

Advanced Syndromic Surveillance and Emergency Triage (ASSET)



Delivery by: University of Ottawa Heart Institute

Sponsor: National Research Council – Institute for Information Technology

Partnership: AMITA Corporation, Public Health Agency of Canada, Ottawa Public Health, The Ottawa Hospital, Children's Hospital of Eastern Ontario, Queensway Carleton Hospital, Montfort Hospital, Michigan Department of Community Health, Queen's University Public Health Informatics, Grey Bruce Health Unit, Peel Public Health, Carnegie Mellon University/School of Computer Science/Auton Laboratory, SilvaCorp, E-Privacy Management Systems Inc.

Start-End: 2007 – 2010

Funding: \$2,870,000.00

Objectives:

- Prototype a Syndromic Surveillance (S2) system in Ottawa that is useful for both counterterrorism and public health surveillance
- Provide the means to improve the adoption, usability and ongoing operations of S2 technology in Canada
- Deliver a bilingual S2 system that is ready for deployment anywhere in Canada
- Create the framework to interface locally collected S2 data with the Canadian Network for Public Health Intelligence (CNPHI)
- Provide S2 response protocols suitable for Canadian cities

Technology and Expertise:

- The ECADS S2 system for early CBRNE attack detection by computerized medical record surveillance already deployed in Grey and Bruce Counties of Ontario
- IT expertise from NRC-IIT (Support Vector Machine and Information Extraction technology, Human Computer Interaction), Carnegie Mellon (Outbreak Detection) and AMITA
- S2 and Public Health expertise from Ottawa Public Health, Grey Bruce Health Unit, QUPHI, CNPHI (Public Health Agency of Canada), and Michigan Department of Community Health
- Health care and medical informatics expertise from The Ottawa Hospital, Children's Hospital of Eastern Ontario, Queensway Carleton Hospital and Montfort Hospital

Outputs:

- Prototype deployment of ECADS S2 system within Ottawa for Ottawa Public Health
- Development of new ASSET S2 system with:
 - Improved database structure
 - Enhanced text mining capabilities
 - More in-depth data mining capabilities
 - Bilingual operation
- A plan to integrate ASSET S2 system into existing Canadian infrastructure, including CNPHI
- Response protocols suitable for Ottawa Public Health and suitable for operation in a Canadian setting

Impact:

- Real time access to epidemiological data to detect and manage CBRNE and other events of public health importance
- Improved breadth of coverage and accuracy of S2 data to reduce the occurrence and mitigate the consequences of false positive alerts
- Provide health units, regional authorities and hospitals with the tools they need to collect and use S2 information at a local level