

Benefits, Essential Components, and Limitations of Electronic Surveillance Systems

Benefits	Essential Components	Limitations
<ul style="list-style-type: none"> ■ Facilitate and streamline efficient review of relevant data, thereby promoting rapid identification of outbreaks and sentinel events ■ Reduce error ■ Facilitate less “desk time,” more time for engaging health care personnel in patient care areas ■ Better define and expand the scope of infection prevention activities ■ Reduce the amount of time spent on surveillance and clerical tasks ■ Improve identification of, and response to, public health issues ■ Demonstrate regulatory compliance ■ Support cost savings associated with reductions in health care–associated infections via enhanced surveillance ■ Enhance antimicrobial stewardship 	<p>The ability to:</p> <ul style="list-style-type: none"> ■ Obtain essential patient-specific clinical information from data sources throughout the organization ■ Retrieve data in real time ■ Take data from various diagnostic and/or clinical systems and translate the data into useful information or alerts ■ Send standard electronic messages and/or clinical documents to public health authorities 	<ul style="list-style-type: none"> ■ Success or failure is dependent on: <ul style="list-style-type: none"> ● User involvement ● Effective communication between users and developers ● Learning curves ● Administrative support ■ Data still require further analysis to meet surveillance definitions, such as those of the National Healthcare Safety Network ■ The threshold for detection of clusters and patterns can be low, so all data need to be evaluated to determine whether they are significant ■ Implementation usually requires extensive time and resource allocation ■ Changes and upgrades to system require ongoing financial support

Sources: Adapted from Greene LR, Cain TA, Khoury R, Krystofiak SP, Patrick M, Streed S. APIC position paper. The importance of surveillance technologies in the prevention of health care–associated infections (HAIs). *Am J Infect Control*. 2009 Aug;37(6):510–513. Accessed Mar 20, 2012. http://www.apic.org/Resource_/TinyMceFileManager/Position_Statements/Surveillance-Technologies-position-paper-2009.pdf; Wright MO. Automated surveillance and infection control: Toward a better tomorrow. *Am J Infect Control*. 2008 Apr;36(3 Suppl 1):S1–6.