

A large, light gray 3D map of Region 1, which includes parts of New Hampshire, Vermont, Massachusetts, and Connecticut, is positioned on the left side of the cover. The map has a slight shadow, giving it a three-dimensional appearance.

# 2021 ANNUAL REPORT



REGION 1

**Regional Disaster  
Health Response  
System**



The RDHRS has proved to be an important vehicle to help us improve our healthcare response capabilities as we plan for major disasters within our region. Through the invaluable collaborations with our partners, and the ongoing demonstrations of need, we are confident in the value and success of a regional approach to healthcare disaster response.



***Paul Biddinger, MD, FACEP***

*Principal Investigator/Medical Director, R1 RDHRS*

# TABLE OF CONTENTS

- 4** Building the National RDHRS Network
- 5** By the Numbers
- 6** Region 1 RDHRS Year Three Priorities
- 7** Region 1 RDHRS Preparedness Activities
- 12** Region 1 RDHRS Response Activities
- 16** Core and Essential Functions of an RDHRS
- 18** Year Three Final Functional Exercise



# Building the National RDHRS Network

The Region 1 Disaster Health Response System (R1 RDHRS) is proud to continue our work enhancing regional healthcare disaster response capabilities. During the last three years, in collaboration with our Region 1 partners, with the other RDHRS programs funded by the Assistant Secretary for Preparedness and Response (ASPR) in Regions 7 and 8, and with ASPR leaders, we have made significant strides toward the development of a robust, comprehensive regional system for healthcare disaster planning and response.

During our third year of work, the R1 RDHRS made substantial progress shifting from a pilot program towards becoming a robust, operational resource that improves the accessibility and coordination of expert clinical care among regional healthcare partners during disasters. Formal integration of the Region 1 RDHRS into the ASPR Region 1 Response Plan has allowed us the opportunity to support enhanced healthcare situational awareness, information sharing, clinical expertise, and resource coordination as part of ASPR's regional response efforts.

In addition to our ongoing collaboration with the ASPR Region 1 team, we have continued our close collaboration with representatives from all six New England states, including: state public health and emergency management agencies, adult and pediatric trauma and burn centers, and healthcare coalitions. We have made great strides in establishing and solidifying relationships with national specialty organizations, notably the American Burn Association (ABA), to promote access to specialty care across the region. In addition to our Region 1 partners, the R1 RDHRS worked closely with the other two ASPR RDHRS pilot programs to align workstreams across sites and identify and align core functions of an RDHRS. The ongoing cross-site collaborations will enable us to continue building towards a more robust RDHRS Network with our colleagues in HHS Regions 7 and 8, as well as with the new Region 4 site.

We are very pleased with the accomplishments of the R1 RDHRS to date and are especially proud of the role that we continue to play in supporting our partners, patients and residents that live within our region. We are excited to continue expanding our response capabilities in the coming year, and look forward to continued collaboration both within and across regions.



PI/Medical Director

**Paul D. Biddinger, MD, FACEP**



Executive Director

**David Reisman, MHA, FACHE**

# By the Numbers

**4** region-wide webinars held reaching over **1000** attendees across all **6** New England states

Multiple successful demonstrations of program effectiveness, including:

**4** disaster telehealth drills, **3** small-scale simulations for telehealth, **1** just-in-time training toolkit demonstration, **1** multi-state functional exercise

**81%** of respondents said they were somewhat/very likely to use a regional disaster teleconsultation system, according to a telehealth survey conducted by EMnet

**40+**  partners across state health departments, hospitals, healthcare coalitions, hospital associations, and regional and national organizations

 **45** MGH deployable Disaster Medical Team (DMT) members rostered

 **4** new legal resources developed to support RDHRS response capabilities

**6** national conference presentations delivered to highlight R1 RDHRS program activities

# Region 1 RDHRS Year Three Priorities



Provide disaster clinical and healthcare operations **subject matter expertise and technical assistance** to public health and emergency management leaders in Region 1



Augment regional medical capacity during disasters via the RDHRS **disaster telehealth platform** and MGH/UMASS **disaster medical teams**



Operationalize **24/7/365 response structure** that supports improved healthcare situational awareness, as well as access to specialized medical and technical expertise related to patient movement and clinical care in real time during disasters



Further **legal and regulatory initiatives** that support cross-jurisdictional response



Continue development of **metrics and evaluation tools** for healthcare coalition-level readiness



Promote **collaboration and standardization** across RDHRS sites to strengthen the national network



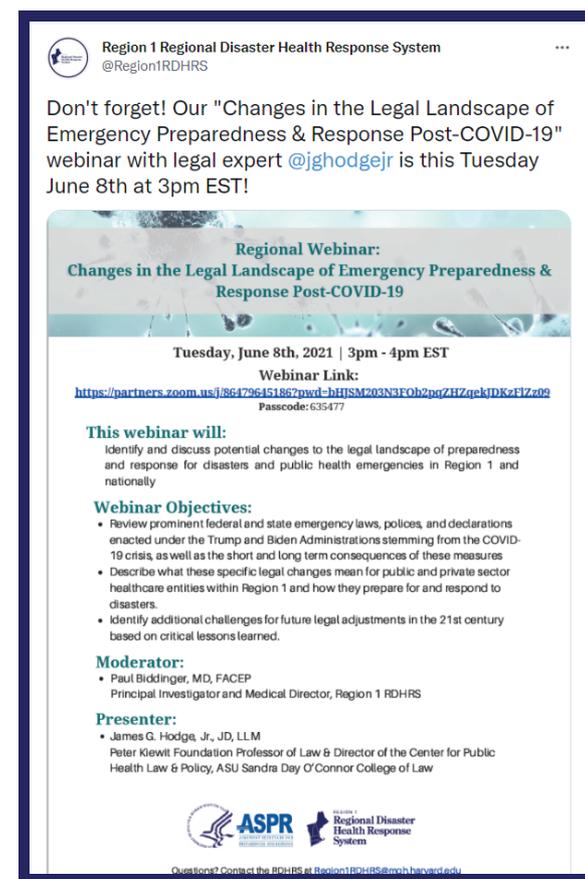
## Region 1 RDHRS Preparedness Activities

The R1 RDHRS supports disaster planning by ensuring that appropriate clinical expertise is integrated into emergency planning and response, maximizing Region 1's clinical surge capabilities. In Year Three, the R1 RDHRS facilitated access to clinical subject matter expertise via webinars, regional working groups and fulfilling technical assistance requests. Additionally, the project team continued to develop the framework for disaster policies that address cross-border barriers to coordinated healthcare disaster response.

# Region 1 RDHRS Preparedness Activities

## Stakeholder Engagement

Throughout Year Three, the RDHRS project team continued to strengthen its relationship with key stakeholders in disaster preparedness and response through various engagement activities. The project team provided technical assistance via several regional webinars, and by leveraging our network of regional and national subject matter experts to address real-time issues related to COVID-19 response, recovery, policy limitations, and identification of mitigation efforts. To increase the engagement of Region 1 partners, the RDHRS project team has created a monthly newsletter to spotlight RDHRS program activities as well as provide information on disaster preparedness resources and training opportunities. The team also established a social media presence through a Region 1 RDHRS Twitter account, that is used to enhance awareness of regional preparedness and response activities.



Region 1 Regional Disaster Health Response System  
@Region1RDHRS

Don't forget! Our "Changes in the Legal Landscape of Emergency Preparedness & Response Post-COVID-19" webinar with legal expert @jghodgejr is this Tuesday June 8th at 3pm EST!

**Regional Webinar:**  
**Changes in the Legal Landscape of Emergency Preparedness & Response Post-COVID-19**

Tuesday, June 8th, 2021 | 3pm - 4pm EST

**Webinar Link:**  
<https://partners.zoom.us/j/864796451867pwd-bHJSM203N3FOh2pqZHZqekIDKzFTZr09>  
Passcode: 635477

**This webinar will:**  
Identify and discuss potential changes to the legal landscape of preparedness and response for disasters and public health emergencies in Region 1 and nationally

**Webinar Objectives:**

- Review prominent federal and state emergency laws, polices, and declarations enacted under the Trump and Biden Administrations stemming from the COVID-19 crisis, as well as the short and long term consequences of these measures
- Describe what these specific legal changes mean for public and private sector healthcare entities within Region 1 and how they prepare for and respond to disasters.
- Identify additional challenges for future legal adjustments in the 21st century based on critical lessons learned.

**Moderator:**

- Paul Biddinger, MD, FACEP  
Principal Investigator and Medical Director, Region 1 RDHRS

**Presenter:**

- James G. Hodge, Jr., JD, LL.M.  
Peter Kiewit Foundation Professor of Law & Director of the Center for Public Health Law & Policy, ASU Sandra Day O'Connor College of Law

ASPR | Region 1 Regional Disaster Health Response System

Questions? Contact the RDHRS at [Region1RDHRS@aspr.hhs.gov](mailto:Region1RDHRS@aspr.hhs.gov)

Quarterly R1 RDHRS Advisory Committee meetings provided an opportunity for Region 1 partners to provide input on project progress and the future direction of the R1 RDHRS. The Advisory Committee is comprised of representatives from the ASPR regional office, state and tribal health departments, specialty medical organizations and other key stakeholders. In the fourth quarter of Year Three, the committee met for a Regional Summit to discuss plans for Year Four and pathways for further integration of the R1 RDHRS capabilities into the existing preparedness and response systems in New England.



Key decisions on how or when to respond must be anticipated in advance to avoid legal or policy pitfalls or complications. Repercussions of failing to prepare for and respond to public health emergencies (PHEs), no matter the cause or duration, can impact patients, health care workers, and public health officials. The R1 RDHRS' efforts have played a crucial role in the development of pathways to promote coordination across jurisdictions during emergencies and build a stronger disaster legal foundation for Region 1.



- James Hodge, Jr., JD, LLM, R1 RDHRS Legal Consultant

## Addressing Legal Obstacles to Effective Disaster Response

The R1 RDHRS team continued its collaboration with legal expert James Hodge, Jr., LLM to closely examine and address legal barriers to disaster response. In addition to updating the Region 1 Legal Resource Guide, Professor Hodge worked closely with the project team to develop a series of templated legal documents to support RDHRS response capabilities within Region 1, including:

**(1) Templated State Executive Order** — This executive order template authorizes out-of-state/out-of-jurisdiction providers to provide teleconsultation via immediate license reciprocity and credentialing/privileging requirement waivers, and institutes liability caps for claims of ordinary negligence.

**(2) Summary of Existing Liability Protections** — This document outlines the umbrella of protections for volunteer healthcare providers during disasters via existing statutes, acts or disaster declarations.

**(3) Letter to Support Inquiry Regarding Extension of Liability Protection** — This templated letter was designed to assist individuals interested in serving as volunteers with inquiring whether their malpractice carrier would extend existing liability coverage for providing disaster care as an RDHRS disaster teleconsultant.

This work will provide the foundation for RDHRS capabilities to be effectively utilized across jurisdictions in Region 1.

## Developing Real-Time Mechanisms to Discuss Identified Legal/Regulatory/Policy Barriers and Conflicts in Disaster Health Response

The Region 1 Emergency Conference Call Protocol, developed with support from ASPR Region 1 staff, provides a virtual venue to rapidly convene key decision-makers to identify opportunities for alignment of policies or decisions across Region 1 states during a disaster or public health emergency. The group is comprised of ASPR Region 1 staff, state public health representatives, RDHRS core team members, and relevant disaster medical and/or hospital operations subject matter experts (SMEs). The RDHRS team continues to work with ASPR Region 1 staff to integrate this protocol into existing regional ASPR response structures.

# Region 1 RDHRS Preparedness Activities

## Just-in-Time Training and Technical Assistance

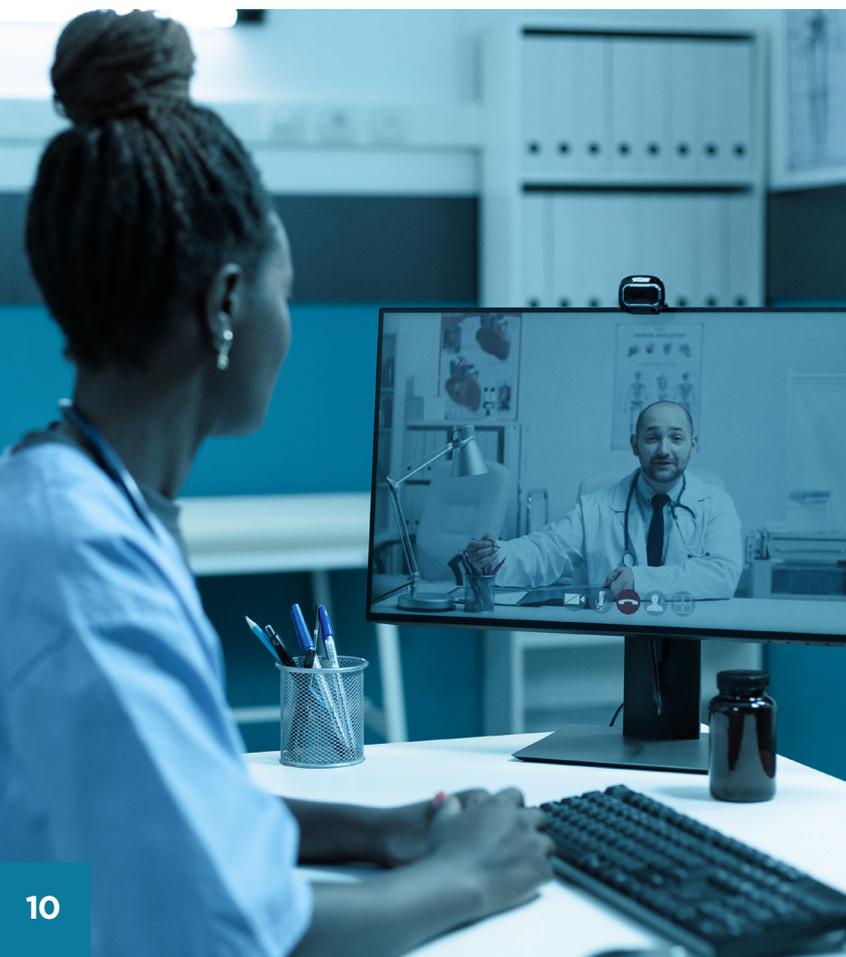
### Region 1 RDHRS Just-in-Time Training Toolkit

The R1 RDHRS, in coordination with the Boston Public Health Commission, enhanced the Just-in-Time training toolkit developed by the team in Year Two. This toolkit was designed to foster the development of clinically sound, expert-vetted, just-in-time training materials for real-time distribution during disasters. Notably, the toolkit includes a rapid training development guide to quickly distill complex specialty care considerations into a concise format for frontline health responders. In July 2021, the RDHRS team tested the updated rapid training development guide in collaboration with the American Burn Association (ABA) in response to a fictional burn event.

### Technical Assistance

The R1 RDHRS continues to serve as a valuable resource for its regional stakeholders. Throughout Year Three, the team provided technical assistance to partners across Region 1, including:

- **Regional Webinars** – the team hosted quarterly webinars to address real-time challenges including, COVID-19 therapeutics and treatments, mental and behavioral health challenges in frontline health care providers, and potential changes in the legal/policy landscape due to COVID-19.
- **Region 1 HCC Discussions** – at the request of ASPR R1, the RDHRS met with state healthcare coalition (HCC) and health department leads to discuss points of collaboration across the groups to improve preparedness in each state.
- **Medical Operations Coordination Cell (MOCC) Planning** – the R1 RDHRS team participated in ongoing discussions with state health partners in Vermont related to the establishment of a state-level MOCC, and consideration of how the RDHRS could potentially support this infrastructure.
- **Specialty Surge Planning** – the RDHRS team, in collaboration with ABA colleagues, provided feedback and guidance to state healthcare coalitions and health departments during the development of the state burn surge planning annexes.



# Readiness Assessment Metrics

Continuing its collaboration with the Harvard T.H. Chan School of Public Health’s Emergency Preparedness Research, Evaluation, and Practice (EPREP) Program, the R1 RDHRS shifted its metrics focus to revising the HCC-level metrics created in Year Two and incorporating them into a similar evaluation framework to the RDHRS-level scorecard. The team worked collaboratively with both Region 7 and Region 8 RDHRS teams to better ensure the HCC metrics were attributable to the correct agencies and would be able to measure changes in response readiness over time. The scorecard domains include:

<b>Domain 1</b>	
<b>Governance of a Healthcare Coalition (HCC)</b>	Establish an HCC partnership that includes a pre-determined geographical area that would respond to disasters in a coordinated manner
<b>Domain 2</b>	
<b>Legal and Regulatory Considerations</b>	Assess regulatory and legal barriers to disaster health response; and, develop, review or refine plans related to Alternate Care Systems
<b>Domain 3</b>	
<b>Planning</b>	Ensure the HCC has Preparedness and Response Plans
<b>Domain 4</b>	
<b>Information Sharing</b>	Establish regular communication mechanisms among HCC members, including a catalog of Essential Elements of Information (EIs) that will inform operational decision-making
<b>Domain 5</b>	
<b>Response</b>	Enhance HCC response through established and novel coordination among partners
<b>Domain 6</b>	
<b>Training</b>	Identify and address training needs for activities requiring coordination or specialized training
<b>Domain 7</b>	
<b>Evaluation</b>	Exercise and evaluate performance and readiness of HCC to respond to a coalition wide disaster and assist in the coordination of health care service delivery

# Region 1 RDHRS Response Activities

The R1 RDHRS effectively expands access to specialty care expertise and coordination of regional disaster healthcare response via the following response capabilities:



**24/7/365  
Duty  
Officer**



**Subject  
Matter  
Experts**



**Disaster  
Medical  
Teams**



**Patient  
Placement  
Coordination**



**Disaster  
Telehealth**

## Response Center

When a disaster event occurs that creates the need for a significant healthcare response, an RDHRS must rapidly mobilize to support healthcare needs. To facilitate constant response readiness, the Region 1 RDHRS established an on-call Duty Officer to serve as the operational point of contact for activation and mobilization of the RDHRS. Upon notification of a disaster, the Duty Officer alerts and organizes Region 1 RDHRS response activities in collaboration with hospital, health system, and governmental partners to support healthcare system response.

In the event a significant RDHRS response is required, the R1 RDHRS may activate the RDHRS Response Center (RC) to manage RDHRS response activities and coordinate information, resources, support, and technical assistance. The R1 RDHRS RC has the capacity to activate either virtually or physically. Due to the large geographic area served by the R1 RDHRS and physical distance from which staffing and subject matter experts may be mobilized, the initial response will typically be virtual in nature; however, the RC may physically activate for emergency events that are more complex in nature, require extended monitoring, or severely impact public health and healthcare services until stabilization and recovery have occurred.

# Support for Regional Patient Movement

During disaster events, patients may need to be transferred between healthcare facilities to optimize capacity and capabilities to save the greatest number of lives. Incidents involving patients with specialty care needs further constrain limited resources – with associated scarcity of beds, providers, and equipment, as well as constrained access to expertise to coordinate the response.

The R1 RDHRS continues efforts to develop regional plans and systems to organize mass patient movement during disasters. This year, the RDHRS team collaborated with technology partner First Line Software to design and develop a custom web-based patient movement coordination platform to support regional patient distribution.

This platform allows hospitals overwhelmed with injured or ill patients to request support from other nearby facilities with bed availability to accept patient transfers. A team of clinical and operational subject matter experts serves to match patients with appropriate beds, distributing patients in a manner that avoids overwhelming any single facility, and coordinating with health system and government leaders to support the response via the RDHRS Response Center. The RDHRS team tested this concept in its end-of-year exercise and will continue work to expand use cases in support of mass casualty incidents, large-scale hospital evacuations and regional load balancing efforts.



# RDHRS Response Activities



## Disaster Telehealth

The R1 RDHRS continued the configuration and testing of its prototype disaster telehealth system in collaboration with technology partner Bluestream Health. The team also worked to revise workflows and key staffing to streamline operations and increase platform efficiency. In addition to platform development, the team worked with the ABA to recruit, onboard and train interested burn surgeons – establishing an initial national registry of RDHRS disaster burn teleconsultants. These experts participated in simulations throughout the project year, helping to test the platform’s functionality and providing crucial feedback related to the system’s notification processes, quality of the platform’s interface, and overall ease of use.

As the team worked to identify implementation requirements within Region 1, the project team conducted a cross-sectional survey of 189 hospitals and free-standing emergency departments across New England, in collaboration with the MGH Emergency Medicine Network (EMNet), to identify barriers and facilitators to implementation, as well as willingness to use a regional disaster teleconsultation system during a disaster or public health emergency. The team will use this data to inform R1 RDHRS telehealth activities moving forward. Of note:

- The team achieved an 87% survey response rate across all hospitals.
- 25% of hospitals lacked any access to burn specialists, but over 80% of respondents could access other disaster-relevant specialists, therefore access to burn expertise during disasters was identified as a crucial need.
- 81% of respondents reported that they would be “somewhat likely” or “very likely” to use a regional disaster telehealth system to access specialists if they were affected by a no-notice disaster.

Looking ahead, the R1 RDHRS telehealth team will continue to collaborate with the Region 7 and Region 8 RDHRS teams to continue advocating for the joint development of a single national telehealth platform, and to expand access to additional disaster specialties.

# Disaster Medical Teams

Throughout Year Three, the project team continued development of the processes required to operationalize hospital-hosted disaster medical teams (DMTs) at Massachusetts General Hospital and the University of Massachusetts Memorial Medical Center. DMT representatives from MGH and UMass held ongoing conversations with state officials to determine how best to integrate DMT resources into the response infrastructure and preparedness plans

In an effort to standardize disaster medical team mission assignments and coordinate deployable resources in Region 1, the R1 RDHRS continued to lead the R1 DMT working group. The R1 RDHRS team also expanded its collaboration with the Region 7 and Region 8 RDHRS teams to establish consistent language and concepts surrounding DMT capabilities and mission assignments for each RDHRS program.



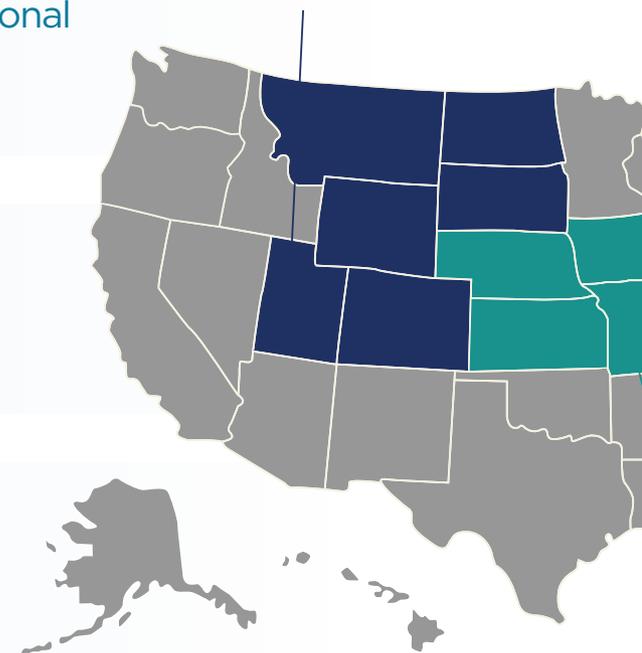
# Core and Essential Functions of an RDHRS

Close collaboration across RDHRS sites throughout Year Three provided the opportunity for alignment and standardization of core functions and building the foundation for a comprehensive national RDHRS Network. Through the establishment of a set of core and essential activities, an RDHRS can meet states' needs across the region, as well as support other HHS Regions during response. Below are the core and essential functions of an RDHRS and the network of RDHRS' identified collaboratively by the three RDHRS teams during Year Three:

- Facilitate involvement of disaster medical and healthcare operational subject matter experts (SMEs) in planning and mitigation
- Facilitate access to disaster medical and healthcare operational SMEs in response and recovery
- Maintain a 24/7/365-capable response structure and electronic situational awareness/information sharing tool to support the above functions
- Support patient movement and capacity management in major disaster events

## Mountain Plains RDHRS

(Denver Health and  
Hospital Authority)  
*Awarded 2020*



- Augment regional medical capacity during disasters

- Support regional training/education

- Identify and document legal and policy challenges related to disaster preparedness

- Lead assessments of disaster medical response readiness in the region using pre-established and vetted metrics and evaluation frameworks

Along with standardization of core functions, the three RDHRS sites continue to align workstreams and develop shared work products across different components of the RDHRS program, as well as coordinate efforts with national specialty organizations. The R1 team looks forward to continuing to strengthen its relationship with other sites in an effort to align core functions and provide a pathway for executing the ASPR RDHRS vision.

**Region 1 RDHRS**  
(Massachusetts  
General Hospital)  
*Awarded 2018*

**Southern RDRS**  
(Emory Hospital)  
*Awarded 2021*

**Region VII Regional Disaster Health  
Response Ecosystem (RDHRE)**  
(Nebraska Medicine)  
*Awarded 2018*

# Year Three Final Functional Exercise

The R1 RDHRS conducted a multi-state preparedness exercise to evaluate the response capabilities that have been developed by the program to date. The exercise scenario simulated a mass casualty event at a festival in rural Vermont.



## EXERCISE SCENARIO >

A small aircraft crashes into a crowd of people, and in the chaos that ensues, hundreds of people are burned, trampled, and otherwise severely injured. The Vermont Department of Health mobilizes a response and contacts the RDHRS Duty Officer to leverage the disaster response capabilities that may aid Vermont's healthcare system in providing care to the injured.

Recognizing the catastrophic nature of the event, the RDHRS Duty Officer immediately activates the RDHRS Response Center. Trauma and burn centers across New England are notified to begin preparing for potential patients, and staff and subject matter experts are mobilized from around the region to provide assistance.

The response was organized into core response capabilities:

- **Clinical Subject Matter Expertise:** To provide clinical expertise to the region's health authorities, the RDHRS mobilized subject matter experts in burn & critical care pediatrics to provide recommendations related to clinical standards of care and specialized treatment practices.
- **Disaster Telehealth Consultations:** Due to the large volume of critically injured patients, the RDHRS Disaster Telehealth System was activated to support Vermont community hospitals most impacted and overwhelmed by the event, providing bedside clinicians access to real-time burn expertise and treatment guidance from burn surgeons across the country.
- **Patient Movement Coordination:** Recognizing that bed capacity in Vermont was quickly being exceeded, the RDHRS activated its patient movement coordination system, allowing overwhelmed hospitals to request transfer of patients, and also enabling receiving facilities to share real-time bed availability and receive information about the patient transfers assigned to their facilities.
- **Disaster Medical Team Activation:** The MGH-hosted Disaster Medical Team was requested to support patient care in Vermont. DMT leaders alerted team members that they had been activated and followed mobilization protocols to prepare supplies and equipment for deployment.

The exercise offered a valuable opportunity to activate a virtual instance of the **RDHRS Response Center**, showcasing the manner in which the RDHRS can provide support during a catastrophic disaster with severe health consequences.

“ Vermont's partnership with the R1 RDHRS has proven to be an invaluable opportunity to further healthcare emergency preparedness planning in our state. We were able to participate in the most recent annual RDHRS exercise and came away with some key lessons learned for Vermont's state-level medical surge and patient movement planning. With the continued support of the R1 RDHRS team, Vermont looks forward to building even stronger relationships with regional partners and advancing our medical operations coordination. ”

- Sarah Perry,  
Healthcare Preparedness Coordinator,  
Vermont Department of Health



Our R1 RDHRS team continues to play a crucial role in developing and implementing strategies to effectively coordinate clinical subject matter expertise in Region 1. We are grateful for the active engagement of our partners and the Regions 7 and 8 RDHRS teams, and look forward to continuing to advance our work in Year Four.



*- David Reisman, R1 RDHRS Executive Director*

## Region 1 RDHRS Core Team

- **Paul D. Biddinger**, MD, FACEP, Principal Investigator
- **David J. Reisman**, MHA, FACHE, Executive Director
- **Rachel Bedenbaugh**, MPH, Senior Program Manager
- **Jacquelyn Nally**, BSN, MA, RN, NHDP-BC Senior Program Manager
- **Robert Krupa**, MS, Senior Program Manager
- **Meredith Hutchins**, MPH, Senior Project Manager
- **Lauren Schmidt**, MPH, Project Manager



REGION 1

# Regional Disaster Health Response System

[www.rdhrs.org](http://www.rdhrs.org)

[Region1RDHRS@mgh.harvard.edu](mailto:Region1RDHRS@mgh.harvard.edu)