

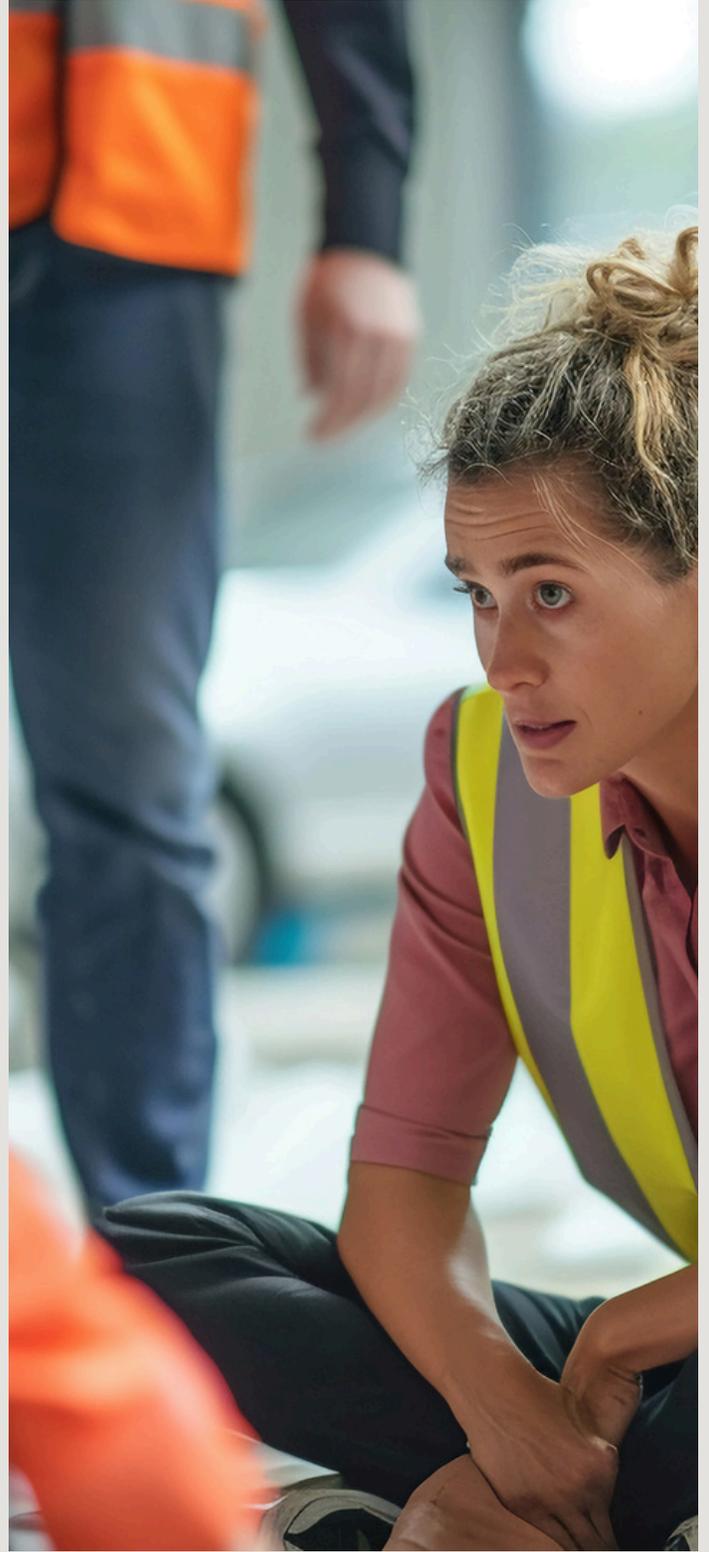


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**BUILDING HEALTHCARE &
COMMUNITY RESILIENCE:**
DISASTER PREPAREDNESS IN
SOUTH FLORIDA

RESOURCE & REFERENCE GUIDE

PART I



**EMERGENCY
MANAGEMENT
FRAMEWORK**

1. Local Tier: The Frontline of Response

At the local level, preparedness focuses on immediate life-saving actions and the sustainability of critical infrastructure.

- **Hospital Capabilities:** Facilities must maintain on-site rescue, triage, and emergency critical care capabilities. However, approximately 73% of hospitals report they could continue operations for **less than one week** without external resources.
- **Community Preparedness:** Efforts center on personal preparedness, local evacuation procedures, and the creation of social networks to improve psychological and physical resilience.
- **Resource Challenges:** Local governments are increasingly innovating to manage biological and weather-related disasters, but often face gaps in emergency response planning and standardized metrics for readiness.

2. Community & Regional Tier: Building Coalitions

The "Whole Community" approach emphasizes that hospitals cannot operate in isolation and must integrate with non-traditional partners.

- **Healthcare Coalitions (HCCs):** Literature highlights the importance of Healthcare Coalitions in coordinating regional surge capacity, communication, and resource sharing during large-scale incidents.
- **Engagement:** Effective community engagement in the planning phase reduces clinical surge during disasters by establishing protocols for non-emergency patient flow.

3. State Tier: Coordination and Support

State agencies serve as the bridge between local needs and federal resources, providing essential regulatory and financial support.

- **Public Health Preparedness:** Programs like the CDC Public Health Emergency Preparedness (PHEP) cooperative agreement provide the funding necessary for states to build laboratory, epidemiology, and response capabilities.
- **Resource Gaps:** States are often responsible for managing [Crisis Standards of Care](#) when traditional medical resources are exhausted.

4. Federal Tier: The Ultimate Safety Net

Federal involvement is triggered when an incident's scale exceeds state and local capabilities, governed by the National Response Framework (NRF).

- **Strategic Assets:** The federal government provides access to medical countermeasures, national stockpiles, and specialized response teams (e.g., NDMS).
- **Funding and Policy:** Programs like the Hospital Preparedness Program (HPP) are critical for hospital readiness, though recent literature notes that less than half of hospitals are satisfied with current federal funding levels.

SUCCESS COMES FROM THE FOLLOWING:

1. Physical Resilience & Surge

Response to natural events (hurricanes, tornadoes, floods) focuses on maintaining the physical plant and managing patient surges.

- **Immediate Response:** Modern standards suggest a "96-hour" independence metric—can a hospital operate for 4 days without any state or federal support?.
- **Continuity Efforts:** Zone-based access control and mass notification systems are critical for protecting high-risk areas like NICUs during storms.
- **Community Integration:** "Unconventional responders," such as sports stadiums and public works, are increasingly being written into local response plans to bolster resource capacity.

2. Cyber Incidents: Digital Resilience & Operational Downtime

Cyberattacks are now categorized as patient safety events, not just IT failures, because they directly disrupt continuity of care.

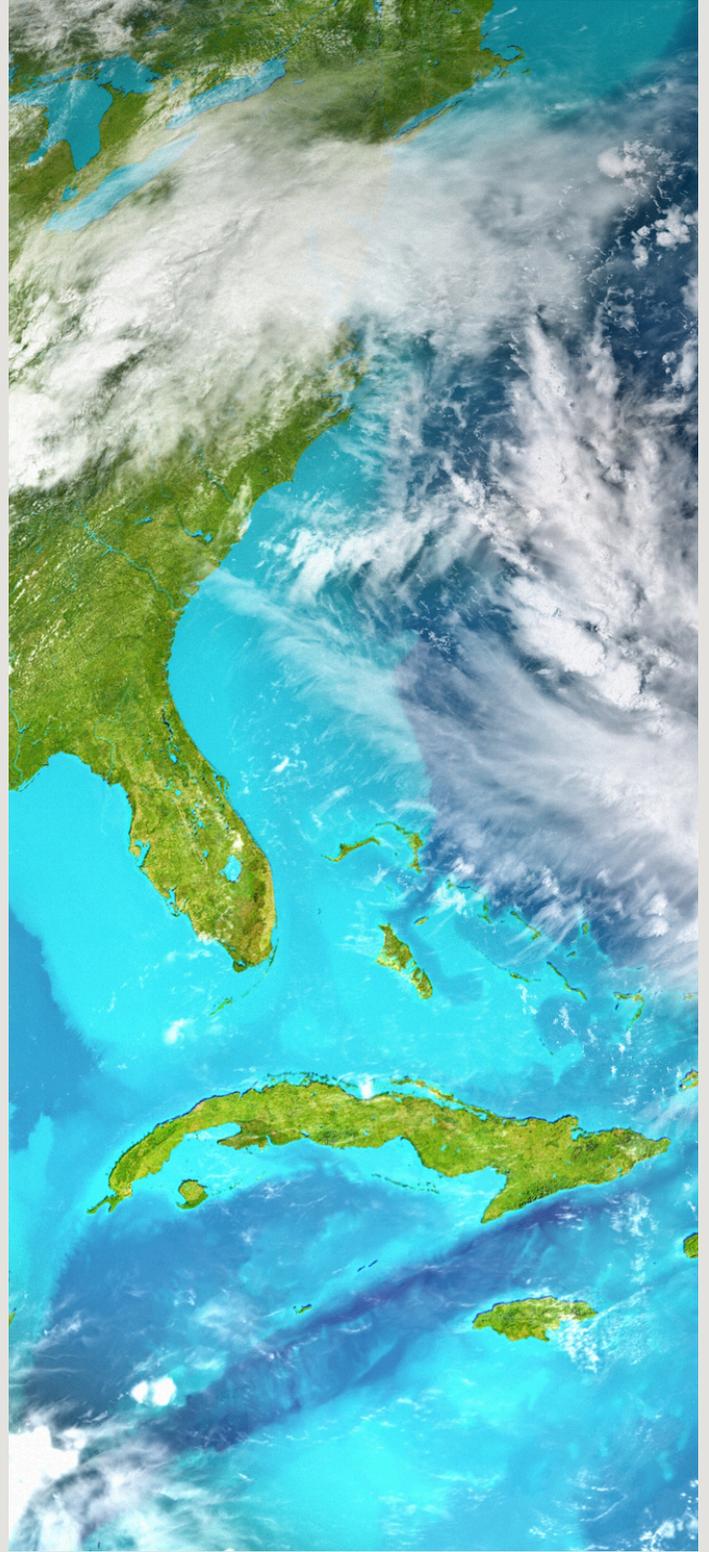
- **Immediate Response:** Automated containment via **SOAR** (Security Orchestration, Automation, and Response) tools is the 2025 standard for isolating compromised medical devices in real-time.
- **Continuity Efforts:** Business Continuity Planning (BCP) has evolved to include "data theft-only" scenarios, where hackers bypass backups to extort organizations. This requires **Zero-Trust architectures** and decentralized storage to protect patient records.
- **Tiered Restoration:** Hospitals now use "Disaster Recovery Tier Lists" to prioritize the restoration of critical applications—for example, restoring Electronic Medical Records (EMR) before administrative programs.

3. Integrated Continuity of Operations (COOP)

The most resilient organizations harmonize their response to both natural and cyber threats through a single [Continuity of Operations Plan \(COOP\)](#).

- **Regulatory Alignment:** The [CMS Emergency Preparedness Rule](#) mandates that communication and training plans cover both physical and technological disruptions.
- **Financial Impact:** Failure to maintain a viable COOP can result in the loss of federal funding and legal penalties, as downtime in high-stakes sectors like healthcare is estimated to cost upwards of \$5 million per hour

PART II



LITERATURE REVIEW

Disclosure: AI assisted in summarizing key sources, highlighting findings, and noting practical applications based on the literature.

REFERENCES



Federal Government & Regulatory Sources

Administration for Strategic Preparedness and Response. (n.d.). Community resilience. U.S. Department of Health and Human Services. https://aspr.hhs.gov/at-risk/Pages/community_resilience.aspx

Summary: Defines Community Health Resilience (CHR) as the ability of a community to use its assets to strengthen public health and healthcare systems and to improve the community's physical, behavioral, and social health to withstand, adapt to, and recover from adversity. Outlines five core strategies: strengthening access to healthcare services, promoting health alongside preparedness, expanding communication networks, engaging at-risk individuals, and building social connectedness.

Key Application: Foundational framework for understanding how disaster preparedness integrates with everyday community health initiatives; useful for developing cross-sector partnerships and defining resilience metrics for South Florida communities.

Administration for Strategic Preparedness and Response. (2024). Health care preparedness and response capabilities for health care coalitions. U.S. Department of Health and Human Services. <https://asprtracie.hhs.gov/technical-resources/resource/3896/health-care-preparedness-and-response-capabilities-for-health-care-coalitions>

Summary: Provides a comprehensive framework for healthcare coalition capabilities including foundation for healthcare and medical readiness, healthcare and medical response coordination, continuity of healthcare service delivery, and medical surge. Establishes national standards for coalition performance and interoperability.

Key Application: Blueprint for evaluating and strengthening South Florida healthcare coalition capabilities; essential reference for Hospital Preparedness Program (HPP) grant compliance and regional coordination efforts.

Administration for Strategic Preparedness and Response. (2025). About the Hospital Preparedness Program (HPP). U.S. Department of Health and Human Services. <https://aspr.hhs.gov/HealthCareReadiness/HPP/Pages/about-hpp.aspx>

Summary: Describes the federal HPP program that provides funding to healthcare systems and coalitions to improve surge capacity, enhance community resilience, and strengthen healthcare delivery during emergencies. Emphasizes regional coordination and public-private partnerships.

Key Application: Critical resource for South Florida healthcare systems seeking federal funding and technical assistance for preparedness initiatives; supports business case for sustained preparedness investments.

Centers for Disease Control and Prevention. (2024). Public health emergency preparedness and response capabilities: National standards for state, local, tribal, and territorial public health. U.S. Department of Health and Human Services.

<https://stacks.cdc.gov/view/cdc/60062>

Summary: Establishes 15 national public health preparedness capabilities organized into three phases: prevent/protect, respond, and recover. Includes capability definitions, functions, resource elements, and performance measures for public health agencies.

Key Application: Aligns healthcare preparedness efforts with public health agency capabilities; useful for developing integrated response plans and establishing common terminology across South Florida emergency management partners.

Centers for Medicare & Medicaid Services. (2025). Emergency preparedness rule. U.S. Department of Health and Human Services. [https://www.cms.gov/medicare/health-](https://www.cms.gov/medicare/health-safety-standards/quality-safety-oversight-emergency-preparedness/emergency-preparedness-rule)

[safety-standards/quality-safety-oversight-emergency-preparedness/emergency-preparedness-rule](https://www.cms.gov/medicare/health-safety-standards/quality-safety-oversight-emergency-preparedness/emergency-preparedness-rule)

Summary: Federal regulation requiring Medicare and Medicaid participating providers and suppliers to establish comprehensive emergency preparedness programs addressing risk assessment, policies and procedures, communication plans, and training/testing. Mandates 96-hour self-sufficiency capability.

Key Application: Regulatory compliance baseline for all South Florida healthcare facilities; provides minimum standards that organizations should exceed given regional hurricane risk; useful for board oversight and accreditation readiness.

National Healthcare Association Resources

American Hospital Association. (2022). Governance practices for high-performing boards. <https://trustees.aha.org/governance-practices-high-performing-boards>

Summary: Outlines governance best practices including board composition, committee structure, strategic oversight, quality and safety governance, executive evaluation, and succession planning. Emphasizes board accountability for organizational performance and community health.

Key Application: Establishes governance framework for board oversight of disaster preparedness programs; useful for integrating emergency management into board quality and risk committees.

American Hospital Association. (2024, August). CLEAR Tip Sheet Series: Natural disaster. <https://www.aha.org/system/files/media/file/2024/07/CLEAR-Tip-Sheet-Series-Natural-Disaster.pdf>

Summary: Practical strategies for preparing and responding to natural disasters including building cross-sector partnerships, fostering collaboration among emergency response agencies, creating training opportunities for adaptive skills, maintaining stakeholder communication, and providing staff support during and after disasters. Features case examples from Boulder Community Health and Barton Health.

Key Application: Actionable checklist for South Florida hospital leaders; emphasizes importance of pre-event partnerships and communication protocols; directly applicable to hurricane preparedness planning.

American Hospital Association. (2024, October 25). From Ian to Milton: Lessons learned in hurricane response [Audio podcast]. AHA Advancing Health Podcast. <https://www.aha.org/advancing-health-podcast/2024-10-25-ian-milton-lessons-learned-hurricane-response>

Summary: Interview with Scott Nygaard, M.D., COO of Lee Health (Fort Myers, FL), discussing organizational response to three major hurricanes (Ian, Helene, Milton) over two years. Covers emergency preparedness, response protocols, recovery efforts, and staff support strategies.

Key Application: Real-world lessons from South Florida healthcare system that experienced recent major hurricanes; directly relevant case study for Greater Miami Chamber audience; highlights importance of staff support and iterative plan improvement.

American Hospital Association. (2025). Strategies for medical surge management during public health emergencies.

<https://www.aha.org/system/files/media/file/2025/10/AHA-CLEAR-Strategies-for-Medical-Surge-Management.pdf>

Summary: Framework for managing patient surge including capacity expansion strategies, staffing models, supply chain management, alternate care sites, and patient flow optimization during mass casualty events and prolonged emergencies.

Key Application: Operational playbook for South Florida hospitals managing hurricane-related surge; addresses both immediate impact and prolonged recovery periods when regional healthcare capacity is strained.

Industry Publications & Case Studies

Becker's Hospital Review. (2024, July 17). 3 things that get in the way of hospital hurricane preparedness. <https://www.beckershospitalreview.com/quality/patient-safety-outcomes/3-things-that-get-in-the-way-of-hospital-hurricane-preparedness>

Summary: Commentary from Beth Israel Deaconess Medical Center and Florida International University experts identifying three common preparedness pitfalls: over-reliance on National Hurricane Center forecast paths (ignoring broader impact zones), delayed evacuation orders limiting safe patient movement time, and underestimation of flooding and secondary threats. Recommends high-fidelity simulation training including combined scenarios (e.g., hurricane plus cyberattack).

Key Application: Identifies specific cognitive biases and planning gaps that South Florida hospitals should address; supports case for enhanced simulation training and multi-hazard scenario planning.

Davila Casas Diamond, A. (2025, September 9). Disaster preparedness in 2025: Recommendations for healthcare chief executive officers. Becker's Hospital Review. <https://www.beckershospitalreview.com/hospital-management-administration/disaster-preparedness-in-2025-recommendations-for-healthcare-chief-executive-officers/>

Summary: Five CEO-level recommendations from Anne Davila Casas Diamond (President, Bridgeport Hospital, Yale New Haven Health): (1) standardize policies and plain-language alert systems across health systems, (2) incorporate regional hazards into Hazard Vulnerability Assessments, (3) plan for special needs populations (27% of U.S. population), (4) ensure senior executive and board visibility during drills, and (5) plan for self-sufficiency beyond 96-hour minimum. Emphasizes that decreased federal/state funding requires increased local preparedness.

Key Application: Executive-level strategic framework for South Florida CEOs and boards; directly addresses governance oversight and resource allocation decisions; particularly relevant given fiscal constraints mentioned in webinar abstract.

Taylor, M. (2024, November 5). What systems can learn from Florida hospitals: 5 emergency-prep ideas to steal. Becker's Hospital Review.

<https://www.beckershospitalreview.com/quality/patient-safety-outcomes/what-systems-can-learn-from-florida-hospitals-5-emergency-prep-ideas-to-steal/>

Summary: Interview with Mary Mayhew (President/CEO, Florida Hospital Association) and Tony Venezia (VP Public Safety, Tampa General Hospital) highlighting five best practices: (1) comprehensive emergency plans with annual revision, (2) pre-season connections with community leaders, (3) early implementation of mitigation (Tampa General's aquafence example), (4) constant multi-level communication, and (5) on-site response teams with stockpiled supplies. Identifies emerging challenges including public infrastructure dependency (water/sewer), EMS transport capacity, fuel access, and long-term care facility coordination.

Key Application: Proven strategies from Florida healthcare leaders with direct hurricane experience; Tampa General's aquafence case study demonstrates infrastructure investment ROI; identifies specific gaps (fuel, LTC coordination) for South Florida planning.

State & Regional Resources

Florida Hospital Association. (n.d.). Emergency management resources.

<https://www.fha.org/emergency-management-resources>

Summary: Centralized repository of emergency management tools, templates, training resources, and regulatory guidance for Florida hospitals. Includes regional coalition contacts, situation reports, and best practice sharing platform.

Key Application: Primary resource hub for South Florida hospitals; facilitates peer learning and standardization across the region; supports Chamber's goal of strengthening healthcare-business partnerships through shared resources.

Academic & Peer-Reviewed Literature

Ersöz Genç, E., & Genç, I. (2025). Enhancing disaster preparedness and response: Key strategies and interventions. *Disaster Medicine and Public Health Preparedness*, 19, e166, 1–3. <https://doi.org/10.1017/dmp.2025.10112>

Summary: Research letter examining latest strategies in disaster preparedness including comprehensive emergency planning, simulation exercises, continuous education, interagency coordination, community engagement, and technological advancements. Emphasizes multifaceted approaches that improve readiness and resilience of healthcare professionals and communities.

Key Application: Evidence-based validation of comprehensive preparedness strategies; supports business case for investing in simulation training and continuous education programs; useful for demonstrating return on preparedness investments to stakeholders.

Jha, A. K., & Pronovost, P. J. (2022). Leading a culture of safety: Boards and executive oversight. *JAMA*, 327(22), 2191–2192. <https://doi.org/10.1001/jama.2022.7425>

Summary: Commentary on board and executive responsibilities for cultivating organizational safety culture, including establishing clear accountability structures, ensuring adequate resources, monitoring safety metrics, and fostering psychological safety for reporting and learning from adverse events.

Key Application: Framework for integrating disaster preparedness into broader board safety oversight responsibilities; supports governance discussion about preparedness as patient safety imperative; relevant to Chamber's business continuity and workforce stability goals.

McMullin, C., & Raggio, P. (2020). Leadership and governance in times of crisis. *Nonprofit and Voluntary Sector Quarterly*, 49(6), 1182–1190. <https://doi.org/10.1177/0899764020964582>

Summary: Analysis of leadership and governance challenges during organizational crises, examining how boards and executives adapt decision-making processes, communication strategies, and stakeholder engagement during high-uncertainty events. Identifies key governance practices that support organizational resilience.

Key Application: Governance framework for crisis decision-making; useful for board preparedness training and establishing crisis governance protocols; supports discussion of how healthcare boards should function differently during disasters.

Morales Ramos, F., Herrera, M. T., Zajac, L., & Sheffield, P. (2021). Children's environmental health and disaster resilience in Puerto Rico and the U.S. Virgin Islands. *Applied Nursing Research*, 61, 151482. <https://doi.org/10.1016/j.apnr.2021.151482>

Summary: Study examining children's environmental health vulnerabilities and disaster resilience in Caribbean territories following major hurricanes. Identifies specific needs of pediatric populations during disasters including medication access, specialized equipment, environmental exposures, and psychosocial support.

Key Application: Highlights importance of planning for vulnerable pediatric populations in hurricane-prone regions; relevant to South Florida's diverse population; supports special needs planning recommendations; useful for pediatric hospital preparedness.

Torres-Agüero, D., Armijo-Rivera, S., Vicencio-Clarke, S., Norte, G., Herrera, E., & Lagos Cordero, A. (2025). Enhancing disaster preparedness and community safety through virtual simulation: A scoping review in undergraduate health education. *Disaster Medicine and Public Health Preparedness*, 19, e351, 1–11.

<https://doi.org/10.1017/dmp.2025.121>

Summary: Scoping review of 17 studies examining virtual simulation (VS) use in disaster medicine training for undergraduate health students. Found VS effectively enhances technical skills, knowledge retention, self-confidence, and decision-making, particularly for triage, evacuation, and decontamination training. Notes geographic concentration in nursing education and limited interprofessional application.

Key Application: Evidence supporting cost-effective virtual simulation training for healthcare workforce preparedness; scalable approach for large-scale community training; relevant to Chamber's workforce development goals and healthcare system training budgets.

Vaughn, V. M., Saint, S., Krein, S. L., & Chopra, V. (2021). The role of boards in quality and safety oversight. *BMJ Quality & Safety*, 30(6), 459–462.

<https://doi.org/10.1136/bmjqs-2020-011757>

Summary: Outlines board responsibilities for quality and safety oversight including setting strategic priorities, ensuring adequate resources and expertise, monitoring performance data, fostering accountability, and creating culture of continuous improvement.

Emphasizes board education and engagement with frontline staff.

Key Application: Framework for integrating disaster preparedness into board quality oversight; supports argument that preparedness is core quality and safety function; useful for board education and committee structure discussions.

Private Sector & Coalition Resources

Healthcare Ready. (2023). Protecting national public health and health care infrastructure for the next disaster. <https://healthcareready.org/wp-content/uploads/2023/01/2023-HcR-Report-Protecting-National-Public-Health-and-Health-Care-Infrastructure-for-the-Next-Disaster.pdf>

Summary: Comprehensive report examining public-private partnerships for healthcare infrastructure protection during disasters. Addresses supply chain resilience, pharmaceutical access, medical equipment availability, and coordination mechanisms between healthcare systems, manufacturers, distributors, and government agencies.

Key Application: Blueprint for private-sector partnerships that support healthcare preparedness; directly relevant to Chamber's role in facilitating business-healthcare collaboration; addresses supply chain continuity critical to both healthcare and business operations.

Vizient, Inc. (2023). Vizient feedback in response to House Energy and Commerce Committee RFI on PAHPA reauthorization.

https://www.vizientinc.com/-/media/documents/sitecorepublishingdocuments/public/aboutus/20230313_vizient_pahpa_rfi_response.pdf

Summary: Healthcare supply chain organization's recommendations for Pandemic and All-Hazards Preparedness Act (PAHPA) reauthorization, emphasizing supply chain visibility, strategic national stockpile modernization, domestic manufacturing capacity, and public-private coordination mechanisms.

Key Application: Policy perspective on national preparedness infrastructure that affects local healthcare systems; useful for understanding federal policy context and advocating for South Florida healthcare system needs; supports supply chain resilience discussion.

Vizient, Inc. (n.d.). Preparing for drug shortages at Ochsner Health: Forward-thinking leadership and supply chain resiliency. <https://www.vizientinc.com/case-studies/ochsner-health-supply-chain-resiliency>

Summary: Case study of Ochsner Health's proactive approach to managing drug shortages through enhanced supply chain analytics, alternative sourcing strategies, clinical substitution protocols, and cross-functional collaboration between pharmacy, supply chain, and clinical leadership.

Key Application: Practical example of supply chain resilience that supports both routine operations and disaster preparedness; demonstrates business continuity value of preparedness investments; relevant to pharmaceutical access challenges during hurricanes.

Policy & Advocacy Resources

Federation of American Hospitals. (2023, March 30). FAH responds to RFI on Pandemic and All-Hazards Preparedness Act. <https://fah.org/fah-responds-to-rfi-on-pandemic-and-all-hazards-preparedness-act>

Summary: Hospital industry association's policy recommendations for PAHPA reauthorization including healthcare workforce development, telehealth infrastructure, supply chain resilience, hospital funding for preparedness capabilities, and improved coordination between federal agencies and healthcare providers.

Key Application: Policy advocacy framework for South Florida healthcare systems; identifies federal funding opportunities and regulatory priorities; useful for Chamber advocacy efforts supporting healthcare preparedness infrastructure.

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