

Exsys Case Study

Toxic Syndrome Rapid Recognition Emergency Preparedness



James Madison University

The Toxic Syndrome Medical Advisor (TSMA) was developed with Exsys Corvid[®] to assist medical personal in providing consistent diagnoses and treatment for victims exposed to hazardous chemical events, such as chemical spills or terrorist chemical attacks. TSMA's primary function is to assist with immediate on-the-scene recognition of toxic symptoms and guide initial empiric therapies following hazardous chemical attacks or accidents.

On-the-scene diagnosis and treatment of victims of hazardous chemical events is currently provided by whatever medical personal and support infrastructure is available in the event-area at the time of the event. Overall success in responding to any given hazardous chemical event is contingent on the practical experience, fact-based and theoretical knowledge, and diagnostic skills found in the responding medical team, and this can vary widely from event to event. These discrepancies presented a seriously unsatisfactory situation that needed to be addressed.

The TSMA assists in alleviating this situation by delivering the practical experience, expert toxic syndrome diagnostic skills, and theoretical knowledge of acknowledged domain expert, Dr. Mark Kirk via the Exsys Corvid system. The online system will deliver state-of-the-practice on "hand-held" hardware systems.

In addition to carrying out this primary function the TSMA contributes to a much more comprehensive decision support system, FALCON, that covers a range of treatment and decision-making points during a medical emergency. FALCON will assist emergency organizations by integrating information describing chemical inventories, security, health readiness, geography, and population into one information system. Emergency organizations will be able to assess response readiness of a community for chemical releases and prioritize antidote stockpiling, training, and security. Emergency organizations and first responders will use the FALCON DSS to simulate and prepare for real-time events, assess possible casualties, and receive emergency contact information. And with the help of FALCON, law enforcement and security personnel will be able to evaluate and augment protection of the most dangerous facilities.



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