

Researchers pilot new electronic system for infectious illness

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Researchers at Harvard Pilgrim Health Care, Harvard Medical School, Atrius Health, and the Massachusetts Department of Public Health have created and tested a set of computer programs that use electronic medical records to help clinicians detect contagious illness and automatically report them to public health departments.

The new system, called Electronic Medical Record Support for Public Health, or ESP, was described in the April 11 issue of *Morbidity and Mortality Weekly Report*, a publication of the Centers for Disease Control and Prevention. The pilot version of ESP was installed in January 2007 at Atrius Health, a multi-specialty physician group with 30 practice sites in Eastern Massachusetts. Atrius Health is an alliance of five medical groups serving approximately 600,000 patients at outpatient clinical sites and hospitals.

“This is a good example of the way clinicians can provide better support for public health activities that benefit everyone,” says Richard Platt, senior author for this study and chairman of the Harvard Medical School Department of Ambulatory Care and Prevention at Harvard Pilgrim Health Care. “It is especially noteworthy that this system also reduces the amount of work required of busy practitioners.”

Typically, clinicians report diseases by filling out paper forms and mailing or faxing them to health authorities. This time-consuming work has historically led to delays in disease reporting and even failure to report some cases altogether. The new system will save time by

automatically scanning electronic medical records to identify cases and electronically report them to the health department on clinicians' behalf. The system will also benefit health officials by providing more complete, timely, and accurate disease reports.

At present, 45 percent of Massachusetts clinicians use an electronic medical record, a number expected to rise to 75 percent by 2010.

ESP substantially increased both the number of reported infections and the completeness of information sent to health officials. In a one year period, the electronic system reported approximately 40 percent more cases of Chlamydia and 50 percent more cases of gonorrhoea. In addition, the electronic system did a better job of reporting if the infected patient was pregnant and whether correct antibiotics had been prescribed. The electronic disease reports contain the same information that clinicians currently report in accordance with state law.

ESP is currently designed to report seven different infections: active tuberculosis, acute hepatitis A, acute hepatitis B, acute hepatitis C, Chlamydia, gonorrhoea, and pelvic inflammatory disease. The research team is developing methods to detect and report additional kinds of infections.

"Despite increasing use of electronic medical records, disease reporting is still frequently done by paper. ESP offers the promise of more rapid detection of threats to the public health. This would allow faster action to prevent further transmission of infection," says Alfred DeMaria, Jr, MD, Director of the Bureau of Communicable Disease Control at the Massachusetts Department of Public Health.

Source: Harvard Medical School

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