Georgia's Strategy for Targeting Syndromic Surveillance

Susan T. Cookson, M.D., M.P.H.,[1,3] James W. Buehler, M.D.,[2]
Susan E. Lance, D.V.M, Ph.D.[1]
1. Georgia Division of Public Health, 2. Rollins School of Public Health, Emory University, 3. Centers for Disease Control and Prevention

Objective

This paper describes the strategy used by the Georgia Division of Public Health (DPH) in implementing syndromic surveillance (SS), including criteria for prioritizing localities and the early results of applying these criteria in initiating new emergency department (ED)-visit based systems.

Background

As part of public health protection activities conducted in support of the G8 Summit in Sea Island, GA, June 2004, DPH implemented SS in the state's coastal region using information provided from ED visits, 911 calls, and pharmacy sales. Following this high-profile event, questions arose about whether to maintain the ED system and about whether and where to extend its use in GA. Despite the emergence of practice-based guidance for conducting SS and the growing experience of public health agencies, little guidance is available regarding strategies for identifying sites where SS should be targeted [1,2].

Methods

To address the question of where to target SS in GA, we sought to develop rational and transparent criteria for prioritizing potential sites, keeping in mind the threats of bioterrorism and emerging or re-emerging infectious diseases, and the occurrence of predictable seasonal illness and community outbreaks. We invited consultation and review from state- and district-level public health officials responsible for emergency preparedness, infectious disease prevention and control, and surveillance. Based on this process, we selected three primary criteria: 1.the size of the population [≥100,000 for cities], 2. the potential for immigration- or travel-associated introduction of infectious diseases, as reflected by travel of foreign-born persons comprising >10% of the area population or by locations with transportation corridors or facilities— interstate highways, airports, seaports, and 3. the potential for disease transmission from crowding—presence of institutions with high-density residential facilities (e.g., military bases or large universities). Additionally, we sought to assure a statewide perspective, taking into account geographic spread. Since 30% of EDs account for 60% of ED visits in GA, we arbitrarily selected hospitals with EDs having >17,000 visits in 2004, as recorded by the Georgia Hospital Association.

Results

Six GA cities with ≥100,000 population, located in 10 of the state's 18 public health districts, met ≥2 of the 3 primary criteria (Table). Statewide, 66 EDs met the volume criteria, including 45 (79%) in these cities. We presented the findings to district officials and are using the results as a guide to recruiting their participation in ED-visit based SS, with district staff taking the lead in soliciting and maintaining hospital-based ED participation. Currently, seven EDs are submitting automated daily reports of patients' chief complaints and demographic profiles via DPH's secure NEDSS-compatible Internet-based surveillance system. These facilities represent 10% (236,600) of ED visits among eligible EDs in 2004. By October 2005, participation is expected for 13 additional EDs totaling 37% of ED visits among eligible EDs.

Georgia cities meeting ≥2 of 3 primary SS inclusion criteria

City	Population Size	Outside Populations	Crowding
Athens	√		
Atlanta	√	√	√
Augusta	√	√	√
Columbus	√	√	√
Macon	√		√
Savannah	√	√	√

Conclusion

Although several states have undertaken ED SS that aims to include all hospital-based EDs, GA DPH has developed an alternative strategy based on criteria that seek to identify localities at greatest potential for infectious disease epidemics, including overall population size, the potential for travel- or immigration-associated introduction, and the presence of large institution-based residential populations. Population size was the strongest indicator in GA for city selection. Further experience and evaluations should help assess the utility of these criteria and its utility for other states with comparable geographic and population diversity. This approach might be considered in states with limited funds for initiating SS.

References

[1] Mandl KD, Overhage JM, Wagner MM, *et al*. Implementing syndromic surveillance: a practical guide informed by the early experience. J Am Med Inform 2004;11:141-50.
[2] Buehler JW. Review of the 2003 National Syndromic Surveillance Conference — lessons learned and questions to be answered. MMWR 2004;53(Suppl):18-22.

Further Information: Susan Cookson, stcookson@dhr.state.ga.us