

Increasing Local Access to Syndromic Surveillance Data

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OBJECTIVE

This paper describes how the Indiana State Department of Health (ISDH) improved response capability by increasing local health department (LHD) and hospital access to syndromic surveillance data as part of the state's evolving Public Health Emergency Surveillance System (PHESS).

BACKGROUND

In the spring of 2005, the ISDH began using Electronic Surveillance System for the Early Notification of Community-based Epidemics (ESSENCE) application to analyze emergency department (ED) chief complaint data for syndromic surveillance purposes. While granting hospitals and local health departments access to their data through ESSENCE has been desirable since the start of the PHESS project, an aggressive timeline made it necessary to direct all resource capacity toward first establishing hospital ED data connections. The Marion County Health Department (Indianapolis) was the only LHD in the state with access to its 14 hospitals through ESSENCE.

However, because hospitals and local health departments (except Marion County) did not have access to their data through ESSENCE, any syndromic alert follow-up conducted by the ISDH was accomplished primarily by telephone. This method, while feasible, was inefficient. The ISDH felt that alert data follow-up could be greatly facilitated if hospitals and LHDs could view these data through ESSENCE just as the ISDH was doing.

METHODS

With the assistance of a public health leadership group, the ISDH developed a pilot project to rollout ESSENCE. Six county health departments and their respective PHESS-connected hospitals (n=21) agreed to participate. Orientation consisted of a general presentation that explained the PHESS and ESSENCE, and a hands-on ESSENCE tutorial.

Using experience and participant feedback from the pilot sessions, PHESS staff began rolling out ESSENCE access to the remaining PHESS-connected hospitals and their respective LHDs. ESSENCE orientation sessions were scheduled with individual LHDs. Public health nurses and key individuals responsible for outbreak investigations, all-hazards preparedness, infection control, and emergency services were invited. ISDH field epidemiologists were also invited.

In contrast to the earlier pilot sessions where multiple computers were often used, equipment at subsequent meetings was minimized to just one laptop computer, an LCD projector, and a high-speed internet connection. Further, the lecture content was reduced and the hands-on ESSENCE tutorial was eliminated. The choice to remove the hands-on ESSENCE tutorial component was motivated by the need for presentation focus, efficiency, and convenience. During the pilot, managing multiple computer users on PCs with varying versions of software (e.g. Java) and hardware proved challenging and at times dissatisfying.

A training username/password is created specifically for each 1.5 hour orientation session. This allows PHESS staff to tailor the data viewed by a given hospital/LHD audience, thereby maintaining data confidentiality. Also, presentations are standardized in order to include "high value" functionalities of ESSENCE such as Alert List, Query, Data Details, Weekly %, and Bookmarks. The ISDH follow-up procedure for ESSENCE alerts is also presented.

Following the orientation, a data use agreement is presented to each potential ESSENCE user. Upon receipt of a signed agreement, the PHESS IT coordinator creates and issues the user a confidential ESSENCE username and password.

RESULTS

Post-orientation evaluation data collected from hospital and LHD participants has been positive. To date, 43 hospitals and 17 LHDs have received ESSENCE training and now have access to their syndromic data. When follow-up has been conducted with recently connected ESSENCE users, they have been able to successfully access alert data.

CONCLUSIONS

Since implementing the PHESS, the ISDH has learned that definitive interpretation of inherently non-specific syndromic data alerts can only happen at the local level. Therefore, realizing the full potential of syndromic surveillance at the state level requires that all local-level users have access to their data. Granting local user access to syndromic data through ESSENCE has increased surveillance capacity and improved statewide communication among hospitals and public health officials in Indiana.

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