

**Missouri Department of Health and Senior Services**  
**Public Health Event Detection and Assessment Program**  
***ESSENCE for IL Local Public Health Agencies***



***Q: What is ESSENCE?***

A: Electronic Surveillance System for the Early Notification of Community-based Epidemics (ESSENCE) software acquires and evaluates several data sources as an early indicator of infectious diseases or unusual clusters. Currently, ESSENCE's main source of data is daily emergency department (ED) visits grouped into 'syndrome' categories based on chief complaints and diagnostic ICD-9-CM codes. This information is used to determine via statistical analysis if the number of visits is greater than expected for that facility or geographic area when compare to previously established data.

***Q: How often does DHSS receive electronic data from reporting sites?***

A: DHSS receives real-time data feeds from most facilities. Records are loaded into ESSENCE roughly the same time when they are processed by the facility.

***Q: What syndrome groups does ESSENCE analyze?***

A: The syndrome groups are Botulism-like, Fever, Gastrointestinal, Hemorrhagic, Neurological, Rash, Respiratory, and Shock/Coma.

***Q: How is ESSENCE used for early event detection?***

A: ESSENCE displays the number of ED visits in each syndrome category in any given day. The system will "flag" a syndrome group whose number of visits is significantly higher than the expected number when compared to historical data. The overall goal is to detect anomalies as early as possible in order to contain and/or prevent further effects of adverse health events, such as naturally occurring outbreaks or acts of bioterrorism.

***Q: How is ESSENCE used for situational awareness?***

A: ESSENCE is use to measure the severity of an adverse event on public's health by monitoring number of counts over time, varying demographics and geographical regions. Examples of adverse events include heat-related illness, slips and falls during the winter, and tracking progress of known outbreaks.

***Q: What is the Mission of the Missouri ESSENCE Program?***

A: Our mission is to help state and local partners respond to adverse public health events by providing information and tools for early event detection and situational awareness.

## **ESSENCE for Illinois Public Health Authorities**

### ***Q: Are Illinois local public health departments responsible for monitoring ESSENCE on a daily basis?***

A: DHSS staff are responsible for daily ESSENCE viewing and communications. However, LPHAs are provided with ESSENCE access as well. This is to enhance their own disease tracking effort, and if needed in the future, to facilitate communications between DHSS, LPHA, and hospital staff regarding suspicious anomalies.

In Missouri, local public health authorities are instrumental in all investigations. DHSS does not contact a hospital directly without coordinating with the hospital's local public health agency first. This ensures local authorities are kept informed and may participate in the investigation process.

### ***Q: How will using ESSENCE benefit local public health agencies?***

A: ESSENCE may be useful in numerous of ways. It can confirm findings from your existing surveillance system and/or aid you to conduct local situational awareness during public health events (e.g., power outages, and known disease outbreaks). In addition, ESSENCE can be use as part of enhanced surveillance during the county fair, local tournaments, or other large gatherings of people to detect adverse health events as early as possible.

### ***Q: What data are available for Illinois public health authorities within ESSENCE?***

A: Please see a map of Missouri and Illinois hospitals and urgent care centers that participate in ESSENCE ([http://www.dhss.mo.gov/ESSENCE/Missouri\\_ESSENCE\\_Map.pdf](http://www.dhss.mo.gov/ESSENCE/Missouri_ESSENCE_Map.pdf) ). These data include but not limited to hospital name, location, patient-level data include age, sex, race, zip code, and county of residence as well as chief complaint and diagnosis information. However, personal identifiers such as name, address, and social security number are not included. The most uniquely identified data in ESSENCE is the patient's medical record number.

### ***Q: How do I acquire ESSENCE?***

A: ESSENCE is entirely web based, no software needs to be installed or site license to be obtained. After completing a DHSS Automated Security Access Processing (ASAP) Network Request Form online, a limited number of users at each LPHA will be granted a username and password via e-mail. Please become familiar with Missouri ESSENCE policies and procedures (<http://www.dhss.mo.gov/ESSENCE/PoliciesProcedures.pdf>) before accessing ESSENCE.

### ***Q: What kind of data security is maintained by DHSS and within ESSENCE?***

A: Most personal identifiers such as name, address, and social security number are not provided to DHSS by Illinois facilities. Nevertheless, efforts are taken to ensure security when e-mailing, storing and using ESSENCE data to protect the patient, the physician, and the facility's identity. DHSS aims to maintain a secure environment for the data and strongly urges everyone to keep usernames and passwords confidential and not share them.

***Q: What HIPAA issues should I be aware of as an ESSENCE user?***

A: These data are being transmitted for public health purposes and are covered under the reporting rule 19 CSR 10-33.040. ESSENCE data should be handled in the same manner as any other confidential information typically used in the LPHA setting (communicable disease, STD, other case reports).

***Q: Are there any other privacy issues I should be aware of?***

A: The reporting rule states that information specific to any patient, physician, or hospital should not be shared with individuals outside of public health. This means that care must be taken to not divulge this information during press conferences, conversations with media, public meetings, or in publications.

***Q: Will DHSS train new ESSENCE users?***

A: Yes, DHSS will provide self-study materials for new users, followed by on-site, in-person sessions or Adobe Acrobat web-based seminars. Additional policies and communication protocols can be found at the ESSENCE homepage.

***Q: Whom do I contact if I have questions?***

A: For general questions or help with ASAP registration, the Missouri ESSENCE Program can be contacted at 573-522-8329 or [ESSENCE@dhss.mo.gov](mailto:ESSENCE@dhss.mo.gov). For more technical questions regarding hospital data submission, please contact [toni.kueffer@dhss.mo.gov](mailto:toni.kueffer@dhss.mo.gov) or call 573-522-9047.