

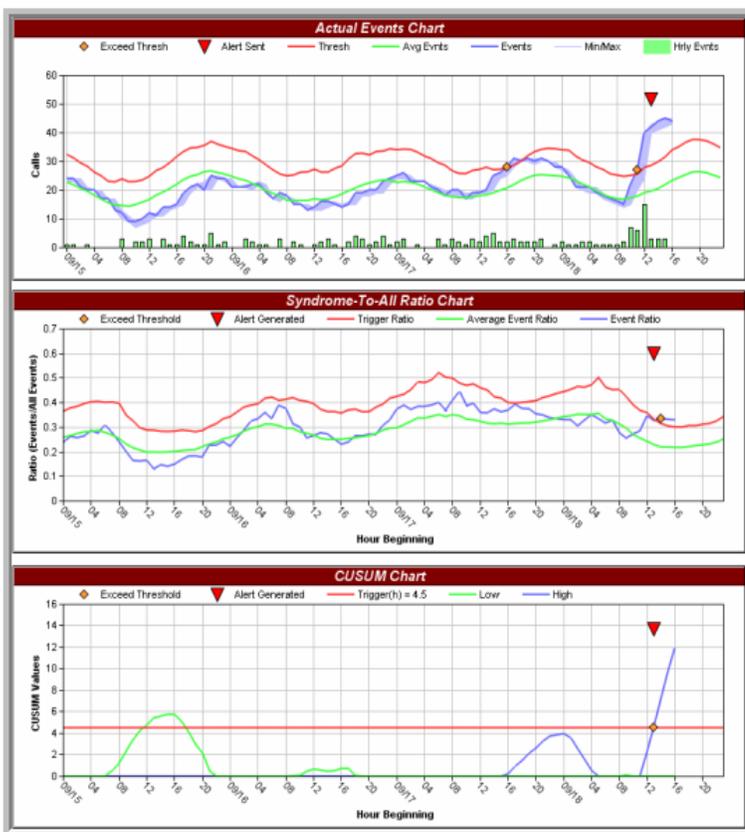
Successful Real-World Test of High-Tech Tool for Detecting All-Hazards Events in Seattle’s Puget Sound Region

BACKGROUND Since 1967 American’s have been conditioned to dial 9-1-1 for any emergency. FirstWatch has played an important role in making this data available to public health officials many of which did not understand that 9-1-1 is dialed for more than “heart attacks and car accidents” and that 9-1-1 is an integral part of every communities public health system and situational awareness system. Combining the real-time analytical features within FirstWatch with the analysis of 9-1-1 data assures public health and public safety officials that they will be alerted to concerning trends (or patterns) as they occur—anytime, day or night.

September 2006, during an otherwise normal day at Edmonds-Woodway High School located north of Seattle, pepper spray was released inside a school building. Initially only affecting a few students in a small area, as the chemical agent dispersed in the high school more and more staff and students became symptomatic. Ultimately more than 25 people were treated at the scene including many who were transported to nearby hospitals over the course of the event. While the incident was still active the automated FirstWatch System identified not only the influx of patients, but also identified the geographic cluster (hot-spot) of activity and alerted officials. This event proved an effective test of FirstWatch as an “All Hazards” early warning system.

Public Health “Smoke Detector” constantly and automatically working in the background: FirstWatch watches and waits. When a statistically significant increase (volumetric or geographic) is identified, FirstWatch alerts just like a smoke detector alerts when smoke is present. This event demonstrates how FirstWatch identifies events as they are unfolding and automatically sends timely information to authorized recipients. The pepper-spray release at Edmonds-Woodway High School was an isolated, single event with all patients treated at a single command post within a two –hour period. However the response of FirstWatch would have been the same even if these patients were treated by Rural/Metro Ambulance anywhere in their service area which extends over several hundred square miles throughout the Puget Sound. Because of the way FirstWatch analyzes large geographic areas over time, had these same patients been treated by Rural/Metro anywhere within this large geographic region FirstWatch would have detected and alerted officials.

FirstWatch Alert from Pepper Spray Release at Edmonds-Woodway HS



Value of 9-1-1 Data: Using FirstWatch to interface with 9-1-1 data brings several distinct benefits over traditional health data.

Real-Time: FirstWatch analysis is done in real-time, with the ability to drill down into incident detail available to end users typically within minutes of the event being reported.

Timeliness: 9-1-1 events unfold quickly, typically with information gathered and entered into the computer within several minutes. The real-time FirstWatch system harnesses this attribute and provides analysis, alerting and access to information within minutes.

Geo-Specific: Public Safety systems like Rural/Metro ambulance typically cover large geographic areas. In this case the FirstWatch system monitors Rural/Metro’s entire service area which extends over 3 counties and several hundred square miles. The ability to provide real-time geospatial analysis over such a large geographic region is a strong suit of FirstWatch.

Analysis of Large Geographic Area: FirstWatch monitors Rural/Metro entire service area which extends over hundreds of square miles and includes large metropolitan communities in Puget Sound like Seattle, Tacoma, Bellevue and Everett and data can be aggregated from other systems for an even larger catchments area.

Patient-Tracking: Whether from a single incident, or spread over a community, tracking which hospital a patient is transported to presents unique challenges. 911 data includes valuable information not only tracking the number of patients, but also which hospitals received the patients and the time they arrived and acuity at time of transport.

All-Hazards Tool: The utility of FirstWatch makes it an excellent tool for identifying All-Hazards events whether an act of terrorism, natural pandemic, major disasters and other emergencies.

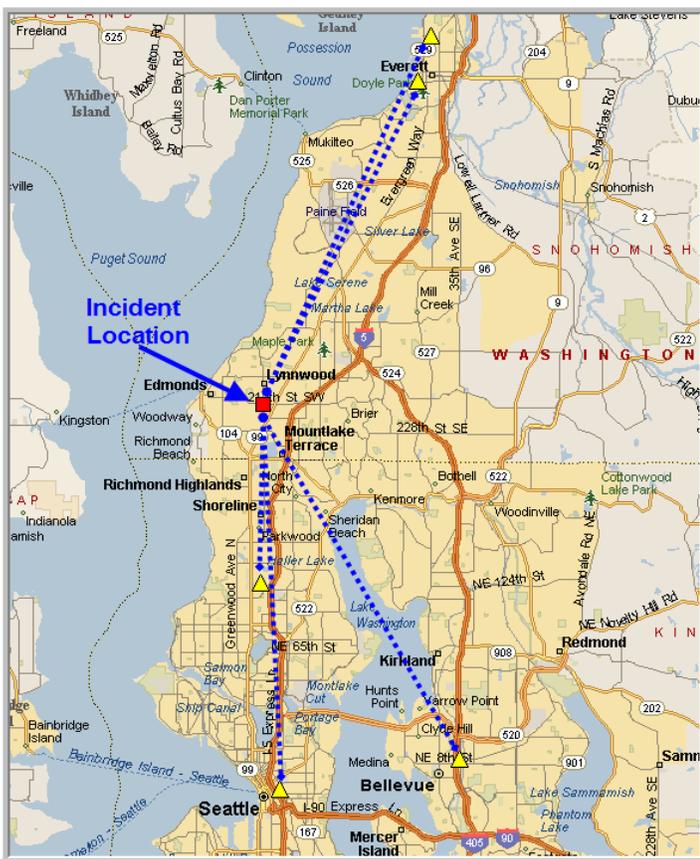
Patient Tracking / Incident Management: The EMS provider transported 22 patients from the scene to five area hospitals, however none of the patients went to the closest facility (less than 1 mile from the school). For a variety of reasons, the patients were transported to patients to hospitals in Seattle, Everett & Bellevue. Using FirstWatch officials were able to track each patient, which facility they were transported to, and what time they arrived—all in real-time.

The images below the listing from FirstWatch of the patient transport information and the map below shows the location of the incident and the location of the five hospitals which received patients from this incident.

This demonstrates the challenges of managing a mass casualty incident and how FirstWatch provides this information in real-time to all authorized users.

Map Showing the Five Hospitals (in Two Different Counties) that received patients from the Incident

FirstWatch Transport Destination Screen with Line Listing of Patient Transport Information presented to authorized users in real-time.



HarborView Hospital - 325 9th Ave, SEATTLE, WA				
Time Arrived At Dest	Incident #	Pri	Problem/Rature	Patient/Call Origination
9/18/2006 1:24:03 PM	048807	1	328 - Unknown Medical BLS	760X 212th St Sw, EDMONDS, WA/RN OFFICE
9/18/2006 1:24:05 PM	048807	1	328 - Unknown Medical BLS	760X 212th St Sw, EDMONDS, WA/RN OFFICE
9/18/2006 1:24:05 PM	048807	1	328 - Unknown Medical BLS	760X 212th St Sw, EDMONDS, WA/RN OFFICE
9/18/2006 1:24:05 PM	048807	1	328 - Unknown Medical BLS	760X 212th St Sw, EDMONDS, WA/RN OFFICE
9/18/2006 1:30:49 PM	048808	1	328 - Unknown Medical BLS	760X 212th St Sw, EDMONDS, WA/RN OFFICE
9/18/2006 1:30:49 PM	048808	1	328 - Unknown Medical BLS	760X 212th St Sw, EDMONDS, WA/RN OFFICE

Northwest Hospital - 1550 N 115th St SEATTLE				
Time Arrived At Dest	Incident #	Pri	Problem/Rature	Patient/Call Origination
9/18/2006 1:03:50 PM	048799	1	328 - Unknown Medical BLS	760X 212th St Sw, EDMONDS, WA/RN OFFICE
9/18/2006 1:03:50 PM	048799	1	328 - Unknown Medical BLS	760X 212th St Sw, EDMONDS, WA/RN OFFICE
9/18/2006 1:03:50 PM	048799	1	328 - Unknown Medical BLS	760X 212th St Sw, EDMONDS, WA/RN OFFICE
9/18/2006 1:03:50 PM	048799	1	328 - Unknown Medical BLS	760X 212th St Sw, EDMONDS, WA/RN OFFICE

Overlake Hospital - 1035 116th Ave Ne BELLEVUE				
Time Arrived At Dest	Incident #	Pri	Problem/Rature	Patient/Call Origination
9/18/2006 1:22:21 PM	048800	1	328 - Unknown Medical BLS	760X 212th St Sw, EDMONDS, WA/RN OFFICE
9/18/2006 1:22:21 PM	048800	1	328 - Unknown Medical BLS	760X 212th St Sw, EDMONDS, WA/RN OFFICE
9/18/2006 1:22:21 PM	048800	1	328 - Unknown Medical BLS	760X 212th St Sw, EDMONDS, WA/RN OFFICE
9/18/2006 1:22:21 PM	048800	1	328 - Unknown Medical BLS	760X 212th St Sw, EDMONDS, WA/RN OFFICE

Providence General Med Center - 1321 Colby Ave EVERETT				
Time Arrived At Dest	Incident #	Pri	Problem/Rature	Patient/Call Origination
9/18/2006 12:57:58 PM	048785	1	328 - Unknown Medical BLS	760X 212th St Sw, EDMONDS, WA/RN OFFICE
9/18/2006 12:57:58 PM	048785	1	328 - Unknown Medical BLS	760X 212th St Sw, EDMONDS, WA/RN OFFICE
9/18/2006 12:57:58 PM	048785	1	328 - Unknown Medical BLS	760X 212th St Sw, EDMONDS, WA/RN OFFICE
9/18/2006 1:07:37 PM	048786	1	328 - Unknown Medical BLS	760X 212th St Sw, EDMONDS, WA/RN OFFICE
9/18/2006 3:30:43 PM	048831	2	068 - Breathing Prob BLS	

Providence Pacific Clinic - 916 Pacific Ave EVERETT				
Time Arrived At Dest	Incident #	Pri	Problem/Rature	Patient/Call Origination
9/18/2006 11:45:45 AM	048777	1	328 - Unknown Medical BLS	
9/18/2006 12:49:43 PM	048792	1	328 - Unknown Medical BLS	760X 212th St Sw, EDMONDS, WA/RN OFFICE
9/18/2006 12:42:43 PM	048792	1	328 - Unknown Medical BLS	760X 212th St Sw, EDMONDS, WA/RN OFFICE
9/18/2006 12:42:43 PM	048792	1	328 - Unknown Medical BLS	760X 212th St Sw, EDMONDS, WA/RN OFFICE
9/18/2006 12:42:43 PM	048792	1	328 - Unknown Medical BLS	760X 212th St Sw, EDMONDS, WA/RN OFFICE

This event demonstrates the impressive utility of FirstWatch. The automated nature of the system frees up staff who can create a series of analysis packages and configure FirstWatch to monitor and test for the prescribed conditions, then alert officials via email, fax or pager when a threshold or condition has been met. Whether a multi-patient event or a slowly emerging trend, FirstWatch is always on the job, watching and waiting until a condition is met. The intuitive and secure web-enabled interface means public health officials can have access to crucial information at the office, at home or virtually anywhere. The centralized nature supports regional aggregation between cities, counties, states and countries. Health risks don't recognize geo-political boundaries or normal business hours, and neither should health surveillance and informatics systems like FirstWatch. To learn more 50 North American communities have become part of the FirstWatch Network, contact us today.

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For more information, additional Case Studies, Research and where FirstWatch is LIVE in North America and more, please visit us online at:
www.firstwatch.net