

NRDM

National Retail Data Monitor

a public health surveillance tool



FACT SHEET: The National Retail Data Monitor

The National Retail Data Monitor

The National Retail Data Monitor is a public health surveillance tool that collects and analyzes daily over-the-counter point of sale data to rapidly identify disease outbreaks, either natural or as a result of bioterrorism.

The NRDM was built by the Real-time Outbreak and Disease Surveillance (RODS) Laboratory at the University of Pittsburgh in collaboration with the food and drug retail industry, state and local health departments and the Centers for Disease Control and Prevention (CDC). The NRDM project began in December 2002 with seed funding by the Commonwealth of Pennsylvania (Bioinformatics Grant ME-01-737) and quickly grew into a high-profile, priority national project. At present, funding also is provided by the Alfred P. Sloan Foundation and a consortium of states. The consortium includes a working group with representatives of Pennsylvania, New York, Georgia, Ohio and New Hampshire.



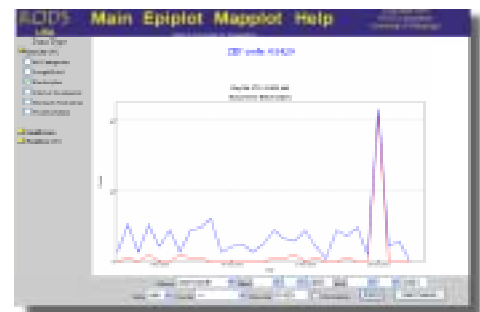
As of October 2003, there are 18,000 retail stores and pharmacies from major retail chains that are participating or have agreed to participate across the nation and 223 system users in health departments across 33 states, the District of Columbia, and the CDC that review daily aggregate data in maps and graphs. Several regions, including New York City and Washington, DC, receive aggregate raw data that are viewed through their own interfaces. The data are available for **FREE** to public health through a secure web-based user interface. Contact nrdmaccounts@cbmi.pitt.edu to obtain a **FREE** user account. The immediate project goals are:

- to increase the market share coverage to 70%
- get to UPC level data granularity
- decrease data feed latency closer to real time
- see that data are reviewed by public health on a daily basis
- create a sustainable organizational model

The role of the retail industry

Industry participation involves contributing point-of-sale data to the NRDM for public health surveillance. The system looks at sales of over-the-counter (OTC) healthcare products and analyzes them for anomalies indicative of a disease outbreak whether naturally occurring or as a result of a bioterrorist attack.

Many of the nation's top retailer's are providing POS data, which are transmitted via a secure FTP link with a delay of 24 hours or less from point-of-sale. Once received, the data are merged to show total sales for a given geography and to de-identify the specific retailer. The output is available to public health officials via a secure extranet which displays time series charts and maps for public health surveillance, as above and right.



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A national effort

Cities, counties and states across the country are working with urgency to deploy methods to identify a disease outbreak that would result from a bioterrorism attack. The National Retail Data Monitor is the first attempt to centralize collection and distribution across the nation and thus eliminate the need for retailers to work with multiple public health departments across the country.

In 2002, President Bush, now Homeland Security Secretary Tom Ridge, and Health and Human Services Secretary Tommy Thompson visited the RODS Laboratory in Pittsburgh.

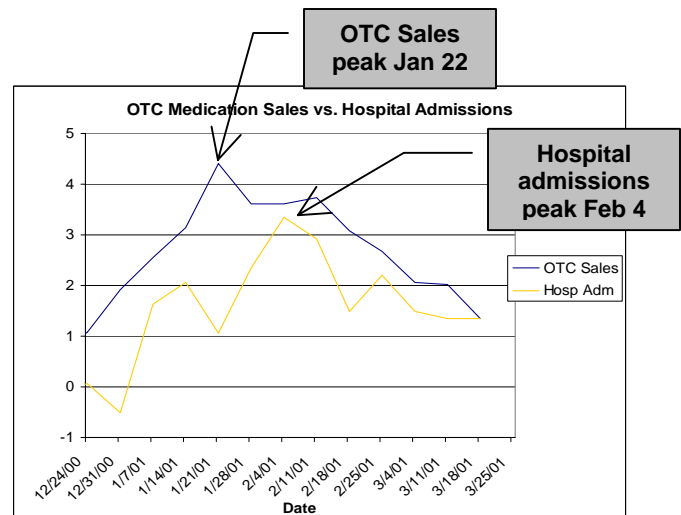
President Bush said, "Some of us remember that back in the '50s we had what was called the DEW line on the Arctic Circle, to warn us if enemy bombers were coming over the North Pole to attack America. Well, here in Pittsburgh, I had the honor of seeing a demonstration of the modern DEW line, a Real-time Outbreak and Disease Surveillance system.... What we saw was how to take real -- data on a real-time basis to determine if there was an outbreak of any kind, including a terrorist attack. The best way to protect the homeland is to understand what's taking place on the homeland so we can respond."

The significance of retail OTC data

Sales of OTC healthcare products are of great interest to early-warning bioterrorism surveillance. When people get sick, they often purchase OTC products prior to visiting a health care provider. By analyzing many years of market data across many cities and states, scientists have been able to correlate certain disease outbreaks with significant OTC sales increases. In some cases it is possible to identify an outbreak up to two weeks earlier with OTC sales than by monitoring clinical data.

Privacy

The NRDM does not collect any personally identifiable information. The system simply looks for abnormal spikes in unit sales and is interested in how many aggregated products sell across a zip code or larger geography, not what individual people buy or what an individual retailer sells. These data are similar to what retailers routinely evaluate and share with trading partners and syndicated analysts such as IRI and ACNielsen.



Next steps

We are actively recruiting retailers for participation in the NRDM and encourage departments of health to join us in this effort. At present, working groups of local and state health departments have formed around the country to join in the recruitment effort. To join in this effort, please

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