

MESSAGING & SURVEILLANCE

Creating scalable solutions to capture and report data.

Real-time Event Detection. Data Warehousing. Aggregation & Visualization. Surveys. Monitoring.



Emergint helps organizations collect clinical data from the point of care to support both retrospective and prospective surveillance and research.

Services

- ◆ Assessment & Evaluation
- ◆ Architecture & Design
- ◆ Development & Integration
- ◆ Implementation & Tuning
- ◆ Support & Monitoring
- ◆ Knowledge Management

Messaging Expertise

Emergint assesses organizational needs before recommending or selecting a platform for messaging. We have in-depth knowledge of industry-standard methods, which allows us to architect messaging solutions that meet your needs. We have experience working with Public Health and Healthcare messaging formats, vocabularies, business rules, security, and metadata.

- ◆ Message Mappings
- ◆ Wide variety of tools and formats
- ◆ Platform
 - Installation & Configuration
 - Customization & Tuning
- ◆ Messaging Route
 - Architecture & Design
 - Implementation & Customization
- ◆ Validation & Certification
- ◆ Public Health Information Network (PHIN)
 - PHINMS
- ◆ National Electronic Disease Surveillance System (NEDSS)
 - NNDM
 - ELR
- ◆ Health Information Network
 - HL7
 - Limited Data Set

Surveillance Expertise

Emergint's data capture experience includes forms-based systems, real-time and batch messaging, and ETL tools. After capturing data, our approach is to prepare the data one step at a time, which allows for componentized solutions that can be easily aligned to human intelligence. Emergint's experience with data profiling and reengineering helps us understand anomalies before they spread to affect aggregate sets. Visualization of data is crucial to unlocking the full value of your data assets. Emergint supports data aggregation that can contain simple or complex charting and mapping visualizations and interactive tabular reporting.

- ◆ Reportable Disease Surveillance
- ◆ Symptom & Syndrome Surveillance
- ◆ Bioterrorism Surveillance
- ◆ Real-time event detection
- ◆ Real-time message capture
- ◆ Survey and forms data capture
- ◆ Data Warehousing
- ◆ Aggregation and Visualization
- ◆ Analysis
- ◆ Operational monitoring and support

Experience

Client: Centers for Disease Control and Prevention
(subcontract to Northrop Grumman)
Project: Early Aberration Reporting System (EARS)
Location: Atlanta, Georgia

Emergint supported the development of the Early Aberration Reporting System (EARS) which was developed by the National Center for Infectious Diseases (NCID) as a method for monitoring bioterrorism during large-scale events. EARS includes SAS and Microsoft Excel versions, and is used for analysis of syndromic data from emergency departments, 911 calls, physician office data, school and business absenteeism, and over-the-counter drug sales.

Client: Centers for Disease Control and Prevention
(subcontract to Northrop Grumman)
Project: RDC (Rapid Data Collector)
Location: Atlanta, Georgia

The Rapid Data Collector (RDC) provides the ability for scientists and epidemiologists to rapidly and flexibly collect data while in the field. The solution includes a Form Design Tool that allows users to create forms which can then be used to collect data. The data entry screens are dynamically generated on the web or in a windows or mobile application that can be disconnected from the network and taken into the field. When operating in a disconnected manner, data is stored locally using an encrypted XML format. Once the user returns to the office or has access to the CDC LAN, all data collected is uploaded into a centralized data store.

Client: Louisville Metro Government
Project: Louisville Electronic Syndrome Classification
Location: Louisville, Kentucky

Emergint leveraged the existing surveillance capabilities offered by the Louisville Metro Surveillance system, where data is captured from local hospitals and monitored for disease events in real-time. The new surveillance methods employed by the Electronic Syndrome Classification System include analysis of Admitting Diagnosis and Chief Complaint based on localized syndrome definitions provided by the Louisville Metro Health Department Epidemiologists. Emergint provided the following services:

- ◆ Loaded Local Syndrome Classifications provided by the Health Department into a vocabulary store using electronic methods
- ◆ Performed a proof-of-concept to determine feasibility of applying Natural Language Processing and/or textual harmonization
- ◆ Implemented an Emergint-developed Business Rules Management System to manage the surveillance rules
- ◆ Implemented the latest version of the PHIN Messaging System (PHIN MS) and configured new physical queues to support the additional feed



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