North Central Region Healthcare Coalition

Joint Risk Assessment

<h2 align="center">North Central Region Healthcare Coalition (NCR HCC)
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<p align="center">December, 2017</p>

OVERVIEW

The North Central Region Healthcare Coalition (NCR HCC) Joint Risk Assessment serves to provide the Governance Board and the Healthcare Coalition as a whole with the information needed to identify and plan for risks that could significantly impact the public health and medical system within the region. In addition, this document will aid the NCR HCC in strategic planning and the prioritization of activities, while helping to direct efforts aimed at addressing the gaps identified within the regional preparedness and response continuum.

NORTH CENTRAL REGION

Population Demographics

The ten-county North Central Region encompasses 7,000 square miles of both urban and rural geography and has a population of approximately 3.1 million people. Although the region does include a number of rural counties, it is largely a densely populated metropolitan area with an average of 453 people per square mile[1]. The region is also home to the City and County of Denver – the capital of the State of Colorado and the most populous city in the state with close to 700,000 residents[2].

Health and Medical Resources

There are a total of 24 acute care hospitals spread across seven of the ten counties – all are located in urban areas. The average number of people per hospital, or hospital density, is 129,814 and the average square miles served per hospital is 287[1]. The region is also comprised of a number of Emergency Medical Service (EMS) agencies that are spread both throughout the urban and rural parts of the region.

Because the region is primarily urban, health and medical resources, even beyond hospital and pre-hospital services, are abundant. The NCR includes a wide variety of ancillary healthcare facilities (e.g., long-term care, hospice, surgical centers, etc.), outpatient clinics, community mental health centers, and volunteer organizations. In addition, the region is home to two Regional Emergency Medical and Trauma Advisory Councils (RETACs) and six Medical Reserve Corps (MRCs).

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[1] Community Statics as reported by Colorado Department of Public Health and Environment in 2016: Population from State Demography Office – 2015 data. Land area reported by U.S. Census Bureau Geography Division
[2] United States Census Bureau: Quick Facts – July 1, 2016 data.

North Central Region Healthcare Coalition

Health and medical emergency preparedness planning and coordination in the North Central All-Hazards Region (NCR) is facilitated, in part, through the North Central Region Healthcare Coalition (NCR HCC). The primary function of the NCR HCC is to coordinate and conduct healthcare emergency preparedness activities through the promotion, development, and enhancement of the region's cross-jurisdictional coordination and collaboration to the health and medical component of incident preparedness, response, and recovery. More specifically, the NCR HCC focuses on communication, planning, training, and collaboration, with coalition partners.

Due to its size, the North Central Region Healthcare Coalition is broken up into three chapters: Boulder Health and Medical Response Partnership (HAMR) Chapter, Metro Foothills Healthcare Coalition (MFHCC) Chapter, and Tri-County Healthcare Coalition Chapter. Each chapter covers a portion of the region, broken down by county. The NCR HCC, comprised of the three chapters, is governed by the NCR HCC Governance Board. The board functions as an advisory group and is tasked with providing guidance and strategic direction to the region and its associated chapters. The Governance Board includes representation from hospitals, emergency management, public health, emergency medical services, and various community partners (e.g., clinics, behavioral health, etc.) across all three chapters.

Although the NCR HCC is comprised of partners who would be involved in the health and medical component of a response, the coalition and its associated chapters default to Emergency Support Function (ESF) #8, or comparable health and medical branches, as the designated mechanism for the coordination of Federal, State, and local resources related to public health and medical needs during an incident(s). These systems primarily operate out of the Emergency Operations Center, allowing for direct communication and coordination with other support functions and emergency management. HCC members are integrated into the larger emergency response framework via this structure with the intention being that ESF #8/health and medical branches will complement and support existing agency level plans and procedures, not replace them.

North Central Region Healthcare Coalition Membership

An HCC member is defined as "an entity within the HCC's defined boundaries that actively contributes to HCC strategic, planning, identification of gaps and mitigation strategies, operational planning and response, information sharing, and resource coordination and management[3]." Diversity within an HCC promotes an integrated community response and serves to strengthen the healthcare system as a whole.

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[3] Assistant Secretary for Preparedness and Response: 2017-2022 Healthcare Preparedness and Response Capabilities. November 2016.

Per the Assistant Secretary for Preparedness and Response (ASPR), an HCC must include the following four core members:

- Emergency Management (EM)
- Emergency Medical Services (EMS)
- Hospitals
- Public Health (PH)

Although ASPR designates the above disciplines as core members, the health and medical system is much more diverse and the NCR HCC strives to include all partners within the healthcare system continuum. This includes, but is not limited to, representation from: behavioral health, outpatient medical services, ancillary healthcare, volunteer groups, and support organizations.

Special Populations

Historically, the region has shown a strong commitment to addressing the needs of special populations through planning, trainings, and exercises. HCC chapters regularly host trainings on the Colorado Department of Public Health and Environment's (CDPHE) Community Inclusion in Colorado (CICO) maps, and multiple jurisdictions have incorporated access and functional needs populations into exercises and drills, including the statewide Public Health Emergency Dispensing Exercise (PHED Ex) in June of 2017. HCC members are strongly encouraged to maintain awareness around special populations that may fall under their care and/or who may end up requiring their services as a result of an event(s). In an effort to continue to support planning for special populations, the NCR HCC Governance Board completed the CDPHE CICO map training in December of 2017, and all three chapters have scheduled trainings for the end of 2017/start of 2018.

PROCESS

The development of the NCR HCC Joint Risk Assessment was collaborative in nature. Hazard and threat assessment data was collected from members representing all three NCR HCC chapters, as well as from other state and local partners.

The primary data source for this document was the North Central Region 2017 Risk Assessment Summary, which was a combined effort between the North Central Region and Urban Area Security Initiative (UASI). The 2017 Risk Assessment Summary was developed during the 2017 Risk Assessment Workshop, which was attended by over 80 participants representing 14 of the 16 critical infrastructure sectors, including Healthcare and Public Health. Those in attendance assessed both intentional as well as unintentional hazards within the region using a standardized risk formula. Because this risk assessment was recently conducted and developed in conjunction with a wide cross-section of disciplines within the region, and included data specifically addressing the healthcare and public health system, the NCR HCC Governance Board

determined that it would be sufficient in serving as the framework for the NCR Healthcare Coalition focused regional assessment.

In an effort to ensure that this JRA was representative of the NCR HCC, Hazard Vulnerability Assessments (HVAs) were collected from HCC chapter organizations and synthesized with the NCR UASI Risk Assessment. A total of thirty HCC member HVAs were submitted, representing the following disciplines: public health, hospitals, ancillary healthcare, clinics, behavioral health, and emergency management. Only those assessments completed within the last two years were included. Once received, the HVAs were compiled into a single spreadsheet and reviewed to determine alignment with the findings of the NCR/UASI Risk Assessment. The HCC member data review concentrated on the top five risks listed on each HVA in an effort to align with the purpose and structure of this document.

The final step in this process was a review and subsequent approval by the NCR HCC Governance Board and presentation of the data to HCC members. The NCR HCC Governance Board reviewed and discussed the 2017 NCR/UASI Risk Assessment Summary, as well as an overview of the data from the HCC chapter organizations. Based on the information presented, the Governance Board was able to come to a consensus on the top five risks to the region's public health and medical system as well as identify where the significant gaps lie within current planning, response, and collaboration initiatives.

Once the data was finalized via the Governance Board, a presentation on the JRA was conducted at chapter meetings, and a summary of the document was sent out to members.

RESULTS

The review and assessment process outlined above resulted in the following incident types being identified as the top risks to the region's public health and medical system:

- Communicable Disease/Epidemic
- Cyber Terrorism/Information Technology (IT) Failure
- Winter Storms
- Power Failure
- Flood

All of these hazards, including cyber terrorism/IT failure, possess the ability to significantly impact the health and wellbeing of individuals and/or facilities located in or near the affected area(s). When health and safety is compromised, oftentimes the medical system and its associated components, are immediately affected in some capacity. In addition, as the size and scope of an incident changes, different components of the health and medical system may be impacted in different ways. Due to the densely populated North Central Region, the human impact due to a single event, or a combination of events, has the potential to be significant and rapidly escalate into a multi-jurisdictional and/or region-wide response.

In addition to the human impact, these incidents have the ability to disrupt or destroy critical infrastructure. Cyber-attacks, in particular, are becoming increasingly common and can be catastrophic on both an economic as well as an operational front. Natural disasters, such as winter storms and floods, have the capacity to shut down cities and wipe out infrastructure in a matter of hours. With the region's strong reliance on these systems (e.g., electricity, cell phone communication, IT/computer networks, etc.), any significant disruption would greatly impact the health and medical system as well as those individuals within the affected area(s). During a prolonged event where infrastructure is impacted, a cascading effect may take place, which puts additional stress on the health and medical system. This is especially true for individuals in the community who may need additional assistance during an emergency. This includes those with access and functional and/or special medical needs.

Although the North Central Region has experienced, at varying levels, all of the risks listed above, the area still lacks a strong regional system to support an incident(s) that spans multiple jurisdictions. Due to the ability for any one of these hazards to escalate into a regional event, it is imperative that the NCR HCC examine ways to increase capabilities on a regional level.

GAP ANALYSIS

The North Central Region's public health and medical system has been building relationships, developing local emergency response plans and procedures, and working collaboratively for many years. As a result, the region has strong healthcare coalition chapters, dedicated Emergency Support Function (ESF#) 8 and health and medical branch leads, and well documented procedures around health and medical response and support on a local level. These systems have been tested through exercises and real-world incidents on multiple occasions, resulting in lessons learned and improvement activities; all of which have strengthened the support and response network. As is often stated in emergency management, "all disasters start local." This statement is true and is the reason why having a strong foundation at the local level is crucial, but planning and collaboration cannot stop there. Given the potential for a regional event to impact the NCR, it is imperative that the regional HCC now shifts its focus to addressing the lack of a regional coordination/support system.

In an effort to close this gap, the NCR HCC has identified three primary areas that need to be addressed on the regional level:

- Regional Coordination
- Regional Communication
- Regional Situational Awareness

Regional Coordination

As mentioned above, the coordination of local ESF #8 and health and medical branches have been the focus of the region in recent years, as has organization/facility level preparedness. Not until the recent HCC restructuring in mid-2017, has the region put a strong focus on regional coordination that aligns with the state defined All-Hazards footprints. Due to the size, population density, geographic diversity, and presence of multiple systems within the NCR, regional coordination will be a key factor should a response cross jurisdictional/ESF #8 boundaries. In its current state, the region lacks the structure to coordinate resources, support, and supplies across the ten counties. Because of this, response, or even preparedness efforts, in one jurisdiction may conflict or compete with efforts in a neighboring jurisdiction. This conflict has the potential to delay and/or create competition for resources and support amongst those within the same region. Due to the resource and population density of the NCR, it is imperative that the NCR HCC examine processes for enhancing regional coordination. In addition, the needs of those in more rural parts of the region will be better served if coordination efforts are inclusive in nature. The ability to assess the situation and coordinate from a regional view-point, may allow for support and resources to be allocated to a rural part of the region, and vice versa, more efficiently.

Regional Communication

Once again, on a local level, communication modalities within the NCR HCC have been developed, tested, and revised. This includes the regular facilitation of HCC chapter-level communication drills. With local systems in place, the NCR HCC needs to shift its focus to addressing the lack of regional communication capabilities. At this time, there is no system in place that can get information out to and receive information in from all of the HCC members within the NCR. Each chapter has a distribution list and defined primary and back-up communication modalities, but this information is not shared or easily accessed across chapters. During a regional event, the current system would likely result in duplicated efforts, confusion, and delays.

Within the region, there are a number of communications plans, including the regional Tactical Interoperable Communications (TIC) plan. Although these plans have utility within the response and support continuum, the need still exists for an inclusive regional communications plan and additional training on those plans that have already been developed.

The addition of a regional communication system, and associated plan, that is inclusive of all HCC members and addresses the need for redundancy, would enhance the ability of the region to plan for, respond to, and support HCC members and the community throughout the duration of a cross-jurisdictional event.

Regional Situational Awareness

The above two priorities, coordination and communication, are both components of regional situational awareness. Having a plan, and the structure in place to oversee coordination and communication efforts across the region, will have a direct positive impact on situational awareness across the affected jurisdictions. Having a high level view of the region will help to inform planning and response efforts on both the local and regional level. In addition, should the state experience a statewide event, situational reports from the region would help to inform the larger response and could support coordination across regions.

It is important to note that these regional activities are not meant to replace, duplicate, or circumvent standardized processes that already exist within the Incident Command System (ICS), Emergency Operations Center (EOC) structure, or ESF #8 system. The purpose of creating a regional system is to *support* and *supplement* response efforts by providing regional coordination, managing regional communication, and developing regional situational awareness.

SUMMARY

Through a detailed analysis of risk assessment data pulled from various sources throughout the region, the North Central Region Healthcare Coalition was able to identify the top five risks to the region's health and medical system: communicable disease/epidemic, cyber terrorism/IT failure, winter weather, power failure, and flood. All of these risks carry the potential for significant human and infrastructure impact.

In addition, the NCR HCC was able to identify a significant gap in the current response structure – the lack of a regional response system, including: regional coordination, regional communication, and regional situational awareness. By addressing this gap, the NCR HCC will be increasing capabilities on a regional level which, in turn, will support the planning and response initiatives related to those hazards that present the greatest risk.