

User and Training Manual for Non-facility-Based ImageTrend Trauma Registry Users



LOUISIANA
EMERGENCY
RESPONSE
NETWORK

Powered by



IMAGETREND

***Louisiana State Trauma Registry Bridge User and Instructional Training Manual for
Non-facility-Based ImageTrend Trauma Registry Users***

This manual will explain:

HOW TO ENTER DATA INTO THE WEB-BASED STATEWIDE TRAUMA REGISTRY APPLICATION



Right Place. Right Time. Right Care.

ABOUT THE LOUISIANA EMERGENCY RESPONSE NETWORK

Louisiana Emergency Response Network's (LERN) vision and mission statements reflect the intent of our enabling legislation and the Board's commitment to building a comprehensive statewide trauma system that meets national model standards and requirements established by the American College of Surgeons Committee on Trauma (ACS COT).

Our Vision

To build and oversee a comprehensive trauma system for the State of Louisiana.

Our Mission

To defend the public health, safety, and welfare by protecting the people of the state of Louisiana from unnecessary deaths and morbidity due to trauma and time-sensitive illnesses.

	Introduction to the Louisiana State Bridge Web Application	7
	Submission Guidelines	8
	LERN State Registry Trauma Patient Inclusion Criteria	9
	Purpose of the State Trauma Registry	10
	System Requirements	10
	User Assistance Availability	13
	Computer Security Awareness Requirements for LSB Application Users.....	14
	ImageTrend Specific Security Information	15
	Application Securities.....	15
	Secure User Log-in	15
	Password Encryption	15
	Password Requirements	15
	Log-in Expirations	15
	Page Access Checking	15
	SSL Server Certificate	15
	User Status	16
	User Securities	16
	View Patient Identifiable Information	16
	Staff Runs Restriction.....	16
	Access to Run Report	16
	Export Security	16
	Permissions Administration.....	16
	Manage Users and Groups	16
	Permissions and Rights	16
	Procedural Securities	17
	Personnel	17
	Hosting Environment.....	17
	Auditing	18
	System Administrator.....	19
	Facility Administrator	20
	Employee Access.....	21
	User Logon Request Forms	22

Table of Contents

- Password Regulations and Set Up.....23**
 - HIPPA Password Regulations23
 - Password Set Up23
- Security Measures Related to Application System Backup.....23**
 - Code Backups24
 - Database Backups24
 - Restore Procedures24
- Louisiana State Bridge Data Elements25**
 - Demographic Information.....25
 - Injury Information.....25
 - Pre-Hospital Information26
 - Emergency Department Information26
 - Hospital Procedure Information.....27
 - Diagnoses Information27
 - Injury Severity Information.....27
 - Outcome Information28
 - Financial Information28
 - Quality Assurance Information28
- Data Submission Process28**

- Appendix A: ACS Comorbid Definitions**
- Appendix B: ACS Complication Definitions**
- Appendix C: Business Associate Agreement**
- Appendix D: Participation Agreement**
- Appendix E: User Logon Request**

- References**

INTRODUCTION TO THE LOUISIANA STATE BRIDGE WEB APPLICATION

The Louisiana State Bridge (LSB) is an automated web-based system called ImageTrend Patient Registry and it is used to collect and analyze information on the incident, severity, cause, and outcomes of trauma patients to evaluate factors and the health system's response. The goal of the ImageTrend Patient Registry is to gather information more efficiently in order to better analyze treatment methods to reduce morbidity and mortality.

The ImageTrend Patient Registry is a database-driven web application based on Microsoft SQL Server allowing for secure access from anywhere at any time to authorized persons. Information gained through research has significantly contributed to evidence-based medicine which has helped providers improve procedures and outcomes. The management process of trauma is complex, involving both the pre-hospital and in-hospital phases and many medical disciplines.

The Facility-Based ImageTrend Patient Registry user will benefit from the quality assurance tools provided. Quality patient care requires involvement of all levels of the system in monitoring the relationship and process of care. This system incorporates quality assurance/quality improvement tools to support peer review monitoring within a secure environment. This discretion promotes confidence, understanding, and patience for change. This confidential information is ONLY seen and accessible by the individual facility and not by LERN or other LSB employees.

SUBMISSION GUIDELINES

Hospitals that have been approved and given access to the “UPLOAD” function for the LSB should submit on a quarterly basis at a minimum. The time between a trauma patient’s discharge from the reporting facility until entry into the LSB shall NOT be longer than six(6) months. An example of a yearly reporting schedule is provided below in Table 1.

Table 1

Calendar Year Quarter	Submission Deadline
January - March Admissions	September 30
April - June Admission	December 31
July - September Admission	March 31
October - December Admission	June 30

LERN STATE REGISTRY TRAUMA PATIENT INCLUSION CRITERIA

Definition

To ensure consistent data collection across the state into the LERN State Registry, a trauma patient is defined as a patient sustaining a traumatic injury and meeting the following criteria:

- **At least one** of the following injury diagnostic codes defined in the *International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM): 800–959.9*

Excluding the following isolated injuries:

- 905–909.9 (late effects of injury)
 - 910–924.9 (superficial injuries, including blisters, contusions, abrasions, and insect bites)
 - 930–939.9 (foreign bodies)
 - 830, 832, and 910 (Drowning)
 - 953 (Hanging without Injury)
-
- **AND MUST INCLUDE ONE OF THE FOLLOWING IN ADDITION TO (ICD-9-CM): 800–959.9:**
 - Hospital admission as defined by your trauma registry inclusion criteria; OR
 - Patient transfer via EMS transport (including air ambulance) from one hospital to another hospital; OR
 - Death resulting from the traumatic injury (independent of hospital admission or hospital transfer status); OR
 - DOA's

*LERN adopts and supports the American College of Surgeon's National Trauma Data Standards (ACS NTDS)

PURPOSE OF THE STATE TRAUMA REGISTRY

The purpose of the state trauma registry is to mine the data – registry data can be coded, compiled, analyzed, and reported. A trauma registry is an important management tool that is used for performance management and improvement, research, and injury prevention.

Individual trauma centers that are verified by the American College of Surgeons, Committee on Trauma (ACS COT) must develop and maintain their own trauma registries and submit their data to the National Trauma Data Bank (NTDB). In Louisiana, hospitals must successfully complete the ACS COT verification process as a condition of state certification as a trauma center.

Louisiana's statewide trauma registry was authorized by the Louisiana Legislature in 2010. The legislation charges the LERN Board to “establish and maintain a statewide trauma registry to collect and analyze data on the incidence, severity, and causes of trauma, including traumatic brain injury. The registry shall be used to improve the availability and delivery of pre-hospital or out-of-hospital care and hospital trauma care services.”

SYSTEM REQUIREMENTS

The following system specifications and recommendations are for all EDS web-based solutions.

Network Requirements

Networking: Any TCP/IP network may be used, including wired and wireless technologies. An Internet connection to the server may be required for remote access and remote data posting.

Operating Systems Supported

Windows 2003 Server with IIS version 6.0 (minimum)

Windows 2008 Server R2 with IIS version 7.5 (recommended)

**Windows 2008 Server RTM not supported

Web Server Hardware (not required if hosted by ImageTrend)

Required:

1 GHz Processor or better

3 GB RAM

20 GB Available Hard Disk Space

Recommended:

Dual 2 GHz Processors or better

4 GB RAM or more

50 GB Available Hard Disk Space

RAID 5 SCSI Hard Drives

ImageTrend Hosted:

Quad 2 GHz Processors

8 GB RAM

100 GB Available Hard Disk Space

RAID 5 SCSI Hard Drives

System Requirements

Server Database (not required if hosted by ImageTrend)

Microsoft SQL Server 2005 (minimum)

Microsoft SQL Server 2008 R2 (recommended)

Required:

Dual 2 GHz Processors or better

4 GB RAM or more

50 GB Available Hard Disk Space

RAID 5 SCSI Hard Drives

Additional Software Required (not required if hosted by ImageTrend)

Adobe ColdFusion 8 Standard or Enterprise Server (minimum)

Adobe ColdFusion 9 Standard (smaller services) or Enterprise Server (50,000+ annual incidents)
(recommended)

Microsoft .NET Framework 3.5 SP1

Microsoft Tablet PC SDK

Internet Browser Requirements for End Users

Microsoft Internet Explorer 6.0 and above

Other browsers that support Mozilla 4.0 and above

Adobe Flash 8 or higher (recommended)

Adobe Reader 8 or higher

Microsoft Silverlight 4.0

USER ASSISTANCE AVAILABILITY

LERN and its staff will serve as Louisiana's system administrator. The actual online web application contains a User's Guide, which can be accessed by clicking on the "HELP" button in the upper right corner. This will bring the user to the ImageTrend University. Here users can find materials for administrators, users, and trainers to use including:

- Educational Videos
- Downloadable Manuals
- Downloadable Quick Guides
- Downloadable Workbooks
- Education-oriented PowerPoint Presentations

Common symbols, buttons, and shortcuts are available in the downloadable manual, as well as clear directions on log on/log off and password changes.

Under the ImageTrend contract with LERN, facilities may contact the ImageTrend support center by calling 1-888-730-3255 or contacting the Help Desk at www.support.imagetrend.com.

At anytime, the individual facility may also contact LERN for questions. Visit the LERN website at www.LERN.la.gov and click on "Contact Us" on the left side under the "ABOUT US" heading. This link contains contact information and an email submission form for obtaining help related to the web-based LSB.

Help Desk: 225.756.3440

Help Desk Fax Number: 225.756.3429

COMPUTER SECURITY AWARENESS REQUIREMENTS FOR LSB APPLICATION USERS

- A. All application users are required to read the computer security awareness best practices policies (see below) and agree to abide by them when signing the LERN LSB Application User Access and Confidentiality Agreement.
- B. All application-users must be aware that:
 - 1. Application users are not permitted to share passwords except for web page saver passwords and then only when management documents, in writing, that it is necessary to share.
 - 2. Application users must locate their desktops/laptops in a direction that does not permit unauthorized individuals to view client information.
 - 3. Application users must use password-protected desktops/laptops when accessing personal health information (PHI) of clients.
 - 4. Application users must ensure that virus protection is implemented on all desktops/laptops.
 - 5. Application users must log out of the LERN LSB Trauma Application when their terminal or computer is going to be left idle and unattended for a significant period of time.

IMAGETREND SPECIFIC SECURITY INFORMATION

ImageTrend applications meet or exceed state and federal data privacy requirements and the HIPAA guidelines. Secure log-ins are an industry standard process and are part of the HIPAA guidelines for data protection. These are implemented throughout the application with the use of the hierarchical security access features of the ImageTrend security module, which provides the environment for controlling the access necessary to provide data protection. The application also provides for security breach notifications and audit trails.

Application Securities

Secure User Log-in

The application adheres to business standard practices for security to ensure only authorized access to the system.

Password Encryption

Hash function implementation

For sessions failing to successfully log-in after three tries

Check access log for sequential unsuccessful log-ins

Set session log-out variable

Password Requirements

Length and complexity enforcement

Validate password for case, length (8 characters), and composition

Log-in Expirations

Validate for expired log-ins

Force password changes on expired log-ins and restrict site access until new, valid password is created

Page Access Checking

Page access checking to make sure user has properly logged in and is not entering the site via an external link

SSL Server Certificate

128-bit encryption security certificate

User Status

Users can be inactivated to restrict access to the site but still maintain data integrity.

User Securities

View Patient Identifiable Information

On each user record permissions can be set to view or not view patient identifiable information.

Staff Runs Restriction

Agency staff can be restricted to only see the runs that they have entered or were one of the crew members on that run.

Access to Run Report

The ability to view, add, change, or delete runs is also controlled on an individual basis.

Export Security

Exports are maintained and controlled by system administrators.

Permissions Administration

Manage Users and Groups

The application employs a hierarchical-based password administration as a series of group policies to control application entry and level of access within the application. With the system administrator being the highest level of security, groups can be created below that to encompass all other group needs, which may include:

- Director – Access to view all runs within their service.
- Multiple Service Administrators – User access and administration to multiple services.
- Hospitals – Access to all runs delivered to their facility.

Permissions and Rights

Permission and rights are governed by the ability of what the user can see and do.

At the global level, rights are typically based on the following criteria:

- County
- City
- Service
- Hospital

On the service level, there are typically two levels:

- Administrator
- User

Service administrators can control and edit all the functions within their own service.

Procedural Securities

Personnel

All ImageTrend employees are subjected to background checks and are required to attend and successfully complete HIPAA training. The ImageTrend Project Management System gives a facility to track any HIPAA Security Incidents or Information Disclosure Incidents for reporting purposes.

Only those certified ImageTrend employees that work with either hardware or software related to the specified application or project will access the data center and interact with the servers. These employees have worked with our hardware as part of our IT support staff or are part of the implementation team as software developers. Authorization is granted from the management.

Hosting Environment

ImageTrend's web applications are hosted in their state-of-the-art 4,500 square foot data center. Built in a vault with 21" concrete walls, their facilities offer the maximum level of security and stability for hosting needs. The data center features triple redundant, high-speed internet connections over fiber optic trunk lines. Only authorized personnel have access to the data floor. The data center is monitored electronically, as well as a log book is kept to monitor and record individuals accessing the server room.

ImageTrend's production network consists of application/web and database servers. The databases are on a private network with access control managed through the firewall permitting only authorized administrators or approved VPN access.

Applications are monitored for availability and performance from multiple locations to ensure an accurate measure of current system health. Slow application pages and long running database queries are logged for analysis by server administrators and development staff. Serious errors and performance degradation trigger email alerts which are sent to support staff and cell phone alerts to ImageTrend's 24/7 X-Team support staff. Their X-Team support employees have VPN access to our production servers, to ensure accessibility and security, when accessing the servers from outside of the network.

Auditing

The Patient Registry’s audit trail tracks user information when accessing the secure portion of the application. The IP address, User ID, date/time, browser information, and information on each file accessed is all tracked within a separate database, which is kept for a period of time for reporting purpose and audit trails.

Any security breaches are logged within the Project Management system for any HIPAA disclosures related to security breaches or information disclosers. If a security breach happens, the security module currently sends an email to their Director of Development and the Security Officer, who in turn notifies the designated customer contact.

This setup can be controlled at the Facility Administrator level. When the “Track all changes after completed” is active a “Mark as Complete” button will appear on the top of the form. Once a registrar has completed entering the information for an incident they can click this button to lock the form and enable field level audit tracking. Audit information is displayed on the “History” record that is associated with each incident. This information can be accessed from the Incident History page or directly from the incident form.

Audit Events Setup			
Select the events to be audited and the reason required message that will be prompted when the event is triggered. The reason required message will only be prompted if "Is Reason Required?" column is set to "Yes".			
Event	Status	Is Reason Required?	Reason Required Message
Generate PDF Reports:	Active ?	<input checked="" type="radio"/> Yes <input type="radio"/> No	Please Explain the Reason for Generating a PDF of this Patient Registry Incident.
View Existing Online Report:	<input checked="" type="radio"/> Active <input type="radio"/> Inactive	<input checked="" type="radio"/> Yes <input type="radio"/> No	Please Explain the Reason for accessing this Patient Registry Incident.
Track All Changes After Completed:	<input checked="" type="radio"/> Active <input type="radio"/> Inactive		
Additional Audit Workflow Configurations			
Mark Runs as Completed Upon Locking Them	<input checked="" type="radio"/> Yes <input type="radio"/> No ?		
Update Status Upon Marking Run As Completed	<input checked="" type="radio"/> Yes <input type="radio"/> No ?		
Select Status To Update To	Requires Review		

SYSTEM ADMINISTRATOR

LERN, or its representative, will serve in the capacity of system administrator. In this role all facility employees will be enrolled in the LSB upon completion of Access/Security User Logon Request Forms. A facility profile including hospital pertinent information will be completed and a facility administrator will be named. The LERN system administrator will maintain the highest level of access into the LSB as allowed by ImageTrend and will be able to review data in compliance with the Data Users Agreement for all facilities.

FACILITY ADMINISTRATOR

A facility administrator is the lead contact at an individual hospital. This position will typically be the trauma program manager or trauma administrator. The facility administrator will then be responsible for enrolling their own local staff for access into the LSB. The facility administrator will be able to grant different levels of access to these staff members depending on their job titles and responsibilities. The facility administrator will be allowed full access to their individual facility data, but will be unable to view any other facility information in the LSB.

EMPLOYEE ACCESS

Employee access is granted to an employee or staff member at an individual hospital by the facility administrator. This access will be limited related to their job title and responsibilities, and will be for their individual facility data only. The facility administrator has the right/authority to limit access or terminate access as established by their facility. The LERN system administrator will not have the authority to set up facility employees. It will be the responsibility of the facility administrator.

USER LOGON REQUEST FORMS

Please see Appendix C for Access and Confidentiality of Records agreement and User Logon Request Forms. These forms are to be completed by the facility administrator to gain access and privileges to the LSB and returned to the LERN system administrator. All employee requests will be completed and returned to the facility administrator.

NOTE: Each user must complete both forms.

PASSWORD REGULATIONS AND SET UP

HIPPA Password Regulations

The Health Insurance Portability and Accountability Act (HIPAA) is a comprehensive piece of legislation passed by the United States Congress. In 2003, a section was added known as the Security Rule, which establishes national standards for protecting the privacy of individuals who partake in electronic healthcare transactions. The HIPAA Security Rule also includes regulations for password management by the healthcare provider. The Act gives database administrators flexibility in establishing password regulations, but it does require them to take certain basic steps.

Training

The act requires that administrators of healthcare databases train their employees in password management and how to create a strong password. The Act does not make specific requirements on the length of the password that employees create.

Initial Passwords

When healthcare employees are originally given access to a password, the password must be randomly generated.

Changing Passwords

Employees must change their passwords every 90 to 120 days, and they also must change their passwords after they initially log-in with the randomly generated password. Database administrators must clearly define to users the procedure for resetting passwords.

Oversight

Administrators must create a system that logs computer usage and automatically flags attempts to access healthcare databases. Additionally, even after logging in with their passwords, employees shall have no expectation of privacy when using a healthcare database.

Password Set Up

Time Suspend:	120	Number of days without login to the application before the user's account is suspended
Password Attempts:	4	Number of attempts a user can attempt to login before their account is placed on temporary suspend
Numeric Characters:	1	Number of numeric characters required in the user's password
Special Characters:	0	Number of special characters required in the user's password
Change Password Time:	0	Time in hours that a user cannot change their password after last change
Account Password:	10	Number of past passwords stored in the log table for a user
Password Compare:	10	Number of passwords in the log table to be compared with the newest password to see if the same password is being used
Password Length:	7	Minimum number of characters in the password

SECURITY MEASURES RELATED TO APPLICATION SYSTEM BACKUP

Code Backups

Application code is backed up daily; at least a daily backup exists for all applications hosted in ImageTrend's production environment and is included in hosting costs. These backups are retained for particular customers as needed on a weekly, monthly, quarterly, or annual basis as agreed to by contract. Daily backups are retained for longer as unallocated storage permits but not guaranteed to be available beyond the previous calendar day. All backup routines execute after peak hours to minimize the effect on users, typically between 11 PM and 4 AM Central Time. Backups are stored on hard disks, with a copy being taken offsite on a monthly basis, and tape cassettes which are rotated on a daily basis. Data synchronization is run across a secure network connection back to ImageTrend's offices in Lakeville, MN, on an irregular basis for both application code and database files.

Database Backups

Database files are backed up daily; at least a daily backup exists for any database hosted in ImageTrend's production environment and is included in hosting costs. Daily backups are retained for several days as unallocated storage permits but not guaranteed to be available beyond three previous calendar days. Database backups are retained for particular customers as needed on a weekly, monthly, quarterly, or annual basis as agreed to by contract. All backup routines execute after peak hours to minimize the effect on users, typically between 11 PM and 4 AM Central Time. Backups are stored on hard disks, with a copy being taken offsite on a monthly basis, and tape cassettes which are rotated on a daily basis. Data synchronization is run across a secure network connection back to ImageTrend's offices in Lakeville, MN, on an irregular basis for both application code and database files.

Restore Procedures

Daily backup files are stored uncompressed to facilitate quick recovery of one or more files as needed. Archive copies are compressed to conserve disk space. All database files are compressed to conserve disk space and must be uncompressed and reattached for restoration. When restoring a file, the newer file, if it exists, is renamed and kept before replacing with the backup version. When restoring an entire database file, the copy being replaced is itself backed up before being modified. When restoring part of a database file, the current file is first backed up and the backup database is mounted with a different name, then the needed tables are restored and the backup file is detached. If restoring a complete backup of application code over a corrupted install, a copy of the bad files is kept to maintain any new user-added files since the backup was created.

LOUISIANA STATE BRIDGE DATA ELEMENTS

LERN, in conjunction with state and national stakeholders, has adopted the National Trauma Data Standards (NTDS) as its LSB data elements. The NTDS is a dataset defining standardized data elements collected by the American College of Surgeons within the National Trauma Data Bank (NTDB). This standardized dataset includes only core variables that would prove useful if aggregated on a state level.

Each individual hospital trauma registry will likely collect additional variables important to patient care. However, the LSB data elements should be collected by all hospitals.

****FOR FULL DEFINITIONS PLEASE GO TO <http://www.ntdsdictionary.org/dataElements/datasetDictionary.html> and download a copy of the National Trauma Data Standards for the current year of admission**

Demographic Information

- Patient's Home Zip Code
- Patient's Home Country
- Patient's Home State
- Patient's Home County
- Patient's Home City
- Alternate Home Residence
- Date Of Birth
- Age
- Age Units
- Race
- Ethnicity
- Sex

Injury Information

- Injury Incident Date
- Injury Incident Time
- Work-Related
- Patient's Occupational Industry
- Patient's Occupation
- Primary E-Code
- Location E-Code
- Additional E-Code
- Incident Location Zip Code

Incident Country
Incident State
Incident County
Incident City
Protective Devices
Child Specific Restraint
Airbag Deployment

Pre-Hospital Information

EMS Dispatch Date
EMS Dispatch Time
EMS Unit Arrival Date At Scene or Transferring Facility
EMS Unit Arrival Time At Scene or Transferring Facility
EMS Unit Departure Date From Scene or Transferring Facility
EMS Unit Departure Time From Scene or Transferring Facility
Transport Mode
Other Transport Mode
Initial Field Systolic Blood Pressure
Initial Field Pulse Rate
Initial Field Respiratory Rate
Initial Field Oxygen Saturation
Initial Field GCS - Eye
Initial Field GCS - Verbal
Initial Field GCS - Motor
Initial Field GCS - Total
Inter-Facility Transfer

Emergency Department Information

ED/Hospital Arrival Date
ED/Hospital Arrival Time
Initial ED/Hospital Systolic Blood Pressure
Initial ED/Hospital Pulse Rate
Initial ED/Hospital Temperature
Initial ED/Hospital Respiratory Rate
Initial ED/Hospital Respiratory Assistance

Initial ED/Hospital Oxygen Saturation
Initial ED/Hospital Supplemental Oxygen
Initial ED/Hospital GCS - Eye
Initial ED/Hospital GCS - Verbal
Initial ED/Hospital GCS - Motor
Initial ED/Hospital GCS - Total
Initial ED/Hospital GCS Assessment Qualifiers
Alcohol Use Indicator
Drug Use Indicator
ED Discharge Disposition
Signs Of Life
ED Discharge Date
ED Discharge Time

Hospital Procedure Information

Hospital Procedures
Hospital Procedure Start Date
Hospital Procedure Start Time

Diagnoses Information

Co-Morbid Conditions
Injury Diagnoses

Injury Severity Information

AIS Predot Code
AIS Severity
ISS Body Region
AIS Version
Locally Calculated ISS

Outcome Information

Total ICU Length of Stay
Total Ventilator Days
Hospital Discharge Date
Hospital Discharge Time
Hospital Discharge Disposition

Financial Information

Primary Method of Payment

Quality Assurance Information

Hospital Complications

****FOR FULL DEFINITIONS PLEASE GO TO <http://www.ntsdictionary.org/dataElements/datasetDictionary.html>**
and download a copy of the National Trauma Data Standards for the current year of admission

DATA SUBMISSION PROCESS

The System Administrator sets up non Image Trend users under the facility profile page. The System Administrator will replace AHA number with facilities NTDB Facility number. This number MUST be obtained from the individual hospital as ACS will not give this information out.

1. Each non Image Trend Hospital will run their NTDB export from their individual software
2. Correct Level 1 and Level 2 errors – same as NTDB
3. Rerun NTDB export
4. Go to State Image Trend Site
5. From the drop down, select the facility to which the import should insert the data
6. Use the BROWSE button to navigate to the import file
7. After you have verified that the destination and file paths are correct, click IMPORT button to start the file transfer. Depending on the number of incidents, this step may take a moment. Be patient and when it is complete you will be notified.
8. The system will automatically run the data importing, processing, and validation routines. Changes will be reflected in the system within 24 hours.

APPENDIX A: ACS COMORBID DEFINITIONS

Alcoholism: To be determined based upon the brief screening tool used at your institution.

ICD-9 Code Range: 291.0-291.3, 291.5, 291.81, 291.89, 291.9, 303.00-303.93, 305.00-305.03, V11.3

Ascites: The presence of fluid accumulation (other than blood) in the peritoneal cavity noted on physical examination, abdominal ultrasound, or abdominal CT/MRI.

ICD-9 Code Range: 789.5 (pre 2008), 789.59

Bleeding disorder: Any condition that places the patient at risk for excessive bleeding due to a deficiency of blood clotting elements (e.g., vitamin K deficiency, hemophilia, thrombocytopenia, chronic anticoagulation therapy with Coumadin, Plavix, or similar medications). Do not include the patient on chronic aspirin therapy.

ICD-9 Code Range: for example - 269.0, 286.0, 286.1, 286.4, 287.1, 287.3 (pre 2006)-287.5, 287.9

Chemotherapy for cancer within 30 days: A patient who had any chemotherapy treatment for cancer in the 30 days prior to admission. Chemotherapy may include, but is not restricted to, oral and parenteral treatment with chemotherapeutic agents for malignancies such as colon, breast, lung, head and neck, and gastrointestinal solid tumors as well as lymphatic and hematopoietic malignancies such as lymphoma, leukemia, and multiple myeloma.

ICD-9 Code Range: V58.1 (Pre-2006), V58.11

Cirrhosis: Documentation in the medical record of cirrhosis, which might also be referred to as end stage liver disease. If there is documentation of prior or present esophageal or gastric varices, portal hypertension, previous hepatic encephalopathy, or ascites with notation of liver disease, then cirrhosis should be considered present. Cirrhosis should also be considered present if documented by diagnostic imaging studies or at laparotomy/laparoscopy.

Congenital Anomalies: Defined as documentation of a cardiac, pulmonary, body wall, CNS/spinal, GI, renal, orthopedic, or metabolic congenital anomaly.

ICD-9 Code Range: 740.0 through 759.9, 758.3 (pre 2005), 752.8 (pre 2004)

Appendix A: ACS Comorbid Definitions

Congestive heart failure: Defined as the inability of the heart to pump a sufficient quantity of blood to meet the metabolic needs of the body or can do so only at an increased ventricular filling pressure. To be included, this condition must be noted in the medical record as CHF, congestive heart failure, or pulmonary edema with onset or increasing symptoms within 30 days prior to injury. Common manifestations are:

1. Abnormal limitation in exercise tolerance due to dyspnea or fatigue
2. Orthopnea (dyspnea on lying supine)
3. Paroxysmal nocturnal dyspnea (awakening from sleep with dyspnea)
4. Increased jugular venous pressure
5. Pulmonary rales on physical examination
6. Cardiomegaly
7. Pulmonary vascular engorgement

ICD-9 Code Range: 398.91, 402.01, 402.11, 402.91, 404.11, 404.13, 404.91, 404.93, 425.0-425.9, 428.0

Current smoker: A patient who has smoked cigarettes in the year prior to admission. Do not include patients who smoke cigars or pipes or use chewing tobacco.

Currently requiring or on dialysis: Acute or chronic renal failure prior to injury that was requiring periodic peritoneal dialysis, hemodialysis, hemofiltration, or hemodiafiltration.

ICD-9 Code Range: V45.1

CVA/residual neurological deficit: A history prior to injury of a cerebrovascular accident (embolic, thrombotic, or hemorrhagic) with persistent residual motor sensory or cognitive dysfunction. (E.g., hemiplegia, hemiparesis, aphasia, sensory deficit, impaired memory).

ICD-9 Code Range: 430-438.9, 436

Diabetes mellitus: Diabetes mellitus prior to injury that required exogenous parenteral insulin or an oral hypoglycemic agent.

ICD-9 Code Range: 250.00-250.33, 250.40-250.73

Disseminated cancer: Patients who have cancer that:

1. Has spread to one site or more sites in addition to the primary site AND
2. In whom the presence of multiple metastases indicates the cancer is widespread, fulminant, or near terminal. Other terms describing disseminated cancer include “diffuse,” “widely metastatic,” “widespread,” or “carcinomatosis.” Common sites of metastases include major organs (e.g., brain, lung, liver, meninges, abdomen, peritoneum, pleura, and bone).

ICD-9 Code Range: 196.0-199.1

Do Not Resuscitate (DNR) status: The patient had a Do Not Resuscitate (DNR) document or similar advance directive recorded prior to injury.

Esophageal varices: Esophageal varices are engorged collateral veins in the esophagus which bypass a scarred liver to carry portal blood to the superior vena cava. A sustained increase in portal pressure results in esophageal varices which are most frequently demonstrated by direct visualization at esophagoscopy.

ICD-9 Code Range: 456.0-456.20

Functionally dependent health status: Pre-injury functional status may be represented by the ability of the patient to complete activities of daily living (ADL) including: bathing, feeding, dressing, toileting, and walking. This item is marked YES if the patient, prior to injury, was partially dependent or completely dependent upon equipment, devices, or another person to complete some or all activities of daily living. Formal definitions of dependency are listed below:

1. Partially dependent: The patient requires the use of equipment or devices coupled with assistance from another person for some activities of daily living. Any patient coming from a nursing home setting who is not totally dependent would fall into this category, as would any patient who requires kidney dialysis or home ventilator support that requires chronic oxygen therapy yet maintains some independent functions.
2. Totally dependent: The patient cannot perform any activities of daily living for himself/herself. This would include a patient who is totally dependent upon nursing care, or a dependent nursing home patient. All patients with psychiatric illnesses should be evaluated for their ability to function with or without assistance with ADLs just as the non-psychiatric patient.

History of angina within past 1 month: Pain or discomfort between the diaphragm and the mandible resulting from myocardial ischemia. Typically angina is a dull, diffuse (fist sized or larger) sub sternal chest discomfort precipitated by exertion or emotion and relieved by rest or nitroglycerine. Radiation often occurs to the arms and shoulders and occasionally to the neck, jaw (mandible, not maxilla), or interscapular region. For patients on anti-anginal medications, enter yes only if the patient has had angina within one month prior to admission.

ICD-9 Code Range: V12.50

History of Myocardial Infarction within past 6 months: The history of a non-Q wave, or a Q wave infarction in the six months prior to injury as diagnosed in the patient's medical record.

ICD-9 Code Range: 412

History of revascularization/amputation for PVD (History of revascularization/amputation for peripheral vascular disease): Any type of angioplasty or revascularization procedure for atherosclerotic PVD (e.g., aorta-femoral, femoral-femoral, femoral-popliteal) or a patient who has had any type of amputation procedure for PVD (e.g., toe amputations, transmetatarsal amputations, below the knee or above the knee amputations). Patients who have had amputation for trauma or resection of abdominal aortic aneurysms would not be included.

Hypertension requiring medication: History of a persistent elevation of systolic blood pressure >140 mm Hg and a diastolic blood pressure >90 mm Hg requiring an antihypertensive treatment (e.g., diuretics, beta blockers, ACE inhibitors, calcium channel blockers).

ICD-9 Code Range: 401.0-401.9, 402.00, 402.10, 402.90, 403.00, 403.10, 403.90, 403.91, 404.00, 404.10, 404.90, 405.01-405.99

Impaired sensorium: Patients should be noted to have an impaired sensorium if they had mental status changes, and/or delirium in the context of a current illness prior to injury. Patients with chronic or longstanding mental status changes secondary to chronic mental illness (e.g., schizophrenia) or chronic dementing illnesses (e.g., multi-infarct dementia, senile dementia of the Alzheimer's type) should also be included. Mental retardation would qualify as impaired sensorium. For pediatric populations, patients with documented behavior disturbances, attention disorders, delayed learning, or delayed development should be included.

ICD-9 Code Range: 290-290.9, 299.00, 312.9, 314.00, 314.01, 315.2, 315.31, 315.39, 315.5, 315.8, 315.9, 317, 318.0, 318.1, 319, 331.1 (pre 2004), 331.11-331.2, V11.0, V11.1, V11.2, V11.8

Prematurity: Defined as documentation of premature birth, a history of bronchopulmonary dysplasia, ventilator support for greater than 7 days after birth, or the diagnosis of cerebral palsy. Premature birth is defined as infants delivered before 37 weeks from the first day of the last menstrual period.

ICD-9 Code Range: 343.0 through 343.9, 765.00 through 765.19, 770.7

Obesity: Defined as a Body Mass Index of 40 or greater.

ICD-9 Code Range: 278.00-278.01

Respiratory Disease: Defined as severe chronic lung disease, chronic asthma; cystic fibrosis; or COPD (such as emphysema and /or chronic bronchitis) resulting in any one or more of the following:

1. Functional disability from COPD (e.g., dyspnea, inability to perform ADLs)
2. Hospitalization in the past for treatment of COPD
3. Requires chronic bronchodilator therapy with oral or inhaled agents
4. An FEV1 of <75% of predicted on pulmonary function testing

Do not include patients whose only pulmonary disease is acute asthma. Do not include patients with diffuse interstitial fibrosis or sarcoidosis.

ICD-9 Code Range: 277.00, 490 through 493.92

Steroid use: Patients that required the regular administration of oral or parenteral corticosteroid medications (e.g., Prednisone, Decadron) in the 30 days prior to injury for a chronic medical condition (e.g., COPD, asthma, rheumatologic disease, rheumatoid arthritis, inflammatory bowel disease). Do not include topical corticosteroids applied to the skin or corticosteroids administered by inhalation or rectally.

APPENDIX B: ACS COMPLICATION DEFINITIONS

Acute renal failure: A patient who did not require dialysis prior to injury, who has worsening renal dysfunction after injury requiring hemodialysis, ultrafiltration, or peritoneal dialysis. If the patient refuses treatment (e.g., dialysis), the condition is still considered present.

ICD-9 Code Range: 403.11, 403.91, 404.12, 404.92, 582.0-582.9, 583.0-583.7, 584.5-584.9 585 (pre 2006), 586, 588.0, 958.5

ARDS: Adult (Acute) Respiratory Distress Syndrome: ARDS occurs in conjunction with catastrophic medical conditions, such as pneumonia, shock, sepsis (or severe infection throughout the body, sometimes also referred to as systemic infection, and may include or also be called a blood or blood-borne infection), and trauma. It is a form of sudden and often severe lung failure characterized by $\text{PaO}_2/\text{FiO}_2 \leq 200$, decreased compliance, and diffused bilateral pulmonary infiltrates without associated clinical evidence of CHF. The process must persist beyond 36 hours and require mechanical ventilation.

ICD-9 Code Range: ICD-9 codes 518.5 and 518.82 cross-referenced with procedural codes for ventilatory support (96.70, 96.71, and 96.72).

Cardiac arrest with CPR: The absence of a cardiac rhythm or presence of chaotic cardiac rhythm that results in loss of consciousness requiring the initiation of any component of basic and/or advanced cardiac life support. This excludes patients that arrive at the hospital in full arrest.

ICD-9 Code Range: 427.5

Catheter-Related Blood Stream Infection: Defined as an organism cultured from the bloodstream that is not related to an infection at another site and is attributed to a central venous catheter. Patients must have evidence of infection including at least one of:

1. Fever >38 C
2. WBC $> 100,000$ or < 3000 per cubic millimeter
3. Hypotension (SBP <90) or $>25\%$ drop in systolic blood pressure

Patients must also have evidence of bacteremia believed to be related to the central venous catheter:

1. A recognized pathogen from one or more blood cultures and an organism cultured is not related to an infection at another site
2. If it is a common skin contaminant (e.g. coagulase negative staphylococci, diphtheroids, propionibacterium, strep viridans), the organism must be cultured from at least two cultures within a 48 hour period

Appendix B: ACS Complication Definitions

3. Erythema at the entry site of the central line or positive cultures on the tip of the line in the absence of positive blood cultures is not considered a CRBSI

ICD-9 Code Range: 993.1, 790.7, 038.0, 038.1, 038.10, 038.11, 038.19, 038.3, 038.4-038.43, 038.49, 038.8, 038.9

Decubitus ulcer: Defined as a “pressure sore” resulting from pressure exerted on the skin, soft tissue, muscle, or bone by the weight of an individual against a surface beneath. Individuals unable to avoid long periods of uninterrupted pressure over bony prominences are at increased risk for the development of necrosis and ulceration.

ICD-9 Code Range: 707.0 (pre 2005), 707.00 through 707.09

Deep surgical site infection: Defined as an infection that occurs within 30 days after an operation and the infection appears to be related to the operation. The infection should involve deep soft tissues (e.g., fascial and muscle layers) at the site of incision and at least one of the following:

1. Purulent drainage from the deep incision but not from the organ/space component of the surgical site.
2. A deep incision spontaneously dehisces or is deliberately opened by a surgeon when the patient has at least one of the following signs or symptoms: fever (> 38 C), localized pain, or tenderness, unless site is culture-negative.
3. An abscess or other evidence of infection involving the deep incision is found on direct examination, during reoperation, or by histopathologic or radiologic examination.
4. Diagnosis of a deep incision infection by a surgeon or attending physician.

Note: Report infections that involve both superficial and deep incision sites as deep surgical site infections. If wound spontaneously opens as a result of infection, code for Deep Surgical Site Infection and Wound Disruption.

ICD9 Code Range: 998.59

Drug or alcohol withdrawal syndrome: Defined as a set of symptoms that may occur when a person who has been drinking too much alcohol or habitually using certain drugs suddenly stops. Symptoms may include: activation syndrome (i.e., tremulousness, agitation, rapid heartbeat, and high blood pressure), seizures, hallucinations, or delirium tremens.

ICD-9 Code Range: 291.0, 291.3, 291.81, 292.0

Deep Vein Thrombosis (DVT)/thrombophlebitis: The formation, development, or existence of a blood clot or thrombus within the vascular system, which may be coupled with inflammation. This diagnosis may be confirmed by a venogram, ultrasound, or CT. The patient must be treated with anticoagulation therapy and/or placement of a vena cava filter or clipping of the vena cava.

ICD-9 Code Range: 451.0, 451.11, 451.19, 451.2, 451.81- 451.84, 451.89, 451.9, 453.40, 459.10-459.19, 997.2, 999.2

Extremity compartment syndrome: Defined as a condition not present at admission in which there is documentation of tense muscular compartments of an extremity through clinical assessment or direct measurement of intracompartmental pressure requiring fasciotomy. Compartment syndromes usually involve the leg but can also occur in the forearm, arm, thigh, and shoulder.

ICD-9 Code Range: 998.89, 958.90-958.93, and 958.99

Graft/prosthesis/flap failure: Mechanical failure of an extracardiac vascular graft or prosthesis including myocutaneous flaps and skin grafts requiring return to the operating room or a balloon angioplasty.

ICD-9 Code Range: 996.00, 996.1, 996.52, 996.61, 996.62

Myocardial infarction: A new acute myocardial infarction occurring during hospitalization (within 30 days of injury).

ICD-9 Code Range: 410.00, 410.02, 410.10, 410.12, 410.20, 410.22, 410.30, 410.32, 410.40, 410.42, 410.50, 410.52, 410.60, 410.62, 410.70, 410.72, 410.80, 410.82, 410.90, 410.92

Organ/space surgical site infection: Defined as an infection that occurs within 30 days after an operation, and the infection involves any part of the anatomy (e.g., organs or spaces) other than the incision, which was opened or manipulated during a procedure; and at least one of the following, including:

1. Purulent drainage from a drain that is placed through a stab wound or punctures into the organ/space;
2. Organisms isolated from an aseptically obtained culture of fluid or tissue in the organ/space;
3. An abscess or other evidence of infection involving the organ/space that is found on direct examination, during reoperation, or by histopathologic or radiologic examination; or
4. Diagnosis of an organ/space SSI by a surgeon or attending physician.

ICD9 Code Range: 998.59

Osteomyelitis: Defined as meeting at least one of the following criteria:

1. Organisms cultured from bone.
2. Evidence of osteomyelitis on direct examination of the bone during a surgical operation or histopathologic examination.
3. At least two of the following signs or symptoms with no other recognized cause: fever (38° C), localized swelling, tenderness, heat, or drainage at suspected site of bone infection and at least one of the following:
 - a. Organisms cultured from blood
 - b. Positive blood antigen test (e.g., H. influenza, S. pneumonia)
 - c. Radiographic evidence of infection, e.g., abnormal findings on x-ray, CT scan, magnetic resonance imaging (MRI), radiolabel scans (gallium, technetium, etc.).

ICD-9 Code Range: 730.00-730.09

Pneumonia: Patients with evidence of pneumonia that develops during the hospitalization. Patients with pneumonia must meet at least one of the following two criteria:

Criterion 1. Rales or dullness to percussion on physical examination of chest AND any of the following:

- a. New onset of purulent sputum or change in character of sputum
- b. Organism isolated from blood culture
- c. Isolation of pathogen from specimen obtained by transtracheal aspirate, bronchial brushing, or biopsy

Criterion 2. Chest radiographic examination shows new or progressive infiltrate, consolidation, cavitation, or pleural effusion AND any of the following:

- a. New onset of purulent sputum or change in character of sputum
- b. Organism isolated from the blood
- c. Isolation of pathogen from specimen obtained by transtracheal aspirate, bronchial brushing, or biopsy
- d. Isolation of virus or detection of viral antigen in respiratory secretions
- e. Diagnostic single antibody titer (IgM) or fourfold increase in paired serum samples (IgG) for pathogen
- f. Histopathologic evidence of pneumonia

ICD-9 Code Range: 480.0-480.3, 481, 482.0, 482.1, 482.2, 482.30, 482.31, 482.32, 482.39, 482.40, 482.41, 482.49, 482.81-482.89, 482.9, 483.0, 483.1, 483.8, 484.1, 484.8, 485, 486

Pulmonary embolism: Defined as a lodging of a blood clot in a pulmonary artery with subsequent obstruction of blood supply to the lung parenchyma. The blood clots usually originate from the deep leg veins or the pelvic venous system. Consider the condition present if the patient has a V-Q scan interpreted as high probability of pulmonary embolism or a positive pulmonary arteriogram or positive CT angiogram.

ICD-9 Code Range: 415.11, 415.19

Severe sepsis: Sepsis and/or Severe Sepsis: Defined as an obvious source of infection with bacteremia and two or more of the following:

1. Temp > 38 degrees C or < 36 degrees C
2. White Blood Cell count > 12,000/mm³, or >20% immature (Source of Infection)
3. Hypotension – (Severe Sepsis)
4. Evidence of hypoperfusion: (Severe Sepsis)
 - a. Anion gap or lactic acidosis, or
 - b. Oliguria, or
 - c. Altered mental status

ICD-9 Code Range: 995.91, 995.92

Stroke/CVA: Following injury, patient develops an embolic, thrombotic, or hemorrhagic vascular accident or stroke with motor sensory or cognitive dysfunction (e.g., hemiplegia, hemiparesis, aphasia, sensory deficit, and impaired memory) that persists for 24 or more hours.

ICD-9 Code Range: 997.02

Superficial surgical site infection: Defined as an infection that occurs within 30 days after an operation and infection involves only skin or subcutaneous tissue of the incision and at least one of the following:

1. Purulent drainage, with or without laboratory confirmation, from the superficial incision.
2. Organisms isolated from an aseptically obtained culture of fluid or tissue from the superficial incision.
3. At least one of the following signs or symptoms of infection: pain or tenderness, localized swelling, redness, or heat and a superficial incision is deliberately opened by the surgeon, unless incision is culture-negative.
4. Diagnosis of superficial incisional surgical site infection by the surgeon or attending physician.

Appendix B: ACS Complication Definitions

Do not report the following conditions as superficial surgical site infection:

1. Stitch abscess (minimal inflammation and discharge confined to the points of suture penetration).
2. Infected burn wound.
3. Incisional SSI that extends into the fascial and muscle layers (see deep surgical site infection).

ICD9 Code Range: 998.59

Unplanned intubation: Patient requires placement of an endotracheal tube and mechanical or assisted ventilation because of the onset of respiratory or cardiac failure manifested by severe respiratory distress, hypoxia, hypercarbia, or respiratory acidosis. In patients who were intubated in the field or Emergency Department, or those intubated for surgery, unplanned intubation occurs if they require reintubation after being extubated.

Unplanned return to the ICU: Unplanned return to the intensive care unit after initial ICU discharge. This does not apply if ICU care is required for postoperative care of a planned surgical procedure.

Unplanned return to the OR: Unplanned return to the operating room after initial operation management for a similar or related previous procedure.

Urinary Tract Infection: Defined as an infection anywhere along the urinary tract with clinical evidence of infection, which includes at least one of the following:

1. Fever > 38.5 C
2. WBC > 100,000 or < 3000 per cubic millimeter
3. Urgency
4. Dysuria
5. Suprapubic tenderness

ICD9 Code Range: 599.0

APPENDIX C: LOUISIANA EMERGENCY RESPONSE NETWORK BUSINESS ASSOCIATE AGREEMENT

Name of Hospital: _____

Hospital Address: _____

City, State, Zip: _____

Effective Date: _____

Hospital participates in the Louisiana Emergency Response Network (“LERN”) Louisiana State Bridge (“LSB”). LERN is an agency of the State of Louisiana created by R.S. 40:2841, et seq. to safeguard the public health, safety, and welfare of the people of this state against unnecessary trauma and time-sensitive related deaths and incidents of morbidity due to trauma, by establishing a comprehensive, coordinated statewide system for access to regional trauma-patient care throughout the state.

LSB is an automated web based system utilizing Image Trend Patient Registry software and is used to collect, and analyze information on the incident, severity, cause, and outcomes of trauma patients to evaluate factors and the health system’s response. The goal of the LSB is to gather information more efficiently in order to better analyze treatment methods to reduce morbidity and mortality.

The hospital participates in LSB in order to meet certain requirements for accreditation and to facilitate internal quality assurance activities.

LSB requires the hospital to disclose to LERN and for LERN to use patient ‘Protected Health Information’ (PHI) as defined in the Health Insurance Portability and Accountability Act of 1996 (HIPAA).

HIPAA requires that the Hospital and LERN enter into a Business Associate Agreement to protect PHI.

I. Agreement

- a. The Hospital agrees that LERN may use the PHI received for the following purposes:
 1. To set standards for quality, multidisciplinary trauma care delivered in numerous hospital settings statewide;
 2. To survey hospitals to assess compliance with those standards;
 3. To analyze, aggregate, produce, and publish aggregated de-identified data on clinical patterns of diagnosis, treatment, and outcomes of trauma patients;
 4. To produce reports of aggregated, de-identified data that describes the diagnosis, treatment, and outcomes of trauma patients;

5. To evaluate hospital performance, develop effective interventions to improve trauma care outcomes at the local and national level, and provide feedback in the form of an individual facility's data benchmarked against aggregated, de-identified regional and national data (NTDB).
- f. The hospital and LERN agree to the additional terms and provisions below in order to comply with the applicable requirements of HIPAA.

II. Definitions

Terms used, but not otherwise defined; in this Agreement will have the same meaning as those terms in the Privacy Rule. PHI will have the meaning ascribed to it in the Privacy Rule, but for the purposes of this Agreement will refer solely to PHI received from, or created or received by LERN, its agents or subcontractors, on behalf of the hospital. LERN is a Business Associate and the Hospital is a Covered Entity under the terms of the Privacy Rule.

III. General Obligations of LERN

- a. LERN agrees not to use or disclose PHI other than as permitted or required by this Agreement or as required by law.
- b. LERN agrees to use appropriate safeguards to prevent use or disclosure of PHI by LERN or its agents, other than as provided for by this Agreement and will, at its own expense and at its own site, provide the equipment and software services necessary to reasonably protect and safeguard the PHI consistent with industry standards of similarly situated business associates.
- c. LERN agrees to report to the Hospital any use or disclosure of PHI not authorized by this Agreement of which it becomes aware.
- d. LERN agrees to ensure that any agent, including a subcontractor, to whom it provides PHI, will agree in writing to comply with the same restrictions and conditions that apply to LERN through this Agreement.
- e. LERN agrees to make its internal practices, books and records, including policies and procedures and PHI, relating to the use and disclosure of PHI received from, or created or received by LERN on behalf of the Hospital, available to the Secretary of the U.S. Department of Health and Human Services ("Secretary"), during reasonable business hours, for purposes of the secretary determining the hospital's compliance with the Privacy Rule.
- f. LERN agrees to document and account for disclosures of PHI and information related to such disclosures as would be required by the Privacy Rule if the Hospital made the same or similar disclosures.
- g. LERN agrees to provide to the Hospital or an Individual, within thirty (30) days, information collected in accordance with subsection (f) of this section to permit the Hospital to respond to a request by an Individual for an accounting of disclosures of PHI.
- h. LERN agrees to cooperate with Hospital in responding to any request by individuals for access to or amendment of PHI as required by the Privacy Rule.
- i. LERN shall implement administrative, physical, and technical safeguards that reasonably and appropriately protect the confidentiality, integrity, and availability of EPHI that creates, receives, maintains, or transmits on behalf of the Hospital.
- j. LERN shall promptly report to Hospital any security incident of which it becomes aware and any other

use or disclosure of the information not provided for herein of which it becomes aware, have in place procedures to mitigate any harmful effects from the inappropriate use or disclosure and mitigate, to the extent practicable, any harmful effect that is known to LERN of a use or disclosure of PHI by LERN in violation of this Agreement. Further, to the extent that such unauthorized use or disclosure constitutes a breach within the meaning of the 42 USC 17921(1):

1. LERN shall notify Hospital of the breach without unreasonable delay but in no case later than 15 calendar days after the first day on which such breach is known, or by exercising reasonable diligence would have been known, to any person, other than the person committing the breach, who is an employee, officer, or other agent of the business associate.
 2. The notification to Hospital shall include, to the extent possible, (1) the identification of each individual whose unsecured protected health information has been, or is reasonably believed by LERN to have been, accessed, acquired, used, or disclosed during the breach; (2) a brief description of what happened, including the date of the breach and the date of the discovery of the breach, if known; (3) a description of the types of unsecured protected health information that were involved in the breach (such as whether full name, social security number, date of birth, home address, account number, diagnosis, disability code, or other types of information were involved); (4) any steps individuals should take to protect themselves from potential harm resulting from the breach; and (5) a brief description of what LERN is doing to investigate the breach, to mitigate harm to individuals, and to protect against any further breaches.
- k. LERN shall ensure that any agent, including a subcontractor to whom it provides, EPHI agrees in writing to implement reasonable and appropriate safeguards to protect EPHI.

IV. Additional Uses and Disclosure Provisions

- a. Except as otherwise limited in this Agreement, LERN may use PHI for the proper management and administration of LERN or to carry out the legal responsibilities of LERN.
- b. Except as otherwise limited in this Agreement, LERN may disclose PHI for the proper management and administration of LERN, provided that disclosures are required by law, or LERN otherwise obtains reasonable assurances from the person to whom the information is disclosed that the person will (i) protect the confidentiality of the PHI, (ii) use or further disclose it only as required by law or for the purpose for which it was disclosed to the person, and (iii) notify LERN of any instances of which the person is aware that the confidentiality of the information has been breached.
- c. Nothing in this Agreement will be interpreted to prevent LERN from disclosing PHI in accordance with the Privacy Rule [45 CFR 164.502(j)(1)] concerning disclosures in the public interest, or other permissible uses or disclosures by a business associate as set forth in the Privacy Rule.

V. Obligations of the Hospital

- a. Provisions for The Hospital to Inform LERN of Privacy Practices and Restrictions.
 1. Hospital shall notify LERN of any limitation(s) in the Hospital's Notice of Privacy Practices, to the extent that such limitation may affect LERN's use or disclosure of PHI. The Hospital will make its Notice of Privacy Practices available to LERN upon request.

2. Hospital will provide LERN with any changes in, revocation of, or permission by an Individual to use or disclose PHI, if such changes affect LERN's permitted or required uses and disclosures.
 3. Hospital warrants that all disclosures of PHI made to LERN are permissible disclosures under the Privacy Rule and that no Individual has restricted disclosure so as to make the disclosure to LERN impermissible. The Hospital will notify LERN of any restriction on the use or disclosure of PHI that the Hospital has agreed to in accordance with the Privacy Rule [45 CFR 164.522] if such restriction affects LERN's use or disclosure of PHI.
- b. Permissible Requests by The Hospital. The Hospital will not ask LERN to use or disclose PHI in any manner that would not be permissible under the Privacy Rule if undertaken by the Hospital; except as otherwise provided for in this Agreement.
- c. LSB Security Tools. Hospital acknowledges that the LSB system has imbedded security features. Hospital agrees to:
1. Appoint a Facility Administrator to be responsible for properly employing the security features of the LSB system; and
 2. Understand and use the security features in the LSB system.

VI. Term and Termination

- a. Term. The Term of this Agreement will begin on the Effective Date and will remain in effect until terminated by mutual agreement of the parties or in accordance with the termination provisions in subparagraph (b) below.
- b. Termination for Cause. Either party may terminate this Agreement based on a material breach of this Agreement, provided that the non-breaching Party gives the breaching party thirty (30) days written notice of termination and the opportunity to remedy the breach, and the breach is not remedied during the notice period.
- c. Effect of Termination. Except as provided in paragraph (b) of this sub-section, upon termination of this Agreement, for any reason, LERN will, at the Hospital's direction, destroy all PHI received from the Hospital, or created or received by LERN on behalf of the Hospital if the PHI has not yet been entered into LERN's database. LERN will retain no copies of the PHI, except to the extent that it has been entered into LERN's database.

In the event that LERN reasonably determines that destroying the PHI is infeasible due to inclusion of the PHI in LERN's database or for other legitimate reason, LERN will give the Hospital a statement of reasons why the return or destruction of the PHI is infeasible. As the sole consequence of such determination, LERN will extend the protections of this Agreement to such PHI and limit further its use and disclosure to those purposes that make the return or destruction infeasible, for so long as LERN maintains such PHI.

The obligations of this sub-section (c) will survive any termination or expiration of this Agreement.

VI. Miscellaneous

- a. Regulatory References. A reference in this Agreement to a section in the Privacy Rule means the section as in effect or as amended and for which compliance is required.
- b. Amendment. Any amendment to this Agreement must be in writing and signed by each of the Parties. The Parties agree to amend this Agreement from time to time as necessary for the Hospital to comply

with the requirements of federal and applicable state law and regulations including the Privacy Rule and HIPAA. Either party may request that the other party amend this Agreement in order to comply with applicable state and federal law and regulations. If amendment of this Agreement is not achieved to the satisfaction of both parties, then either party may terminate this Agreement without penalty.

- c. Interpretation. Any ambiguity in this Agreement will be resolved in favor of a meaning that permits the Hospital and LERN to comply with HIPAA and applicable state and federal laws and regulations.
- d. Assignment. Except as otherwise provided herein, neither Party may without the written consent of the other assign, subcontract, delegate or otherwise transfer this Agreement or any of its rights or obligations under this Agreement. Nor may either Party contract with third parties to perform any obligations required by this Agreement except as may be contemplated in this Agreement, without the other Party's prior written consent.
- e. Severability. If any part of this Agreement is determined to be invalid, illegal or unenforceable by any Act of Congress, state legislature, or by any regulation issued by the United States or a state, or declared null and void by any court with valid jurisdiction, then the Parties will modify such part, if possible, to conform to the law, and the remaining parts will be fully effective and operative insofar as reasonably possible.
- f. Entire Agreement. This Agreement constitutes the entire understanding and agreement between the Parties concerning the subject matter of this Agreement, and supersedes all prior negotiations, agreements and understandings between the Parties, whether oral or in writing, concerning its subject matter.

THUS DONE AND SIGNED on the date first written above.

Louisiana Emergency Response Network (LERN)

Hospital

Name: _____

Name: _____

Title: _____

Title: _____

**APPENDIX D: LOUISIANA EMERGENCY RESPONSE NETWORK
PARTICIPATION AGREEMENT**

Name of Hospital: _____
Hospital Address: _____
City, State, Zip: _____
Effective Date: _____

This Participation Agreement (“Agreement”) is entered into between the hospital listed above (“Hospital”) and the Louisiana Emergency Response Network (“LERN”), an agency of the State of Louisiana.

WHEREAS, LERN is an agency of the State of Louisiana created by R.S. 40:2841, et seq. to safeguard the public health, safety, and welfare of the people of this state against unnecessary trauma and time-sensitive related deaths and incidents of morbidity due to trauma, by establishing a comprehensive, coordinated statewide system for access to regional trauma-patient care throughout the state;

WHEREAS, LERN has created the Louisiana State Bridge (“LSB”), which is an automated web based system utilizing Image Trend Patient Registry software and is used to collect, and analyze information on the incident, severity, cause and outcomes of trauma patients to evaluate factors and the health system’s response;

WHEREAS, the State’s goal of the LSB is to gather information more efficiently in order to better analyze treatment methods to reduce morbidity and mortality; and

WHEREAS, Hospital participates in LSB in order to meet certain requirements for accreditation and to facilitate internal quality assurance activities.

NOW, THEREFORE, for and in consideration of the mutual promises and conditions contained herein, the parties agree as follows:

1. Louisiana State Bridge

- 1.1 LERN has established the Louisiana State Bridge, a detailed description of which is contained on the LERN website – www.lern.la.gov.
- 1.2 Hospital agrees to participate in the LSB according to the then current rules and policies contained on the LERN website, including but not limited to the following:
 - 1.2.1. Accurately and timely enter the data elements for all applicable claims.
 - 1.2.2. Access only its own data and such aggregated data as permitted by the then current rules and policies.

- 1.2.3. Strictly comply with the then current privacy and security rules and policies.
- 1.3. Hospital enters into this Agreement, and participates in the LSB, to evaluate Hospital performance, develop effective interventions to improve trauma care outcomes at the local and national level, and receive feedback in the form of an individual facility's data benchmarked against aggregated, de-identified regional and national data (NTDB).
2. **LERN use of data.** The Hospital agrees that LERN may use the PHI received for the following purposes as more fully described on the LERN Website:
 - 2.1. To set standards for quality, multidisciplinary trauma care delivered in numerous hospital settings statewide;
 - 2.2. To survey hospitals to assess compliance with those standards;
 - 2.3. To analyze, aggregate, produce, and publish aggregated de-identified data on clinical patterns of diagnosis, treatment, and outcomes of trauma patients; and
 - 2.1.4 To produce reports of aggregated, de-identified data that describes the diagnosis, treatment, and outcomes of trauma patients.
3. **Warranties.** Hospital agrees to use its best efforts to enter its data accurately. LERN agrees to use its best efforts to have all participants enter their data accurately, and to accurately present same in aggregated form. Notwithstanding the foregoing, however, neither party hereto warrants the accuracy of any of the data made available to the other through the LSB or otherwise.
4. **Privacy and security.** LERN, as the business associate of Hospital, has entered into the Business Associate Agreement attached hereto as Exhibit I, and agrees to abide by the same as provided therein.
5. **Use of Image Trend Patient Registry software.** LERN has acquired, for the implementation and operation of the LSB, certain licenses for the use of the Image Trend Patient Registry, which is a web-based tool more fully described on the LERN Website. Hospitals may derive independent benefit from the use of that tool, and LERN's licenses allow LERN to authorize the use of that tool by hospitals participating in the LSB. Therefore, in consideration of Hospital's participation in the LSB and other valuable consideration, receipt and sufficiency of which is hereby acknowledged, LERN hereby grants to Hospital the right to use the Image Trend Patient Registry for its own purposes, subject to the then current terms and conditions provided on the LERN Website.
6. **Term and termination.**
 - 6.1. This Agreement shall become effective on the latest date of signature below, and shall continue in effect until terminated by either party.
 - 6.2. Either party to this Agreement may terminate it, with or without cause, by providing written notice to the other, not less than thirty (30) days in advance.
 - 6.3. Upon termination, unless otherwise agreed by the parties in writing, LERN shall be entitled to retain and continue to use Hospital's data, in the de-identified form, in the LSB.

7. Miscellaneous.

- 7.1. Each party is an independent contract of the other. Neither party shall be the legal agent of the other for any purpose whatsoever and therefore has no right or authority to make or underwrite any promise, warranty, or representation, to execute any contract, or otherwise to assume any obligation or responsibility in the name of or on behalf of the other party, except to the extent specifically authorized in writing by the other party. Neither party shall be bound by nor liable to any third party for the acts, obligations, or debts incurred by the other toward such third party, except to the extent specifically agreed to in writing by the party to be so bound.
- 7.2. If any provision of this Agreement is held to be illegal, invalid, or unenforceable under any present or future law, and if the rights or obligations of either Party under this Agreement will not be materially and adversely affected thereby, (a) such provision shall be fully severable, (b) this Agreement shall be construed and enforced as if such illegal, invalid, or unenforceable provision had never comprised a part hereof, (c) the remaining provisions of this Agreement shall remain in full force and effect and shall not be affected by the illegal, invalid, or unenforceable provision or by its severance therefrom, and (d) in lieu of such illegal, invalid, or unenforceable provision, there shall be added automatically as a part of this Agreement a legal, valid and enforceable provision as similar in terms to such illegal, invalid, or unenforceable provision as may be possible and reasonably acceptable to the parties herein. To the fullest extent permitted by applicable law, each party hereby waives any provision of law that would render any provision prohibited or unenforceable in any respect.
- 7.3. Neither party hereto shall be liable for defending or for the expense of defending the other party, its agents, or employees, against any claim, legal action, dispute resolution or administrative or regulatory proceeding arising out of or related to the other party's actions or omissions under this Agreement. Neither party hereto shall be liable for any liability of the other party, its agents, or employees, whether resulting from judgment, settlement, award, fine nor otherwise, which arises out of such other party's actions or omissions under this Agreement.
- 7.4. This Agreement shall be governed by the law of the State of Louisiana.
- 7.5. Any amendment to this Agreement must be in writing and signed by each of the Parties.
- 7.6. Except as otherwise provided herein, neither Party may without the written consent of the other assign, subcontract, delegate or otherwise transfer this Agreement or any of its rights or obligations under this Agreement. Nor may either Party contract with third parties to perform any obligations required by this Agreement except as may be contemplated in this Agreement, without the other Party's prior written consent.
- 7.7. This Agreement may be executed in two or more counterparts, each of which shall be deemed an original, but all of which together shall constitute one and the same instrument.

THUS DONE AND SIGNED on the date first written above.

Louisiana Emergency Response Network (LERN)

Hospital

Name: _____

Name: _____

Title: _____

Title: _____

APPENDIX E: LOUISIANA EMERGENCY RESPONSE NETWORK USER LOGON REQUEST FORM

This form is to be completed by the facility administrator for each individual hospital. See page 14 of the LERN User & Training Manual for Non Image Trend Registry Users for more detail on the facility administrator. **This form is to be submitted to the LERN System Administrator after completion of the Business Associate Agreement and the Data Participation Agreement.**

PLEASE PRINT CLEARLY

USER INFORMATION

Name (First, Middle, Last): _____
 Facility Name: _____
 Street Address: _____
 City, State, Zip: _____
 Work Phone Number: _____
 Cell Phone Number: _____
 Pager Number: _____
 Fax Number: _____
 E-Mail Address: _____

FACILITY INFORMATION

Region: _____
 Trauma Center Level: _____
 Rehab Facility: _____
 Burn Center: _____
 Facility Name: _____
 NTDB Facility ID: _____
 National Provider ID: _____
 Facility State ID: _____
 Medicare Provider Number: _____
 Street Address: _____
 City, State, Zip: _____

The following Data Privacy Statement will display each time you log into the Image Trend System. You must agree to this statement as denoted by clicking yes to proceed.

PLEASE READ THIS PRIVACY STATEMENT CAREFULLY

By accepting this Data Privacy Statement, you agree to keep the information contained within this site private and confidential. Any reporting or exporting of data must be done securely using industry standards and best practices for data privacy and adhering to all applicable federal and state data privacy requirements. It is the responsibility of the user to ensure that all applicable requirements are adhered to.

The State has taken steps to ensure that all information contained within this site is secure to protect against unauthorized access and use. All information is protected by our security measures, which are periodically reviewed. Information is protected through the use of passwords, strictly controlled server access, physical security of the hosting site, and 128-bit SSL encryption.

Although the State can assure the security and privacy of the data that has been submitted, we have no control over how individual users may handle their own data, either before or after they have submitted data. In order to protect the security and privacy of your records before or after you have submitted data, we recommend adopting the following procedures/practices:

1. Do not send incident records via email. Email does not offer the same level of security as submitting data via the internet to the Louisiana (LERN) Patient Registry because it is not encrypted.
2. Only assign user names and passwords to individuals who have responsibility for the Louisiana (LERN) Patient Registry.
3. Regularly change passwords.

If you have questions about the Privacy or Security of this site, please contact:

LERN OFFICE USE ONLY

User ID: _____

Password: _____

Permission Group:

- System Administrator
- Hospital Administrator
- Hospital Staff
- Peer Review Committee

Report Writer

Permission Group

- Administrator
- Report User
- Report Read Only

View "MY" Incidents ONLY

- Yes (See only records individual enters)
- No (See all records for this facility)

Incident Forms

- Hidden
- View
- Edit
- Add
- Delete

Ability to Lock Incidents

- Yes
- No

Ability to Change Incident Status

- Yes
- No

View Patient Identifiable Information

- Yes
- No

Restrict Based on Date

- Last _____ Days
- Date Range: _____ to _____

REFERENCES

American College of Surgeons, Committee on Trauma, Resources for Optimal Care of the Injured Patient, 2006, Chapter 15, Trauma Registry

HIPAA Password Regulations, Drew Lichtenstein, m eHow Contributor, http://www.ehow.com/list_6960330_hipaa-password-regulations.html

American College of Surgeons, National Trauma Data Standards, Data Dictionary, 2011 Admissions: <http://www.ntdsdictionary.org/dataElements/datasetDictionary.html>

www.wikipedia.org

LERN Image Trend Data Dictionary

Texas Data Dictionary

California Data Dictionary

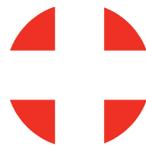
Virginia State Trauma Registry User & Training Manual

Washington Hospital Data Dictionary

North Carolina Data Dictionary

North Carolina Data Dictionary

A special Thank You to Image Trend



LOUISIANA
EMERGENCY
RESPONSE
NETWORK