



# **CFDMC Hazard Vulnerability Assessment (HVA)**

**Updated December 22, 2023**

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## Record of Changes and Distribution

Changes	Distribution
Original plan drafted April 2018	Distributed to CFDMC Members for comment in April 2018
Submitted to Board for approval on 6/16/18	Posted to Website on 6/29/18
Annual update approved by Board on 6/18/19 (changes based on member input, PHRAT emPOWER and SVI data)	Updated plan posted to website on 6/20/19
Annual update drafted May 2020 (changes based on member input, PHRAT emPOWER and SVI data)	Distributed to CFDMC Members for comment in May 2020 Approved by Board 6/16/20 Posted to website 6/30/20
Annual update based (changes based on member input, PHRAT emPOWER and SVI data)	Draft sent to members in May 2021 Approved by Board 6/15/21 Posted to website 6/16/21
Annual update	Draft sent to members 6/1/22 Approved by Board 6/21/22 Posted to website 6/30/22
Annual update (updated hazards/gaps based on new federal, state, regional, county, hospital, and member data; updated format to address new contractual requirements); summarized and removed raw data from plan (available through Coalition if needed)	Draft sent to Board / Members for review & comment on 12/27/22 Posted to website 1/13/23
Annual update (added ALICE data; updated emPOWER data, updated hazards/gaps based on new federal, state, and member data)	Draft sent to Board/Members for review & comment on 10/25/23 Distributed to members and posted to website 12/22/23

## Executive Summary

Central Florida Disaster Medical Coalition’s mission is to develop and promote healthcare emergency preparedness and response capabilities in the East Central Florida Domestic Security Task Force Region 5 (RDSTF Region 5), including the following nine counties: Brevard, Indian River, Lake, Martin, Orange, Osceola, Seminole, St. Lucie, and Volusia Counties. The CFDMC will facilitate healthcare organizations and other partners in working together collaboratively to build, strengthen, and sustain a healthcare preparedness and response system within Central Florida and to assist Emergency Management and Emergency Support Function (ESF)-8 (Health and Medical) with the National Preparedness Goal identified five mission areas: Prevention, Protection, Mitigation, Response, and Recovery as related to healthcare disaster operations.

CFDMC conducts an annual update to the regional hazards and vulnerability assessment (HVA) and identifies capability gaps through a review and update of the region’s characteristics, and collaboration with and data from federal, state, regional, county and member stakeholders. This includes a review of national and state data, and discussion with and input from regional, county, facility, and member stakeholders.

Based on this year’s data and analysis, the most significant regional hazards, and threats for 2024 are:

Hazard	Identified as High Risk in Federal and/or State Data	Identified as High Risk in Regional Data	Identified as High Risk in County Data	Identified as High Risk in Hospital Data	Identified as High Risk in Member Data
Hurricane/Tropical Storm	X	X	X	X	X
Tornados	X	X	X		X
Flooding	X	X	X		X
Disease Outbreaks/Pandemic	X		X	X	X
Cyber Attack/IT Outages	X	X	X	X	X
Mass Casualty Incident	X	X			X
Extreme Temperatures	X	X			X
Staffing Shortages					X
Supply Chain Shortages					X

The most significant regional gaps for 2024 identified in the CFDMC Capabilities Assessment are:

- Training & Preparing the Health and Medical Workforce (continuing training and exercises)
- Ensuring Preparedness is Sustainable (engaging leaders, collaborations)
- Protecting Responder Safety and Health (supporting mental wellness/resiliency)
- Maintaining Non-Personnel Resources During Emergencies (supply chain integrity)
- Responding to Medical Surge (family reunification, patient tracking, and patient movement/coordination)

The process, data and tools used in this annual update are included in the following pages. This document serves to guide the annual update of the Coalition’s Preparedness plan and annexes and informs the annual CFDMC work plan.

## Process to Update HVA:

CFDMC coordinated with county emergency management, county health department, hospitals, and member stakeholders in conducting this HVA to ensure coordination and integration with federal, state, regional and county efforts. At a national level, CFDMC reviewed data from the Department of Homeland Security 2024 Homeland Threat Assessment, the FEMA National Risk Index, and the emPOWER data. At a state level, we added the top ten Florida threats. At a regional level, CFDMC participated in the RDSTF Region 5 Threat and Hazard Identification and Risk Assessment (THIRA) and Stakeholder Preparedness Review (SPR) process. At the county level, we discussed the HVA update with county emergency managers and asked for county HVAs. CFDMC is also participating in the Osceola County HVA/HIRA process. We also discussed the HVA with the county health department planners and asked for the most recent county Public Health Risk Assessment Tools (PHRATs). This year, the Coalition included ALICE data by county (ALICE stands for Asset Limited, Income Constrained, Employed — households that earn above the Federal Poverty Level (FPL) but cannot afford the basic cost of living in their county.) Despite struggling to make ends meet, ALICE households often do not qualify for public assistance. ALICE families are also at higher risk of adverse outcomes in a disaster. At the facility level, we discussed with the region’s hospitals and asked for hospital HVAs or assessments. At the member level, we facilitated an assessment at the September 21<sup>st</sup> Coalition member meeting, sent out a survey to solicit input from all members, shared the draft HVA with all members for review and comment and posted the HVA to the Coalition website.

The chart below shows the tools, data, meetings, and members participating in the annual HVA update process:

Level	Tools	Data	Members Participating	Meetings
Federal	Intelligence Analysis	Department of Homeland Security 2024 Homeland Threat Assessment	N/A	N/A
Federal	County scores related to risks, economic loss, social vulnerability index and community resilience	FEMA National Risk Index	N/A	N/A
Federal	emPOWER	Data by county on Medicare beneficiaries and at-risk (electric dependent) beneficiaries	N/A	N/A
State	Florida Top Ten Threats/Hazards	Threats	N/A	Presented at 7/12/23 Preparedness Advisory Council Meeting

Regional	Florida Functional and Access Needs Profile, Region 5	Data re functional and access needs for the region	N/A	N/A
Regional	THIRA/SPR Steps 1, 2 and 3	Risk Assessment/ Capability Assessment	CFDMC Executive Director and RDSTF-5 Health and Medical Co-chair, Board Vice-Chair and Hospital Emergency Manager	Meeting to complete the SPR Step #1 for the health discipline on September 6, 2023  Meeting to complete the SPR Steps 2 & 3 for the health discipline on October 4, 2023.
County	Multiple tools used	County HVAs	Region 5 County Emergency Management Directors and Emergency Management (EM) Health Planners	Region 5 Emergency Managers/ Stakeholder Meeting 9/28/23
County	PHRAT	County PHRATS	Region 5 CHD Planners and Health and Medical Co-Chairs	Meeting with co-chairs and county CHD planners on 9/21/23
County	Standard ALICE data is based on the ACS — both household tabulated data and individual data from the Public Use Microdata Sample (PUMS) records. In addition, this Report includes analysis of two surveys that capture the experiences of a nationally representative sample of households during the pandemic.	ALICE Data by County	N/A	N/A

Acute Care Hospitals	Multiple tools used, including Live Process, Kaiser Permanente HVA, Community Hazard Vulnerability Assessment (CHVA), and internal facility assessment tools	Facility HVAs	Region 5 Hospitals	Region 5 Hospital Call on 9/7/23
Members	Mentimeter SurveyMonkey	Ranking of hazards (likeliness to occur and impact), capability gaps	All Coalition Members were invited to participate	<p>An HVA assessment was conducted in person using Mentimeter at the CFDMC Member Meeting on 9/21/23</p> <p>A follow-up survey to gather member input from those not present was sent to all members on 9/22/23.</p> <p>The draft HVA was sent to all members for review and comment on</p> <p>The final HVA was posted to the website and sent to all members on 12/31/23.</p>

A summary of data collected is described in the following pages.

## Assessment of Regional Characteristics and Population:

Central Florida is uniquely vulnerable to large scale disasters due to its population and critical infrastructure. The 2022 US Census data shows more than 4.5 million people reside in the nine counties representing Central Florida (Central Florida Regional Domestic Security Task Force, Region 5 or RDSTF-5 (see chart below). Winter residents dramatically increase this population. In addition, domestic and international tourists flock to Central Florida for golf, shopping, water sports, theme parks, conventions, and the speedway. Orlando is the number one most visited destination in the world. Orlando International Airport was the 10<sup>th</sup> busiest airport in the nation before the pandemic with approximately 50 million passengers each year and rebounded at twice the average rate of travelers since December 2020. Visitors also arrive in Central Florida via cruises at Port Canaveral, Florida’s fastest growing port and the second busiest port in the world, with more than 5 million travelers annually. Kennedy Space Center in Brevard County has a rigorous launch schedule, with an average launch every four days. Patrick Force Base is also located in Brevard County. The region has 161 miles of coastline from Volusia to Martin County. There are three large chemical manufacturing plants within the region, multiple international and commercial airports, both freight and passenger railroad service across the region, and a nuclear power plant in St. Lucie County. All these factors increase the potential for a large-scale event in Central Florida.

The Region has a robust healthcare system, with a total of 80 acute care hospitals and free-standing emergency departments, including a Level I trauma center, a Level 1 pediatric trauma center in the metro Orlando area, five Level 2 trauma centers across the region, and three children’s hospitals.

<b>Region 5 Population by County (US QuickFacts- Estimated Population July 2022):</b>	
Brevard County	630,693
Indian River County	167,352
Lake County	410,139
Martin County	162,006
Orange County	1,452,726
Osceola County	422,545
Seminole County	478,772
St. Lucie County	358,704
Volusia County	579,192
Region 5	4,662,129

<https://www.census.gov/quickfacts/fact/table/US/PST045222>



HHS emPOWER Data (June 2023)

County	Total Beneficiaries	Total At-Risk Beneficiaries
Brevard	168,879	6,781
Indian River	58,819	1,624
Lake	117,173	5,041
Martin	64,893	1,911
Orange	203,060	7,208
Osceola	65,447	2,418
Seminole	87,884	3,533
St. Lucie	87,677	2,981
Volusia	162,456	6,831

<https://empowerprogram.hhs.gov/>

**Florida Access and Functional Needs Profile, Region 5**

Indicator	Year(s)	Measure	Region Count	Region Rate	State Count	State Rate
Demographic Data						
Total Population	2021	Count	4557661		22005587	
Resident Live Births	2021	Per 1,000 Population	44598	9.8	216189	9.8
Population (Aged 65-84 Years)	2021	Percent of Total Population	795336	0.175	4084197	0.186
Population (Aged 85 Years and Older)	2021	Percent of Total Population	111713	0.025	601986	0.027
Individuals Living Alone (Aged 65 Years and Older)	2021	Percent of Population 65+	191109	0.23	1047479	0.245
Children in Foster Care (Aged 0-17 Years)	2021	Per 100,000 Population, Under 18	4680	516.9	25475	590.4
Socioeconomic Data						
Individuals Below Poverty Level (Census)	2021	Population for Whom Poverty Status is Determined	529557	0.122	2744612	0.131
Population Uninsured (Aged 0-64 Years) (Census)	2021	Count	510988		2608912	
Households Receiving Cash Public Assistance or Food Stamps	2021	Percent of Households	219218	0.134	1151577	0.141
Monthly Medicaid Enrollment	2021	Per 100,000 Population	998228	21902.2	4939359	22445.9
Women, Infants and Children (WIC) Eligibles	2021	Percent of Total Population	126766	0.028	636067	0.029
Women, Infants and Children (WIC) Eligibles Served	2021	Percent of WIC Eligibles	79646	0.628	400966	0.63
Homeless Estimate	2021	Percent of Total Population	3670	0.001	21141	0.001
Population That Speak English Less Than Very Well (Aged 5 Years and Older)	2021	Percent of Census Population 5+	390066	0.093	2388642	0.118
Spanish-Speakers Among Population That Speak English Less Than Very Well (Aged 5 Years and Older)	2021	Limited English Proficiency Ages 5 and Over	288354	0.739	1860400	0.779

Vulnerability Data						
Adults Who Are Limited in Any Way in Any Activities Because of Physical, Mental or Emotional Problems	2016	Percent				0.212
Adults Who Use Special Equipment Because of a Health Problem	2016	Percent				0.099
Population Civilian Non-Institutionalized With a Disability	2021	Percent of Civilian non-institutionalized population	611142	0.139	2818838	0.134
Developmentally Disabled Clients	2021	Count	11821		61574	
Clients Who Sustained a Brain and/or Spinal Cord Injury	2021	Count	116		540	
Estimated Seriously Mentally Ill Adults	2021	Count	149744		725329	
Population With Vision Difficulty (Aged 18-64 Years) (Census)	2021	Percent of Census Population 18-64	58573	0.022	247494	0.019
Population With Hearing Difficulty (Aged 18-64 Years) (Census)	2021	Percent of Census Population 18-64	53182	0.02	225318	0.018
Medicare Beneficiaries Enrolled in Medical Essential Electric Utility Program	2021	Count	35233		168855	
Adult Substance Abuse Program Enrollees (Aged 18 Years and Older)	2021	Count	10498		42298	
Population With an Independent Living Disability (Aged 18-64 Years) (Census)	2021	Percent of Census Population 18-64	99701	0.037	446580	0.035
Children Through Age 20						
Population With Vision Difficulty (Aged 0-17 Years) (Census)	2021	Percent of Census Population Under 18	8253	0.009	34286	0.008
Population With Hearing Difficulty (Aged 0-17 Years) (Census)	2021	Percent of Census Population Under 18	6205	0.007	22723	0.005
Medical Foster Care Children	2021	Count	106		400	
Florida Children's Medical Services (CMS) Clients	2021	Percent of Population Under 21	22429	0.021	110419	0.022
Child Substance Abuse Program Enrollees (Aged 0-17 Years)	2021	Count	2226		7458	
Elderly Ages 65+						
Population With Vision Difficulty (Aged 65 Years and Older) (Census)	2021	Percent of Census Population 65+	53873	0.064	257006	0.059
Population With Hearing Difficulty (Aged 65 Years and Older) (Census)	2021	Percent of Census Population 65+	115125	0.136	547096	0.126
Probable Alzheimer's Cases (Aged 65 Years and Older)	2021	Percent of Population 65+	105187	0.116	553736	0.118

<https://www.floridahealth.gov/%5C//programs-and-services/emergency-preparedness-and-response/community-preparedness/access-functional-needs/afn-profile.html#:~:text=Data%20for%20persons%20with%20access%20and%20functional%20needs,the%20data%20sources%20used%20in%20compiling%20the%20profile>

## ALICE:

The United Way ALICE (Asset Limited, Income Constrained, Employed) report identifies communities where families are working but, due to rising costs, are financially instable. A comparison was made of each state in 2021 to compare the percentage of households that live below the ALICE threshold. Florida ranked 44th in the nation (out of 50 states and the District of Columbia), with 45% of the population living below the ALICE threshold. This creates additional complexities for communities due to a large segment of the population being unable to complete preparedness activities such as storing medications, food and water, etc. This creates further issues with community resiliency, which may ultimately have a significant impact on healthcare entities. The counties making up the Central Florida Disaster Medical Coalition member area are detailed below:

County	Total Households	Poverty (%)	ALICE (%)	Above ALICE Threshold (%)
Brevard	254,314	11%	33%	56%
Indian River	69,974	10%	35%	55%
Lake	156,435	10%	33%	57%
Martin	69,719	12%	32%	56%
Orange	512,496	15%	32%	53%
Osceola	133,330	13%	36%	51%
Seminole	188,239	10%	33%	57%
St. Lucie	131,235	10%	35%	55%
Volusia	243,344	14%	28%	58%

\*Source: <https://www.unitedforalice.org/state-overview/florida>

## Federal, State, Regional, County, Facility and Member Data Used:

### Federal Data:

#### Department of Homeland Security 2024 Homeland Threat Assessment:

- Terrorism
- Illegal Drugs
- Foreign Misinformation, Disinformation and Malinformation
- Transnational Repression
- Chemical, Biological, Radiological and Nuclear Threats
- Migration and Watchlist Encounter Trends
- Transnational Criminal Organizations
- Disruptive and Destructive Attacks on Critical Infrastructure
- Espionage against Critical Infrastructure
- Economic Manipulation, Coercion and Malign Influence
- Economic Espionage
- Financially Motivated Cyber Attacks

## FEMA National Risk Index - Update

The FEMA National Risk Index is based on potential hazards, expected loss, social vulnerability index and community resilience. It compares each county to the national percentile and Florida percentile.

County	Risk Index	Expected Annual Loss	Social Vulnerability Index	Community Resilience
Brevard	Relatively High Score 99.36	Relatively High Score 99.38	Relatively Moderate Score 47.07	Relatively Moderate Score 59.83
Indian River	Relatively High Score 97.07	Relatively High Score 97.25	Relatively Moderate Score 52.10	Relatively Moderate Score 49.55
Lake	Relatively Moderate Score 95.23	Relatively Moderate Score 95.14	Relatively High Score 67.79	Relatively Moderate Score 48.09
Martin	Relatively High Score 96.53	Relatively High Score 96.56	Relatively Moderate Score 48.98	Relatively Moderate Score 41.37
Orange	Relatively High Score 98.57	Relatively High Score 98.58	Very High Score 80.11	Relatively Moderate Score 43.92
Osceola	Relatively Moderate Score 95.13	Relatively Moderate Score 94.46	Very High Score 87.30	Relatively Low Score 35.74
Seminole	Relatively High Score 95.64	Relatively High Score 95.73	Relatively Low Score 33.58	Relatively High Score 64.58
St. Lucie	Relatively High Score 98.31	Relatively High Score 98.3	Relatively High Score 78.68	Relatively Moderate Score 46.21
Volusia	Relatively High Score 97.52	Relatively High Score 97.37	Relatively High Score 65.79	Relatively Moderate Score 45.64

<https://hazards.fema.gov/nri/map>

### State Data:

#### Florida's Top Ten Threats/Hazards (FDOH Bureau of Preparedness & Response):

- Hurricane/Tropic Storm
- Storm Surge
- Flood
- Wildfires
- Extreme Heat
- Tornado
- Water Supply Contamination-Environmental Health
- Biological Disease Outbreak
- Seasonal Influenza
- Pandemic Influenza

### Regional Data:

## **Region 5 THIRA/SPR:**

CFDMC participated in the RDSTF 2023 Stakeholder Preparedness Review (SPR). The SPR is an annual three-step self-assessment of a community's capability levels based on the capability targets identified in the THIRA (Threat and Hazard Identification and Risk Assessment). CFDMC participated in this process with other regional partners. The THIRA helps communities understand their risks and determine the level of capability they need to address those risks. The outputs from the SPR lay the foundation for determining a community's capability gaps, including:

Most significant risks identified in the Orlando UASI:

- Active Shooter
- Cyber
- Weather

The 2023 UASI regional capability gaps are:

- Family reunification, patient tracking, and patient movement/coordination

## [County Data:](#)

### **County Emergency Management HVAs:**

The Coalition met with county emergency management personnel within the region on 9/28/23 and requested updates to county HVAs. No updates were provided. The Coalition is currently participating in an update to the Osceola THIRA. During last year's HVA, county emergency management identified the top hazards as:

- Floods
- Severe thunderstorms
- Hurricane
- Tornado
- Wildfire
- Pandemic
- Cyber Attack

## [County Health Department PHRATS:](#)

The Coalition discussed the HVA process and requested county PHRATS at a meeting with co-chairs and county planners on 9/21/23. Three counties provided PHRATS (Brevard, Indian River, St. Lucie).

The highest rated threats (with all three counties rating these as a high risk) were:

- Drought
- Hurricane
- Lightening

- Tornado

#### Hospital Data:

The HVA process and a request for facility HVAs was discussed during the 9/7/23 regional hospital call. Only one hospital provided an updated facility HVA, identifying epidemic/pandemic and hurricanes as the highest threats. During the 2022 update, hospitals identified the following as the top threats:

- Epidemic/Pandemic
- Medical Surge/MCI
- Active Shooter
- Hurricane
- Hazmat Incidents
- Cyber Attack/IT Failure
- MCI/Trauma Event
- Emerging Infectious Diseases

#### CFDMC Member Data:

Member data was collected in two ways. At the September 21 Coalition Member meeting, a facilitated risk assessment/capabilities assessment was conducted via Mentimeter, with 52 members participating from the following organizations:

- AdventHealth New Smyrna Beach
- Aza Health
- Brooks Rehab
- City of Altamonte Springs
- Cleveland Clinic
- Community Health Centers
- Davita
- DOH HAI Prevention Program
- DOH RERA
- DOH-Brevard
- DOH-Indian River
- DOH-Lake
- DOH-Martin
- DOH-Orange
- DOH-Osceola
- DOH-Seminole
- DOH-St. Lucie
- DOH-Volusia
- Florida CHC
- Grainger Healthcare
- Halifax Health
- Haven Home Health

- HCA
- HCA FL Lawnwood
- HCA FL Osceola & Poinciana
- HCA Lake Monroe
- Health First
- Hospice of Okeechobee/Chapters Health Hospice (St. Lucie/Martin)
- Hotzone
- Martin Fire/Rescue
- NHC Home Care - Merritt Island
- Northland Church
- Orange County Fire Rescue
- Orange County Office of EMS Medical
- Orlando Health
- Orlando Health Air Care
- Poison Control
- Select Medical
- SMA Healthcare
- Surgery Center-Orlando
- USF MPH Alumni
- VA
- Vitas Healthcare
- Volusia County Emergency Manager
- Volusia Sheriff

The top risks identified during this session were:

- Civil Disorder (73% Likely to Occur; 80% High Impact)
- Cyber (65% Likely to Occur; 80% High Impact)
- Disease Outbreak/Pandemic (67% Likely to Occur; 76% High Impact)
- Fires/Wildfires (58% Likely to Occur; 31% High Impact)
- Flooding (72% Likely to Occur; 72% High Impact)
- Mass Gatherings (81% Likely to Occur; 64% High Impact)
- Staffing Shortages (81% Likely to Occur; 79% High Impact)
- Tornadoes (70% Likely to Occur; 72% High Impact)
- Hurricanes/Tropical Storms (98% Likely to Occur; 88% High Impact)

The top capabilities gaps identified during this session were:

- Training & Preparing the Health and Medical Workforce (66% Medium Gap; 18% Large Gap)
- Ensuring Preparedness is Sustainable (78% Medium Gap; 5% Large Gap)
- Protecting Responder Safety & Health (55% Medium Gap, 3% Large Gap)
- Responding to Medical Surge (56% Medium Gap, 2% Large Gap)

The top three actions the Coalition needs to take identified during this session were:

- Training
- Exercises
- Communications

On 9/22/23, a risk/capabilities survey was sent to all members. A total of 22 responses were received and the risks identified in that survey were:

- Critical Infrastructure Disruption (64% Likely to Occur; 77% High Impact)
- Cyber (68% Likely to Occur; 64% High Impact)
- Flooding (64% Likely to Occur; 55% High Impact)
- Severe Weather (95% Likely to Occur; 41% High Impact)
- Staffing Shortages (82% Likely to Occur; 41% High Impact)
- Supply Chain Shortages (55% Likely to Occur; 41% High Impact)
- Tornadoes (50% Likely to Occur; 55% High Impact)
- Hurricanes/Tropical Storms (95% Likely to Occur; 87% High Impact)

The top capabilities gaps identified in that survey were:

- Training & Preparing the Health and Medical Workforce (32% Medium Gap; 32% Large Gap)
- Ensuring Preparedness is Sustainable (44% Medium Gap; 28% Large Gap)
- Maintaining Access to Non-Personnel Resources During Emergencies (32% Medium Gap; 21% Large Gap)

The top actions the Coalition needs to take were identified as:

- Communications/Information Sharing
- Response Planning

For additional information on the data used in this HVA update, please contact [info@centralfladisaster.org](mailto:info@centralfladisaster.org).