

# ASPR TRACIE Evaluation of Hazard Vulnerability Assessment Tools

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The Administration for Strategic Preparedness and Response (ASPR) Technical Resources, Assistance Center, Information Exchange (TRACIE) Evaluation of Hazard Vulnerability Assessment (HVA) Tools provides the following chart that illustrates the similarities and differences among several sample hazard vulnerability tools used by public health and healthcare organizations, and the Federal Emergency Management Agency's (FEMA) Threat and Hazard Identification Risk Assessment (THIRA). Each description includes a summary of the tool's primary use/purpose; information on who developed the tool and how; the format of the tool; a basic overview of the calculations approach; and the benefits and limitations of the tool.

Healthcare and public health organizations should use the HVA tools that are most useful to their facility/jurisdiction. The outcomes of the HVA should then be used during the development of a jurisdictional risk assessment (JRA). The JRA can come in a variety of forms, including the THIRA. Regardless of the type of tool used, HVAs and JRAs (including the THIRA) all assess risk based on the identification of threats and/or hazards and assign a level or severity of risk. However, the THIRA is primarily focused on emergency management and disaster response at the jurisdictional level, and asks states, territories, tribes, local areas, insular areas, and the Urban Area Security Initiatives (UASI) grant recipients to perform their respective threat and hazard identification risk assessments (e.g., HVAs developed by the key stakeholders within the jurisdiction).

Therefore, there may be an entirely different assessment of risk in the jurisdictional THIRA than what may be assigned at the hospital or public health level. There will be similarities in the identification of common hazards across the various assessments; however, the THIRA may result in a higher level of risk assessment than the HVA for the health sector entities.

It is also important to note that public health and healthcare are often expected to use the data used in the JRA for their respective HVAs. Risk assessment is a collaborative process among partners and the various HVAs should inform each other.

The ASPR TRACIE [Hazard Vulnerability/ Risk Assessment Topic Collection](#) clarifies the differences between these assessments and provides links to additional examples and templates.

Assessment Tool Name	Intended Audience/ Applied Sector	Use/Purpose	Development of Tool	Format	Calculations Approach	Benefits	Limitations
<a href="#">American Health Care Association/ National Center for Assisted Living's Hazard Vulnerability Assessment Tool</a>	Long-term Care facilities	<ul style="list-style-type: none"> <li>To assist long-term care facilities in evaluating vulnerability to specific hazards. The tool uses various categories, such as probability of experiencing a hazard, human impact, property and business impact and response, to create a numeric value based on various hazards.</li> </ul>	<ul style="list-style-type: none"> <li>Developed by AHCA/NCAL and Jensen Hughes.</li> <li>Based on the Kaiser Permanente tool and has been re-designed specifically for nursing homes and assisted living.</li> </ul>	Workbook developed in Microsoft Excel. <b>NOTE:</b> Requires free registration to download the tool.	<ul style="list-style-type: none"> <li>Risk calculations automatically created based on data input.</li> </ul>	<p><b>Common Features</b></p> <ul style="list-style-type: none"> <li>Helps establish planning priorities.</li> <li>Identifies hazards that pose the greatest risk to a facility.</li> <li>Generates charts/graphs to analyze hazards relative to each other.</li> </ul> <p><b>Additional/Unique Features</b></p> <ul style="list-style-type: none"> <li>The tool contains 59 pre-populated hazards, and users can skip those that do not apply.</li> </ul>	<ul style="list-style-type: none"> <li>Does not incorporate baseline data.</li> </ul>
<a href="#">American Society for Health Care Engineering (ASHE) Hazard Vulnerability Assessment Tool</a>	Healthcare facilities	<ul style="list-style-type: none"> <li>To assist multidisciplinary groups in assessing and prioritizing potential hazards and risks that will help facilities develop the required documentation for accrediting organizations and compliance with the Centers for Medicare and Medicaid Services Conditions of Participation.</li> </ul>	<ul style="list-style-type: none"> <li>Developed by the ASHE.</li> </ul>	Workbook developed in Microsoft Excel.	<ul style="list-style-type: none"> <li>Scores emergency preparedness “all hazards” approach and identify the potential hazards that need the most attention for exercise, mitigation and/or planning.</li> </ul>	<p><b>Common Features</b></p> <ul style="list-style-type: none"> <li>Helps establish planning priorities.</li> <li>Identifies hazards that pose the greatest risk to a facility.</li> </ul> <p><b>Additional/Unique Features</b></p> <ul style="list-style-type: none"> <li>Includes factors such as mitigation exercised within past five years, mobilization ability, supply chain, surge ability, and community mutual aid involvement.</li> </ul>	<ul style="list-style-type: none"> <li>Healthcare facility specific.</li> <li>Minimal instructions.</li> <li>Instructions on tool are not comprehensive.</li> <li>Does not incorporate baseline data.</li> </ul>
<a href="#">Big Bend Healthcare Coalition (Florida) Hazard Vulnerability Analysis (HVA) Risk Assessment Tool</a>	Healthcare facilities	<ul style="list-style-type: none"> <li>To provide information for assessing vulnerabilities and needs, and for determining emergency management program priorities that ensure the most important hazards, including highly probable and/or major healthcare impacts, are planned for first, and those least likely to occur or have minor/moderate public impact can be deferred until later.</li> </ul>	<ul style="list-style-type: none"> <li>Developed by the Big Bend Healthcare Coalition in Florida.</li> <li>Based on the Kaiser Permanente tool; the University of California, Los Angeles (UCLA) Hazard Risk Assessment Instrument (HRAI), and the Los Angeles Department of Public Health's Health Hazard Assessment and Prioritization (hHAP).</li> </ul>	Available in Microsoft Word and as a workbook in Microsoft Excel.	<ul style="list-style-type: none"> <li>Relative Risk Score (% of threat) is calculated based on probability that each hazard may occur within a 5-year planning window, and severity (inverse relationship between potential impact, and status of mitigation activities)</li> </ul>	<p><b>Common Features</b></p> <ul style="list-style-type: none"> <li>Helps establish planning priorities.</li> <li>Identifies hazards that pose the greatest risk to a facility.</li> <li>Identifies gaps in coalition preparedness.</li> <li>Includes detailed scoring criteria and directions for the tool.</li> <li>Generates charts/graphs to analyze hazards relative to each other.</li> </ul> <p><b>Additional/Unique Features</b></p> <ul style="list-style-type: none"> <li>Addresses populations with access and functional needs.</li> <li>Pre-loaded tool includes 48 hazards.</li> </ul>	<ul style="list-style-type: none"> <li>Does not incorporate baseline data.</li> </ul>

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<a href="#">Community Hazard Vulnerability Assessment (CHVA)</a>	Healthcare facilities, jurisdictions, emergency management, public health agencies (state and local)	<ul style="list-style-type: none"> <li>To provide comprehensive analysis of the health, property, and business-related impacts of various hazards that can occur within a jurisdiction or to a healthcare facility. Results can be used to focus finite resources.</li> <li>To help prioritize planning efforts for those emergencies.</li> <li>To provide a mechanism for external partners to rate the event based off of the four phases of emergency management.</li> <li>To illustrate operational and regulatory impact of events.</li> <li>To align efforts in emergency management and operational continuity.</li> </ul>	<ul style="list-style-type: none"> <li>Developed by Children's Hospital Colorado, in collaboration with a Wisconsin workgroup consisting of state and local emergency management and public health departments, tribal health and hospital emergency planners.</li> <li>Based on adaptations of other existing resources: Kaiser Permanente's HVA Tool.</li> </ul>	Workbook developed in Microsoft Excel.	<ul style="list-style-type: none"> <li>Assesses risk based on probability of occurrence; probability of a facility needing to respond to the hazard; human, property, and business impact; and readiness assessments based on the 4 phases of emergency management.</li> <li>The tool allows the user to evaluate events three different ways: Relative Risk based on Occurrence, Relative Risk based on the likelihood of facility Response, or an absolute number to rank risk (non-weighted). <ul style="list-style-type: none"> <li>It is up to the user to determine which rating scale or a combination thereof, they will use. (The non-weighted risk removes the weighting scale but provides a larger range of numbers).</li> </ul> </li> </ul>	<p><b>Common Features</b></p> <ul style="list-style-type: none"> <li>Helps establish planning priorities.</li> <li>Identifies hazards that pose the greatest risk to a facility or community.</li> <li>Identifies jurisdictional gaps in public health and healthcare preparedness.</li> <li>Includes explanation of tool components and directions for using the tool.</li> <li>Generates charts/graphs to analyze hazards relative to each other.</li> </ul> <p><b>Additional/Unique Features</b></p> <ul style="list-style-type: none"> <li>Incorporates the four phases of emergency management and takes an all-hazards approach to address national and local planning scenarios.</li> <li>Fully customizable for use by other organizations and industries (e.g., schools) based on specific needs.</li> <li>Includes 120 events for comprehensiveness (however, not all need to be used). Extra "preprogrammed" event lines are available in each section.</li> <li>Includes data input columns for both Occurrence and Response for more precise calculations; the justification being that just because an event occurs does not mean the facility has to respond.</li> <li>Includes a Non-Weighted Risk column for facilities that do not like a percentage-based rating.</li> </ul>	<ul style="list-style-type: none"> <li>Does not address populations with access and functional needs.</li> <li>Does not incorporate baseline data.</li> </ul>



Assessment Tool Name	Intended Audience/ Applied Sector	Use/Purpose	Development of Tool	Format	Calculations Approach	Benefits	Limitations
<a href="#">Comprehensive Preparedness Guide (CPG) 201: Threat and Hazard Identification and Risk Assessment (THIRA) and Stakeholder Preparedness Review (SPR) Guide</a> (Third edition, May 2018)	Jurisdictions, emergency management	<ul style="list-style-type: none"> <li>To support the conduct of a THIRA as described in the third edition of the CPG 201: THIRA and SPR Guide. <ul style="list-style-type: none"> <li>Note: The <a href="#">First Edition of the CPG</a> (April 2012) and associated <a href="#">toolkit</a> described a standard process for identifying community-specific threats and hazards, and setting capability targets for each core capability identified in the National Preparedness Goal as required in Presidential Policy Directive (PPD) 8: National Preparedness. The CPG 201: THIRA Guide (Third Edition) expands the process to include estimation of resources needed to meet the capability targets.</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>Developed by FEMA.</li> <li>Builds on existing local, state, tribal, and territorial hazard identification risk assessments.</li> </ul>	PDF document contains detailed directions, best practices, and examples for each step, including calculations.	<ul style="list-style-type: none"> <li>The third edition provides a three-step approach for conducting a THIRA: identify the threats and hazards of concern, give the threats and hazards context, and establish capability targets.</li> <li>The SPR builds off the capability targets from the THIRA and has three steps: assess capabilities; identify and address gaps; and describe impacts of funding sources.</li> </ul>	<p><b>Common Features</b></p> <ul style="list-style-type: none"> <li>Helps establish planning priorities.</li> <li>Allows jurisdictions to estimate impacts from threats and hazards to the community across the 32 core capabilities and 5 mission areas (prevention, protection, mitigation, response, and recovery).</li> </ul> <p><b>Additional/Unique Features</b></p> <ul style="list-style-type: none"> <li>Allows jurisdictions to identify a community's capability targets, current capabilities, and capability gaps to address identified risks.</li> </ul>	<ul style="list-style-type: none"> <li>Emergency management specific.</li> <li>This is a guidance document, not an actual tool to enter data into.</li> <li>Does not automatically generate calculations or graphs/charts.</li> <li>Does not provide a template for the format of the completed THIRA/SRP.</li> <li>Does not address populations with access and functional needs.</li> </ul>
<a href="#">Facility Hazard Vulnerability Assessment Tool</a> <b>NOTE:</b> Refer to the section titled Hazard Vulnerability Assessment Tool on this page.	Hospitals	<ul style="list-style-type: none"> <li>To be used by individual hospitals to identify and rank various risk and mitigating factors related to hospital emergency preparedness and to assist facilities in identifying preparedness gaps.</li> </ul>	<ul style="list-style-type: none"> <li>Developed by the Kansas Department of Health and Environment Bureaus of Community Health System (BCHS).</li> </ul>	Excel and worksheet based.	<ul style="list-style-type: none"> <li>Risk calculations automatically created and the average score of each criterion is entered.</li> </ul>	<p><b>Common Features</b></p> <ul style="list-style-type: none"> <li>Helps establish planning priorities.</li> <li>Identifies hazards that pose the greatest risk to a facility.</li> <li>Identifies gaps in emergency preparedness.</li> </ul> <p><b>Additional/Unique Features</b></p> <ul style="list-style-type: none"> <li>Automated scoring calculations broken down into categories of incident effect, preparedness, and risk.</li> <li>The tool provides a warning time and duration time associated with the event.</li> </ul>	<ul style="list-style-type: none"> <li>Hospital specific.</li> <li>Does not incorporate baseline data.</li> </ul>





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<a href="#">Florida Public Health Risk Assessment Tool (FPHRAT)</a>	Public health agencies (state, regional, and local)	<ul style="list-style-type: none"> <li>To create jurisdictional risk assessments by assessing the 15 Centers for Disease Control and Prevention (CDC) Preparedness Capabilities and local resources; producing gap analyses; estimating the impacts of hazards to public health, healthcare, and mental health; measuring the positive effect of mitigation factors such as community resilience; and producing a final matrix of residual risk.</li> </ul>	<ul style="list-style-type: none"> <li>Developed by local, regional, and state partners within the state of Florida.</li> </ul>	Online tool. <b>Note:</b> This tool supports the following desktop browsers: Mozilla Firefox version 10 or newer, Google Chrome version 13 or newer, Apple Safari version 5 or newer.	<ul style="list-style-type: none"> <li>Users enter data on capability assessments and status of resources needed for response and recovery.</li> <li>The tool calculates a Hazard Risk Index score for each hazard by considering the probability of occurrence; medical and social vulnerability scores; and public health impact, healthcare impact, and behavioral health impact.</li> <li>The tool also calculates a Residual Risk Index that takes mitigation factors into account (capability and resource data entered by user and pre-populated community resilience data).</li> </ul>	<p><b>Common Features</b></p> <ul style="list-style-type: none"> <li>Helps establish planning priorities.</li> <li>Identifies hazards that pose the greatest risk to a community.</li> <li>Identifies jurisdictional gaps in public health and healthcare preparedness.</li> <li>Generates charts/graphs to analyze hazards relative to each other.</li> </ul> <p><b>Additional/Unique Features</b></p> <ul style="list-style-type: none"> <li>Tool contains pre-filled hazard information for 36 hazards most likely to have public health impact in Florida.</li> <li>Probability, vulnerability scores, health impact scores, and resilience scores are pre-populated in the tool, as determined by subject matter experts.</li> <li>Analysis incorporates capability and resource assessment data entered by user.</li> <li>Custom reports can be built by the user, in addition to the standard charts and graphs generated by the tool.</li> <li>Highly detailed directions and explanation of data sources and calculations used.</li> </ul>	<ul style="list-style-type: none"> <li>The tool's pre-populated data are specific to the state of Florida, though the tool may be used as a model for other jurisdictions wanting to create something similar.</li> </ul>
<a href="#">General Healthcare Community Risk Assessment</a>	Healthcare facilities	<ul style="list-style-type: none"> <li>To identify and understand the potential disasters and hazards for the community in which a healthcare facility is located so that decisions can be made regarding which hazards require attention and what actions must be planned for to protect the people, property, and environment of that facility.</li> </ul>	<ul style="list-style-type: none"> <li>Developed by the University of Iowa and the Iowa Department of Public Health.</li> <li>Based on existing hazard and vulnerability assessment tools, such as the Kaiser Permanente HVA tool and the UCLA HRAI.</li> </ul>	Online tool set up within a Learning Management System. <b>NOTE:</b> Requires free registration.	<ul style="list-style-type: none"> <li>Risk calculations are based on the probability of each hazard's occurrence, its potential human, property, business impact, and the effect of mitigation factors, including preparedness, training, internal resources, and external resources.</li> <li>Risk scores for each hazard are relative to each other.</li> </ul>	<p><b>Common Features</b></p> <ul style="list-style-type: none"> <li>Helps establish planning priorities.</li> <li>Identifies hazards that pose the greatest risk to a facility.</li> <li>Generates charts/graphs to analyze hazards relative to each other.</li> </ul> <p><b>Additional/Unique Features</b></p> <ul style="list-style-type: none"> <li>Users log data online, one hazard at a time.</li> <li>The tool contains 45 pre-populated hazards, and users can skip those that do not apply.</li> </ul>	<ul style="list-style-type: none"> <li>Does not address populations with access and functional needs.</li> <li>Can only be accessed through a Learning Management System account.</li> </ul>
<a href="#">General Public Health Community Risk Assessment</a>	Local public health agencies	<ul style="list-style-type: none"> <li>To identify and understand the potential disasters and hazards that may impact a community's public health, so that decisions can be made regarding which hazards require attention and what actions must be planned for to protect the community's people, property, and environment.</li> </ul>	<ul style="list-style-type: none"> <li>Developed by the University of Iowa and the Iowa Department of Public Health.</li> <li>Based on existing hazard and vulnerability assessment tools, such as the Kaiser Permanente HVA tool and the UCLA HRAI.</li> </ul>	Online tool set up within a Learning Management System. <b>NOTE:</b> Requires free registration.	<ul style="list-style-type: none"> <li>Risk calculations are based on the probability of each hazard's occurrence, its potential human, infrastructure, and community impact, and the mitigating effects of preparedness and training.</li> </ul>	<p><b>Common Features</b></p> <ul style="list-style-type: none"> <li>Helps establish planning priorities.</li> <li>Identifies hazards that pose the greatest risk to a community.</li> <li>Identifies jurisdictional gaps in public health preparedness.</li> <li>Generates charts/graphs to analyze hazards relative to each other.</li> </ul> <p><b>Additional/Unique Features</b></p> <ul style="list-style-type: none"> <li>Users log data online, one hazard at a time.</li> <li>The tool contains 37 pre-populated hazards, and users can skip those that do not apply.</li> </ul>	<ul style="list-style-type: none"> <li>Does not address populations with access and functional needs.</li> <li>Can only be accessed through a Learning Management System account.</li> </ul>

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<a href="#">Health Hazard Assessment and Prioritization (hHAP)</a>	Jurisdictions, public health agencies	<ul style="list-style-type: none"><li>▪ To assess and prioritize planning and mitigation efforts for the most important hazards (in Southern California).<ul style="list-style-type: none"><li>– Although the tool is focused on hazards in Southern California, it is designed to be flexible and adaptive, and applicable to other health jurisdictions and numerous potential hazards.</li></ul></li><li>▪ To offer a health-focused mechanism to engage the community, identify organizational priorities, and improve an agency's or community's capability to successfully prepare for, respond to, and recover from potential emergency threats.</li><li>▪ Provides a six-step hazard vulnerability assessment process.</li></ul>	<ul style="list-style-type: none"><li>▪ Developed by the Los Angeles Department of Public Health—in collaboration with the Orange County Health Care Agency, the Long Beach Department of Health and Human Services, and the Pasadena Department of Public Health.</li><li>▪ Based on adaptations of other existing resources: UCLA's HRAI and Kaiser Permanente's HVA Tool.</li></ul>	Workbook developed in Microsoft Excel.	<ul style="list-style-type: none"><li>▪ Identifies, ranks, and prioritizes the health and medical impacts of potential hazards relevant to a specific jurisdiction/agency based on user-provided input (scores).</li><li>▪ Focuses on the relative perceived risk, expressed through a relationship and interaction of several Risk Components: probability of hazard occurrence, health severity of the hazard (potential for increase in morbidity, hospitalizations and mortality), impact (consequences) of hazard on health and medical systems and the community, and the protective value of existing response and community preparedness resources.<ul style="list-style-type: none"><li>– Each Risk Component has a corresponding metric input for each associated hazard.</li></ul></li></ul>	<p><b>Common Features</b></p> <ul style="list-style-type: none"><li>▪ Guide and step-by-step instructions provided.</li><li>▪ Helps establish planning priorities.</li><li>▪ Jurisdiction-specific analysis using automated calculations.</li><li>▪ Identifies hazards that pose the greatest risk to a jurisdiction.</li><li>▪ Identifies jurisdictional gaps in public health and healthcare preparedness.</li><li>▪ Simple implementation, yet comprehensive assessment.</li><li>▪ Generates charts/graphs to analyze hazards relative to each other.</li></ul> <p><b>Additional/Unique Features</b></p> <ul style="list-style-type: none"><li>▪ Flexible and adaptive for use by other jurisdictions. Tool can be applied to any potential hazard identified by the jurisdiction.</li><li>▪ Pre-loaded tool includes 62 scenario-based hazards. User can add/delete hazards.</li><li>▪ Tool can average responses from multiple users.</li><li>▪ Requires responses from various partners in addition to public health and healthcare partners.</li><li>▪ Includes mental health system impact in risk assessments.</li></ul>	<ul style="list-style-type: none"><li>▪ Does not incorporate baseline data.</li><li>▪ Does not address populations with access and functional needs.</li></ul>



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<a href="#">Healthcare and Public Health (HPH) Risk Identification and Site Criticality (RISC) Toolkit 2.0</a>	Healthcare facilities, health systems, healthcare coalitions, and public health agencies	<ul style="list-style-type: none"> <li>To provide a web-based, objective, data-driven all-hazards risk assessment with self-assessment modules allowing HPH sector organizations to identify threats and hazards; assess vulnerabilities; determine criticality and consequences; and aggregate results and share data.</li> </ul>	<ul style="list-style-type: none"> <li>Developed by ASPR's Office of Critical Infrastructure Protection and HPH Sector partners.</li> </ul>	Web-based	<ul style="list-style-type: none"> <li>The tool uses three modules to access all-hazards risk to their operations. The Threat/Hazard Assessment Module (THAM), the Rapid Infrastructure Survey Tool Module (RIST-V), and the RIST Consequence and Criticality Module (RIST-C).</li> <li>Users input data and risk ratings are calculated by multiplying scores from each of the three modules (THAM, RIST-V, and RIST-C). The overall score is the product of the relative Threat/Hazard Rating, the hazard-specific Vulnerability Score, and the hazard-specific Consequence Rating.</li> </ul>	<p><b>Common Features</b></p> <ul style="list-style-type: none"> <li>Web-based user interface with significant process efficiencies.</li> <li>Objective, evidence-based data and quantifiable risk results with supporting ranked lists of threats, vulnerabilities and consequences.</li> <li>Estimates the human, property, and business impacts to a facility from 67 total threats and hazards. Includes 34 external threats or hazards, including active shooters, flooding, and more. Also, includes 33 internal threats or hazards, including water or generator failures, supply shortages and more.</li> <li>Define and create custom organizations with data aggregation that allows comparing facilities across systems, coalitions, and regions.</li> <li>Plug-n-Play capability to include all public/private sectors beyond hospitals.</li> <li>HHS Authority to Operate - System and collected data protected per Federal standards.</li> <li>Single, centralized, secure interface for all healthcare sectors with common understanding and voluntary data sharing for shared benefits.</li> </ul> <p><b>Additional/Unique Features</b></p> <ul style="list-style-type: none"> <li>Ability to control who has access to results of surveys.</li> <li>Provides multiple options to view, export and share results via the RISC dashboard page. Ability to create printer-friendly, shareable PDF reports; Microsoft Excel files; or shareable web content.</li> <li>Aggregated data will be available to federal partners for use in identifying trends impacting critical infrastructure within the HPH sector.</li> </ul>	<ul style="list-style-type: none"> <li>Does not address populations with access and functional needs.</li> </ul>
<a href="#">Kaiser Permanente Hazard Vulnerability Analysis (HVA) Tool</a> <b>NOTE:</b> Facilities should ensure their assessment aligns with their accrediting organization's requirements and terminology.	Hospitals and healthcare facilities	<ul style="list-style-type: none"> <li>To identify hazards, through a systematic approach, that may affect demand for hospital services or its ability to provide those services.</li> </ul>	<ul style="list-style-type: none"> <li>Developed by Kaiser Permanente.</li> </ul>	Workbook developed in Microsoft Excel.	<ul style="list-style-type: none"> <li>The tool takes inputs from the facility's HVA group on the probability and impact of threats, and mitigation and preparedness measures the facility has taken to determine a level of risk for each hazard.</li> <li>The risks associated with each hazard can be analyzed and used to prioritize planning, mitigation, response, and recovery activities.</li> </ul>	<p><b>Common Features</b></p> <ul style="list-style-type: none"> <li>Helps establish planning priorities.</li> <li>Identifies hazards that pose the greatest risk to a facility.</li> <li>Generates charts/graphs to analyze hazards relative to each other.</li> </ul> <p><b>Additional/Unique Features</b></p> <ul style="list-style-type: none"> <li>Pre-loaded tool includes 61 scenario-based hazards.</li> <li>2021 version of tool incorporates data from real-world emergency alerts and activations to inform probability and risk calculations.</li> </ul>	<ul style="list-style-type: none"> <li>Hospital and healthcare facility specific.</li> <li>Does not provide a guidance manual.</li> <li>Instructions on tool are not comprehensive.</li> <li>Does not incorporate baseline data.</li> <li>Does not address populations with access and functional needs.</li> </ul>

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<a href="#">Midlands Regional HVA 2021</a>	Healthcare coalitions	<ul style="list-style-type: none"> <li>To identify the hazards that the healthcare coalition may need to respond to.</li> </ul>	<ul style="list-style-type: none"> <li>Developed by the Midlands Healthcare Coalition (South Carolina).</li> <li>Based on the Kaiser Permanente HVA.</li> </ul>	PDF. May request Excel file from <a href="#">ASPR TRACIE</a> .	<ul style="list-style-type: none"> <li>Users enter data to estimate probability and impact of threats, and mitigation and preparedness measures the coalition has taken to determine a relative level of risk for each hazard.</li> </ul>	<p><b>Common Features</b></p> <ul style="list-style-type: none"> <li>Helps establish planning priorities.</li> <li>Identifies hazards that pose the greatest risk to coalition members at a regional level.</li> <li>Identifies regional gaps in healthcare preparedness.</li> <li>Generates charts/graphs to analyze hazards relative to each other.</li> </ul> <p><b>Additional/Unique Features</b></p> <ul style="list-style-type: none"> <li>Clearly defined consensus-based scoring criteria are included with the tool.</li> </ul>	<ul style="list-style-type: none"> <li>Healthcare-specific.</li> <li>Tool does not address populations with access and functional needs.</li> <li>Does not provide a guidance manual.</li> <li>Instructions on tool are not comprehensive.</li> <li>Does not incorporate baseline data.</li> </ul>
<a href="#">Pennsylvania Public Health Risk Assessment Tool (PHRAT)</a>	Jurisdictions, public health agencies	<ul style="list-style-type: none"> <li>To provide an analysis of the health-related impacts of various hazards that can occur in a jurisdiction and help prioritize planning efforts for those emergencies.</li> </ul>	<ul style="list-style-type: none"> <li>Developed by the Drexel University School of Public Health (contracted by the Pennsylvania Department of Health).</li> <li>Based on adaptations of other existing resources: UCLA HRAI and Kaiser HVA Tool.</li> </ul>	Workbook developed in Microsoft Excel.	<ul style="list-style-type: none"> <li>Generates an estimate of hazard-specific risk, based on probability and impact severity identified for each hazard.</li> <li>Severity is measured in five major domains: human health, healthcare services, inpatient healthcare infrastructure, community health, and public health services.</li> <li>Generates “adjusted risk,” which incorporates an assessment of the additional planning required to reduce a hazard’s impact on populations with access and functional needs.</li> <li>A Preparedness Score is generated using the jurisdiction’s current capacity in each of the 15 Public Health Preparedness capabilities and 8 Healthcare System Preparedness capabilities.</li> </ul>	<p><b>Common Features</b></p> <ul style="list-style-type: none"> <li>Guide and step-by-step instructions provided.</li> <li>Helps establish planning priorities.</li> <li>Jurisdiction-specific analysis using automated calculations.</li> <li>Identifies hazards that pose the greatest risk to a jurisdiction.</li> <li>Identifies jurisdictional gaps in public health and healthcare preparedness.</li> <li>Simple implementation, yet comprehensive assessment.</li> <li>Generates charts/graphs to analyze hazards relative to each other.</li> </ul> <p><b>Additional/Unique Features</b></p> <ul style="list-style-type: none"> <li>Addresses populations with access and functional needs.</li> <li>Analysis incorporates baseline data entered by user.</li> <li>Available for customization through the Pennsylvania Department of Health.</li> </ul>	<ul style="list-style-type: none"> <li>Public health specific.</li> <li>Data may be skewed if entered from multiple sources or by various users.</li> </ul>





Assessment Tool Name	Intended Audience/ Applied Sector	Use/Purpose	Development of Tool	Format	Calculations Approach	Benefits	Limitations
<a href="#">Region 9 Healthcare Coalition (Washington State) Community Hazard Vulnerability Assessment (CHVA) Tool</a>	Healthcare coalitions	<ul style="list-style-type: none"> <li>To evaluate vulnerability to specific hazards and address anticipated and unanticipated risks that may affect coalition members in the region. The assessment focuses on the input of healthcare partners as the core group to provide a regional healthcare outlook on hazards.</li> </ul>	<ul style="list-style-type: none"> <li>Developed by the Region 9 Healthcare Coalition in Washington State.</li> <li>Adapted from the <a href="#">Arizona Coalition for Healthcare Emergency Response's (AzCHER) CHVA tool</a>, which Region 9 HCC used to prioritize and weigh hazards. <ul style="list-style-type: none"> <li>The Arizona CHVA is based on the Children's Hospital Colorado CHVA.</li> </ul> </li> </ul>	PDF and Excel file.	<ul style="list-style-type: none"> <li>Assesses risk based on probability of occurrence; probability of the region needing to respond to the hazard; healthcare impact; and readiness assessments based on the 4 phases of emergency management.</li> <li>The tool allows the user to evaluate events three different ways: Relative Risk based on Occurrence, Relative Risk based on the likelihood of facility Response, or an absolute number to rank risk (non-weighted). <ul style="list-style-type: none"> <li>It is up to the user to determine which rating scale or a combination thereof, they will use. (The non-weighted risk removes the weighting scale but provides a larger range of numbers).</li> </ul> </li> </ul>	<p><b>Common Features</b></p> <ul style="list-style-type: none"> <li>Helps establish planning priorities.</li> <li>Identifies hazards that pose the greatest risk to coalition members at a regional level.</li> <li>Identifies regional gaps in healthcare preparedness.</li> <li>Generates charts/graphs to analyze hazards relative to each other.</li> </ul> <p><b>Additional/Unique Features</b></p> <ul style="list-style-type: none"> <li>Incorporates the four phases of emergency management and takes an all-hazards approach to address planning scenarios at the regional level.</li> <li>Includes data input columns for both Occurrence and Response for more precise calculations; the justification being that just because an event occurs does not mean the facility has to respond.</li> <li>Includes a Non-Weighted Risk column for organizations that do not like a percentage-based rating.</li> </ul>	<ul style="list-style-type: none"> <li>Healthcare-specific.</li> <li>Tool does not address populations with access and functional needs (though the HVA protocol does note that social vulnerability data should be considered when developing plans).</li> <li>Scoring criteria and instructions for using the tool are incomplete in the PDF document.</li> <li>Does not incorporate baseline data.</li> </ul>
<a href="#">University of California, Los Angeles (UCLA) Hazard Risk Assessment Instrument (HRAI)</a>	Public health agencies (state and local)	<ul style="list-style-type: none"> <li>To provide guidance in determining the likelihood of a hazard occurring, assess community vulnerabilities and current resources, and prioritize resources in planning for disasters. Key hazards are identified, and their potential consequences are estimated.</li> </ul>	<ul style="list-style-type: none"> <li>Developed by the UCLA Center for Public Health and Disasters.</li> <li>Is based on the expertise of the authors and incorporates disaster-related data in order to illustrate its systematic methodology.</li> </ul>	Worksheets provided as appendices.	<ul style="list-style-type: none"> <li>Consists of four steps: probability of mishap, severity of consequences, scoring of the consequences, and risk analysis.</li> </ul>	<p><b>Common Features</b></p> <ul style="list-style-type: none"> <li>Guide and step-by-step instructions provided.</li> <li>Helps establish planning priorities.</li> <li>Identifies hazards that pose the greatest risk to a jurisdiction.</li> <li>Identifies jurisdictional gaps in public health and healthcare preparedness.</li> </ul> <p><b>Additional/Unique Features</b></p> <ul style="list-style-type: none"> <li>Analysis incorporates baseline data on the community's everyday health status entered by user.</li> </ul>	<ul style="list-style-type: none"> <li>Public health specific.</li> <li>Developed in 2006.</li> <li>Tool is provided as a PDF only. Cannot easily enter data or manipulate tool.</li> <li>Does not automatically generate calculations or graphs/charts.</li> <li>Does not address populations with access and functional needs.</li> </ul>

