

Attachment K
Scope of Work

Indiana Healthcare Emergency Systems
#26-84370

Purpose Statement

The purpose of this Request for Proposal (RFP) is to procure a qualified vendor to develop, implement, and maintain a robust, real-time hospital, healthcare, public health and emergency medical services (EMS) reporting and data delivery system(s) as well as a volunteer notification and accountability system for the State of Indiana. The system is intended to support a statewide Medical Operations Coordination Center (MOCC) as a centralized 24/7 hub for day-to-day hospital and EMS operational reporting, patient transfer coordination, and EMS resource alignment with a primary goal of improving the quality and efficiency of statewide care coordination and transport of rural residents dependent on interfacility transfers for trauma, stroke, psychiatric, and OB/GYN emergencies. The system(s) must provide 24/7 network-based delivery for the following areas in emergency settings.

A. Healthcare Infrastructure Status Information System

Informed by the 2024 Statewide Jurisdictional Risk Assessment (JRA), this initiative responds directly to Indiana's identified priority hazards, most notably epidemic/pandemic threats, infrastructure failures, severe weather, mass casualty incident (MCI), and cybersecurity incidents—creating significant threats to healthcare service delivery. This system enhances situational awareness, operational coordination, and equitable emergency response by integrating health system status data with risk-informed decision-making.

1. The system must have the ability to capture, manage, and report Essential Elements of Information (EEI) necessary for effective emergency management, healthcare system coordination, patient transport, and executive leadership decision-making from healthcare facilities, including but not limited to, hospitals, emergency medical services (EMS), long-term care, dialysis/ESRD, local health department (LHD), urgent care, Federally Qualified Health Care (FQHC), Community Health Centers (CHCs), Rural Health Centers (RHCs), rehabilitation facilities, behavioral mental health providers.
2. The system must provide comprehensive tracking and reporting of EEIs including, but not limited to:

- Bed capacity and utilization (e.g., ICU, med/surg, pediatric, behavioral health)
- Ventilator availability
- Generator and power status
- Emergency department functionality
- Staffing levels and shortages
- Surge capacity and Mass Casualty Triage indicators
- Diversion Status
- Telecommunications Status
- Facility Water Status
- Electronic Medical Records Status

The system must support interoperability with hospital and EMS providers for frequent and automated data flow. The system must also be able to provide dashboards (at the healthcare facility, EMS unit, district, and state level) and other methods to take all data elements within the system and turn it into digestible information that can be shared amongst key stakeholders.

The system must support connections with out-of-state health systems, state and locally operated healthcare facility and EMS tracking systems. These connections will support cross-border transportation and situational awareness.

3. User Interface Requirements:

- Ability for users/administrators to send network, county, district, statewide alerts to other users
- Ability to connect to other patient tracking systems at the facility, system, and state level
- Administrative Dashboard: Design a user-friendly dashboard for administrators to view key metrics, such as bed and ventilator availability, resource statuses, and recent notifications.
- Reporting Interface: Provide a reporting tool that can generate and reports on-demand or on a scheduled basis, with options to export to different formats (PDF, Excel, etc)

4. Security and Compliance

- Data Security: Implement robust security protocols to protect sensitive health data and personal information, including encryption and access controls.
- Compliance with Regulations: Ensure the system complies with relevant healthcare regulations, such as HIPAA (Health Insurance Portability and

Accountability Act), for managing patient data. Must be compliant with state regulations.

5. Testing and Quality Assurance

- User Acceptance Testing (UAT): Conduct thorough testing with hospital staff, healthcare facility staff, EMS staff, and administrators to ensure the system meets all functional requirements.
- Performance Testing: Test the system for handling large volumes of data and simultaneous users to ensure it can scale appropriately.

6. File Validation

- The Contractor will be required to be responsible for the submission of data to the Indiana Department of Health, along with the National Healthcare Safety Network (NHSN), to include the list of NHSN Organization ID numbers.

7. Application Programming Interface (API)

- The System shall be designed to integrate seamlessly with existing state and partner systems to enable automated data exchange and reduce manual reporting. Integration objectives include:
 - Automated Data Upload: Enable continuous or scheduled data transfer from hospital and healthcare systems to maintain accurate, real-time operational data (e.g., bed availability, diversion status, staffing, critical resource levels).
 - Interoperability: Ensure compliance with national data standards (e.g., HL7, FHIR, NEMIS, EDXL) to facilitate interoperability across healthcare and emergency management platforms.
 - Bidirectional Data Sharing: Support both inbound and outbound data exchange to ensure hospitals, health departments, emergency medical services (EMS), and other healthcare entities receive consistent and up-to-date information.
 - Integration and connection with Indiana Department of Homeland Security (IDHS) WebEOC platform
 - Integration and connection with: hospital and healthcare system electronic medical records (EMRs), EMS electronic medical records (EMR) and Computer Aided Dispatch (CAD), 911 Public Safety Answering Point Computer Aided Dispatch (CAD) systems
 - The system must support connections with out-of-state health systems, state and locally operated healthcare facility and EMS tracking systems. These connections will support cross-border transportation and situational awareness.

- API Integration Requirements
 - The vendor shall provide secure, well-documented APIs to allow integration with external systems, including but not limited to:
 - Hospital Information Systems (HIS) and Electronic Medical Records (EMR/EHR) platforms for facility status and patient census data.
 - Public Health Systems, including syndromic surveillance, laboratory reporting, and emergency operations databases.
 - Emergency Medical Services (EMS) systems for real-time patient transport and hospital destination data.
 - State and Federal Data Systems such as Health Care Coalition platforms, or other regional situational awareness tools.
- APIs must adhere to industry best practices for authentication, encryption, and access control. Vendors will provide technical documentation, testing environments, and support for onboarding partner systems.
- Automation and Data Management
 - The System shall include automated workflows to collect, validate, and display data without requiring manual entry whenever possible. Automated data ingestion must support configurable thresholds and alerts to flag data inconsistencies or operational changes (e.g., capacity thresholds, resource shortages, or diversion status changes).
- Testing and Validation
 - The vendor will collaborate with designated hospitals, healthcare coalitions, and state agencies to:
 - Conduct interface testing and data validation.
 - Demonstrate real-time data synchronization and accuracy.
 - Document successful integration with at least three EMR platforms and one EMS data source prior to full system launch.
- Security and Compliance
 - All integrations and data exchanges must comply with applicable state and federal laws, including HIPAA, HITECH, and state data security standards. The vendor will implement and maintain appropriate security controls and provide documentation verifying compliance.

8. Offline Functionality/Extended Downtime Requirements

- The system must be designed to operate with partial functionality offline, enabling key features essential for emergency response and patient tracking. This includes:
 - Access to Essential Information: Users should have offline access to critical operational data, such as current bed capacities, staffing levels, and equipment availability to support decision-making during emergencies.
 - Data Synchronization and Integrity
 - The system must include mechanisms for seamless data synchronization when connectivity is re-established. This ensures that all offline records are captured accurately and integrated into the main database without data loss or duplication.
 - A protocol must be established to validate the integrity of the data transferred during synchronization, ensuring accuracy and consistency across systems.
9. User Support and Training:
- Dedicated specialist to design/implement systematic changes
 - Initial and ongoing user training for administrators and end-users.
 - 24/7 technical support during incidents and regular business hours.
 - Ability to provide on-site support during emergency activations.
 - User manuals, knowledge base, and online help center.

B. Pre-Hospital Care and Patient Movement Tracking System

1. Integration Capabilities:
 - a. The system must be capable of seamless integration with 9-1-1 Public Safety Answering Points (PSAPs) to facilitate real-time communication and data sharing between emergency dispatchers, EMS providers, and healthcare facilities.
 - b. It must support interoperability with critical hospital status information systems, existing hospital and EMS systems including Electronic Medical Records Systems (EMRs) and allow for frequent and automated data flow to enhance patient tracking and care coordination.
2. Essential Elements of Information (EEI)
 - a. The system must capture crucial data pertinent to emergency management and patient tracking/care coordination, including but not limited to:
 - i. Patient destination alerts for emergency transport
 - ii. Real-time tracking of EMS unit status and location including linkage with the local 911 Computer Aided Dispatch (CAD) system.

- iii. Ambulance availability and response times
 - iv. Hospital diversion status and capacity, including bed availability and types (ICU, med/surg, etc.)
 - v. Patient triage status and critical care needs
- 3. Application Programming Interface (API)
 - a. The System shall be designed to integrate seamlessly with existing state and partner systems to enable automated data exchange and reduce manual reporting. Integration objectives include:
 - i. Automated Data Upload: Enable continuous or scheduled data transfer from hospital and healthcare systems to maintain accurate, real-time operational data (e.g., bed availability, diversion status, staffing, critical resource levels).
 - ii. Interoperability: Ensure compliance with national data standards (e.g., HL7, FHIR, NEMESIS, EDXL) to facilitate interoperability across healthcare and emergency management platforms.
 - iii. Bidirectional Data Sharing: Support both inbound and outbound data exchange to ensure hospitals, health departments, emergency medical services (EMS), and other healthcare entities receive consistent and up-to-date information.
 - iv. The system must support connections with out-of-state health systems, state and locally operated healthcare facility and EMS tracking systems. These connections will support cross-border transportation and situational awareness.
 - b. API Integration Requirements
 - i. The vendor shall provide secure, well-documented APIs to allow integration with external systems, including but not limited to:
 - 1. Hospital Information Systems (HIS) and Electronic Medical Records (EMR/EHR) platforms for facility status and patient census data.
 - 2. Public Health Systems, including syndromic surveillance, laboratory reporting, and emergency operations databases.
 - 3. Emergency Medical Services (EMS) systems for real-time patient transport and hospital destination data.
 - 4. State and Federal Data Systems such as Health Care Coalition platforms, or other regional situational awareness tools.

- c. APIs must adhere to industry best practices for authentication, encryption, and access control. Vendors will provide technical documentation, testing environments, and support for onboarding partner systems.
 - d. Automation and Data Management
 - i. The System shall include automated workflows to collect, validate, and display data without requiring manual entry whenever possible. Automated data ingestion must support configurable thresholds and alerts to flag data inconsistencies or operational changes (e.g., capacity thresholds, resource shortages, or diversion status changes).
 - e. Testing and Validation
 - i. The vendor will collaborate with designated hospitals, healthcare coalitions, and state agencies to:
 - 1. Conduct interface testing and data validation.
 - 2. Demonstrate real-time data synchronization and accuracy.
 - 3. Document successful integration with at least three EMR platforms and one EMS data source prior to full system launch.
 - f. Security and Compliance
 - i. All integrations and data exchanges must comply with applicable state and federal laws, including HIPAA, HITECH, and state data security standards. The vendor will implement and maintain appropriate security controls and provide documentation verifying compliance.
4. User Interface Requirements
- a. Collaboration Tools: Users and administrators must be able to send alerts on network, county, district, and statewide levels, enabling coordinated communication during emergencies.
 - b. Patient Tracking System Integration: The platform must provide the ability to connect with existing patient tracking systems utilized by EMS and healthcare facilities.
 - c. User-friendly Dashboard: Design a comprehensive dashboard for administrators to monitor key metrics, including EMS response times, patient tracking, hospital statuses, and alerts in real-time.
 - d. Advanced Reporting Interface: Provide tools for generating reports on-demand or scheduled, with the capability to export in various formats (PDF, Excel, etc.).

- e. The system must facilitate patient reunification during mass causality events or other large-scale emergencies.
 - f. The system must be accessible from multiple mobile digital devices, including laptop, tablet, and cell phone.
- 5. Security and Compliance
 - a. Data Protection: Implement advanced security measures to safeguard sensitive health information and personal data, including encryption and stringent access controls.
 - b. Regulatory Compliance: Ensure full compliance with relevant healthcare regulations, including HIPAA, protecting both patient and provider data throughout the system.
- 6. Testing and Quality Assurance
 - a. User Acceptance Testing (UAT): Conduct thorough testing with EMS teams, hospital staff, and administrators to validate that all functional requirements are met.
 - b. Performance Testing: Assess the system for scalability, ensuring it effectively handles high data volumes and numerous simultaneous users.
- 7. Data Submission Responsibility
 - a. The contractor will oversee the systematic submission of data to the Indiana Department of Health and related agencies, ensuring accurate and timely reporting of metrics relevant to emergency management.
- 8. User Support and Training
 - a. Develop a dedicated support structure, including specialists to assist with the design and implementation of system changes.
 - b. Provide initial and ongoing training sessions for all users, complemented by 24/7 technical support during incidents and regular business hours.
 - c. Facilitate on-site support during emergency operations to ensure system effectiveness.
 - d. Develop user manuals, an extensive knowledge base, and an online help center to aid users.
- 9. Offline Functionality/Extended Downtime Requirements
 - a. The system must be designed to operate with partial functionality offline, enabling key features essential for emergency response and patient tracking. This includes:
 - i. Real-time Patient Tracking: EMS providers should be able to record patient data, transport details, and triage information offline. This data will sync automatically with the central system once connectivity is restored.

- ii. Critical Alerts and Notification Management: Users must have the ability to send and receive alerts regarding critical incidents, staffing changes, and diversion statuses without relying on an active internet connection.
 - iii. Access to Essential Information: Users should have offline access to critical operational data, such as current bed capacities, staffing levels, and equipment availability to support decision-making during emergencies.
- b. Data Synchronization and Integrity
 - i. The system must include mechanisms for seamless data synchronization when connectivity is re-established. This ensures that all offline records are captured accurately and integrated into the main database without data loss or duplication.
 - ii. A protocol must be established to validate the integrity of the data transferred during synchronization, ensuring accuracy and consistency across systems.

10. Additional Considerations

- a. The system should include both web-based and mobile application options to support EMS personnel in the field, providing them with immediate access to vital patient and system information.

C. **Volunteer Registry, Notification, and Accountability System**

The selected vendor shall provide a robust, secure, and fully functional volunteer notification and accountability system to support statewide emergency preparedness and response activities. The system must be compliant with all federal ESAR-VHP (Emergency System for Advance Registration of Volunteer Health Professionals) requirements and designed to support the coordination, communication, credential verification, and on-site management of healthcare and support volunteers during public health and medical emergencies, including but not limited to natural disasters, acts of terrorism, pandemics, etc.

At a minimum, the system must include the following capabilities:

1. Multi-Channel Notification
 - Ability to send mass or targeted notifications via voice call, SMS text, and email to registered volunteers.
 - Customizable messaging templates and prioritization features for urgent communications.
 - Tracking and logging of delivery status responses in real time.

- Ability for participants to register to receive notifications without completing a full volunteer profile creation process.
- 2. Volunteer Registration and Credential Verification
 - Support for secure volunteer profile creation, management, and updating.
 - Integration with appropriate national or international licensing agencies to verify professional licensure status and standing (e.g., Nurses, FSMB, etc.).
 - Ability to provide automated connections to state professional licensing agency for licensure verification.
 - Ability to conduct background checks
 - Capability to validate identity and licensure in alignment with ESAR-VHP Tier Levels.
 - Ability for multiple registration modalities, including:
 - Self-registration via website
 - Administrator registration
 - Bulk upload registration
- 3. On-Site Volunteer Accountability and Incident Management
 - Real-time check-in/check-out functionality for deployed volunteers at incident sites.
 - Ability to track volunteer location, time on site, and roles performed.
 - Provide incident commanders or authorized personnel with dashboard access for accountability and resource management.
- 4. System Integration and Interoperability
 - Interoperability with other public health and emergency management platforms used by the State.
 - Capability to import/export data in standard formats (CSV, XML, etc.) and interface with state databases as needed.
- 5. Security and Compliance
 - System must adhere to all relevant HIPAA, HITECH, and NIST cybersecurity standards.
 - Role-based access controls, audit trails, and secure data storage.
 - Compliance with federal and state regulations for volunteer management systems.
- 6. User Support and Training
 - Initial and ongoing user training for administrators and end-users.
 - Dedicated specialist to design/implement systematic changes
 - 24/7 technical support during incidents and regular business hours.
 - User manuals, knowledge base, and online help center.
- 7. Reporting and Analytics
 - Customizable reports on volunteer availability, licensure, deployment history, and communication metrics.
 - Dashboards for leadership oversight and after-action reviews.

The vendor must ensure data security, system interoperability with existing platforms, user accessibility, and alignment with whole-community planning principles. The solution must serve not only as a reporting mechanism but also as a strategic tool to guide preparedness, mitigate disruptions, and support Indiana's public health and healthcare resilience in the face of complex and evolving threats.