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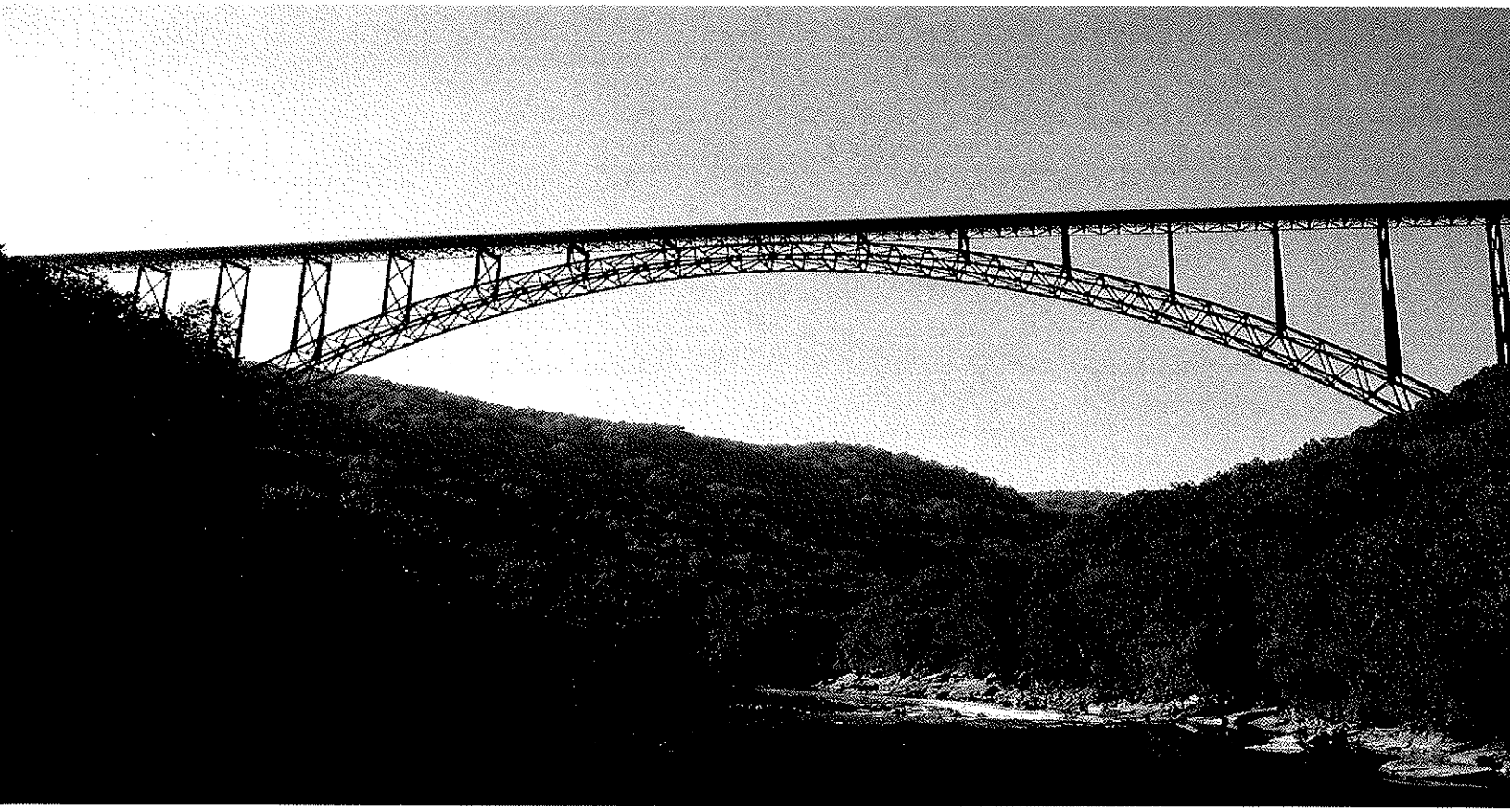

TECHNICAL PROPOSAL TO WEST VIRGINIA HEALTH CARE AUTHORITY

Proposal for Hospital Inpatient Data System

RFP # HCC 11096

SUBMITTED: April 20, 2011

777 E. EISENHOWER PARKWAY – ANN ARBOR, MI 48108 – 734.913.3000 – WWW.THOMSONREUTERS.COM

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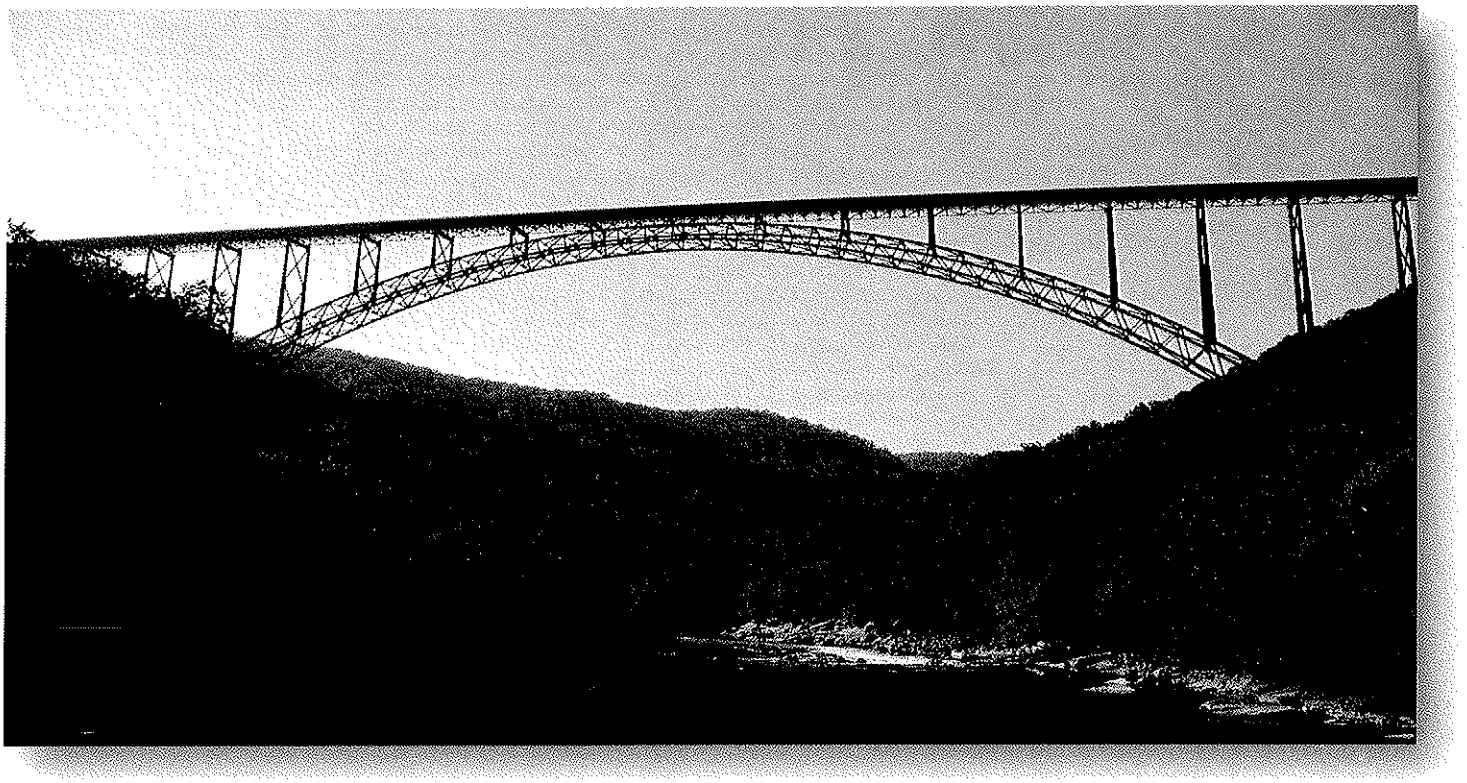

WEST VIRGINIA HEALTH CARE AUTHORITY

TECHNICAL PROPOSAL FOR HOSPITAL INPATIENT DATA SYSTEM

RFP# HCC 11-096

SUBMITTED: April 20, 2011

Thomson Reuters Healthcare
777 E. Eisenhower Parkway
Ann Arbor, MI 48108

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C. Douglas Shaw
EVP and General Manager

ORIGINAL

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EXECUTIVE SUMMARY

Thomson Reuters Healthcare is pleased to submit our response to the WVHCA RFP (the HCA). We appreciate your consideration of our response and, are hopeful for the opportunity to present our proposed solution in greater detail.

West Virginia Health Care Authority And Thomson Reuters Healthcare: A History Of Success Together

Thomson Reuters Healthcare has served as a vendor to and, partner with the HCA for the past four years. Over this time we have successfully worked together, and continue to work with you on multiple initiatives such as:

- Enhancing the data quality reports by creating new reports to meet specific needs
- Adding data fields such as length of stay and charges to existing reports. Examples include:
    - Quality Monitor Report
    - ALOS Multi-Period Trending Report
    - Frequently Modified Fields by Facility Report

- Adding new errors and warnings to enhance the completeness and accuracy of the data reported by the facilities.
- Adding statistical significance testing to some of the data quality reports to flag areas for the hospitals to investigate.
- Developing the migration approach, training, documentation and implementation support for the transition from a flat file submission format to the 837i v4010.
- Providing access to analytic and consulting staff.
- Migrating from annual reconciliation to quarterly reconciliation of the database.

This long standing experience working with you on increasing the timeliness and accuracy of the data, providing data analysis expertise and planning, and executing the migration to the 837i v4010 provides us with valuable insight into your strategic priorities and will allow us to continue our successful working relationship to deliver both near- and long-term value to HCA. The Thomson Reuters proposed solution, whose details are specified in our response, will allow the HCA to better address your current focus areas, goals and initiatives including:

- Enhancing data quality reporting;
- Increasing the timeliness of data reconciliation allowing you to close out the annual database earlier;
- Identifying key areas of focus to migrate into monitoring and partnering with your facilities to increase the quality and cost of healthcare in West Virginia;
- Improving the adjudication process;
- Implementing the ANSI ASC X12 5010 format and ICD-10-CM;
- Increasing the analysis and dissemination of data, including reports of healthcare utilization, population health, and hospital and physician quality;
- Enhancing the collection of National Provider Identifiers;
- Revising the HCA payer coding system; and,
- Identifying and implementing methods to track patients across hospital settings.

Thomson Reuters Healthcare:
Industry Leader In Healthcare Informatics And Data Analytics

As a leader in healthcare informatics and data analytics we combine our industry expertise with innovative technology to deliver insights on a daily basis to more than 4,000 different organizations in the U.S. healthcare market. We have experience in many aspects of clinical decision support, including business planning and development, technical planning and design, and implementation, operations support and data aggregation, and healthcare analytics. We place particular emphasis on data integration and security, clinical data extraction, interoperable data transport between providers and other stakeholders, the application of data for clinical decision support, and in analytical/reporting applications.

Since 1985, Thomson Reuters Healthcare and its predecessor companies has provided data collection, aggregation and, state database deliverable programs. Thomson Reuters currently provides state data programs, similar to the HCA program, for seven US states. Five of these seven state data programs include both inpatient and outpatient data.

Thomson Reuters Healthcare has extensive, long-term experience working with state government agencies. Across our almost 30-year history, we have held contracts to build healthcare databases for more than 45 state agencies across more than 30 states.

Proven Solution With Distinctive Benefits

If selected to provide your solution, Thomson Reuters Healthcare can continue to bring to the HCA the following distinctive benefits:

- Proven solutions that have been successfully deployed in a manner aligned with your vision and objectives.
- Top of class project team to ensure the HCA needs are met in a timely manner
- Project team that can leverage knowledge across the product, consulting and analytic domains throughout the different business lines (Payer, Provider, Clinical, etc) to design the best options for the HCA and provide recommendations
- Highly secure operations to meet and exceed your privacy and security requirements
- Experienced implementation team to provide process, guidance and training
- World leading clinical decision support tools and reference databases
- Working knowledge of virtually all healthcare data sources, and their unique characteristics, across all sectors of the healthcare landscape
- An independent, trusted third party perspective
- A stable partner with the proven capacity and financial stability to navigate change over a long-term collaboration

The Thomson Reuters Healthcare Footprint And Experience

GOVERNMENT:
Federal agencies and 25+ state programs, state healthcare associations

- Surveillance & utilization review
- Fraud & abuse detection
- Data collection and aggregation
- Population health

HOSPITALS:
3000+ hospitals & health systems

- Operational benchmarking
- Value-based purchasing
- Marketing & planning
- Accountable care
- Health Information Exchange

PLAN SPONSORS:
400+ including 20% of the Fortune 500

- Benefit plan design
- Budgeting & forecasting
- Claims audits
- Contracting
- Wellness & productivity

HEALTH PLANS:
100+ large & mid-sized plans

- Consumer messaging
- Network report cards
- Disease management

PHARMA:
200+ manufacturers including the top 20 pharmaceutical companies

- Comparative effectiveness
- Longitudinal studies
- Market research

CLINICIANS:
Providers in 83 countries

- Medical error reduction
- Compliance with evidence-based guidelines
- Clinical workflow

Thomson Reuters Data Resources

- Discharge records from 100% of the non-federal hospitals, representing 55% of all annual discharges
- National sample from over 500 hospitals' department-level, detailed billing records covering five million discharges annually
- Operating, financial and labor statistics from approximately 800 hospitals
- Survey data from 120,000 households annually on health care attitudes, and behaviors
- Outpatient site of service information from over 640 million claims annually
- Fully adjudicated, longitudinal patient database representing medical, surgical and drug claims for more than 35 million enrollees annually

Thomson Reuters offers a unique combination of product, approach, expertise, and understanding to deliver services with a level of quality that will meet or exceed your expectations.

ATTACHMENT A: VENDOR RESPONSE SHEET

Qualifications and Experience

Provide a response regarding the following: firm and staff qualifications and experience in completing similar projects; references; copies of any staff certifications or degrees applicable to this project; proposed staffing plan; descriptions of past projects completed entailing the location of the project, project manager name and contact information, type of project, and what the project goals and objectives where and how they were met. The response should include:

- ***An organization chart indentifying the Vendor's overall business structure and locations, including an explanation of the various services offered by the company.***
- ***A minimum of three (3) current customer references. At least one (1) of the references should be from the public sector. All references should be from accounts of a similar scope and complexity as the project outlined in this RFP. References' telephone number and e-mail address shall be provided. The HCA shall attempt to contact references for a maximum of five (5) business days.***
- ***A proposed staffing plan for the initial project implementation and for ongoing project management and support, including the responsibilities and FTE allocation for key project staff.***

Thomson Reuters Reuters Overview and Qualifications

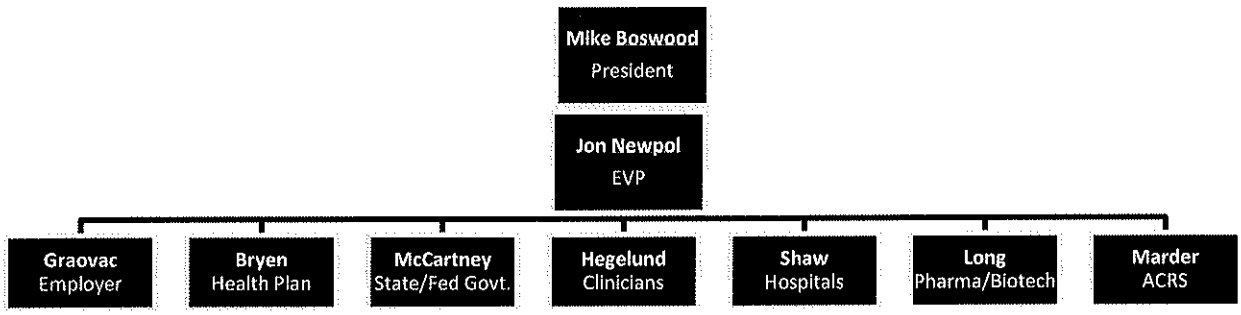
Thomson Reuters Corporation is a $13 billion company publicly traded on the New York Stock Exchange and Toronto Stock Exchange under the ticker symbol "TRI." Thomson Reuters Healthcare, is a division of Thomson Reuters Corporation. With headquarters in New York City and major operations in London, England and, Eagan, Minnesota, the Thomson Reuters organization employs 55,000 people and operates in more than 100 countries.

Thomson Reuters is the leading source of intelligent information for the worlds' businesses and professionals, providing customers with competitive advantage. Intelligent information is a unique synthesis of human intelligence, industry expertise and innovative technology that provides decision-makers with the knowledge to act, enabling them to make better decisions faster.

As a leader in healthcare informatics and data analytics, Thomson Reuters Healthcare combine our industry expertise with innovative technology to deliver insights on a daily basis to more than 4,000 different organizations in the U.S. healthcare market. We have experience in many aspects of clinical decision support, including business planning and development, technical planning and design, implementation, operations support and data aggregation, and healthcare analytics. We have particular emphasis on data integration and security, clinical data extraction, interoperable data transport between providers and other stakeholders, the application of data for clinical decision support, and in analytical/reporting applications.

The company's healthcare solutions are composed of comprehensive healthcare databases, analytics, professional services, and research services to help professionals make better decisions faster. Thomson Reuters Healthcare offers business solutions for clinicians, hospitals and healthcare providers, employers, health plans, government agencies, and pharmaceutical companies.

Organization Structure of Thomson Reuters (Healthcare)



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- Enhancing the data quality reports by creating new reports to meet specific needs
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- Enhancing the collection of National Provider Identifiers;
- Revising the HCA payer coding system; and,
- Identifying and implementing methods to track patients across hospital settings.

Thomson Reuters Healthcare has extensive, long-term experience working with state government agencies. Across our almost 30-year history, we have held contracts to build healthcare databases for more than 45 state agencies across more than 30 states.

Currently, we build and maintain large, multi-source, integrated healthcare databases for 11 state employee health benefit agencies: Alabama, California, Delaware, Georgia, Kansas, Kentucky, Missouri, Michigan, Mississippi, Ohio, and Tennessee. These agencies use their Thomson Reuters Healthcare databases to:

- Manage the costs of employee healthcare, including workers' compensation and disability
- Design better benefit programs
- Hold managed care plans and large providers accountable for performance
- Negotiate with public sector labor unions
- Develop and evaluate special programs for wellness, disease management, and other quality and cost containment initiatives
- Respond to state budget and legislative requests for information and research data

In addition, we build and maintain large-scale data warehouses and enterprise decision support systems for 11 state Medicaid and CHIP agencies: Alabama, Georgia, Kansas, Missouri, Nebraska, Nevada, New Hampshire, New York, North Dakota, Ohio, and South Carolina, with implementations in process in Idaho, Maine, and North Carolina. State Medicaid officials use this data for the same functions as state employee health benefit agencies, as well as to:

- Develop, manage, and evaluated new federal waiver programs

- Meet mandated federal reporting requirements
- Establish care management programs

Medicaid Program Integrity is also a major area where Thomson Reuters Healthcare supports state government. Medicaid Program Integrity involves large-scale data mining activities for the purpose of surveillance and utilization review and for identifying fraud, waste, and abuse by Medicaid providers and beneficiaries. Thomson Reuters Healthcare is a nationally-prominent partner to state Medicaid in the fight against fraud, waste and abuse; we do this type of work for 9 states in addition to the states mentioned above: Alaska, Illinois, Indiana, Louisiana, Maryland, Michigan, Mississippi, New Jersey, and West Virginia. At the West Virginia DHHR Bureau for Medical Services, our system has been used for surveillance and utilization review for approximately 4 years.

Clearly, our hallmark is to perform data quality validation, aggregation, and standardization of data from multiple sources to build integrated databases for our customers.

Thomson Reuters Healthcare has been, and continues to be, at the forefront of the development of integrated, enterprise decision support systems for, state data programs, large-scale purchasers of health care – Fortune 500 employers, large insurers and health plans, Medicaid, Medicare, and workers' compensation carriers. This has given us unparalleled experience in managing, merging, and enhancing data from sources just like those involved in this project for the HCA. We manage data on a regular basis for over 400 such organizations across the country.

Thomson Reuters Healthcare will continue to bring to the HCA the following distinctive qualifications and experience:

- Proven solutions that have been successfully deployed in a manner aligned with your vision and objectives.
- Top of class project team to ensure the HCA needs are met in a timely manner
- Project team that can leverage knowledge across the product, consulting and analytic domains throughout the different business lines (Payer, Provider, Clinical, etc) to design the best options for the HCA and provide recommendations.
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- World leading clinical decision support tools and reference databases.
- Working knowledge of virtually all healthcare data sources, and their unique characteristics, across all sectors of the healthcare landscape.
- An independent, trusted third party perspective.
- A stable partner with the proven capacity and financial stability to navigate change over a long-term collaboration.

Project Team and Staffing

Implementation of this project and ongoing support and maintenance of our solution will involve a multi-disciplinary team of both dedicated and shared staff to deliver the proposed functionality and services. The Thomson Reuters Healthcare team that will support the HCA has been hand-selected to bring expertise, focus, and judgment. Listed below are the biographies of key personnel which would be assigned to the project, many of who are currently working with the HCA. A brief description of the role of each key project team member follows along with an average FTE allocation (or range) for each year of the project:

PAUL PRESKEN
Product Manager
Paul Presken is Director of Product Management for Thomson Reuters Healthcare & Science.

Presken has over fifteen years of healthcare information technology and services experience. Presken currently leads the architecture, design and delivery of customized healthcare data programs for large, strategic provider and government clients, ensuring that client business needs are met with the most effective and innovative solutions in the market. Prior to assuming this role, Presken worked as Director of Service Line Development for Catholic Health Initiatives, one of the nation's largest hospital systems. Paul also spent over 11 years as Vice President of Product Management for Solucient (a former company of Thomson Reuters) running the Planning and Marketing business line.

Presken received his bachelor's degree from the Carleton College in Minnesota and his master's degree in Public Policy from the University of Michigan in Ann Arbor.

WENDY RICHARDSON
Project Manager and Analytic Services
Wendy Richardson brings over 20 years of experience in health care analytics to her role as senior manager in the Analytic Services group. In her current role, she supports the program management and analytical needs of our large strategic and custom accounts.
Richardson held several roles within the Healthcare business of Thomson Reuters prior to her current role in the areas of product development, design and product management of our clinical products and services. Richardson has also served as an Analytic Consultant supporting clients in their clinical analysis and data interpretation. Prior to joining Thomson Reuters, Richardson was the Product Associate for the Vascular Program at Cryolife, Inc. She received a B.S. in Physics from the University of Mississippi while working in Biophysics research at the National Center for Physical Acoustics.

TIM ZALESKI
Manager, Operations

Tim. Zaleski has over 25 years of project leadership experience, with 18 years of healthcare claims experience and 11 years of analytic consulting experience.
Mr. Zaleski currently manages the hospital compliance reporting functions and provisioning team within Thomson Reuters. He also provides operational support for custom solutions developed for Thomson Reuters' hospital customers. He ensures that system production, delivery, and implementation projects meet defined timelines. His role involves developing release plans and timelines for new products, service offerings, and system updates and working with engineering staff to determine optimal

release dates for system updates. He holds a BBA degree in Quality Management from Cleary University in 1996.

ANNE CALVIN
Technical Analyst, Operations

Anne Calvin is an experienced EDI technical analyst. She started working with the ANSI X12 Healthcare transactions in the EDI Department of Blue Cross and Blue Shield of Michigan in 1998. While in a technical role she supported the Medicare ERA, the Blue Cross Claims Clearinghouse, Electronic Enrollment, and Electronic Dental Claims projects. During the HIPAA project she took the role of technical team lead, and contributed to a successful HIPAA implementation. Additionally, she designed the physical dual environment in the role of EDI technical architect. Additional healthcare experience includes the business analyst role for Blue Cross NASCO, EDS Legacy modernization team, State of Michigan Medicare claims system implementation and Total Health Care. Her degrees include BA Management Information Technology from Cleary University in 2002 and a MBA from Ellis College in 2006.

JAMEY MOTTER
Client Manager

Jamey Motter is currently responsible for client support of Thomson Reuter's existing east coast state data program clients. This role includes a focus on increasing customer satisfaction, development of training programs including online and onsite sessions, and support of individual hospital issues including support with how to collect and use the data. She formerly was responsible for new programs and business development for hospital association clients including program implementation, ongoing operations and marketing activities for the east coast.

During her 21 years of healthcare experience, Motter has worked as a data/research/business analyst in several settings, including the State of South Carolina's Office of Research and Statistics and for a hospital in North Carolina. For the past 18 years, she has worked in the healthcare information business and has served in many capacities including sales, marketing, customer service, contract management and product development. She has worked with individual hospitals, health systems, state agencies and hospital associations. She has been with Thomson Reuters for 16 years.

Motter has a Master of Health Administration (M.H.A.) from the University of South Carolina, School of Public Health in Columbia, SC and a Bachelor of Science in Health Administration (B.S.) from East Tennessee State University, School of Public Health in Johnson City, Tennessee.

WALTER ROSENTHAL
National Director, State Programs

Walter Rosenthal, National Director, State Programs, is a strategic relationship executive with Thomson Reuters Healthcare focused on organizations offering state data programs. Walter has been with Thomson Reuters and its legacy companies for 20 years. His responsibilities have been centered on managing large government healthcare organizations, agencies and, associations that provide state data programs.

Rosenthal holds a bachelor's degree from the University of Buffalo in Biochemistry,

.

Outlined below is the role of the project team members:

- Project Manager/Client Services Manager - General coordinator and communicator of projects with accountability to both Thomson Reuters and the HCA to ensure that all product functionality and services are delivered on time and with high quality. Average annual FTE allocation: 0.25 FTE

- Product Manager - Works closely with the Project Manager to document requirements and oversee construction of new product features that meet the business needs of the HCA and West Virginia Hospitals. Average annual FTE allocation: 0.33 FTE

- Engineering - Works closely with Product Management to design, build, deploy and maintain quality and timely product functionality that meets documented requirements. Average annual FTE allocation: 2.00 FTE

- Operations - Focused on timely and accurate submission, processing and delivery of system data. Average annual FTE allocation: 0.33 FTE

- Implementation - Dedicated to working closely with the HCA and West Virginia hospitals to assist in the formatting of submission data to the program, including transition to the new 5010 837i format as well as to ICD-10 format. Implementation FTEs will be involved in all years of the project, but will most heavily contribute during the 2nd year of the term (approximately mid-2012 to mid-2013). The approximate FTE allocation during this 2nd year of the project will be: 0.85 FTE

- Product Support & Training - Assists the HCA and West Virginia hospital users in utilizing the new system and troubleshooting issues in regard to all aspects of the data submission and delivery cycles. Also escalates any reported issues to necessary internal technical Thomson Reuter's resources for resolution. Average annual FTE allocation: 0.50

- Analytical Services - Provides any one-time or ad-hoc research and/or analysis requests. Results of analytical studies will be delivered directly to the HCA and other internal groups to improve and inform the system. Average annual FTE allocation: 0.10 FTE

Client References

Thomson Reuters has significant experience in data collection and integration projects. Outlined below are three references from similar work:

David Bertoch
Vice President, Informatics
Child Health Corporation of America
913-262-1436
david.bertoch@chca.com

Headquartered in Shawnee Mission, Kansas, CHCA is a network of 43 of North America's leading children's hospitals. CHCA provides a range of programs and services designed to improve the performance of children's hospitals. CHCA programs reduce hospital costs, increase revenue, strengthen the competitive position of children's hospitals, and improve the quality of care for children.

Thomson Reuters Healthcare assists CHCA in collecting their members clinical, financial and physician data through the Children's Data Processing Program, CDPP. The CDPP program aggregates the individual members' data into a consistent dataset. Within the dataset, Thomson Reuters Healthcare applies processes, methodologies, audits and data quality reporting metrics to ensure data accuracy. The final approved dataset is then used by CHCA within their Pediatric Health Information System, (PHIS) program. The PHIS program is used by CHCA and their member hospitals to benchmark the clinical data providing benchmark data for the unique pediatric population. CHCA and its members conduct many research projects based upon the information derived from the CDPP and PHIS programs with the ultimate goal being to improve the quality of care delivered to children.

James E. Hauge
Vice President/COO-Foundation
North Carolina Hospital Association
919-677-4235
jhauge@ncha.org

The Thomson Reuters Healthcare/NCHA relationship began in 1987 and encompasses the collection of inpatient, outpatient and emergency department claims data along with near real-time collection of emergency department data every 12 hours. The hospitals represent total inpatient discharges of over a million per year and there are currently 128 hospitals and 86 freestanding surgery center participants. Participating Members currently are receiving quarterly Care Comparison Reports as standard deliverables with ad hoc reports and statewide database files made available upon request.

Thomson Reuters Healthcare is responsible for collecting and auditing all required data for the participating hospitals which includes the use of over 200 audits as data are processed through the system, delivery of Data Quality Reports with each submitted file, processing of correction files, and creation of a final, adjudicated statewide database each quarter.

Thomson Reuters Healthcare is certified as a statewide data processor by the State Division of Facility Services. On behalf of NCHA, Thomson Reuters provides a statewide database to the North Carolina State Department of Health in order to meet the state data mandate on behalf of the hospitals.

Bruce Cottew
Data Analyst
The Commonwealth of Kentucky
Department of Employee Insurance
(502) 564-6732
Bruce.Cottew@ky.gov

The Commonwealth of Kentucky Department of Employee Insurance has been a Thomson Reuters Healthcare customer since 2000. The Commonwealth licenses our Advantage Suite decision support tool with the Medical Episode Grouper (MEG). Their database integrates medical, prescription drug, and eligibility data, updated on a monthly basis, for their approximately 156,000 employees and early retirees (approximately 260,000 lives). Thomson Reuters delivers analytic services to the Commonwealth including:

- State Employer Norms Comparison Analysis
- Disease Management Program Evaluation
- Preventive Care Benefit Change Impact Analysis; Cost Driver (Contributing Factors) Analysis
- Emergency Room Utilization Analysis

Project Goals and Objectives

Describe the approach and methodology proposed for this project. This should include how each of the goals and objectives is to be met. Please include in your response, in reference to the appropriate Goal/Objective: -

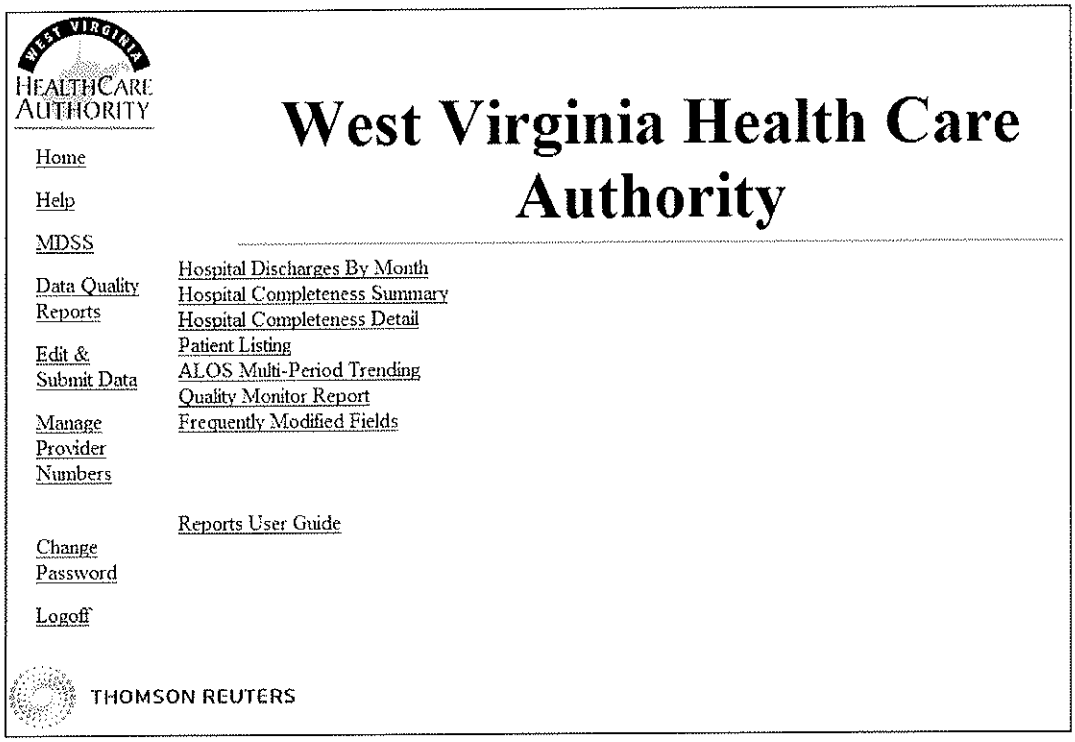
- **Copies, drafts, examples, or descriptions of proposed products, including design and features of a web-based data submission system; structure of a master database; sample data quality reports, analytic reports, and technical documentation; descriptions of new analytic fields proposed to be created by the Vendor; etc.**
- **Data security and disaster recovery plan(s).**
- **Detailed work plan (including a timeline and lead team members) of proposed Year 1 activities, including a pre-implementation assessment of the online data submission system and outreach and education activities. Also include a work plan outlining key activities planned to be implemented in Years 2-5.**
- **Project management and performance management plans, including proposed service level agreements and strategies for monitoring project status and deliverables to ensure implementation within established or mutually agreed upon timelines.**

Thomson Reuters Healthcare plans on meeting the HCA's business needs for the next five years by expanding significantly the functionality and services already being delivered. This approach will not only provide continuity of use for the HCA and all West Virginia hospitals, but will allow for rapid expansion of new system features and services. In addition, hospital implementation of requested data submission formats and adoption of expanded reporting features will be efficient by building on the existing construct of the deliverables.

The current MDSS submission file layout will be modified to accommodate the one-time migration to the 837i 5010 and ICD-10 formatting as well as ongoing state, federal or industry changes to data submission standards. In addition, the existing Online Data Editor provided to the HCA will be expanded to not only process, store and display new and modified data elements, but will provide new and compelling reports designed to improve the data quality of the data program over time. Also, more flexible and robust physician identifier audits as well as source of payment information features will add to the accuracy and depth of the data. Lastly, new analytical reports and quarterly reconciliation reports will also be provided on top of the existing platform to ensure the completeness of the dataset as well as allow the HCA to start analyzing utilization trends.

Examples of functionality and design of product features are included below to demonstrate the general approach to some of the additional deliverables requested in this RFP. These are examples only and do not constitute final design of the expanded features:

Example of Reports Available to Users



WEST VIRGINIA HEALTHCARE AUTHORITY

Home
Help
MDSS
Data Quality Reports
Edit & Submit Data
Manage Provider Numbers
Change Password
Logoff

West Virginia Health Care Authority

Hospital Discharges By Month
Hospital Completeness Summary
Hospital Completeness Detail
Patient Listing
ALOS Multi-Period Trending
Quality Monitor Report
Frequently Modified Fields

Reports User Guide

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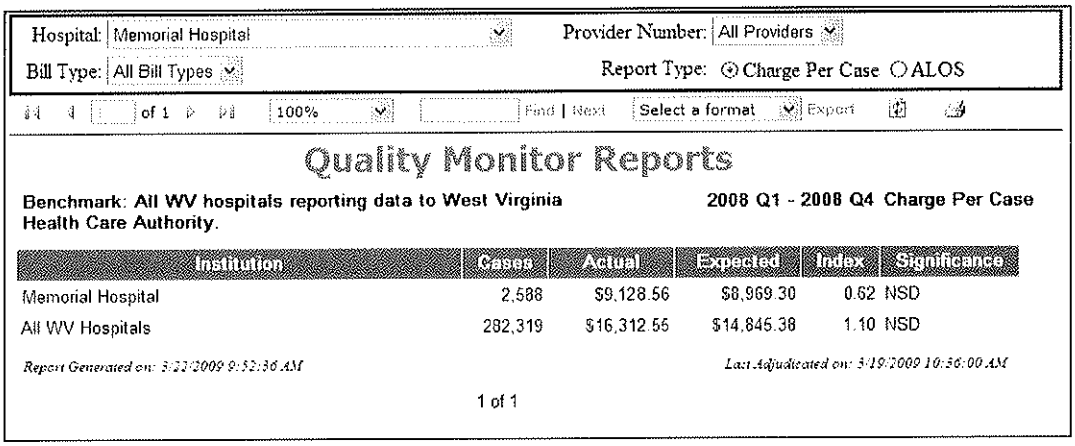
Example of Data Quality Report



Hospital: Memorial Hospital Provider Number: All Providers
Bill Type: All Bill Types Report Type: ⊙ Charge Per Case ○ ALOS

1 of 1 100% Find | Next Select a format Export

Quality Monitor Reports

Benchmark: All WV hospitals reporting data to West Virginia Health Care Authority. **2008 Q1 - 2008 Q4 Charge Per Case**

Institution	Cases	Actual	Expected	Index	Significance
Memorial Hospital	2,588	$9,128.56	$8,969.30	0.62	NSD
All WV Hospitals	282,319	$16,312.55	$14,845.38	1.10	NSD

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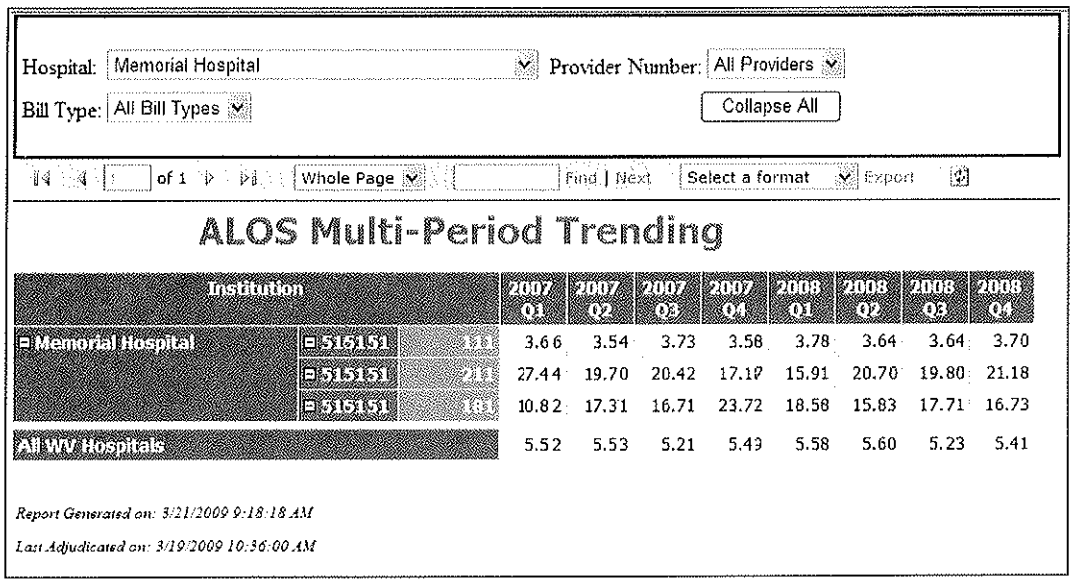
1 of 1

Example of Analytical Report Available to Users



Hospital: Memorial Hospital Provider Number: All Providers

Bill Type: All Bill Types Collapse All

1 of 1 Whole Page Find | Next Select a format Export

ALOS Multi-Period Trending

Institution			2007 Q1	2007 Q2	2007 Q3	2007 Q4	2008 Q1	2008 Q2	2008 Q3	2008 Q4
⊟ Memorial Hospital	⊟ 515151	1	3.66	3.54	3.73	3.58	3.78	3.64	3.64	3.70
	⊟ 515151	2	27.44	19.70	20.42	17.17	15.91	20.70	19.80	21.18
	⊟ 515151	3	10.82	17.31	16.71	23.72	18.58	15.83	17.71	16.73
All WV Hospitals			5.52	5.53	5.21	5.43	5.58	5.60	5.23	5.41

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Last Adjudicated on: 3/19/2009 10:36:00 AM

Data Security and Disaster Recovery Plan – In the current deliverables to the HCA, Thomson Reuters Healthcare safeguards hardware, software and data from unauthorized access and unanticipated corruption and/or damage to the system. Furthermore, Thomson Reuters Healthcare plans on strengthening these safeguards even more in the next term of this agreement.

Specific safeguards in place currently include:

- Full data and application backup occurs every 2 days
- Maintenance of multiple non-production environments that could be rapidly redeployed as production if necessary
- Well documented process for ensuring only authorized access to the system

New safeguards employed as part of the new term of the agreement include:

- Clustering of multiple servers that can serve as failover systems automatically if production environment is compromised
- Higher level of authorization deployed – 2 factor authentication through the use of RSA tokens

Work Plan

The following work plan details out the key project roles involved with each of the projects required in year 1 of the agreement and the ongoing projects during years 2 through 5:

Year 1 Work Plan:

- **Deployment of 5010 837i Data System (2.4.1.2)** - Lead team includes Project Manager & Client Service Manager, Product Manager, Implementation Manager and Product Support & Training
- **Deployment of ICD-10 compliant Data System (2.4.1.1)** - Lead team includes Project Manager & Client Service Manager, Product Manager, Implementation Manager & Product Support & Training

- **Physician Identifier (2.3.1.1)** - Lead team includes Project Manager & Client Service Manager, Product Manager, Product Support & Training

- **Expected Source of Payment (2.4.1.1.2)** - Lead team includes Project Manager & Client Service Manager, Product Manager, Product Support & Training, Analytical Services

- **Reconciliation Reporting (2.4.1.8)** - Lead team includes Project Manager & Client Service Manager, Product Manager, Product Support & Training

Years 2 – 5 Work Plan:

In addition to the continued deployment of work plans done during year 1, the following work plans would occur each of the 4 remaining years of the term of agreement:

- **Report Configuration for Analysis (2.4.3.4) -** Design reports to analyze data for HCA and deliver 2 new reports each year and 3 modifications each year – Lead team includes Project Manager & Client Service Manager, Product Management

- **Data Quality Report Configuration (2.4.1.7)** - Design reports to improve quality of data from hospitals and deliver 2 new reports each year and 3 modifications each year – Lead team includes Project Manager & Client Service Manager, Product Management

2.4.1 Data Collection, Processing, and Editing. Collect, process, maintain, and assure the quality of inpatient hospital discharge electronic billing data from West Virginia hospitals in accordance with the West Virginia Hospital Inpatient Data System Policies and Procedures (available for download on the HCA website).

The Thomson Reuters Healthcare system will continue to effectively and efficiently collect and process inpatient electronic billing data from West Virginia hospitals. In addition, the system will provide audits and data quality reports for ensuring high levels of data file integrity. Furthermore, hospital users will have the opportunity to correct or edit their submitted data online before submitting it for final inclusion in the database.

2.4.1.1 Collect the hospital inpatient uniform billing (UB) data elements outlined in the Data Element Specifications Guide (available for download on the HCA website) and implement annual additions and/or modifications to reported data elements based on changes in state, federal, or industry standards or policies, including but not limited to ICD-10-CM, in a manner and timeline approved by the HCA.

Thomson Reuters Healthcare will ensure the accurate collection of uniform billing data elements and modify all aspects of the entire system if, and when, changes to these standards are altered by state, federal or industry standards. Such modifications include, but are not limited to the migration of providers to the 5010 version of the 827i file as well as to ICD-10 billing changes to take effect on October 1, 2013.

2.4.1.1.1 Implement processes to enhance the current collection and analysis of physician identifiers (National Provider Identifiers).

Thomson Reuters Healthcare will obtain from CMS on a periodic (annual) basis a copy of the NPI database and from that create a list of valid NPIs residing in a table format. The system will then automatically check submitted NPI numbers from each hospital's files in the Online Editor against the valid NPIs in the table. Errors would be shown to the user for each and every record that did not pass the errors. This would expand the current audit which only checks to make sure the submitted NPI value is 10 digits long.

2.4.1.1.2 Implement processes to review and revise the collection of expected source of payment, which is currently reported in accordance with the West Virginia Hospital Inpatient Data System Payer Coding Specifications (available for download on the HCA website).

Thomson Reuters Healthcare will work closely with HCA and its hospitals to re-examine how expected source of payment codes can be collected, processed, stored and grouped. Based on the results of this research, Thomson Reuters will implement a new more flexible and transparent method of working with expected payment coding. This new approach will allow HCA to more easily modify and expand the collection of expected source of payment codes in the data program.

2.4.1.2 Accept inpatient data files in the current HCA UB-04 (available for download on the HCA website) and ANSI ASC X12 8371 4010 (included in Attachment D) formats that accommodate the data elements outlined in 2.4.1.1. Implement the ANSI ASC X12 8371 5010 file format, and/or other then current industry standard formats, in a manner and timeline approved by the HCA. Implement additions and/or modifications to the file format over the course of the contract based on changes to state, federal, and/or industry requirements, as required and/or approved by the HCA.

Thomson Reuters Healthcare will be working in unison with the standard and required roll-out schedule for ICD-10. The move from 837i 4010 to the 837i 5010 will be conducted in year 2 of the contract which equates to 2012Q3 – 2013Q2. When migration to 5010 is complete, use of prior formats will not be supported. This will not include any implementation of an expanded 5010 layout. No audit changes/modifications are included.

Thomson Reuters Healthcare will update existing user documentation, consisting of the Data Collection Guide, online help, and Release Notes, as needed to represent changes to the Online Editor that are impacted by these changes.

During the move from the 837i 4010 to the 837i 5010, the submitters will have the engagement of an Implementation Manager who will provide guidance, as needed, throughout the process. In addition, a Project Manager will be acting as an additional resource throughout the project effort and point person for managing regularly scheduled calls and providing coordinated status updates involving progress to date, opportunity management and education opportunities. Adherence to the 837i 4010 to the 837i 5010 schedule by the HCA and hospitals will be crucial in delivering this functionality on schedule.

2.4.1.3 Assess and confirm the accuracy, completeness, quality, appropriateness, and reasonability of the submitted data to identify and eliminate common errors. Implement current edit checks, as outlined in the Edit Check Definitions guide (available for download on the HCA website). Conduct routine and custom analyses to identify data submission and processing errors. Implement additional or revised edits over the course of the contract based on: identified data quality issues; revised reporting requirements; or changes to coding, billing, and reimbursement standards, as requested, required, and/or approved by the HCA.

Thomson Reuters Healthcare provides experienced Product Managers that are consistently monitoring the product performance and processes to routinely implement quality improvements and to maintain and modify data quality checks. The HCA also has the ability to submit enhancement requests that will allow for the improvement of the platform.

Thomson Reuters Healthcare currently supports the WV On-Line Editor which is designed to be a flexible system that will continue to incorporate updates and revisions according to the business needs of WVHCA.

Thomson Reuters Healthcare will deliver two new data quality reports per year that will enable the data submitters, the HCA and Thomson Reuters to review and make appropriate quality improvements based on the information provided in these new reports.

Additionally, Thomson Reuters Healthcare will also propose three suggested improvements or the HCA requested changes to the reports currently in production each year of the term.

2.4.1.4 Maintain a secure web-based system for the online submission and editing of hospital inpatient UB data. Implement updates or revisions to the system based on changes adopted per 2.4.1.1, 2.4.1.2, and 2.4.1.3.

Thomson Reuters Healthcare currently supports the WV On-Line Editor which is a secure system for online submission of hospital inpatient data. We will continue to incorporate updates and revisions according to the business needs of the HCA.

Thomson Reuters Healthcare will ensure the web-based platform will be available for all hospitals and end-users to perform required activities when submitting data.

Implementation of updates and/or revisions to the system will be planned accordingly as detailed in the work plan that will be defined when changes are required.

Production support and associated SLAs are outlined to ensure the system is supported and issues are addressed in a timely manner.

2.4.1.5 Maintain a master database of all data collected during the contract period and develop and implement processes that allow for an audit trail of all submissions, additions, changes, and deletions to the master database.

Thomson Reuters Healthcare currently maintains a master database as an integral component of the WV On-Line Editor that includes all data submitted by the WV hospitals. The system includes processes that provide an audit trail of all submissions, additions, changes, and deletions to the master database.

Thomson Reuters Healthcare will ensure the web-based platform and all data will be archived and backed-up to perform any research or recovery requests that may be submitted. The platform can be audited when requested by the HCA. Thomson Reuters Healthcare engineering will require a formal request from the HCA and then an agreed upon turn-around time to provide these audit trails to the HCA will be provided by Thomson Reuters Healthcare.

2.4.1.6 Implement methods to link all records submitted for a single discharge (including interim, replacement, and late charges bills) and create and/or identify a single complete (analytic) record representing each encounter, based on HCA adjudication rules, generally accepted industry standards, and record characteristics, such as patient control number, bill type, and discharge date.

Thomson Reuters Healthcare adheres to the HCA adjudication rules and provides methods to link all records submitted for a single discharge (including interim, replacement, and late charges bills) and create and/or identify a single complete (analytic) record representing each encounter, based on HCA adjudication rules, generally accepted industry standards, and record characteristics, such as patient control number, bill type, and discharge date.

2.4.1.7 Develop and make available to data submitters and the HCA, reports that promote the assessment of the quality and completeness of data submitted to the master database. The data quality reports should be updated on a reasonable and routine basis to summarize recently submitted data and be available in common formats (e.g., PDF, Excel, etc.). Propose a series of reports to be developed during the first project year. In subsequent years, plan for three modifications to current reports and for the development of two new reports annually.

Thomson Reuters Healthcare will deliver two new data quality reports per year that will enable the data submitters and the HCA to review and make appropriate quality improvements based on the information provided in these new reports.

Additionally, Thomson Reuters Healthcare will also propose three suggested improvements or the HCA requested changes to the reports currently in production each year of the term.

2.4.1.8 Provide resources or tools to assist the HCA with the quarterly reconciliation of the master database. Currently, hospitals submit to the HCA a quarterly reconciliation report summarizing the number of discharges by provider number (CMS Certification Number), month, and HCA payer classification (available for download on the HCA website). This report is manually compared to a report of the data contained in the master database. Hospitals are notified by the HCA of discrepancies and must revise the submitted data, as requested by the HCA.

Thomson Reuters Healthcare will create a new report accessible by the HCA and hospitals that summarizes quarterly counts of discharges by hospital from the master database. This report will be able to be downloaded by users in order to more efficiently compare these numbers to quarterly counts currently being reported separately by hospitals to the HCA. These comparisons will be done by the HCA and hospital offline and will help reconcile any differences between the two data sources. If inconsistencies exist, then hospitals will submit new/changed records through OLE in order to rectify any discrepancies in the reporting.

2.4.1.9 Continually evaluate the data collection, processing, and editing procedures for performance and compliance; routinely implement quality improvements, based on these reviews, to enhance system processes, efficiencies, and speed, as requested and/or approved by the HCA.

Thomson Reuters Healthcare provides experienced Product Managers that are consistently monitoring the product performance and processes to routinely implement quality improvements, based on these product reviews. The HCA also has the ability to submit enhancement requests that will also allow for the improvement of the platform.

2.4.2 Documentation and Technical Support. Provide documentation, training, and technical support regarding data collection, editing, and reconciliation.

2.4.2.1 Provide and maintain various materials for data submitters documenting rules, processes, and guidelines related to data collection, reporting, and editing, as requested and/or approved by HCA. Distribute documentation to data submitters in common formats and via the web within a reasonable period prior to the implementation date of required changes.

Thomson Reuters Healthcare will update existing user documentation, consisting of the Data Collection Guide, online help, and Release Notes, when and as needed to represent changes to the Online Editor that impact its operation by submitters. Before distribution, documentation changes will be reviewed by Thomson Reuters Healthcare subject matter experts for accuracy, relevance, completeness, and overall usability in enabling continued ease and timeliness of data submissions by editor users. Distribution of user documents will continue in the current industry-standard presentations of online help and PDF, and be directly available to data submitters from the web-based OLE itself.

2.4.2.2 Provide documentation to the HCA that details the operational processes of the web-based data submission system necessary for HCA staff to evaluate effectiveness and understand and communicate information about the system to data submitters.

Thomson Reuters Healthcare will update existing system overviews, pictorial and verbal, when and as needed to represent changes to the Online Editor, or its process of use, that impact its operation by submitters. Overviews are currently presented in Chapter 1 of the Data Collection Guide, and in the Engagement Kick-off presentation that is a part of the existing Support Documentation package.

2.4.2.3 Provide training and technical support to the HCA, data submitters, and/or their representatives on topics related to file formats, data submission, editing, and coding and billing standards.

Thomson Reuters Healthcare will provide a combination of web-based training, mentoring meetings and step by step documentation to assist HCA, the data submitters and their representatives regarding file formats and data submission efforts over the course of the designated RFP dates. The implementation of the 837i 5010 file format will incorporate multiple web-based training sessions to ensure a level of comfort covering the changes to the file format, the process to make those changes and submit successfully, as well as provide opportunity for individual questions and coaching. Detailed documentation will also be provided as an additional resource. During the move from the 837i 4010 to the 837i 5010, the submitters will have the engagement of an Implementation Manager who will provide guidance as needed, throughout the process. In addition, a Project Manager will be acting as an additional resource and point person for managing regularly scheduled calls and providing

coordinated status updates involving progress updates, opportunity management and education opportunities throughout the project effort.

2.4.2.4 Work closely with diverse data submitters and/or their representatives, with varied levels of knowledge, skills, and resources, to understand their questions, problems, and demands, and be able to investigate and communicate solutions to them in a professional and cordial manner.

A dedicated team of Product Support specialists is available via toll free number, website, and email to provide the HCA with answers to questions regarding file formats, data submission, editing and coding and billing standards. If a problem is identified the proper response objectives will be managed and escalation procedures followed to provide a timely resolution. Requests for product enhancements may also be submitted through the Product Support group. All client contact regarding issues and questions is tracked through our incident management system. Reporting of all incidents submitted through any of the support channels described below can be accessed by the staff at the HCA online at any time. In addition, a summary report can be provided on a quarterly basis during regular account review meetings. Based on information received from our Customer Satisfaction Survey, we currently achieve a customer satisfaction rate of 96% or higher.

Support Availability

- Website: (http://healthcare.thomsonreuters.com/support). The Product Support Portal is available 24/7 and access by user id and password is available for all Thomson Reuters Healthcare customers. The Portal provides the ability to search a Knowledge Base for information contained on the site including solutions to previously reported customer questions and issues of general interest. Customers who require assistance from Product Support typically enter their requests via a support incident entry screen. Once the request has been entered, customers may monitor status of their request and append the work notes with additional information. Product Support will respond to the request per response objectives provided below during our standard business hours.
- Phone and email support - While most Thomson Reuters customers have found the portal to be the preferable means of communicating with Product Support, customers may also contact support through our toll free number (877-843-6796) or email (healthcare.providersupport@thomsonreuters.com) which are both staffed during our standard business hours.

Standard Business Hours

Product Support standard business hours are 7a-7p central, Monday through Friday, excluding company holidays.

2.4.3. Analytic Files. Create and provide to the HCA adjudicated analytic files containing submitted fields, appropriate groupers and adjustment factors, and other demographic, cost, clinical, and quality fields.

Thomson Reuters Healthcare currently follows the HCA's rules for adjudication and provides a weekly adjudicated database of all records submitted in the current reporting period. This

process also includes the identification of analytic records, records that are complete, year to date. The groupers, adjustment factors, ZIP codes, ICD-9 codes, and other files, as applicable, are updated annually after the new groupers are available. This file is made available to the HCA (according to an agreed-upon schedule) for download from the existing Thomson Reuters Healthcare WV On-Line Editor (WVOLE) application web server. All communication between the the HCA user and the WVOLE application web server is via secure HTTP protocol (HTTPS). VeriSign digital certificates are installed on the application web server.

2.4.3.1 Create and provide to the HCA, on a routine basis, data file(s) containing all of the records and data elements submitted by hospitals, adjudicated records flagged for analysis, and processing and analytic fields created by the Vendor (including MDC, DRG, and other useful indicators of services, payment, cost, severity of illness, risk of mortality, intensity of service, and quality of care that will enhance HCA analysis). The minimum fields required in the analytic files are outlined in Attachment E.

Thomson Reuters Healthcare currently follows the HCA's rules for collecting and enhancing data from the hospitals and provides a weekly file that includes all records submitted for the current reporting period. The groupers, adjustment factors, ZIP codes, ICD-9 codes, and other files, as applicable, are updated annually after the new groupers are available. This file is made available to the HCA (according to an agreed-upon schedule) for download from the existing Thomson Reuters Healthcare WV On-Line Editor (WVOLE) application web server. All communication between the HCA user and the WVOLE application web server is via secure HTTP protocol (HTTPS). VeriSign digital certificates are installed on the application web server.

2.4.3.2 Deliver the file(s) to the HCA in a secure electronic format approved by the HCA and acceptable for import into the HCA's then current version of SAS and Oracle, or other, then current software.

Standard defined deliverables for the HCA include all required content in the agreed-upon format with scripts to simplify import using a SAS format. These files are available to the HCA (according to an agreed-upon schedule) for download from the existing Thomson Reuters WV On-Line Editor (WVOLE) application web server. All communication between the HCA user and the WVOLE application web server is via secure HTTP protocol (HTTPS). Verisign digital certificates are installed on the application web server.

2.4.3.3 Maintain and provide to the HCA documentation, reference files, and data dictionaries detailing the contents of the data file(s) and any information necessary or useful for HCA in its review and analysis of the data, including but not limited to: a data element frequency report; file layouts; load programs; code value definitions and labels; custom programming code; and descriptions of the methodologies related to the creation of the calculated fields added to the file(s) by the Vendor.

As a part of the overall program deliverables, Thomson Reuters Healthcare will maintain and deliver database documentation to include data dictionaries and layouts outlining fields and codes with code definitions/values, related reference files, descriptions of methodologies that are used in all calculated-fields and any other necessary documentation pertaining to the databases delivered. This supporting material will be provided to the HCA on an as needed basis.

2.4.3.4 Create and provide to the HCA, on a routine basis, new reports (current standard reports are described in the UB data request form available for download on the HCA website) from the analytic file(s) that summarize key utilization, access, cost, and quality indicators, such as: patient days; case-mix; market share and service areas; and common DRGs/diagnoses/procedures by patient demographic characteristics, geographic region, and/or hospital. Propose a series of reports to be developed during the first project year. In subsequent project years, plan for three modifications to current reports and for the development of two new reports annually.

Thomson Reuters Healthcare will to develop and deliver two new data reports a year that will enable HCA to analyze trends in utilization, access, cost, quality metrics and market dynamics across all of the hospitals in West Virginia. These reports will also help HCA pinpoint performance or access issues more readily, thus improving the quality and accessibility of care to West Virginia patients. In addition, Thomson Reuters Healthcare will modify or enhance up to three current reports each year of the term.

2.4.4. Data Security and Privacy. Implement administrative, physical, and technical safeguards to ensure the confidentiality, integrity and availability of all System data the Vendor creates, receives, maintains, or transmits, in accordance with federal and state laws and regulations (including the HIPAA Security Rule, 45 CFR § 164.302), this contract, and HCA policies.

2.4.4.1 Comply with all HIPAA Security administrative safeguards, including:

We have developed effective practices for protecting confidential patient information. In 1997, in response to increased customer attention to confidentiality issues and anticipation of

government HIPAA privacy regulations, we initiated a comprehensive review and further enhancement of our privacy policies. Our policies include:

1. Protecting explicit identifiers whenever possible by removing personal identifiers (e.g., name, address, phone number) or masking/encrypting needed identifiers (e.g., employee number, SSN).
2. Establishing clear privacy and confidentiality policies and procedures for our employees and contractors and for external release of data.
3. Upholding privacy and confidentiality policies and procedures in subcontractor agreements by removing personal identifiers (e.g., name, address, and phone number) and encrypting identifiers.
4. Establishing clear guidelines for release of data to outside third parties (e.g., researchers and consultants) when this is requested by our customers.
5. Training all employees on confidentiality policies and holding employees accountable to protect patient privacy.

We continue to lead the industry in the area of security and patient privacy, actually pioneering many of the requirements of the HIPAA legislation. We closely monitor activity at the Federal and State levels to ensure our products, procedures, and processes meet or exceed national requirements.

2.4.4.1.1 Undertake a valid risk assessment and establish an effective risk management program for the System.

Security reviews and risk assessments are an integral part of our HCA system development life cycle. We recognize that there are elements of risk when implementing large-scale decision support systems like the one HCA is planning. Our experience shows that an ongoing effort to identify security risks and develop appropriate mitigation plans when needed. Our risk management program includes reviews to ensure the compliance and effectiveness of procedures and controls applicable to the HCA system.

2.4.4.1.2 Implement procedures to regularly review records of information systems activity, such as audit logs, access reports, and security incident tracking reports.

We use a variety of tools to monitor our servers, databases, network, and environment. These tools include HP Insight Manager, Nagios, Oracle Enterprise Manager, and some internally developed tools/scripts. The monitoring tools can use SNMP, e-mail, and/or log files. We also have a performance/report monitoring process (internally developed) that serves as a benchmark and threshold indicator on report performance.

The computer operations and networking teams use Nagios, a Linux based application to monitor our servers and network. This application measures availability and latency and provides alerts when appropriate. In addition, we send server and network equipment alerts to a Syslog which is reviewed daily. Network monitoring tools include IBM Netview, SevOne, and Ciscoworks. IBM Netview is used to report device status, SevOne provides bandwidth and error analysis, Ciscoworks provides syslog alerting.

Commercial-off-the-Shelf (COTS) real-time intrusion detection systems are part of our overall security system with multiple detection points installed at various locations within the network. Alerts and notifications are generated according to defined parameters and rule sets. Information from these remote nodes is collected and sent to a central server for reporting, and forensic purposes, among others. We use TripWire that performs host-based intrusion detection to alert administrative and production staff if and when critical files are added, modified, or deleted. We also install software that monitors the Thomson Reuters solution servers and detects unauthorized access attempts by any user and notifies our system administrators.

We use a COTS patch management system to update the system when updates and patches are released for the Windows servers. Patches are applied manually to the DBMS and AIX servers. We monitor CERT and other vendor patch release and other notification systems. As part of our relationship with Microsoft, we receive early warning emails of pending Microsoft patches. These patch notifications are now published once a month, with additional critical and immediate patch notifications from Microsoft as warranted. In addition, we use Qualys to perform weekly vulnerability scans on all external facing servers. A weekly scanning results report identifying any specific patches or other corrective actions is distributed to groups with responsibility for maintaining different parts of the Thomson Reuters infrastructure.

In addition, as tested and validated by the Ernst & Young SAS 70 Type II auditors, application and Web server logs and events are sent to a center syslog server. System Administrators receive real-time alerts when pre-determined thresholds are reached for failed login attempts. All failed login attempts from the previous day are reviewed daily.

UNIX administrative logs (SUDO, SU, root, smitty) are reviewed in their entirety on a monthly basis, with daily reviews of defined exception reporting.

2.4.4.1.3 Conduct security audits, at the request of the HCA, to evaluate the appropriateness and effectiveness of policies and procedures for protection of privacy, confidentiality, and security of the System data, including an analysis of the mechanisms used for data transfer and storage. The audit may include a review of the networking and computer facilities used by the System, penetration testing, or an active assault on the preliminary evaluation of basic data security issues; therefore, some sources of risk may only need to be evaluated categorically (i.e., significant vs. not significant). The audit should be conducted by an external subcontractor with expertise in the field of data security.

A report on the results of the security audit should contain at a minimum: effectiveness/ineffectiveness of current data security policy and procedures, including

receipt of data, storage, handling printouts, LAN access, remote access, staff knowledge and compliance, data transmission, and loss control security risks not addressed in the report. If appropriate, the report should address how findings compared to standards relevant to general businesses that develop research files for the government. If significant data security risks are identified by the audit, the report should recommend measures by which such risks can be minimized. Additional audits may be required to assess new threats or to evaluate the effectiveness of remediation steps taken to resolve problems.

Thomson Reuters performs audits regularly to identify network, system, or application vulnerability and to review security, data handling and management practices, physical security, authentication and authorization controls, and HIPAA compliancy, among others. Thomson Reuters intends to audit applications used by, or on behalf of, our customers. These audits will typically take place on a bi-annual basis using independent entities, supplemented by internal reviews as needed. Requests for additional audits will be supported on a time-and-materials basis.

We use appropriate industry standards to ensure our security and operational practices provide the highest level of support for our customers. We conduct periodic audits by third party organizations such as RipTech and @stake and take appropriate action, as needed, based on the results of the audits. Our security plans and practices are reviewed and updated periodically by an advisory group of health data privacy experts. We have established a comprehensive Business Continuity Plan that includes disaster recovery testing on a regular basis.

2.4.4.1.4 Have security policies and procedures in place for Vendor staff, which include appropriate sanctions for staff that act contrary to such policies and procedures. Implement a security awareness and training program for all members of the vendor workforce. The State may require that a vendor provide evidence of adequate background checks, including a nationwide record search, for individuals who are entrusted by the vendor to work with State information.

Thomson Reuters has established disciplinary measures for breaches of the HIPAA-related rules. All our employees must sign a confidentiality agreement acknowledging that any unauthorized use or disclosure of a customer's private information constitutes grounds for dismissal. Every new employee receives data privacy, confidentiality, and security training. Additionally, periodic privacy, confidentiality, and security awareness training is conducted at each facility. As our Corporate Security Officer (CSO) periodically updates our data privacy, confidentiality, and security policies and procedures, every employee must read the policies and procedures manual and reply to the CSO that the manual has been read and understood. Each employee is retrained each year and must pass a recertification test.

Any employee who does not strictly follow Thomson Reuter's privacy, confidentiality and security policies and procedures for data is subject to sanctions up to and including immediate termination, depending on the nature of the offense. Any knowing or intentional misuse, abuse or violation of these policies and procedures will result in immediate employment termination. An employee with an inadvertent first-time procedural lapse will be given a written warning by

his/her supervisor, with copies of the warning sent to Human Resources and the CSO, and immediate re-training. Repeated procedural lapses will result in termination of employment. In addition, employees may be subject to criminal and civil liabilities under federal and state health information privacy laws.

We contract with an outside firm to perform background checks on all new hires, contractors, and temporary employees. All employees are instructed on Thomson Reuter's security policies and procedures, and refresher instruction is provided each year. Breaches of security are considered serious, and punishment can include termination.

Verifications (www.verifications.com) is used to provide background checking for all positions. Standard background checks cover the past seven years and include education verification, employment verification, criminal (to the extent permitted by law), Social Security number trace, and National Criminal Records Locator.

2.4.4.1.5 Establish emergency/backup/disaster plans and contingencies for the System.

The Thomson Reuters Eagan Data Center has been designed from its inception around continuous operation. The main campus has three data center facilities with more than 100,000 square feet of critical high-density raised floor space, utility service-independent power capacity, hardened security features, and unparalleled redundancy for critical systems. The data center is prepared for any scenario that could possibly affect service – from inclement weather to power failure to a threatened security breach from any source.

Physical security

- Physical access to the data center is tightly controlled through multi-zoned, multilevel access controls and monitors
- 24x7 video surveillance, electronically stored for 30 days and maintained on tape backups for a minimum of 60 days
- Access to critical areas is controlled by company-issued photo-ID card system

Data security

- Multiple layers of traffic filtering, intrusion detection systems, and anti-virus protection
- The data center employs a third-party security firm to provide 24x7 security monitoring and event analysis
- Other advanced security measures keep data and applications safe

Technical support

- Highly trained tech support staff available and on-site 24x7x365
- More than 500 IT, security, power, and other specialists support the infrastructure
- Proactive monitoring and troubleshooting for all platforms and networks
- The data center utilizes change, incident, inventory, and knowledge management systems with automated escalation to ensure high system and application availability and notification

IT infrastructure

- Large installed base of distributed and mainframe systems

- More than:
  - 25,000 Mainframe MIPS
  - 4,300 Intel stand-alone servers
  - 4,700 Intel Blades
  - 675 Unix servers
- Operating systems include: Z/OS, OS/390, Solaris, AIX, Microsoft® Windows®, Red-Hat, and Suse
- Other technologies include: Citrix and VMware
- Supported databases include: DB2 UDB, Microsoft SQL Server, Oracle,
- DB2 OS/390, ADABAS, and Sybase
- Internet access through four OC12 network pipes, fed from four different providers, transmit up to 2,488 megabits per second
- High-speed corporate connections to 96 locations worldwide
- Large installed base of CISCO equipment
- Continuing commitment to upgrading our infrastructure

Data backup

- More than one petabyte of installed usable disk space
- Data is regularly backed up on tape, in automated and virtual systems
- Data is stored in different facilities as needed
- Critical data is stored in off-site vaults

Power

- N+1 design
- Power is supplied by two separate sub-stations
- Dual, simultaneous paths to critical IT equipment via color-coded systems
- Separate UPS systems sustain a full power load up to 15 minutes through power fluctuations
- Each data center facility has been configured with four 2 MW diesel generators, providing replacement power in the event that utility power is lost

Environmental control

- Six-foot-wide dry moat diverts water away from critical equipment
- All drinking and facility water lines are routed external to the data processing rooms
- Multiple cooling towers and air conditioning units provide uniform and redundant cooling distribution. These units are constantly monitored
- Data center accesses redundant water sources – including private wells

Fire suppression

- State-of-the-art early detection systems are used above and below the raised flooring
- Gaseous fire suppression systems deploy below the raised flooring
- A dry-pipe system for water backup is used as an ultimate fail-safe

In addition to the hardened data center environment outlined above, the Healthcare Business also employs other strategies for recovery should an unplanned event occur in the Minneapolis region that disables the data center there.

2.4.4.2 Comply with all HIPAA Security physical safeguards, including the establishment of adequate Vendor facility access controls and device and media controls.

We operate a primary Data Center near Minneapolis, MN. The Data Centers have been designed from their inception around continuous operation. Our main campus has three data center facilities with more than 100,000 square feet of critical high-density raised floor space, utility service-independent power capacity, hardened security features, and unparalleled redundancy for critical systems. Each facility operates 24 x 7 and features the services detailed below.

Fault Tolerance And Environmental Controls

Fault tolerance and environmental controls are built with minimal to no service interruption in mind. The Data Centers have redundant power feeds from two separate utility substations. Separate UPS systems sustain a full power load up to 15 minutes through power fluctuations. Each data center facility has been configured with four 2 MW diesel generators, providing replacement power in the event that utility power is lost. Three days' worth of diesel fuel is located onsite and stored in two 10,000 gallon, aboveground, double-walled fuel tanks. Each tank is filled by two different suppliers to mitigate the risk of potential bad fuel. The entire system is tested multiple times each year.

Cooling towers and multiple air conditioning units with closed loop systems provide uniform and redundant cooling distribution; we constantly monitor these units. All drinking and facility water lines are run external to the data processing rooms, and a six-foot wide moat surrounds the Data Center to divert water away from the critical equipment. Each Data Center also has a private well that provides a backup source of water in the event of a disaster that impacts the redundant city water supply.

State-of-the-art smoke detection and fire suppression systems protect the facilities. These fire control systems use either Halon, CO_2, or FM-200 fire suppression above and below the raised flooring. We use a dry pipe system as fail-safe water fire suppression. The water pipes running through the facility are air-filled until the point at which the system would be activated. The air-filled pipes prevent the possibility of water leaks and damage to electronic systems.

All power requests and power maintenance tasks require form submission and proper IT and Facilities management sign-off before maintenance can be completed. The facility infrastructure is designed to enable seamless maintainability.

Physical Security

More than 500 IT, security, power and other engineers support the infrastructure. We strategically place security cameras throughout the campus, which includes the Data Center facilities. Surveillance data is electronically stored for 30 days, and we maintain it on tape backups for a minimum of 60 days. Physical access to buildings on campus requires a company issued photo ID. The Data Center has multi-zoned, multi-level card-key access controls and is restricted to Thomson Reuters technology staff and individuals approved by the Data Center Manager. The Facility Manager approves access for facility-related personnel.

Cage Environment

Servers in our facility that house Thomson Reuters customer data are located within a locked cage that extends from the floor to the ceiling with hog wire both underneath the raised floor tiles and above the ceiling tiles. As a result of expansion in our Data Center, we are using locked cabinets, which are also proximity key card protected. We monitor access to the cage and locked cabinets via a log recording the time anyone with key card access enters and exits the area. Only staff that have successfully completed our HIPAA certification training and who provide hands, ears, and eyes support services are allowed key card access. Security is also monitored by cameras, and operators watch activity within the area. Should anyone try to gain unauthorized access, alarms are triggered.

2.4.4.3 Comply with all HIPAA Security technical safeguards, including:

2.4.4.3.1 Secure and appropriate authentication of all users of the data.

Multi-layer security protections will ensure the confidentiality and protection of patient-identifiable healthcare data, as required by HIPAA. Users must successfully pass through a 2-factor security screen in order to access detail data in the database, as follows:

- **Primary Security Layer:** This security layer relies on RSA Tokens and requires a fob synchronized with the user's ID. We will assign each user a unique personal ID number (PIN) and a fob. The fob contains a constantly changing numeric password for that ID. The user enters their WV OLE (On-Line Editor) login ID and password, and then enters the value displayed on the fob screen to gain access to the database server, where an additional access control may apply. While Thomson Reuters Healthcare will enable the RSA Tokens, Thomson Reuters has not included the cost of these tokens in the total costs for the new system. The HCA will need to pay separately for all RSA Tokens to enable this security.
- **Secondary Security Layer:** Once connected to the WV OLE server, if the user needs to upload data to the database, they must pass another user ID and password screen to gain access to the MDSS file transfer application.

Passwords for the primary security layer changes automatically every 90 days and must conform to strong password format requirements.

2.4.4.3.2 Support role-based access to data.

The system uses access control lists to assign user roles. All users have access rights that are determined by an access control list based on their login ID. In this way, our application groups individual users into classes of users with particular views of the database and access to reports.

2.4.4.3.3 Adequate encryption of data "at rest," per then current N1ST Special Publication 800111, and "in motion," per then current FIPS 140-2, and methods to ensure that System data may be transmitted over an electronic communications network between hospitals, the HCA, and the Vendor in a manner that prevents unauthorized access. Maintain all encryption keys on a separate device from the device upon which the encrypted System data is stored.

Data encryption will comply with NIST SP 800-111, Guide for Storage Encryption Technologies for End User Device" for data "at rest", and per FIPS 140-2, Security Requirements for

Cryptographic Modules, for data "in motion" to ensure that System data is transmitted over an electronic communications network between hospitals, the HCA, and Thomson Reuters in a manner that prevents unauthorized access. All encryption keys will be stored on a separate device apart from the device upon which encrypted System data is stored.

2.4.4.3.4 Incorporate and employ an effective and efficient audit mechanism for tracking access to System data, including the preparation, update, and maintenance of audit logs.

Thomson Reuters uses a variety of tools to monitor our servers, databases, network, and environment. These tools include HP Insight Manager, Nagios, Oracle Enterprise Manager, and some internally developed tools/scripts. The monitoring tools can use SNMP, e-mail, and/or log files. We also have a performance/report monitoring process (internally developed) that serves as a benchmark and threshold indicator on report performance.

The computer operations and networking teams use Nagios, a Linux based application to monitor our servers and network. This application measures availability and latency and provides alerts when appropriate. In addition, we send server and network equipment alerts to a Syslog which is reviewed daily. Network monitoring tools include IBM Netview, SevOne, and Ciscoworks. IBM Netview is used to report device status, SevOne provides bandwidth and error analysis, Ciscoworks provides syslog alerting.

Our solution logs all user transactions against confidential data at the Database layer. This logging is performed for all user privilege levels including System administrators. We will create, maintain, and regularly review audit and system logs. The audit logs include information on server and database activity. We review all audit logs to ensure that all users and system administrators have the appropriate level of access for a given role. The level of monitoring, tracking, and reporting is at the database and application layers, based on roles, for who has been using the system.

2.4.4.3.5 Provide for automatic notification of certain non-routine or unscheduled access of System data to designated personnel, as appropriate.

Commercial-off-the-Shelf (COTS) real-time intrusion detection systems are part of our overall security system with multiple detection points installed at various locations within the network. Alerts and notifications are generated according to defined parameters and rule sets. Information from these remote nodes is collected and sent to a central server for reporting, and forensic purposes, among others. We use TripWire that performs host-based intrusion detection to alert administrative and production staff if and when critical files are added, modified, or deleted. We also install software that monitors the Thomson Reuters solution servers and detects unauthorized access attempts by any user and notifies our system administrators.

2.4.4.3.6 Employ systemic mechanisms, including anti-virus and intrusion detection software, to ensure the integrity of data from improper alteration and destruction, and to corroborate the data's ongoing integrity, in compliance with HIPAA.

Virus protection is applied to servers by a Trend system center, updates are automatically retrieved daily, new files are scanned immediately when placed on a server, and complete server scans are performed every Friday. We ensure the installation and active use of comprehensive COTS anti-virus and virus protection software on servers, and the routine update of such software when updates are released.

Intrusion detection systems are part of our overall security systems with multiple detection points installed at various locations within our networks. Alerts and notifications are generated according to parameters and rule sets defined. Information from these remote nodes are collected and sent to a central server for reporting, forensics, et cetera. The Director, Data Center Operations, is responsible for receiving and monitoring the results and taking corrective action when necessary.

2.4.4.4 Ensure that data maintained on behalf of the System is not used, released, or sold without the specific authorization of the HCA, regardless of whether the data has been de-identified or included within a limited data set.

Data maintained on behalf of the System is not used, released, or sold without the specific authorization of the HCA, regardless of whether the data has been de-identified or included within a limited data set.

2.4.4.5 Implement appropriate notification procedures upon the discovery or suspicion of a breach of security of System data.

Our intrusion prevention/handling program includes a formal escalation process. Thomson Reuters Security staff, Data Center Operations staff, and Internal Systems Support groups meet formally once a week to review security and to coordinate technical security issues in the operational environment. A documented vulnerability action plan requires, among other things, that trouble reports received by system administration personnel be reviewed for symptoms that might indicate a security threat; any suspicious symptoms are reported to the Security Manager. An assessment is made by the security administrator who works together with the administrator of the system and the application.

Notifications to customers about a security related event will go out from our Product Support department to the Client Manager and Client Director responsible for that customer account. The Client Manager or Client Director will then notify the customer.

2.4.4.6 Routinely review and revise policies and procedures to ensure data security and privacy are in accordance with the then current federal and state laws, and HCA standards and policies.

All security and privacy policies and procedures are routinely reviewed and revised to ensure compliance with federal and state regulations and the HCA standards and policies as applicable.

2.4.4.7 In the response to this RFP, the Vendor should:

2.4.4.7.1 Certify that it is not currently under investigation by any state or federal authority for a breach of data security.

We are not currently under investigation by any state or federal authority for a breach of data security.

2.4.4.7.2 Disclose whether it has been involved in any breach of data security, and provide details relating to the causes of the breach, the mitigating actions taken in response to the breach, and whether notification of affected consumers was undertaken.

In January of 2008, a Thomson Reuters laptop was stolen from a locked car. Upon investigation, it was determined the laptop may have contained Protected Health Information (PHI). The police were called, and the customer was notified immediately. Appropriate disciplinary and corrective action was taken, and we now encrypt all laptops used by employees who have access to PHI.

Our policy states employees are not allowed to leave data or laptops with data in a locked car or hotel room. Employees must have permission from a senior member of the security organization, a Local Security Manager (LSM), prior to saving PHI or customer data to their laptop. Additionally, portable media such as laptops, flash drives, and CD-ROMs must be encrypted using an approved encryption method. Outside of that incident, there have not been any other system breaches or compromises since the HIPAA rule became effective.

2.4.4.7.3 Disclose details of any previous investigations by any state or federal authority related to privacy or security of patient information. The details must include the resulting corrective action plan or details of the final resolution, including the assessment of any fines or other sanctions against the vendor.

There have been no previous investigations of Thomson Reuters Healthcare by any state or federal authority related to privacy or security of patient information.

2.4.4.7.4 Certify that it has never been convicted of, charged with, or is under investigation for, violation of any criminal law, or violation of any civil law governing health care fraud, abuse, or waste.

Thomson Reuters is not and has never been excluded or debarred from participating in any federal health care program. Further, Thomson Reuters is not aware of any pending investigation violation of any criminal law, or violation of any civil law governing health care fraud, abuse or waste.

2.4.4.7.5 Certify that it does not employ any individuals who have been excluded or debarred by the federal or any state government from participating in any federal or state program or contract.

Thomson Reuters does not employ individuals who are excluded or debarred from participation in any federal health care program.

2.4.5. Project Management. Provide project management, consulting, analysis, and reporting services to ensure successful project implementation.

2.4.5.1 Provide a dedicated, knowledgeable, and experienced team to provide- project management and consultation, as required and/or requested by the HCA, including a project manager, functional/operational lead, and programmer. The team will work directly with the HCA, hospitals, and/or their representatives (e.g., Vendors) to implement the project as described in this RFP.

Thomson Reuters Healthcare will provide a dedicated Client Manager (CM) who will serve as project manager and central point of contact for all account management activities. The Client Manager will facilitate meetings, track progress and work to deliver an excellent client experience. The Client Manager is available during standard business hours, 8 am – 5 pm ET, Monday – Friday and is available at other times as needed. To effectively communicate various types of knowledge, different modes of communication will be utilized depending on the audience and the message. Email, web conferences, conference calls and onsite meetings will be scheduled with the input of the HCA including the agenda development. Client management meetings will be held weekly, or as often as needed to communicate project progress and obtain response from the HCA. The Client Manager along with other members of the support teams will be available to the HCA to provide response according to service level agreements.

2.4.5.2 Continuously monitor changes to coding, billing, reimbursement, and electronic exchange standards and provide recommendations to the HCA regarding updates/revisions to the project and System.

Thomson Reuters Healthcare will proactively monitor changes in federal and industry standards for coding and billing and alert HCA to any modifications that may affect their data program. Furthermore, Thomson Reuters Healthcare will research, analyze and provide consultation to HCA on coding issues that either HCA or West Virginia hospitals inquire about.

2.4.5.3 Communicate regularly with the HCA regarding project status, including data submission activities, potential problems or barriers to project implementation, and contacts/communications with data submitters.

See response in question 2.4.5.1

2.4.5.4 Maintain a documentation log of all changes implemented throughout the project period related to data collection and the resulting master and adjudicated files, including but not limited to: changes to file formats, data elements, coding, editing, revisions to the online data submission system; and any revisions applied to data submitted and contained in the master database, as approved by the HCA.

A master project log will be maintained to document all work requested by the HCA and performed by product management, development, engineering, operations and others that impact in any way the HCA data program. A sample project log can be found as Attachment D. The log will be utilized to manage and communicate all issues as described in section 2.4.5.7 that are raised by the HCA. The status can be reported back in detail and in summary including completed and open items, raising any questions or items that need further evaluation to provide timely resolution.

2.4.5.5 Provide consultation and recommendations to the HCA regarding HCA data analysis, reporting, and dissemination activities aimed at assessing the utilization, access, cost, and quality of healthcare.

Thomson Reuters Healthcare has two internal groups that can offer assistance to the HCA on how to analyze report and disseminate data based on the HCA's goals and objectives. These include:

1. Client Manager (CM): Our client service managers work across multiple clients with similar needs and can provide lessons learned and best practice scenarios leveraging their experience across the client base. The CM that will work with the HCA has a vast knowledge of other healthcare association experiences and can also serve as a conduit to connect the HCA to other programs across the country. A CM will be assigned to the

HCA for this contract period and act as another facilitator internally and externally for the HCA.

2. Analytical Services (AS): Our Analytical Services group is staffed with a team of highly skilled project managers that focus on strategic client needs to understand and disseminate data on a variety of topics. These include market share analysis, clinical quality and process measures, and risk adjusted metrics. Our projects managers work with the client service manager, the client and the data assets to design analyses that meet client specific objectives. Our team can also help facilitate discussions with teams within the HCA to determine the best forums for the sharing of information with the HCA or to the participating hospitals. An AS project manager will be assigned to the HCA and will work with the CM and other company experts to facilitate the HCA's analytical needs. Complex analysis and extensive use of content experts will need to be scoped and priced based on the HCA's current business need.

2.4.5.6 Create systems, programs, and processes that are flexible enough to integrate updates and revisions in a timely manner, as required and/or requested by the HCA, without creating undue burden on resources.

Thomson Reuters Healthcare currently supports the WV On-Line Editor which is designed to be a flexible system that will continue to incorporate updates and revisions according to the business needs of WVHCA.

2.4.5.7 Respond to HCA inquiries or requests for technical assistance and/or project revisions/updates within reasonable time frames, based on the urgency and importance of the issue as determined by the HCA.

Definition of Priorities

The structure of Product Support's SLA's follows a 4-tier priority definition scheme. All requests for assistance are assigned a priority, from which response objectives are set and results measured. The priority is determined mutually between the client and the Product Support team.

The following guidelines will be used for priority setting:

Priority 1 – Production Down: The client is experiencing a condition that has stopped production, ceasing access to the application. No workaround is available, and an immediate solution is required.

Priority 2 – Business Critical: The client is experiencing a condition that frequently disrupts or limits production, critically impacting the client's ability to access the application. No reasonable workaround exists, and an immediate solution is required.

Priority 3 – Operational/Implementation Problem: Overall production is operational with no major impact on the client's business operation. Functionality differs from the intended design, or help is needed to answer installation questions or to resolve implementation issues. Furthermore, a reasonable workaround is available, or an immediate solution is not required.

Priority 4 – General Request: Request for information, analytical problem assistance, or new product feature.

Response Objectives and Escalations

The support operation is priority and process driven to ensure timely and accurate resolutions. The response times shown below are for requests placed via the Thomson Reuters Customer Portal or email. If a resolution cannot be provided within a reasonable timeframe, an escalation procedure is followed for allocation of additional resources and expertise. Our First Call Resolution Rate is currently over 80% and 95% of issues are handled within the time frames below.

Please note that all timeframes stated below may be impacted if additional information or ongoing assistance from Customer is required.

Thomson Reuters Healthcare Standard Product Support Service Levels			
Priority	Response Time	Problem Escalation to Product Development & Management	Provide Update to Customer
1	30 minutes	1 business hours	Once every 1 business hours
2	60 minutes	4 business hours	Once every 4 business hours
3	2 hours	1 business days	Once every 1 business days
4	4 hours	As necessary	As necessary

Customer Escalation Procedures

Product Support management closely monitors adherence to Service Level Agreement response times via an automated escalation component of the Support Incident Tracking System.

The Manager of Product Support and/or the Vice President of Product Support are available to address any issues that the HCA chooses to escalate.

Customer Escalation Procedures		
Contact Name	Telephone Number	E-mail Address
Julie Whitworth, Manager	(847) 866-4720	julie.whitworth@thomsonreuters.com
Bruce Tenuta, Vice President	(847) 424-4325	bruce.tenuta@thomsonreuters.com

2.4.5.8 Acquire or provide any necessary hardware, software, and reference data files to complete all tasks the Vendor proposes to perform in fulfillment of the project specifications and to meet all applicable timeframes set forth in this RFP. Data obtained for the sole purpose of the performance of this contract should not be used for any other purpose outside of the HCA contract.

Thomson Reuters Healthcare will provide the web-based hosted environment and all applicable content required to support the needs to the Online Editor.

2.4.5.9 Cover, or include in the project budget, all costs associated with providing technical assistance, training, and status reports to the HCA and data submitters, including teleconferencing, webinars, and/or travel to a minimum of two onsite meetings each year.

These costs are included in the project budget presented in Attachment C.

2.4.6 OPTIONAL SERVICES.

The Vendor may submit written plans and associated costs for the optional services that follow. The HCA SHALL have the option in each case whether to accept any or all optional services at any time during the term of the contract and all extensions. Costs MUST be included in the separate Cost Proposal, as outlined in Attachment C.

2.4.6.1 Develop and deliver to AHRQ's Healthcare Cost and Utilization Project (HCUP) an annual adjudicated file, in a timeline and format required by the HCA.

Thomson Reuters Healthcare currently follows the HCA's guidelines for the annual HCUP deliverable to include all required content in the agreed-upon format with scripts to simplify import using a SAS format. These files are available to the HCA (according to an agreed-upon schedule) for download from the existing Thomson Reuters Healthcare WV On-Line Editor (WVOLE) application web server. All communication between the HCA user and the WVOLE application web server is via secure HTTP protocol (HTTPS). Verisign digital certificates are installed on the application web server.

2.4.6.2 Prepare and provide to the HCA annual standard aggregated public use data files and standard reports, as described on the UB data request form available for download on the HCA website, to be disseminated by the HCA to data requesters.

The standard aggregated public use data files and standard reports as described on the UB data request form are:

Aggregated Datasets

Four subsets of the statewide UB database have been created annually since 1990. All four files are aggregated after sorting on discharges, days of stay, total charges, and DRG or MSDRG case weight. Files PTDRG and PTZIP for 2007 data are split by grouper version 24 (DRG) and 25 (MSDRG). Available in SAS or text delimited format.

PTDRG Data are sorted by hospital by state by county by four payor groups (Medicare, Medicaid, PEIA, Other) and DRG, then aggregated into four age cohorts (0-14,15-44, 45-64, 65 and over); the number of discharges in each cohort is reported with no restriction on minimum cell size.

PTPC Data are sorted by hospital by state by county by four payor groups by principal procedure; the total number of discharges for each procedure is reported with no restriction on minimum cell size.

PTDX Data are sorted by hospital by state by county by four payor groups by principal diagnosis; the total number of discharges for each diagnosis is reported with no restriction on minimum cell size.

PTZIP Zip codes with fewer than 30 discharges are set to blanks. Data are then sorted by hospital by state by county by zip by four payor groups by drg by into four age cohorts (0-14, 15-44, 45-64, 65 and over); the total number of discharges for each procedure is reported with no restriction on minimum cell size.

Standard Reports

These reports include acute care data only, excluding state psychiatric hospitals, rehab hospitals and units, and long-term care units of hospitals including swing beds.

Patient Origin	Discharges by hospital by state and county of residence
Cardiac Catheterization	Procedures and discharges by procedure by hospital and by county
Open-heart Surgery	Procedures by hospital and by state and county of residence.

Thomson Reuters Healthcare can create the standard aggregate datasets after the close and sign off by the HCA of each annual adjudicated database in June of each year on an agreed upon schedule with the HCA. Year one would need to include a development plan, detailed specifications, project plan and QA process with the HCA for the creation of these datasets to ensure they met the HCA specifications.

Thomson Reuters Healthcare can create the standard reports for the acute care data after the close and sign off by the HCA of each annual adjudicated database in June of each year on an agreed upon schedule with the HCA. As with the aggregate datasets, these reports would need a development plan, detailed specifications, project plan and QA process outlines with the HCA to ensure that they were developed to the HCA specifications.

The aggregate datasets and standard reports would be made available to the HCA (according to an agreed-upon schedule) for download from the existing Thomson Reuters Healthcare WV On-Line Editor (WVOLE) application web server. All communication between the HCA user and the WVOLE application web server is via secure HTTP protocol (HTTPS). VeriSign digital certificates are installed on the application web server.

The HCA would need to maintain responsibility for the approval and dissemination of these datasets and standard reports outside the HCA.

2.4.6.3 Fulfill customer requests for subsets of adjudicated inpatient data, as approved and requested by the HCA, in accordance with the then current HCA policies and procedures (the current data disclosure policy is available for download on the HCA website).

Thomson Reuters Healthcare can process custom requests for subsets of the adjudicated inpatient data at the HCA's request. These are assumed to be requests for the same layout and format as the HCA currently receives and only to be subsets based on Hospital ID or ZIP code. These data cuts can be processed on an as needed basis and the HCA would only incur costs for the cuts as they are processed in their monthly invoicing statements. Thomson

Reuters and the HCA would need to agree on a set request form and processing time before starting this joint service.

The datasets would be made available to the HCA (according to an agreed-upon service level agreement) for download from the existing Thomson Reuters Healthcare WV On-Line Editor (WVOLE) application web server. All communication between the HCA user and the WVOLE application web server is via secure HTTP protocol (HTTPS). VeriSign digital certificates are installed on the application web server.

The HCA would need to assume responsibility for the data quality checks on the completion and fulfillment of the request and provide the data to the data requester. Thomson Reuters Healthcare will not disseminate these data cuts directly to requestors outside the HCA.

2.4.6.4 Fulfill ad hoc analysis requests to answer occasional and special research questions of the HCA.

Thomson Reuters Healthcare will fulfill occasional ad hoc analysis requests to answer occasional and special requests from the HCA. As per the pricing table in Attachment C, the assumption will be that this effort will consume approximately 120 hours each year of Thomson Reuters time. The final amount of time each year consumed by these analyses may vary but should remain approximately 120 hours each year. For requests that are likely to require more than 4 hours applied time, Thomson Reuters Healthcare will scope the request and estimate a target timeframe for completing the request.

2.4.6.5 Develop and provide to the HCA an analysis of the risk of reidentification of patients in the database based on the information contained in the final annual file in combination with other readily accessible data sources; recommend appropriate statistical disclosure limitation methods to increase patient confidentiality; and develop a limited data set, based on these recommendations, for release to requestors.

Thomson Reuters Healthcare has many statisticians on staff with extensive database experience. Historically, our statisticians have not conducted assessments of risk of reidentification for Thomson Reuters' datasets in order to ensure the study is completed by an objective third party. Thomson Reuters Healthcare would be happy to review the potential scope in more detail and work with the HCA to evaluate whether our team or a subcontractor would be the best fit to complete the project.

2.4.6.6 Develop, validate, and implement methods to track patients within and between hospitals and encounters in order to estimate hospital readmissions and patient transfers, and develop a report summarizing the methodology and findings.

Thomson Reuters Healthcare will utilize existing Master Patient Indexing (MPI) methods and technology to track patients between providers and encounters in order to build a longitudinal record of each patients care history. Thomson Reuters Healthcare has several approaches that could be utilized and will work with HCA to evaluate which approach suits their needs the best. The results of these studies will help shed light on provider-specific and state-wide trends in hospital readmissions and transfers.

2.4.6.7 Provide tools, products, report templates, software, and/or code for use by HCA and/or external partners to conduct analysis of health care utilization, access, costs, and quality.

Thomson Reuters Healthcare will provide, if the option is chosen, a user license, for the HCA internal corporate use only, for CareDiscovery Transform and Market Expert State Data Analyst during the term of this agreement. A Data Use Agreement will be provided if this option is chosen.

These tools will assist the HCA to conduct analysis of health care utilization, access, costs, and quality and provide the additional benefits described herein.

Carediscovery Transform

CareDiscovery Transform will provide the HCA the needed reliable information to focus attention on efforts that both increase quality and generate economic value, guiding and supporting staff and clinicians to set priorities and effectively implement improvement initiatives. Thomson Reuters provides a consistent source of critical, empirical, and evidence-based insight that connects the quality of care with the bottom line.

With CareDiscovery Transform, the HCA will be able to focus on process improvements that balance clinical and financial impact.

- Gain a detailed view into root causes by drilling down from service line to diagnoses and even patient-level discharge detail.
- Severity-adjusted LOS, charges, costs; risk-adjusted complication and mortality rates
- Top Performer benchmarks and national norms
- Facility level analysis, service line analysis, CRG analysis, DRG/MS DRG analysis, physician level analysis, patient detail level analysis
- Helps drive process changes to improve every patient's quality of care
- Provides actionable information to help lower average LOS
- Reveals opportunities to improve patient safety
- Detects issues potentially driving readmissions
- Helps zero in on physician's use of department resources and reduce supply costs
- CareDiscovery Transform clinical performance solution can help you deliver a positive bottom line
- Reduce practice variation with reports on LOS, cost, complications, mortality, and case distribution.
- Compare activity based on physician performance by facility, patient population, physician role, custom groups of physicians, and batch reporting for up to 300 physicians

- Uncover the factors that affect length of stay and mortality rates, as well as how individual actions affect utilization and cost.
- Support physician re-credentialing and hospital profiling efforts

Market Expert State Data Analyst

State Data Analyst Strategic Planning Solution, will enable the HCA to quickly analyze and model available public and private inpatient, outpatient, and emergency room patient data1 by market and facility.

State Data Analyst is a Web-based data reporting and modeling decision support solution. Gain insight into market- and facility-specific utilization trends, market share, physician loyalty and financial analysis. The HCA can create custom, detailed queries of historic state data, including multi-year trends, and can forecast and model local market demand and facility utilization.

With State Data Analyst, the HCA can evaluate utilization and market share for custom-defined market areas and facility groups. It will also help you identify in-migration of services from outside your service area, and out-migration of services from your market to other facilities in the state. Thomson Reuters combines competitor data with detailed current and projected demographic data to deliver utilization rates specific to your market and to forecast demand based on local utilization.

2.4.6.8 Identify, collect, edit, maintain, and provide to the HCA data for services rendered in non-inpatient settings by West Virginia hospitals, and other relevant providers, using methods and processes comparable to inpatient data collection. Provide separate cost information for each category of data below (to be submitted separately in the cost proposal):

Each type of data will have a specific format built for the unique dataset and the data will be kept separate from inpatient data and from other outpatient data. If the HCA elects to purchase one or more of the below optional items, Thomson Reuters will provide entire new sets of data audits and Data Quality Reports.

General assumptions made regarding the development of a new data program include:

- There is an initial implementation fee that is outlined in the cost grid for the first new program selected
- No new user role is needed for the online editor currently in production Separate deliverables will be provided for the outpatient data
- Assumes separate data deliverables to the HCA for outpatient data A duplicate process will be created to support outpatient and/or ER.
- Assumes a separate but similar process/structure for outpatient/ER as compared to the current inpatient process/structure
- No adjudication needed for outpatient data Thomson Reuters will be supplied the data elements that need to be collected.
- Thomson Reuters will be supplied the data elements that need to be collected by the HCA
- Additional analysis/requirements gathering may need to be completed if purchased
- Data deliverables included in weekly deliverables

2.4.6.8.1 Emergency Department data;

Emergency Department data; this data set would not include physician professional fee billing, only the associated outpatient hospital based charges.

2.4.6.8.2 Outpatient surgery data from hospitals

Outpatient Surgery data from hospitals; this data set would not include physician professional fee billing, only the associated outpatient hospital based charges.

2.4.6.8.3 Outpatient observation stays;

Outpatient observation stays; this data set would not include physician professional fee billing, only the associated outpatient hospital based charges

2.4.6.8.4 Outpatient diagnostic and therapeutic hospital services;

Outpatient diagnostic and therapeutic hospital services; this data set would not include physician professional fee billing, only the associated outpatient hospital based charges

2.4.6.8.5 Outpatient physician office visits or other types of hospital outpatient services;

Outpatient physician office visits or other types of hospital outpatient services; would include physician office procedures and outpatient services provided in the physician office, but under the hospital umbrella. This data set would not include physician professional fee billing, only the associated outpatient hospital based charges

2.4.6.9 Develop and implement new System enhancements, data quality reports, or analytic reports, determined necessary to perform the functions of this project but not elsewhere specified or required by this RFP.

Thomson Reuters will work with the HCA to identify, analyze, design and deploy specific enhancements to the system for expanding reporting content and functionality that has not already been specified in earlier sections of the RFP. At the time of request, Thomson Reuters will finalize requirements, scope and cost before starting such projects. Thomson Reuters will charge appropriate hourly fees for this work as listed in the pricing in Attachment C.

ATTACHMENT B:
MANDATORY SPECIFICATION CHECKLIST

The vendor must describe a plan to implement the following mandatory specifications and certify that the proposal meets or exceeds these specifications. Vendors unable to meet these mandatory specifications will be disqualified.

2.5 MANDATORY REQUIREMENTS

2.5.1 The Vendor SHALL agree that all data and any software, programming code (including code to implement editing and adjudication procedures, and to create non-proprietary analytic fields), file formats, or other deliverables developed to fulfill the contract requirements, be the sole property of the HCA.

Thomson Reuters Healthcare agrees that all data provided to Thomson Reuters Healthcare by the HCA and its hospital customers shall be the sole property of the HCA. Thomson Reuters Healthcare intends to deliver the solution using pre-developed, proprietary, commercially-available software which is designed to be customizable for each customer installation. Thomson Reuters Healthcare retains the ownership of the software and related deliverables, but will provide an appropriate license for HCA to use the software.

2.5.2 The Vendor SHALL agree to provide privacy and security safeguards to protect all data from any use or disclosure for any purpose other than that described within this proposal or expressly authorized by the HCA Project Manager through written signed consent.

Thomson Reuters Healthcare agrees.

2.6 MANDATORY DELIVERABLES

2.6.1 The Vendor SHALL maintain a secure website for the on-line data collection, data submission by file upload, data editing, and distribution of reports to data submitters and the HCA, as approved by the HCA, within 90 days of contract award.

Thomson Reuters agrees.

2.6.2 The Vendor MUST provide live help desk support by telephone to data submitters

and/or their representatives for at least eight hours per day during daytime business hours (EST), five days per week, excluding West Virginia state holidays.

The Product Support Portal is available 24/7 and access by user id and password is available for all Thomson Reuters Healthcare customers ((http://healthcare.thomsonreuters.com/support)). While most Thomson Reuters Healthcare customers have found the portal to be the preferable means of communicating with Product Support, customers may also contact support through our toll free number (877-843-6796) or email (healthcare.providersupport@thomsonreuters.com) which are both staffed during our standard business hours, 7a-7p, Monday through Friday, excluding company holidays.

2.6.3 The Vendor SHALL conduct analyses to investigate and determine potential data quality issues, as requested by the HCA, within at least 10 business days of request.

The Client Manager will coordinate all potential data quality issue situations either identified by the HCA, one of its member facilities or Thomson Reuters. That investigation and analysis will be completed in 10 business days or less resulting in a final report of findings. Depending on the outcome the next steps would be planned accordingly. Should the finding be that there is no data quality concern, it would be reviewed with the HCA and closed. If it is determined that there is a data quality concern, the Client Manager will coordinate all parties to develop a plan of action, accompanying schedule and facilitate the plan to completion.

2.6.3.1 The Vendor MUST correct identified data submission errors that are determined cannot or should not be corrected by the data submitter, as requested and/or approved by the HCA, within at least 20 business days of request/approval.

Thomson Reuters will correct errors identified that are not the fault of the hospital or the HCA. These errors will be considered "bugs" in the system and will be addressed by Thomson Reuters within 20 business days of request or approval to do so.

2.6.3.2 The Vendor MUST correct any identified errors in the System or the resulting file(s), which are attributable to the Vendor, within at least 10 business days of request.

Thomson Reuters correct any identified errors in the System or the resulting file(s), which are attributable to the Vendor, within at least 10 business days of request. These requests will need to be submitted via the production support portal for proper triage and tracking.

2.6.4 The Vendor SHALL certify that the disaster recovery plan, as approved by HCA, has been tested and proven effective within 60 days of contract award.

Thomson Reuters certifies that a disaster recovery plan will be written, approved by HCA and tested within 60 days of contract award. Testing of the plan will consist of successful restoration of the production environment (both application and data) in an alternate location to ensure that the disaster recovery plan is viable.

2.6.5 The Vendor MUST deliver a final complete data file for the previous calendar year, with all identified data quality issues resolved, by June 1 each year.

Thomson Reuters can deliver a final complete data file for the previous calendar year, with all identified data quality issues resolved, by June 1 each year. To meet this date and to ensure data quality, Thomson Reuters will need to have final data submissions no later than April 30th of each year.

2.6.6 The Vendor SHALL, within 30 days of the end of each contract year, provide to the HCA an annual report of the project, including but not limited to: project successes and barriers; revisions or updates implemented to the System during the project year; and any recommendations for future project and System enhancements.

On the anniversary of the contract each year, Thomson Reuters Healthcare will provide a comprehensive annual report to the HCA. The annual report shall include but not be limited to program revisions, product support, client situations, and recommendations for enhancements. The report shall be compiled and delivered by the Client Manager within 30 days of the end of the contract year. In addition, the report will be reviewed with the HCA during the next conference call or onsite visit to collaborate and identify opportunities to improve the processes and program.

2.6.7 The Vendor SHALL, at least 90 days prior to each contract year, submit to HCA a final and approved annual detailed work plan of key activities and projects to be completed during the year. The work plan must include an implementation timeline for key project activities and identify responsible team members.

Each year a comprehensive work plan will be developed by Thomson Reuters Healthcare including product and project activities, project plans for key projects and assigned project leads. The Client Manager will facilitate the sharing and approval of the plan with the HCA and will ensure that Thomson Reuters Healthcare fulfills each component of the annual plan.

2.6.8 The Vendor SHALL cooperate with the HCA and any subsequent Vendor should the contract, which is the subject of this RFP, be terminated, and to deliver any and all data, documentation, and associated work products to the HCA or its designee within thirty (30) days of receipt of notice of contract termination.

Thomson Reuters Healthcare will deliver data and documentation to the HCA within 30 days of receipt of notice of contract termination.

2.6.9 The Vendor SHALL destroy all data in the System at the end of the contract and/or upon the request of the HCA in accordance with the then current NIST Special Publication 800-88.

In destroying confidential information on electronic or magnetic media, data/information managers must use the following procedures:

- Diskettes must be wiped clean.
- CDs are cut or broken into pieces.
- Tapes or cartridges physically in the possession of Thomson Reuters Healthcare staff must be either certified destroyed, using a tape/cartridge destruction company, or degaussed (wiped clean) by hand using a strong electromagnet.
- Tapes at remote mainframe computer centers must be overwritten with zeros (facilities selected for storing Thomson Reuters data must have special software utilities to accomplish this).
- Hard disks on personal computers must be managed with special utilities for wiping files. Peter Norton's Speed Disk wipes (i.e., writes zeros to) all unused clusters on a hard disk.

These disposal precautions eliminate any possibility of unauthorized and/or accidental access to "destroyed confidential data." In selected Thomson Reuters offices, confidential information on electronic or magnetic media are physically destroyed by a third party information storage and retrieval organization, and destruction of this information is certified. Other offices send their confidential, tape-based data to offices having certified destruction capabilities.

2.6.10 The Vendor SHALL notify the designated HCA Project Manager immediately, by telephone call at 304.558.7000 and e-mail, upon the discovery of breach of security of System data, where the use or disclosure is not provided for by this RFP or contract, of which it becomes aware, if the System data was, or is reasonably believed to have been, acquired by an unauthorized person. If there is a suspected security incident, intrusion or unauthorized use or disclosure of PHI in violation of this RFP or contract, or potential loss of System data affecting this RFP or contract, then notification must occur within 24 hours by the same methods above. The Vendor shall immediately investigate such security incident, breach, or unauthorized use or disclosure of System data. Within 72 hours of the discovery, the Vendor shall notify the HCA Project Manager of: (a) What data elements were involved and the extent of the data involved in the breach; (b) A description of the unauthorized persons known or reasonably believed to have improperly used or disclosed System data; (c) A description of where the System data is believed to have been improperly transmitted, sent, or utilized; (d) .A description of the probable causes of the improper use or disclosure; and (e) Whether any federal or state laws requiring individual notifications of breaches are triggered. HCA will coordinate with the Vendor to determine additional specific actions that will be required of the Vendor for mitigation of the

breach, which may include notification to the individual or other authorities. All associated costs shall be borne by the Vendor. This may include, but not be limited to costs associated with notifying affected individuals.

Thomson Reuters will comply with the notification requirements of HIPAA and HITECH regarding Security Incidents and Breaches of Unsecured Protected Health Information. In the event that notification to one or more Individuals is required by applicable, law, Vendor will reimburse HCA for the direct, actual, and reasonable costs associated with such notification.

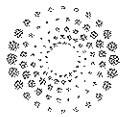
I certify that the proposal submitted meets or exceeds all the mandatory specifications of this RFP. Additionally, I agree to provide any additional documentation deemed necessary by the State of West Virginia to demonstrate compliance with said mandatory specifications.

Thomson Reuters (Healthcare) Inc.
Company:

C. Douglas Shaw
Representative Name and Title

Walter Rosenthal, 704-321-0101
Contact Phone

April 18, 2011
Date



THOMSON REUTERS

ATTACHMENT D:
SAMPLE PROJECT LOG

Project Name		Project Manager	
		Date Updated	

Request Name	Request Number	Origination Date	Assess Date/Plan	Assess Date/Actual	Review Date/Plan	Review Date/Actual	Final Disposition	Final Closure Date