APPENDIX B
SCOPE OF WORK AND TECHNICAL REQUIREMENTS

1. The system will comprise the following core elements:

1. A secure web-based application that will allow for analysis of data, including predetermined reports and data mining, but also allow for detailed statistical analysis and querying of data for future or novel areas of interest which would support EMS funding or resource allocation.
2. A web-based data collection and management application designed to support both a central site data repository and field stations;
3. Translation programs to import EMS run data from various proprietary software programs in use by EMS providers throughout the state;
4. A web-based reporting and data mining system;
5. A System compliant with the National Emergency Medical Services Information System (NEMSIS) 3.5 (https:
6. Health Insurance Portability and Accountability Act (HIPAA) compliant.
7. 24/7 access to the System and customer service support.

2. The System will have the ability to do the following:

1. Ability to provide data export to partner database applications such as Delaware's Trauma, CARES, NEMSIS, ESSENCE, PRI, WebEOC.
2. Standard web-based interface that is logging directly into the web server, as data is entered
3. To generate complete, real-time electronic critical care and patient care reports in the field.
4. Quality assurance module
5. To create custom reports in different views and multiple relationships for predicting trends and/or assessments.
6. Ability to work across multiple hardware platforms and operating systems.
7. Collect and analyze data from multiple sources into one System
8. Ability to create a patient care report.
    a. Ability to mark portion of area where patient sustained burns on patient report.
9. Mobile application for EMS providers to complete real-time Patient Care Reports (PCRs) in the field and upload when connection is available.
10. Ability to have input from monitors into system electronically, i.e. cardiac tracking, vital signs.
11. Ability for the receiving facility to see patient coming to facility if the provider puts the information in, along with the ability to batch print the information.
12. Ability for PCR system to interface with patient tracking system.
13. Mobile application where documents can be uploaded
14. Develop specific agency-based quality assurance questions that will be uniformly applied to all patient care reports and that are reviewed using the module.
15. Ability to specifically filter patient care reports to develop batches or groups of calls for review by various criteria that must include Incident date range, EMS shift, User entered, and Patient disposition.
16. Assign batches of patient care records to specific individuals for review.

17. Track the progress of the chart review by providing the following real time status: not started, in progress, reviewed, requires further review.
18. Ability to impose a due date parameter to assign batches of patient care reports for specific personnel assigned to those batches.
19. Ability to view the specific patient care record in the quality assurance(QA)/quality improvement (QI) module/program and change the status of that patient care record to closed, billed, reviewed, or requires review) in the QA/QI module/program.
    a. Ability to have batches or groups of calls based on the criteria stated above automatically generated based on time parameters set.
20. Ability to communicate (real-time) between medical personnel working in ambulances and hospitals.
    a. Displays incoming patient information, including but not limited to condition, assessments, history, procedures, and medications.
21. Ability to map data and analyze data. (such as cluster mapping)
22. Ability to interface with Computer Aided Dispatch (CAD) systems (EMS/Fire).
23. Ability to interface with CARES (Cardiac Arrest Registry to Enhance Survival).
24. Track patients from first contact, to destination, arrival at destination, and departure.
    a. Mobile capability
    b. In field data to be sent to receiving facility (i.e. hospital)
    c. Integrates with electronic medical records used by first responders
    d. Ability to use handheld scanner for scanning of patient triage tags/hospital bands.
25. Ability for hospitals, long-term care, or other facility to enter bed availability into system.
    a. System will allow each hospital to select which bed categories are current within their hospital.
    b. Ability for state to have beds identified per state and not per pre-designated categories within the system (i.e. ICU – Cardiovascular, ICU – Medical, etc) or the ability to change them.
    c. Ability to pull report to provide beds in overarching categories for federal use (i.e. ICU, Med/Surge, Peds, NICU, etc.)
26. Information Sharing capabilities with security rights
    a. Ability to send alerts within the System and outside of the System (i.e. email, text)
    b. Document storage with security rights set by administrators
    c. Real-time instant messaging, invitation only chat rooms with the ability to share documents
27. Ability to manage the licensing process for EMS personnel.
28. Ability to create validation rules allows the administrator to determine what mandatory or not mandatory fields are and to customize or create fields.
29. Ability to build within the system (layout edition).
30. Ability for the administrator to manage the entire system with the ability to set rights within the system, creating user groups.
    a. Ability to see locked users, why they were locked was it a password error or did the agency lock them out of the system.
31. Ability for agencies to manage their agency only, adding users, deleting users, changing profile information.
32. System will have a “home page” that allows the administrator (OEMS) the ability to make announcements, insert links, point of contacts.

33. The system will have the ability to accept electronic signatures with “finger” or mouse.
34. Ability to use drop down boxes or narrative fields.
35. Visibility rule, i.e. pregnant, this field would not be seen for male or a female over the age of 70.
36. The system will allow user to input their profile, demographics, national/state certifications, training documents and emergency contact information.
37. Ability to export information to the billing company, i.e. Sweet Support.
38. Ability to pull everything that is put into the system out of the system using a reporting tool for the purpose of auditing, statistics, staff records.
39. Ability to send patient care reports directly into hospital record.

3. Project Deliverables:

1. The Contractor shall provide an implementation plan for installation, testing, and implementing the System.
2. The Contractor shall submit a training plan describing in detail how users will be trained on any application provided by the Contractor on a statewide basis. Including the following: One-site training, Distance training, Train-the-Trainer, Webinars
3. The Contractor will provide a fully functional administration tool (utility and/or documentation?) for the System that allows OEMS to manage and maintain the System for the statewide EMS community.
4. The Contractor must make available the technical information needed for other programs to be able to “map” their data to the state database (i.e. CSV to XML etc.)
5. The Contractor shall make available the service of performing mapping for other programs, with the option of OEMS, priced at the hourly rate provided in the Contractor’s Financial Proposal.
6. The Contractor must provide technical support for its data collection, analysis and reporting tool 24 hours a day, 7 days a week, regardless of holidays.
7. The Contractor shall furnish reasonable assistance to OEMS in responding to support requests. If electronic access does not prove effective, the Contractor will visit the site to determine the appropriate actions and resolve the problem to the satisfaction of the State of Delaware client within 24 hours. The Contractor will pay for travel, hotel, and per diem expenses unless the problem is determined to have been caused by a third-party application, or third-party application update, patch or modification or otherwise no responsibility of the Contractor or OEMS agrees in advance to other arrangements.
8. For System maintenance the Contractor will provide technical support for all aspects of the State of Delaware’s system, on-call support twenty-four hours a day, seven days a week (Holidays included) for the System based on the priority levels set forth below:
    a. Critical Issue – Respond one (1) hour
    b. High – Respond six (6) hours
    c. Medium – respond twelve (12) hours
    d. Low – respond two (2) business days
9. Upon satisfactory completion of the System and acceptance of delivery of the System by OEMS the Contractor shall provide one calendar year of System maintenance at no charge.

10. If elected by OEMS, immediately following the one calendar year of System maintenance at no charge, the Contractor shall provide two additional years of System maintenance at a price agreed to in the Contractor's Financial Proposal and Contract.
11. If elected by OEMS, immediately following the first two additional years of System maintenance, the Contractor shall provide an additional two years of System maintenance at a price agreed to in the Contractor's Financial Proposal and Contract.
12. System maintenance shall include software support services which, at a minimum, shall include the detection and correction of any software errors and the provision and implementation of all program changes, updates, upgrades, and installation of additional programs provided under the RFP Contract, discovered by OEMS, or otherwise made known to the Contractor. The Contractor agrees to respond to OEMS inquiries regarding the use and functionality of the System as issues are encountered by OEMS.
13. As part of System maintenance the Contractor shall provide all software version upgrades, as well as new functions, of the System software together with such written documentation as may be necessary for use of the software by OEMS. The Contractor shall maintain the System so that it operates in conformity with all descriptions and specifications herein plus specifications for the performance of all improved or modified versions of the System which Office of EMS (OEMS) owns or are licensed to use.
14. If the Contractor proposes updates, changes, modifications, or enhancements which would interfere with OEMS and/or the statewide EMS system level of intended usage or operating environment, the Contractor and OEMS shall work together with mutual best efforts in order to implement and install all revisions so that they function properly at the level of the OEMS intended usage and within the OEMS operating environment.
15. The Contractor will provide data import services from Central Square, Tyler Technologies, and all FDA approved medical devices for the purposes of pre-populating ePCR data elements linked to patient care.

4. Contractor will provide the following:

1. Organizational chart outlining key personnel assigned to accomplish the work called for in this RFP. The chart must illustrate the lines of authority and designate the individual responsible and accountable for the completion of each RFP component and deliverable.
2. Contractor provides a flow chart of the system, i.e. on a patient report if provider clicks on a cardiac patient then these fields are a requirement.
3. Transition of systems:
    a. Transfer of records from current system.
    b. Outline the cost of transitioning from the current system to system being offered.
    c. Provide a time frame and identify any special equipment needed for the transition from the current system to the system being offered.
4. Project management:
    a. Develop and provide appropriate project management for all contract work that the Contractor is responsible to perform.
    b. Coordinate with project manager and staff for the System that will be implemented.

c. Through the implementation of the System the contractor will meet with the project manager and staff on site at a location to be specified by OEMS at least once per month and conference call at least once per week in order to update project status and address ongoing project issues.

5. Project milestones – the Contractor will submit project plans for implementing the System around the following milestones:
    a. Planning – Project plan completed, including all project deliverables described in section 6 below.
    b. Staging – System installed and tested in a staging environment including any required modifications to applications or databases and development of import mechanisms for legacy data.
    c. Deployment – System deployed to production use, including import of configuration data (i.e. user information, etc.) legacy data (if requested by OEMS), application and database deployment, quality testing of the production system and implementation of maintenance and support programs.
    d. Implementation – Rollout to end users, including user and administrator training, product documentation and training materials.
6. Project documentation – the following are key deliverables and shall be provided to OEMS by the Contractor:
    a. Provide OEMS copies of all System project documentation throughout the project lifecycle. The Contractor shall be responsible for all documentation updates.
    b. Documentation will be submitted to OEMS electronically by email to the project manager. All milestone reporting and/or documentation and deliverables shall be submitted via e-mail to the project manager designated by OEMS and any other persons OEMS shall designate.
    c. Documentation shall be presented in Microsoft Office documents as appropriate to the document and content (i.e. MS Word, MS Excel, MS Visio, MS PowerPoint, MS Project).
    d. Update all documentation continually as needed throughout the project life cycle.
    e. Notify OEMS of updates or changes to project documentation and provide updated documents within one business day of change.
7. Project plan and deliverables – the Contractor shall provide a Project Management Plan (Project Deliverables) including at minimum the following sub-plans and items:
    a. Project Description
    b. Project Scope of Work
    c. Project Development Strategy
    d. Work Breakdown Schedule
    e. Project Schedule:
        i. To be provided in Microsoft Project.
        ii. Outline each key phase with milestones and associated deliverables.
        iii. Outline all Agency assignments required to make the project successful.
    f. Project Resources Schedule
    g. Communication Plan that includes:
        i. Outline tools and procedures to identify, assess, and report project issues throughout the life of the project.

ii. Register of key stakeholders or stakeholder groups with contact information.
iii. Plan for frequency, mode, and content of communication to Agency staff.
iv. Format and outline for weekly progress/status reporting.
v. Format and outline for weekly progress/status meetings and meeting minutes.
vi. Format and outline for all design review meetings and meeting minutes.

h. Configuration Management Plan identifying "historical versioning" and the tools or methods to be used for configuration management control.
i. Change Management Plan
j. Problem Issue Resolution Plan
k. Risk Management Plan which shall, at a minimum, include the following:
   i. Description of the contractor's approach to managing risk.
   ii. Outline tools and procedures to identify, assess, mitigate, and report risks throughout the project.
   iii. Provide a risk priority assessment.

8. Progress Reporting – the Contractor shall drive the following reports and attend scheduled meetings:
   a. Weekly project progress status reports must be delivered to the Agency's project manager no later than 5:00 p.m. EST every Friday through the lifecycle of the project. The status report shall include:
      i. Current status of project progress relative to the baseline schedule.
      ii. Tasks completed throughout the preceding week.
      iii. Tasks are currently not completed.
      iv. Issue log with action items and due dates.
      v. Updated Risk register with risk rankings and proposed mitigation.
   b. Monthly project progress status reports must be delivered to the Agency's project manager no later than 5:00 p.m. EST on the 15th of each month. If the 15th is not a business day the report shall be delivered the next business day. Monthly reports shall include:
      i. Current status of project progress relative to the baseline schedule.
      ii. An outline and roll up of the events, issues, and work completed from each week through the preceding month.
      iii. A complete monthly risk assessment clearly identifying any new or updated risk associated with the project.
   c. Project Status Meetings – the Contractor shall participate in weekly team status meetings to provide a status of the project and to identify any issues and risk associate with the project. If necessary, the Contractor Project Manager can teleconference at these meetings, but it is required to participate in person at a location specified by the Agency location at least once monthly.
   d. The Contractor shall provide a System Engineering Management Plan (SEMP) (Project Deliverable) providing top-level technical plan describing the management process necessary to ensure that all components are fully compliant with all agreed upon requirement and standards. The SEMP shall, at a minimum, include the following:
      i. Detailed scope description
      ii. Contracted software

iii. Network communication protocol information
iv. System security and how it relates to engineering activities

9. Quality Assurance Plan (QAP) (Project deliverable) – the Contractor shall provide a QAP which shall, at a minimum, include the following:
    a. Quality assurance methodology
    b. Best practices are associated with implementing a system of the size required by OEMS.
    c. Procedures and tools that will be used to ensure delivery of quality products to OEMS.
    d. Defined roles for OEMS relating to the review of deliverables for quality.
    e. Sample "Test Plan" documentation that the vendor has utilized successfully during previous installations.
    f. Sample "Test Plan" documentation that the Contractor has utilized successfully during previous installation.
    g. Sample "Test Results" documentation that the contractor has utilized successfully during previous installations.
10. The contractor shall provide a Product Deployment Plan and Schedule (Project Deliverable) which describes how the System will be installed, deployed to production and transitioned into an operational system. The plan at a minimum will include the following:
    a. Overview of the deployment process with brief description of major tasks involved.
    b. Overall resources needed to support the deployment of production (such as personnel, access to facilities, ancillary support, communication channels, etc.)
    c. Any site-specific deployment requirements.
    d. A timeline for all deployment steps with descriptions and responsible parties
    e. A roll back plan for all steps to cancel the deployment at any point in the event of insurmountable issues.
    f. A risk register with qualitative risk rankings and mediation plan for all significant risks to a successful deployment.
11. The Contractor shall provide a Training Plan (TP) (Project Deliverable) that outlines the objectives, needs, strategy, and curriculum to be addressed when training users on the new system. This plan at a minimum will include the following:
    a. Activities needed to support the development of training materials.
    b. Coordination of training and schedules.
    c. Reservation of personnel and facilities.
    d. Planning for training needs (Include the target audiences and topics on which training must be conducted.)
    e. Format of the training program. (Include the list of topics to be covered, materials, time, space requirements, and proposed schedules.)
    f. Discuss the Quality Assurance (QA) of training in terms of testing, course completion, feedback, and course modification/enhancement.
12. The Contractor shall provide and install an operational version of their application software and database to allow OEMS to adequately test and train on the application.
13. Product documentation – the Contractor shall provide a Maintenance and Operations Manual (Project Deliverable) which at a minimum includes the following:

a. Network/Systems Diagram for all parts of the installed system
b. Technical Specifications for All Software Components
c. Application Interface Specifications
d. Required regular maintenance
e. Project Update (Bug Fix Release) Mechanism and Process
f. Application Software Monitoring (i.e. logging errors, severity, escalation, and notification)
g. Format of user manuals
    i. Six (6) original hard-copy user manuals are required.
    ii. In addition, one electronic format file in MS Word is required on a USB Flash Drive.

14. The Contactor shall provide a Systems Administrator Guide (Project Deliverable) which shall at minimum, include the following:
    a. At a minimum, this document shall include:
        i. Network/System Diagrams
        ii. Technical and function specifications for software
        iii. Troubleshooting criteria and procedures
        iv. Required regular maintenance procedures
        v. Restart and recovery procedures
        vi. Application software monitoring and alerting tools
        vii. Interface specifications
        viii. Backup and restore procedures
        ix. Scheduled process and script for batch jobs
        x. Data extraction/sharing requirements
        xi. Installation procedures
        xii. Resource requirements
        xiii. Release notes
        xiv. Data Dictionary or Data Model
    b. Format of user manuals
        i. Six (6) original hard-copy user manuals are required.
        ii. In addition, one electronic formatted file in MS Word is required on a USB Flash Drive.
    c. It is the responsibility of the Contractor to keep documentation current for the life of the contract.
15. The Contractor shall provide a Toolset User Guide (Project Deliverable) developed in conjunction with the Agency. This User Guide is provided for the internal agency users as a “How To” manual to guide users in detail through the use of all parts of the application. This document usually contains system screen shots and provides step-by-step instructions for completing task and activities. It is written on a business level with the needs of the user in mind. At a minimum the document should contain the following content:
    a. Contents of User Manual
        i. Introduction
        ii. Summary of application
        iii. Glossary (Definition/Acronyms)
        iv. Procedures (Step-by-Step instructions on how to use the System)

v. Screen shots and diagrams, as necessary
vi. Troubleshooting tips
vii. Customizing views
viii. How to print reports
ix. How to use help
x. Accessibility

b. Format of User Manuals
   i. Six (6) original hard-copy user manuals are required.
   ii. In addition one electronic formatted file in MS Word is required.
c. It is the responsibility of the Contractor to keep documentation current for the life of the contract.

16. The Contractor shall provide an ePCR User Guide (Project Deliverable) developed in conjunction with the Agency. This User Guide is provided for external end users (i.e. EMS personnel) as a "How To" manual to guide users in detail through the use of end-user aspects of the application. It is written on a business level with the needs of the user in mind. At a minimum the document should contain the following content:
    a. Contents of User Manual
       i. Introduction
       ii. Summary of application
       iii. Glossary (Definitions/Acronyms)
       iv. Procedures (Step-by-Step instructions on how to use the System)
       v. Screen shots and diagrams, as necessary
       vi. Troubleshooting tips
       vii. Customizing views
       viii. How to print reports
       ix. How to use help
       x. Accessibility
    b. Format of User Manuals
       i. Six (6) original hard-copy user manuals are required.
       ii. In addition one electronic formatted file in MS Word is required.
    c. It is the responsibility of the Contractor to keep documentation current for the life of the contract.
    d. The Contractor shall provide on-line documentation and the capability of customized on-line documentation manuals and help screens.
    e. The Contractor must provide a Training environment that resides concurrently with the production and staging-testing environments for all versions and components of the System that are loaded into the production environment or tested and ready to load into the production environment.
    f. The Contractor must provide Computer Based Training (CBT) modules or course-ware available for the System. These materials may be based on the standard commercial offering supplied to OEMS as the System.

g. The Contractor shall provide materials and assistance as needed to OEMS modify CBT modules or courseware for the purpose of incorporating training on modified or added features and data fields, or for the purpose of tailoring CBT or courseware for the training needs of EMS/other agencies.

17. The Contractor shall provide training to computer operations and technical support personnel. The Contractor shall specify:
    a. Who delivers training (The Contractor, 3rd party vendors or consultants)
    b. Procedures for delivery of training, in conjunction with the Agency project manager
    c. Recommended training for:
        i. Hardware operations
        ii. System performance monitoring
        iii. Hardware, operating system or application software maintenance procedures to specific to the Contractor's requirements, including but limited to:
            1. Recovery from system failures (hardware/software)
            2. System utilities relating to hardware and software
            3. General system "trouble shooting" and diagnostics
            4. Support issue reporting and escalation.
18. The Contractor shall coordinate with OEMS the elements of vendor-supplied training to be conducted on-site at OEMS or at EMS locations in Delaware.
19. The Contractor shall indicate which elements of vendor-supplied training must be conducted off-site, if necessary, and include a description of the training, the location (city, state), number of days per class, and number of people required to attend.
20. The Contractor shall recommend how much training time will be required for each end- user in the categories of data analysis (i.e. query and report building), internal OEMS users (enter or import data and run standard reports) and end users, i.e. EMS providers.
21. The Contractor shall indicate how ongoing training is provided to customers. The Contractor shall provide ongoing training as part of the ongoing maintenance contract. (OEMS will provide travel and expenses related to attending such training under most reasonable circumstances.)
22. The Contractor shall develop and deliver a "Train the Trainer" course for the proposed System.
23. The Contractor shall provide a Database Schema and System Data Dictionary (DD) for the System. Information provided in this document should include the following:
    a. Names of Data Elements
    b. Definition of Data Elements
    c. Data Types of Data Elements
    d. How to deal with missing or incomplete information
    e. The Variables associated with each Data Element
    f. What Data Elements are associated (related) to other Data Elements
    g. Whether the Data Element is part of the Data Elements to be collected by NEMSIS