incident notifications, recall essential personnel, and stand-up EOC/MACC/IOF systems to provide a fully staffed and operational EOC/MACC/IOF.

Task 1.1: Activate, alert, and request response from EOC/MACC/IOF personnel.

Task 1.2: Brief incoming personnel.

Task 1.3: Activate EOC/MACC/IOF.

Strengths:

- Stanly Regional Medical Center (SRMC) has a detailed Assets COOP in place, identifying its plans for proactive vendor procurement in the early stages of events.
- There is a generator plan that includes detailed fuel management to make it through the 96 hour period,
- There is an effective dietary management plan for extended events.
- There are human resource management plans that include transportation (with 4x4s in winter weather events) and a pre-event call-in process for staff.
- Stanly Regional Medical Center, (SRMC), SCPH (Public Health), SCEM (Emergency Management), all EMS units, FD units, and the 911 Center are equipped with VIPER system radios.
- SRMC set up a JIC, in collaboration with SCEM.
- “NC SMARTT” was used during the event.
- SRMC has pre-established protocols in place with vendors to procure an identified additional allotment of essential supplies prior to an impending event (such as the winter storm).
- In the early stages of communication with SCEM and SRMC, SCPH stated its intentions to request SNS if needed.
- It was stated that SNS was successfully tested in real weather events, including winter weather to ensure its capabilities.

Areas for Improvement:

- May consider more proactive requests for competitive resources in the early stages of regional events.
- There is evidence of need for additional training for hospital staff in the use of radios.



ACTIVITY 2: Direct EOC/MACC/IOF Tactical Operations

Activity Summary: Following activation of the EOC/MACC/IOF system, staff and organize the EOC/MACC/IOF in accordance with the comprehensive emergency management plan (CEMP) and the requisite policies, procedures, and directives.

Task 2.1: Establish organization/operation of EOC/MACC/IOF.

Task 2.2: Ensure that all emergency support functions (ESFs) are staffed.

Task 2.3: Ensure safety and security measures are included in EOC/MACC/IOF management activities.

Task 2.4: Coordinate management of EOC/MACC/IOF with other ICS operations.

Task 2.5: Arrange for shelter, housing, and feeding for responders and personnel supporting the operation per the emergency plan, as applicable.

Task 2.6: Arrange for shelter, housing, and feeding for displaced responder families and general population.

Strengths:

- SRMC pre-established protocols with vendors to procure an identified additional allotment of essential supplies prior to an impending event (such as a winter storm).
- SRMC has contact info and healthy working relationships with area healthcare organizations.
- The agencies participating in the exercise considered a strategy of partnering with NC Wildlife Resources and State Park Rangers personnel with 4x4 vehicles for transportation of critical staff and supplies to/from Stanly Regional Medical Center and other critical-need locations.
- SRMC employs in house security personnel with training & protocols to lock down the facility when the need arises.
- Under the threat of being overrun by unruly populations, Stanly Regional immediately made the decision to lock down to avoid losing control and to maintain its ability to continue delivery of the adequate care level being provided
- SRMC called for local law enforcement to assist with control of citizens at the door.
- Knowledge and use of HICS by SRMC was evident.
- Staff roles were defined in the EOP for all critical areas.
- The organization has an established process for identifying care providers and other personnel assigned to particular areas during an emergency.

Areas for Improvement:

- It was not determined whether the organization plans for managing staff family support needs.
- SRMC employs in-house security personnel with training & protocols to lock down the facility when the need arises.
- Continue ICS training and assessment of training needs for all personnel that would likely be assigned positions in a long term disaster event.
- It was not determined whether the organization communicates to licensed independent practitioners their roles in emergency response and to whom they report during an emergency.



ACTIVITY 3: Gather and Provide Information

Activity Summary: Upon establishing EOC/MACC/IOF operations, gather, organize, and document incident situation and resource information from all sources to maintain situational

awareness within the EOC/MACC/IOF, and horizontally and vertically within the National Incident Management System (NIMS).

Task 3.1: Verify that all participating public safety-related Communication Centers, serving the EOC/MACC/IOF directly or indirectly, have established communication links with the EOC/MACC/IOF.

Task 3.2: Ensure appropriate notifications are made.

Task 3.3: Coordinate emergency management efforts among local, county, regional, State, and Federal EOC/MACC/IOF.

Strengths:

- The plan identified alternate means of providing electricity, fuel for vehicles, and other essential utility needs such as ventilation, medical gas, etc.
- SRMC called for local law enforcement to assist with control of citizens at the door.

Areas for Improvement:

- The plan identified alternate means of providing electricity, fuel for vehicles, and other essential utility needs such as ventilation, medical gas, etc.



OVERALL SUMMARY: Stanly County EOC and Participants

SCEM's discussion with the three assisted living facilities during a lull in the exercise included working with SCEM/ SRMC/ MTAC to pursue a VIPER radio through future grant and/or budget opportunities. As a result of this exercise, the assisted living facilities seemed to clearly recognize future ownership of a VIPER radio as a critical asset in their goal to provide the expected level of care and well being for their clients and staff in such an event. EMS staffing during the disaster exercise was well handled by SCEM. SCPH Agency is committed to partnerships/relationships with fellow organizations and vendors in order to maintain redundant 24-hour contact information. The strength in relationships and collaboration among agencies, both in the public and private sector, was in great evidence.

Some improvements that need attention include alternative and innovative means of staff transportation to deal with potential absenteeism of critical staff and its impact during disaster events. Stanly Regional should continue to strive for improvement of partnerships and redundant levels of 24-hour contact with critical needs entities of the private sector as well as providers of critical supplies and services during adverse events. Overall, all participants in the exercise were engaged and enthusiastic. Agencies displayed a confident level of preparedness in many aspects. Participants were open to new ideas and considerations. There was a hearty effort made by all participating agencies throughout the exercise.



SECTION 4: PARTICIPANT FEEDBACK FORMS

For the purpose of categorizing the responses of all participants in the Metrolina Trauma Advisory Committee Exercise, the information expressed by each respondent was categorized as a specific target capability (such as emergency operation planning, communications, resources and assets, etc.) outlined by the Joint Commission as critical for hospital preparedness. Each entry was assigned a category and provided a numerical value in order to implement a system for measuring player perceptions and common concerns among functional groups in the same fashion as the ETACS section was assessed.

Part I – Participant Recommendations and Action Steps

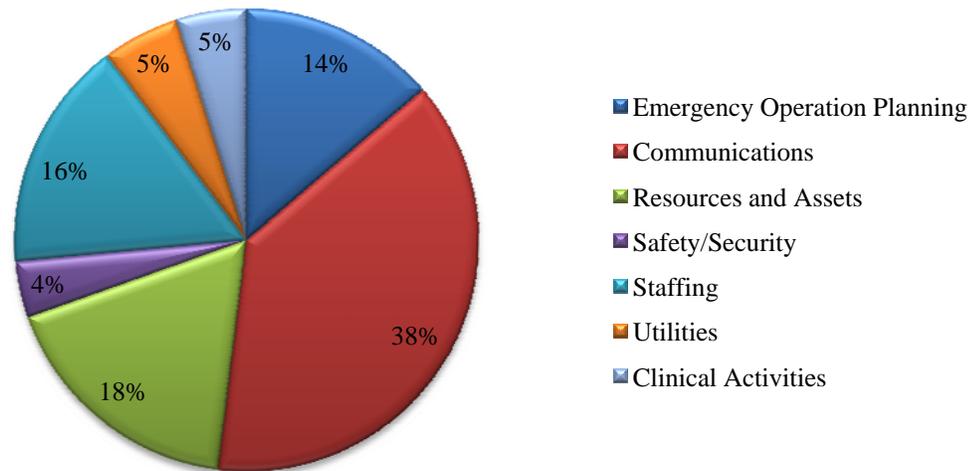
It is important to note that a comprehensive response utilizes standardized plans including internal agency and external agency coordination, in order to integrate multiple response agencies.

Example: Computer pop-up information is a dispersal mechanism for alerting affected agencies/departments as well as an integrated system within the communication policy of response agencies. This system is activated for alert notification but is also part of the communication infrastructure, i.e. a communication capability. Categorization of this system according to target capabilities depends on the context of usage. If a text message was used to notify the hospital administrator, this is categorized within the Critical Resource Logistics and Distribution target capability because the hospital administrator is considered part of the response framework. If a public announcement via television or radio was used to coordinate response for the impacted community, this is categorized within the Emergency Public Information & Warning capability because it was intended to alert the public at large and not specifically first responders.



All Groups: Post-Exercise Areas Identified for Improvement

Figure 4.1: Areas for Improvement



In *Figure 2.1*, the data captured from participant feedback forms is represented according to the seven critical areas of preparedness identified by the Joint Commission. Participants identified the top three areas they felt required the most improvement following the exercise.

Participants felt that the area of communications required the most attention. The most common suggestions for improvement in the area of communication were:

- Viper Radio Capability
- Streamline usage of WebEOC for updated information and interagency communication
- Documentation of events and resource information
- Updated contact lists
- Red Emergency Phones in the ICC

Participants felt that the area of Resources and Assets also required attention. The most common participant suggestions for improvement in the area of Resources and Assets were:

- Reassessment of capabilities for staff and pet housing and transportation
- MAR Printing
- Resource guide or inventory

Participants felt that the area of Staffing also required attention. The most common participant suggestions for improvement in the area of staffing were:

- Clear understanding of agency and personnel roles and capabilities.
- Revision or restructuring of ICS
- Training and education in Emergency Operation procedures and use of equipment

SECTION 5: CONCLUSION

The MTAC Regional Full Scale Exercise was a success because of the cooperation, coordination, and participation of the hospital and emergency response community represented at the exercise. Their willingness to take the exercise scenario and participate as if it were real made the exercise a useful learning tool. Although every aspect of the exercise did not go perfectly, a real event would be no different. The process for adapting to and overcoming the hurdles that arise during exigent circumstances is the key to successful operations.

The knowledge and training gained now during the peaceful times is what will define the response when an emergency occurs. The MTAC Region can be proud of their performance and with information gleaned from this After Action Report (AAR), utilize future training and exercises to strengthen their responses.



APPENDIX A: METROLINA TRAUMA ADVISORY COMMITTEE SYSTEM IMPROVEMENT PLAN

Facility	Capability	Tasks	Observation	Corrective Action Description	*Functional Group	Agency POC	Start Date	Completion Date
Blue Ridge Health	Emergency Operations Planning	4.12.1- 4.12.7	Hospital Emergency Operations Plan was not referenced	Reference plan when developing objectives,				
			When remaining consistent with HICS procedures, it is crucial to develop an Incident Action Plan.	Develop a plan that provides operational objectives, benchmarks as well as resource allocation efforts for the proceeding operational period.				
			Take more direct efforts to meet incident objectives.	Develop checklists for designated job functions, reduce task redundancy. More follow up on status of delegated activities as they relate to the overall incident objectives.				
	Communications	4.13.1- 4.13.14	EOP was not referenced while communicating objectives to ensure accuracy.	Ensure that leaders are aware of the presence and importance of the EOP				
Resources and Assets	4.14.1- 4.14.11	Consider coordination with external resources for sustained operations of medical supplies management and distribution.	Review agreements concerning supply and resources to ensure that they are all updated, all needs are met, and all contacts are on file.					

Metrolina Trauma Advisory Committee

After Action Report (AAR)

Full Scale Exercise

Full Scale Exercise

Facility	Capability	Tasks	Observation	Corrective Action Description	*Functional Group	Agency POC	Start Date	Completion Date
Blue Ridge Health	Resources and Assets	4.14.1- 4.14.11	Maintaining communications with transportation vendors during distribution of medical supplies.	In the list of role descriptions prescribed above, ensure that at least one key staff member is in charge of tracking supplies and distribution.				
	Safety and Security	4.15.1- 4.15.7	Plan for Public Safety and Security Response During Large-Scale, All-Hazards Events	Review plans for decontamination sites and access to decontamination equipment and personal protective equipment (PPE) Review existing protocols, and develop protocols for the operation of decontamination sites and out-processing areas. Review and improve existing evacuation routes and staging areas to ensure sufficient public safety resources to establish and maintain perimeters, safety zones, and public order as well as facilitate evacuations and/or sheltering-in-place activities.				
			Determine appropriate training and exercises necessary to address gaps, initiate a training schedule	Identify gaps in personnel training at the awareness and first response operational level, and demands on public safety responders as set forth in agency plans, protocols, and procedures for a crisis response.				

Metrolina Trauma Advisory Committee

After Action Report (AAR)

Full Scale Exercise

Full Scale Exercise

Facility	Capability	Tasks	Observation	Corrective Action Description	*Functional Group	Agency POC	Start Date	Completion Date
Blue Ridge Health	Staffing	4.16.1- 4.16.4	It was not observed that the hospital addressed how it communicates to licensed independent practitioners their roles in emergency response and to whom they report during an emergency.	Review plans and procedures regarding independent practitioners, update contacts and relevant emergency information for practitioners, notify them of changes.				
			HIC was capable of understanding a wide variety of problem areas, however, focusing on details of each problem can distract from viewing the overall large picture of emergency response.	IC and staff should consider delegating responsibilities more. Thorough role descriptions and tasks lists will assist with this.				
	Utilities	4.17.1- 4.17.5	It was not determined whether the hospital had sufficient back-up plans to provide for necessary utilities during an emergency.	Identify an alternative means of providing for the following utilities in the event that their supply is compromised or disrupted: other essential utility needs (for example, ventilation, medical gas/vacuum systems, etc.).				
			There was some confusion regarding billing during an emergency.	Establish procedures for billing and reimbursement of the medication/ equipment/supplies that are dispensed.				

Metrolina Trauma Advisory Committee

After Action Report (AAR)

Full Scale Exercise

Full Scale Exercise

Facility	Capability	Tasks	Observation	Corrective Action Description	*Functional Group	Agency POC	Start Date	Completion Date
Blue Ridge Health	Utilities	4.17.1- 4.17.5	There was confusion regarding back up procedures and what personnel could accomplish them.	Exercise demonstrated a need for additional training in and regular testing of all back-up systems and capabilities.				
	Clinical Activity	4.18.1- 4.18.6	It was not observed whether the plan has sufficient measures in place to provide for certain sections of the population, or groups with special needs during an emergency.	Review plans to manage: clinical services for vulnerable populations, patients who are pediatric, geriatric, disabled, or have serious chronic conditions or addictions; the mental health service needs of patients; and mortuary services.				
Catawba Valley Medical Center	Emergency Operations Planning	4.12.1- 4.12.7	The Alternate Care Site Plan or plans should be referenced in the EOP.	It is recommended that the EOP plan make relevant references to the Alternate Care Site Plan so that actors will be familiar with the process of determining need for an ACF and initiating set-up				
	Communications	4.12.1- 4.12.7	No areas for improvement were indentified	Instate necessary drills and exercises to ensure that this level of communications capability is maintained				

Metrolina Trauma Advisory Committee

After Action Report (AAR)

Full Scale Exercise

Full Scale Exercise

Facility	Capability	Tasks	Observation	Corrective Action Description	*Functional Group	Agency POC	Start Date	Completion Date
Catawba Valley Medical Center	Resources and Assets	4.14.1- 4.14.11	It was not determined whether the hospital had sufficient plans in place for acquiring, preparing, or serving food.	The plan should be reviewed to ensure that it contain sufficient procedures for acquiring food and cooking staff in the event of an emergency, including facilities to store food.				
			It was not determined whether the hospital had sufficient plans in place for collection, cleaning, and organization, and distribution of laundry and clean linen.	Laundry services should be reviewed, especially capabilities on alternate care sites.				
	Safety and Security	4.15.1- 4.15.7	No safety or security measures were discussed during the course of the exercise.	An adequate safety/security plan should address the following tasks: identifying the role of community service agencies and coordination with them; management of hazardous materials; decontamination of radioactive, biological, or chemical hazards; controlling movement into and out of the facility; controlling public movement within the health care facility; and controlling traffic accessing the facility during emergencies.				

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Catawba Valley Medical Center	Staffing	4.16.1- 4.16.4	No areas for improvement were indentified	Ensure that training programs are updated to maintain excellent staffing capabilities.				
	Utilities	4.17.1- 4.17.5	It was not determined whether the hospital had sufficient plans in place for stocking the warehouse.	Review the policy for stocking emergency warehouses to ensure that all hospital needs are accounted for.				
	Clinical Activity	4.18.1- 4.18.6	It was not determined whether the hospital morgue plan was sufficient to account for a large-scale or long-term emergency situation.	Reevaluate the morgue plan to ensure that sufficient provisions are made to accommodate a large-scale and long-term event.				
CMC Main	Emergency Operations Planning	4.12.1- 4.12.7	There was some confusion regarding roles and responsibilities of personnel, the EOP did not assist in this.	Recommendations would lead to ask for written checklists and job descriptions within the EOP.				
			There was some trouble delegating tasks based on the confusion of personnel roles and responsibilities.	Continued training on the EOP will lead to a more seamless approach to assigning tasks and delegating responsibilities to respective positions throughout the EOC.				

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CMC Main	Communications	4.13.1- 4.13.14	In was not determined whether the facility maintained tested back-up systems for communications.	Look into a suitable back up communications system, preferably Viper.				
			Paging system was not working properly.	Update, repair, and test the paging system.				
			No scribe was present in the early part of the exercise	Assign the role of scribe early on; make a provision in the EOP with descriptions of roles and responsibilities.				
			It was not determined whether the hospital IC was in possession of an updated contact list of essential personnel.	Develop a thorough contact list of essential personnel, updated periodically and distributed to relevant IC team members.				
	Resources and Assets	4.14.1- 4.14.11	It was not determined whether an inventory or master list of resources was available for quick reference in the IC.	Develop a master resource list of all internal and external resources available. Distribute access to all relevant IC team members.				

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CMC Main	Safety and Security	4.15.1- 4.15.7	Many Security personnel arrived to work without being requested.	Ensure a structured shift rotation, unneeded personnel create unnecessary liability and limit resources				
	Staffing	4.16.1- 4.16.4	Some minimal uncertainty regarding roles and responsibilities.	Ensure that job descriptions are developed and placed in EOP, ensure adequate training is provided.				
	Utilities	4.17.1- 4.17.5	No areas for improvement identified.	Maintain agreements and contacts for backup utility systems.				
	Clinical Activity	4.18.1- 4.18.6	No areas for improvement identified	No recommendations.				
CMC Mercy	Emergency Operations Planning	4.12.1- 4.12.7	Slight lack of organization, no identified goals or objectives or plans to achieve them.	Develop an IAP to establish incident objective and to document the command structure.				

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CMC Mercy	Communications	4.13.1- 4.13.14	Overhead pages not being heard by some of the staff, lack of overhead speakers in portions of the facility, delay in paging personnel, not clearly defined as to whom should be paged initially, and essential personnel not being paged	Consider modifying notification system to meet hospital needs.				
	Resources and Assets	4.14.1- 4.14.11	No areas for improvement were identified	Ensure that all resource agreements, needs, and plans are maintained, all contact lists are updated.				
	Safety and Security	4.15.1- 4.15.7	Information regarding the disaster was not relayed between all agencies on the hospital campus.	Develop plans for communicating safety messages throughout the hospital campus				
	Staffing	4.16.1- 4.16.4	EOC location not adequate with amount of space needed and distance from main operations could be a problem.	Review other potential EOC locations and site capabilities.				

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CMC Mercy	Staffing	4.16.1- 4.16.4	Technology available for the facility was not accessible in the EOC.	Ensure that new EOC locations allow access to all relevant communication and technology systems.				
	Utilities	4.17.1- 4.17.5	No areas for improvement were identified.	Ensure that all utility back up plans, agreements, and contacts are kept up to date.				
	Clinical Activity	4.18.1- 4.18.6	No areas for improvement were identified.	No recommendations.				
CMC Lincoln	Emergency Operations Planning	4.12.1- 4.12.7	There was some confusion as to whether or not an evacuation plan was included in the Emergency Activation Plan.	Suggest that relevant personnel review plan and schedule appropriate training and exercises to increase familiarity.				
			EOC members were, at times, unfamiliar with the provisions of the emergency response plan, including those for instating alternate utility sources.	Might also provide relevant personnel for time tables or sufficient conditions necessary to implement or initiate provisions of the plan.				

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CMC Lincoln	Communications	4.13.1- 4.13.14	The EOC realized half an hour into the exercise that emergency phone calls were inadvertently being directed to voice mail and potentially critical information might be lost or go unaddressed.	Provide technology cheat sheets for personnel substitutes who may not be familiar with it. Ensure that all technology is tested and staff receives sufficient training.				
			The VMN in the EOC and the portable VMN in the emergency room proved inoperable two hours into the exercise.	Repair and test all communication equipment regularly.				
	Resources and Assets	4.14.1- 4.14.11	It was not determined whether the plan provided for the shelter and needs of the families of hospital personnel.	Review plan and confirm that sufficient plans for shelter, provisions, and transportation are made for families of personnel.				
			It was not determined whether the hospital's emergency transportation plan included the movement of critical patient information.	Review plan and ensure that all relevant records and documentation accompany patients to alternate facility.				

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CMC Lincoln	Safety and Security	4.15.1- 4.15.7	The hospital does not have a standing agreement providing law enforcement staffing in the event of this type of an emergency, but have had great response in the past.	Agreements might be useful in the event of a large-scale or long-term event.				
			The hospital is in the process of creating an emergency response locker where law enforcement officers could locate maps, door swipe cards, and phone contacts.	Ensure that all relevant personnel have access, and contents are updated regularly.				
			It was not determined whether the hospital plan accounts for traffic control into and out of the hospital facility.	Review plans for traffic control and ensure that certain staff are assigned to this task and are aware of procedure.				
	Staffing	4.16.1- 4.16.4	There were concerns regarding overstaffing.	In the event of overstaffing, ensure that there is a designated staff member responsible for notifying personnel and adjusting schedules.				

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CMC Lincoln	Staffing	4.16.1- 4.16.4	It was assumed that all alternate care facilities were appropriately staffed. Staffing concerns were not identified as a potential reason for relocation.	Explore further staffing options to make sure that there are sufficient plans in place to acquire more staff, update agreements and contacts.				
			There was some concern regarding staff documentation, tracking, and employee accountability.	Ensure that there are secondary systems in place for all of these to ensure continuity of operations in the event of technological failure.				
	Utilities	4.17.1- 4.17.5	There was no generator heat for the MOB area proposed for employee housing.	Review potential sites for employee housing to determine whether the current site is the most adequate.				
			There is limited washer and dryer capability (residential and not commercial machines).	Consider back up plans for laundry services.				

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CMC Lincoln	Utilities	4.17.1- 4.17.5	It was revealed, in the course of the exercise that supposed agreements with the Boger Fire Department to deliver water by pump truck did not actually exist.	Review all utility back-up plans to ensure that agreements and contacts are updated.				
			It was not determined whether the hospital has sufficient plans in place for replenishing fuel required for building operations or essential transport.	Review plan for providing emergency fuel, update agreements and contacts.				
	Clinical Activity	4.18.1- 4.18.6	There were some issues with patient documentation, and finding out whether certain equipment was vital to certain patients or merely supplemental (EOC staff were trying to determine the use of a CPAP machine to a particular patient).	Ensure that relevant personnel have access to updated patient records and that appropriate staff is assigned to determine the allocation of medical equipment and is aware of procedures for clearance.				
			It was not determined whether the hospital was equipped to manage the mental health service needs of its patients.	Review plan and capabilities to determine if patient needs could be met in an emergency.				

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CMC Lincoln	Clinical Activity	4.18.1- 4.18.6	It was not determined whether the hospital retained sufficient plans for documenting and tracking patient clinical information.	Review plans to ensure that patient documentation is backed up by several supplemental systems and that personnel are trained in these systems.				
CMC NorthEast	Emergency Operations Planning	4.12.1- 4.12.7	HCC attempted to contact county EM coordinator and were instead transferred to the EMS office.	Review contacts				
			Some confusion regarding contact information for major players which impeded communication	It would be beneficial to review the chain of command and points of contact and update county lists.				
			Task 4.12.6 ensured that the EOP/IAP identifies the hospital's capabilities and establishes response efforts when the hospital cannot be supported by the local community for at least 96 hours in the six critical areas.	Review plan to ensure that Task 4.12.6 is accomplished.				

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CMC NorthEast	Communications	4.13.1- 4.13.14	Servers for critical functions have for the most part been consolidated at the CMC Main site. There is potential vulnerability between the NorthEast site and the Charlotte (Main) site that could lead to a loss of connection with the remote servers.	It is recommended that back-up systems, additional redundancy, or alternate methods be reviewed to ensure server access or effective communication of updated information				
			The IC did not have access to hospital emergency management email site and was unable to monitor incoming emails.	All HCC personnel should be granted appropriate points of access to email or information systems. It is useful to identify a list of at least three alternatives for each HCC role in the event that certain personnel are unreachable and also to review the list of required personnel to ensure that all potential needs are met (such as a scribe for documentation).				
			Some HCC personnel were not available when called to the HCC.	Identify alternative key personnel in case primary are unavailable.				

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CMC NorthEast	Communications	4.13.1- 4.13.14	Lack of space in the HCC that would inhibit movement in a long-term event.	Suggest looking at a larger site within the hospital for use as an HCC.				
	Resources and Assets	4.14.1- 4.14.11	Printers proved to be extremely slow when staff decided to test them for printing patient records. Printed records were several months old (August, 2010 from downtime solution).	Assess remote server capabilities and ensure that ACF staff would have relevant information in the event of system failure.				
	Safety and Security	4.15.1- 4.15.7	There was a question raised as to whether the hospital trash compacter was on emergency power circuit.	Ascertain whether the trash compacter is on emergency power, if not make appropriate provisions for garbage disposal.				
	Staffing	4.16.1- 4.16.4	It was not determined whether substitute staff or outside personnel were updated on emergency operations.	Suggest development of Standard Operating Procedures to support the plan(s) along with position specific checklist.				

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CMC NorthEast	Staffing	4.16.1- 4.16.4	More training is needed for relief personnel, administrative staff, and support staff.	Checklist would help with “just in time” training issues by providing focus and a reminder of critical tasks.				
	Utilities	4.17.1- 4.17.5	HCC staff did not have updated information regarding facilities management	Better communication is needed between the Facilities Manager and the HCC staff.				
			There was some confusion or redundancy in the responsibilities of several utility positions.	Clarification of the roles of Facilities Management and Logistics Chief.				
			It was not determined whether there were sufficient supplementary plans for water supply for surgery, food preparation, laboratory functions, etc.	Review plans, agreements, and contacts for back up utilities for these purposes.				
Clinical Activity	4.18.1- 4.18.6	HCC staff indicated successful patient tracking within the ED but were unsure of how well patients could be tracked on the various hospital floors.	Develop an emergency paper process to back up computer functions to account for emergencies involving extended loss of power or evacuation to an ACF with remote server difficulties					

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CMC NorthEast	Clinical Activity	4.18.1- 4.18.6	There was a question regarding patient tracking responsibility. ICS forms placed it under Operations while the HICS.org chart assigned it to the Planning Section (Situation Unit Leader)	Review these roles, assign the tasks, and inform relevant personnel.				
CMC Pineville	Emergency Operations Planning	4.12.1- 4.12.7	There is a concern that if key personnel are not available during a crisis that other employees are not as familiar with the EOP and that the implementation of the Incident Action Plan would be hampered.	Identify several substitutes for each key or essential staff member and provide them with appropriate information and training, Test knowledge in future exercises.				
			There is a need for secondary persons to practice and familiarize themselves with the EOP and implementation of the Command Structure during a crisis situation.					
	Communications	4.13.1- 4.13.14	The Viper Radio was not functioning, concerns of insufficient staff training with VIPER	Regular testing of the Viper system as well as verifying the compatibility of standby generators with UPS was an area of concern discussed.				

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CMC Pineville	Communications	4.13.1- 4.13.14	There is no backup handheld VIPER.	Develop some form of back up communications and provide appropriate training.				
			There was a question as to when to notify local Emergency Responders when there are problems at the facility such as the disruption of water service.	Review procedure, inform relevant personnel.				
			There was minimal communication with healthcare facilities outside the CMC structure. Consideration should be given to include conference calls to other facilities similar to the conference calls held with CMC facilities.	Review communications plans with outside hospitals, update lists of medical care partners who could assist and implement appropriate communications provisions.				
	Resources and Assets	4.14.1- 4.14.11	Some staff confusion regarding the EOP	Training of additional staff, as to locating MOAs within the EOP would be beneficial.				
			Planning for housing and family support needs was accomplished but there are concerns as to whether the hospital is able to meet all needs required in this area.	Review family housing and support plans, update agreements/contacts, ensure that reasonable provisions are made got housing/transport				

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CMC Pineville	Safety and Security	4.15.1- 4.15.7	The roles of outside security agencies were unclear as to what outside security resources were available to the facility, who would contact them and when.	Review staff roles regarding security, update agreements and contacts, inform relevant personnel and partner agencies				
			There was a concern that the on-site Security would quickly become overwhelmed with the influx of personnel seeking shelter.	Review security options and make new provisions and agreements for back up personnel, obtain relevant contacts and inform personnel				
			It was unclear as to how the facility would be secured, controlling the entrance and movement of non employees within the facility during the emergency.	Ensure that a plan is in place for controlling public movement through facility, that personnel are familiar with the plan and information is easily accessible to backup security personnel.				
	Staffing	4.16.1- 4.16.4	The procedure for identifying care providers and other personnel assigned to particular areas was not discussed during the exercise.	Review these procedures, determine whether current policy is most beneficial and ensure that all relevant personnel are informed.				

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CMC Pineville	Utilities	4.17.1- 4.17.5	Transportation of patients was the only major concern due to outside resources being taxed during an emergency.	Review current transportation policies, explore agreements with other hospitals and agencies, and update contacts.				
	Clinical Activity	4.18.1- 4.18.6	There was a concern that not all staff members were thoroughly versed in the paper processes for tracking patients and services that might become necessary during the event of an emergency resulting in the loss of some or all information technology services.	Schedule training for all relevant personnel or instate a short training update in emergency operations plan during briefing.				
CMC University	Emergency Operations Planning	4.12.1- 4.12.7	It was noted that the EOP/IAP plan depended upon the corporate EOC's initiation of the response and recovery phase.	Review this portion of EOP to ensure that procedure meets the facilities' needs. However, process did not appear to affect emergency response				
	Communications	4.13.1- 4.13.14	ICC staff should improve their familiarity with VMN.	Schedule appropriate training for relevant personnel.				

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CMC University	Resources and Assets	4.14.1- 4.14.11	It was not determined whether the hospital plans accounted for potential sharing of resources with health care organizations outside of the community in the event of a regional or prolonged event.	Review partners, assess need for further agreements, establish connections as needed, update contacts and inform relevant personnel.				
			It was not determined whether the hospital has established procedures in place for the transportation of relevant patient information to an alternate care site.	Review plan to ascertain whether adequate provisions to transport information are made and ensure personnel are aware of this necessity.				
	Safety and Security	4.15.1- 4.15.7	It was not determined whether the hospital plan accounts for the management of hazardous materials and waste	Review plan, ensure that all equipment is present and all relevant personnel are aware of policy.				
			It was not determined whether the hospital has a plan for controlling traffic accessing the health care facility during emergencies	Review plan, update or formulate plan as needed, ensure that personnel are informed, plan is available, and contacts are updated.				
	Staffing	4.16.1- 4.16.4	It was not determined whether or not the hospital communicates to licensed independent practitioners their roles in emergency response and to whom they report	Update contact lists, review info for independent practitioners, ensure that this info is made accessible to them				

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CMC University	Utilities	4.17.1- 4.17.5	No areas for improvement were identified.	Ensure all agreements, contacts, and equipment are updated and personnel are informed.				
	Clinical Activity	4.18.1- 4.18.6	It was not determined whether the hospital has sufficient plans for documenting and tracking patients' clinical information.	Ensure that sufficient plans are in place for patient documentation in the event of an emergency, in the event of transport to an alternate care facility, and in the event of network failure.				
Gaston Memorial	Emergency Operations Planning	4.12.1- 4.12.7	Not all administrative staff has same level of emergency response experience.	Additional Incident Management Team (IMT) training for less experienced staff would prove to be beneficial.				
			Not all staff was familiar with EOC primary, secondary, and tertiary locations as well as their respective functionality.	Review EOC locations and functionality, ensure that relevant personnel are updated, or schedule small training for all relevant personnel				

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Gaston Memorial	Communications	4.13.1- 4.13.14	Code announcements were not audible in the EOC. In order to hear the announcements being made, it was observed that someone had to open the door to the EOC and try to listen.	Consider communication equipment updates.				
			Concerns regarding lack of written communication plan and training.	Additionally, a written communications plan with ALL available methods of communication should be generated, and communications-plan training provided to primary as well as backup personnel expected to function in the EOC.				
	Resources and Assets	4.14.1- 4.14.11	It was not determined whether plans were in place to maintain present equipment and facilities.	Develop a preventive maintenance program to ensure essential resources, materials, and facilities are available.				
	Safety and Security	4.15.1- 4.15.7	During a large scale event GMH security has limited staffing and capabilities.	Review security plan and develop more security staffing options, assess need, update agreements. Meeting with respective agencies and determining more defined response and support times would be prudent.				

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	Safety and Security	4.15.1- 4.15.7	Relying on outside agencies such as Gaston PD and Gaston SD may be problematic.	Ensure that backup provisions are in place in the event that police force is taxed				
Gaston Memorial	Staffing	4.16.1- 4.16.4	It was not determined whether policies were in place to ensure that roles and job action sheets were updated based on hospital needs and exercise results.	Continued customization of the Job Action Sheets towards GMH facilities and operations will make for a more applicable task checklist. This will also ensure a more streamlined process when a new person fills the position.				
	Utilities	4.17.1- 4.17.5	It was not verified whether there were sufficient supplementary systems in place for all utilities.	Ensure that all departments responsible for maintaining facility services have more than adequate backup plans which follow the "All Hazards" approach.				
	Clinical Activity	4.18.1- 4.18.6	Further verification of clinical activity tasks would improve process and preparedness.	Plans must address the following: the clinical activities required as part of patient scheduling, triage, assessment, treatment, admission, transfer, discharge, and evacuation; clinical services for vulnerable populations...				

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Gaston Memorial	Clinical Activity	4.18.1- 4.18.6	Further verification of clinical activity tasks would improve process and preparedness (contd.)	...including patients who are pediatric, geriatric, disabled, or have serious chronic conditions or addictions; personal hygiene and sanitation needs of its patients; the mental health service needs of its patients, mortuary services, and documenting and tracking patients' clinical information.				
Lake Norman Regional Medical Center	Emergency Operations Planning	4.12.1- 4.12.7	May want to supplement training in command structure to ensure continuity of operations.	Increase ICS training / exercises for additional levels of the organization –directors, managers, supervisors				
			Some concern regarding documentation.	Use HICS forms to document events				
			Hospital did not formulate IAP, resulting response may have lacked goals and objectives	Create a formal IAP at established interval				

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Lake Norman Regional Medical Center	Communications	4.13.1- 4.13.14	Would benefit from additional supplementary communication systems	Consider establishing coordination with ham radio operators in the area				
			Concerns over whether there was sufficient equipment for personnel	Add more 800 MHz radios and establish effective training & practice opportunity. Add “Red/Black” phones at strategic locations				
	Resources and Assets	4.14.1- 4.14.11	Little communication with other hospitals regarding resource agreements.	Increase collaboration with community & regional hospitals. Consider establishing a pre-arranged mutual aid/sheltering Agreement				
			Some complications during the exercise with water plan.	Reconsider LNMC Loss of Water Plan in light of issues identified during exercise.				
	Safety and Security	4.15.1- 4.15.7	No areas for improvement were indentified.	No recommended actions.				

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Lake Norman Regional Medical Center	Staffing	4.16.1- 4.16.4	Command staffing issue	Consider medical staff attendee(s) in command when possible.				
			No IAP was created; resulting response may have lacked concrete goals.	Create a formal Incident Action Plan (IAP) at an established interval.				
	Utilities	4.17.1- 4.17.5	Water mitigation could be improved	Adjust water contract for quicker response. Consider water purification technology.				
	Clinical Activities	4.18.1- 4.18.6	Some confusion regarding coordinating with public health and SMNS victims	Work with public health in jurisdiction to address community response to SMNS type victims to ID where SMN shelters might already exist to address individuals that may not meet admission criteria.				
Resources for evacuation and relocation could be supplemented through agreements.			Negotiate the evacuation/relocation process with the send hospitals and other partners to address resources that support the transfer.					

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Presbyterian Charlotte	Emergency Operations Planning	4.12.1- 4.12.7	Took staff a long time to review EOP	Task checklists could be developed to assist staff with prioritizing key tasks				
	Communications	4.13.1- 4.13.14	The current list in the Incident Command Center has incorrect numbers.	Need to update staff's cell phone numbers				
Presbyterian Charlotte	Communications	4.13.1- 4.13.14	Insufficient communication equipment and training	Need additional 800 MHz for Matthews. Need additional training on Viper 800 MHz radios for all personnel.				
			Presbyterian Hospital – Orthopedic did not receive the first hour of emails. The email coding excluded the initial communication	Additional IT support staff is needed in the HICS Incident Command Center.				
			Slow reporting of ICS contact information	Need to capture all ICS staff names and contact numbers quickly to aid in communications to other hospitals.				

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Presbyterian Charlotte	Resources and Assets	4.14.1- 4.14.11	Presbyterian Hospital – Orthopedic only had a 36 hour food supply.	96 hour sustainability of essential resource is required to reduce critical resources being transferred from Presbyterian Hospital – Charlotte.				
	Safety and Security	4.15.1- 4.15.7	The communications plan did not have adequate resources if the cellular phone and/or landline phone service fails.	A communications plan is needed for each department in the event of failure. Consider written communication with runners in the EOC				
	Safety and Security	4.15.1- 4.15.7	The communications plan did not have adequate resources if the cell phone and/or landline phone service fails.	Duplicate note forms would allow EOC staff to communicate in written form. The duplicate forms allow staff to send a copy of the message and leave a copy in the EOC for reference.				
	Staffing	4.16.1- 4.16.4	Some staff had to reference the EOP for long periods of time to obtain all the needed information for their role	Task level checklists for each section of the EOP would allow for a quicker reference of each task. Also, additional training would allow EOC staff to become proficient in the EOP. Key components of the EOP could be transferred to electronic reference sheets				

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Presbyterian Charlotte	Utilities	4.17.1- 4.17.5	Presbyterian Hospital – Orthopedic needs additional food storage. During the exercise the hospital only had 36 hour supply of food supplies.	96 hour sustainability of essential resource is required to reduce critical resources being transferred from Presbyterian Hospital – Charlotte.				
			With additional staff staying at the hospital for 4-7 days and the possibility of a surge of patients; the hospital’s linen supply may not cover all areas.	Consider agreements for additional linen supply.				
	Clinical Activity	4.18.1- 4.18.6	Concern from the staff was given that they may not have adequate paperwork in the event of an IT failure.	Ascertain whether more hard copies of the paperwork are needed in clinical areas.				
Presbyterian Huntersville	Emergency Operations Planning	4.12.1- 4.12.7	ICC was overstaffed at certain critical points. Excessive traffic in and out of the ICC during emergency operations inhibited movement and communication.	Require that staff review the chain of command, communication options, and procedures for reporting to the ICC to avoid this problem in future.				

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Facility	Capability	Tasks	Observation	Corrective Action Description	*Functional Group	Agency POC	Start Date	Completion Date
Presbyterian Huntersville	Communications	4.13.1- 4.13.14	No areas for improvement were identified	No recommendations.				
	Resources and Assets	4.14.1- 4.14.11	No areas for improvement were identified.	Ensure that all agreements and contacts are updated.				
	Safety and Security	4.15.1- 4.15.7	No areas for improvement were identified	Ensure that all agreements and contacts are updated.				
	Utilities	4.17.1- 4.17.5	No areas for improvement were identified	Ensure that all agreements, equipment, and contacts are updated.				
	Clinical Activity	4.18.1- 4.18.6	No areas for improvement were identified.	No recommendations.				
Presbyterian Matthews	Emergency Operations Planning	4.12.1- 4.12.7	Failure of VIPER system occurred during exercise. Facility could only receive, not transmit.	Have IT personnel on hand to assist, test and repair system.				
			Not determined whether sufficient provisions for alternate staff are continuity of operations were made.	Expand on training to ensure ICS positions can be staffed by several different individuals (to accommodate unavailability of some staff)				

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Presbyterian Matthews	Communications	4.13.1- 4.13.14	Communications are greatly in need of improvement. Backup systems exist but are limited in scope and availability.	Internal communication is adequate; but should be supplemented by additional internal radio or direct connect type system.				
			Media contacts / procedures should be expanded.	Review policy and make needed corrections to ensure that media receives a uniform message.				
			Some confusion regarding the role of the PIO.	The PIO component needs to be clarified, written role and responsibilities, update relevant personnel.				
	Resources and Assets	4.14.1- 4.14.11	Need for sharing resources is acknowledged and recognized, specific plans are apparently dealt with on an as-needed basis	Clarify specific plans for sharing of resources.				
Safety and Security	4.15.1- 4.15.7	Controls on traffic access to the facility are limited. This is largely due to the physical location and accessibility to the hospital and surrounding facilities.	Acquiring portable barricades to restrict access to parking lots may be an option. Employee parking is protected by an entry card admission system restricting outside entry, this could be overridden in an emergency.					

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Presbyterian Matthews	Safety and Security	4.15.1- 4.15.7	Security personnel are equipped and present a good image, but they are unarmed (i.e.: firearms).	It is recommended that consideration be given to requesting LEO presence at the facility during any unusual occurrence, especially if the event may be of extended duration				
	Staffing	4.16.1- 4.16.4	High level of efficiency, maintain with training	It is recommended that additional cross training for certain (ICS) positions be expanded				
	Utilities	4.17.1- 4.17.5	Need assessment of hospital needs to determine if utilities and back-up systems are sufficient	Re-examine existing MOU's to determine if further expansion is needed for resources.				
	Clinical Activity	4.18.1- 4.18.6	High level of efficiency, maintain with training	Continue training and frequent reevaluation of methods				

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Lincoln County EOC	Activity 1: Activate EOC	1.1: Activate, alert, and request response from EOC/MACC/IOF personnel.	Technology seems to be outdated within the EOC. The need for additional resources and personnel increases exponentially with the complexity of the incident. Adequate work space reduces stress that can lead to low morale and diminished productivity.	Though adequate for this particular response, consideration for expanding the EOC's physical location and technology would huge improve response capabilities. If expansion is not an option, consider break out rooms.				
		1.2: Brief incoming personnel.						
		1.3: Activate EOC/MACC/IOF						
	Activity 2: Direct EOC/MACC/IOF Tactical Operations	2.1: Establish organization/operation of EOC/MACC/IOF	Review of the current message flow system should take place. The current system allows for duplication of messages and resource requests for record; however the process appears to be labor intensive	This can be addressed with an electronic resource and message tracking system similar to WebEOC.				

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Lincoln County EOC	Activity 2: Direct EOC/MACC/IOF Tactical Operations	2.2: Ensure that all emergency support functions (ESFs) are staffed.	There was some evidence of need for further staffing and there was no one to screen phone calls.	Consider training additional staff in EOC in case of personnel shortage. Designate a staff member filter calls to the EOC (could be a volunteer).				
		2.3: Ensure safety and security measures are included in EOC/MACC/IOF management activities.	No security actions were observed	No recommendations.				
		2.4: Coordinate management of EOC/MACC/IOF with other ICS operations.	Some participants did not have access to NCOEMS SMARTT system.	Verify that all partners who need access have access to SMARTT and continually update access information as needed.				
		2.5: Arrange for shelter, housing, and supplies for responders and personnel supporting the operation per EOP	There was some uncertainty as to what resources were available to the EOC to accomplish this task.	EOC Management identified the need for a master resource list to be compiled for future events.				

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Lincoln County EOC	Activity 2: Direct EOC/MACC/IOF Tactical Operations	2.6: Arrange for shelter, housing, and feeding for displaced responder families and general population.	There was some concern that arrangements for family housing may not have been sufficient for protracted events.	Identify potential mutual aid agreements and other ways to acquire needed resources in the event of a prolonged incident.				
	Activity 3: Gather and Provide Information	3.1: Verify that all participating public safety-related Communication Centers have established communication links with EOC	EOC is currently in a difficult position, as they are waiting for a contractor to begin EOC renovation/expansion as well as IT upgrades. Otherwise, EOC performed well.	Technology updates will greatly enhance their capabilities. Communications capabilities and interoperability in the EOC are vitally important to incident management.				
		3.2: Ensure appropriate notifications are made.						
3.3: Coordinate emergency management efforts among local, county, regional, State, and Federal EOC/MACC/IOF								

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Stanly County EOC	Activity 1: Activate EOC	1.1: Activate, alert, and request response from EOC/MACC/IOF personnel.	Requests for resources did not entirely keep up with demand.	May consider more proactive requests for competitive resources in the early stages of regional events.				
		1.2: Brief incoming personnel.	There were initially some problems with radio communication due to poor technology. No alternative means of communication with other area healthcare organizations was identified.	There is evidence of need for additional training for hospital staff in the use of radios. Ensure that there is a backup system in place in case of failure.				
		1.3: Activate EOC/MACC/IOF .						
	Activity 2: Direct EOC/MACC/IOF Tactical Operations	2.1: Establish organization/operation of EOC/MACC/IOF .	EOC was organized and established.	No recommendations.				
		2.2: Ensure that all emergency support functions (ESFs) are staffed.	There were some concerns that staffing would be an issue in a prolonged event.	Continue ICS training and assessment of training needs for all personnel that would likely be assigned positions in a long term disaster event.				

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Stanly County EOC	Activity 2: Direct EOC/MACC/IOF Tactical Operations	2.3: Ensure safety and security measures are included in EOC management activities.	SRMC employs in-house security personnel with training & protocols to lock down the facility when the need arises.	No recommendations.				
		2.4: Coordinate management of EOC/MACC/IOF with other ICS operations.	Coordination will be improved by new technology.	Test coordination and interoperability regularly.				
		2.5: Arrange for shelter, housing, and supplies for responders and personnel supporting the operation per the emergency plan, as applicable.	It was not determined whether the organization plans for managing staff family support needs.	Identify all resources that could be used in these events. Update contacts and verify mutual aid agreements.				
		2.6: Arrange for shelter, housing, and feeding for displaced responder families and general population.						

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Stanly County EOC	Activity 3: Gather and Provide Information	3.1: Verify that all participating public safety-related Communication Centers, serving the EOC directly or indirectly, have established communication links with the EOC/MACC/IOF	Communications were established.	Ensure that all contact lists are continually updated. Pursue partners and mutual aid agreements.				
		3.2: Ensure appropriate notifications are made.	Appropriate notifications were made.	No recommendations.				
		3.3: Coordinate emergency management efforts among local, county, regional, State, and Federal EOC/MACC/IOF	Lincoln EOC did an excellent job of coordinating with incoming agencies.	No recommendations.				