

Over-The Counter Pharmaceutical Sales Surveillance (OTCPSS) System: A Packaged Health Solution

SYSTEM OVERVIEW

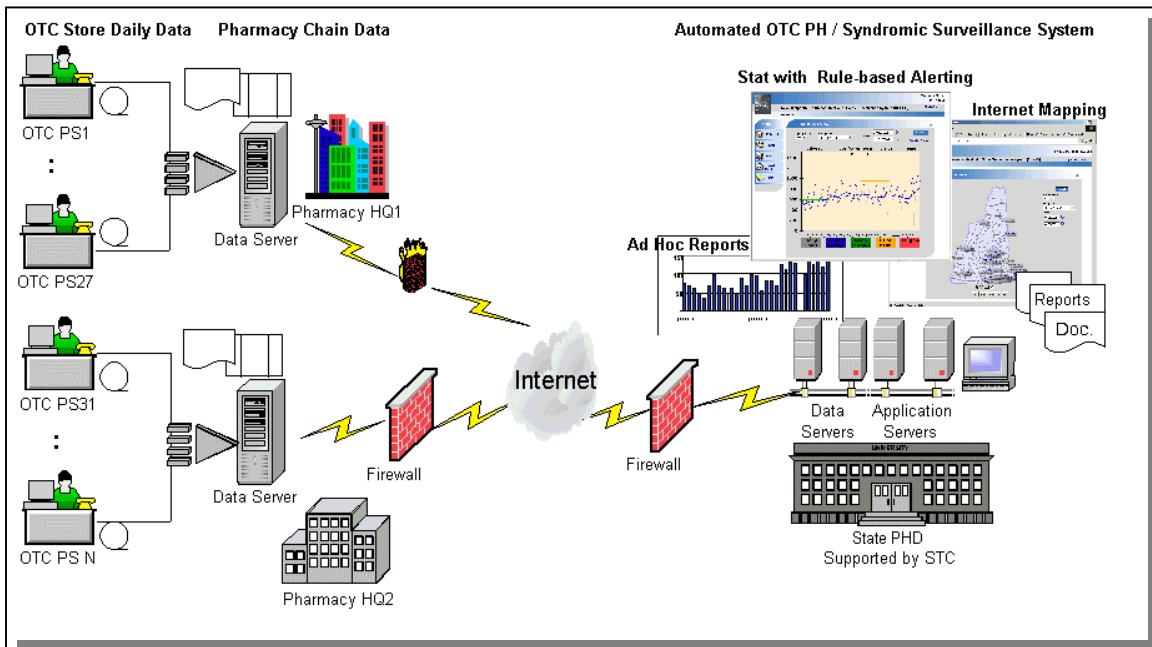
The OTC Pharmaceutical Sales Surveillance solution provides support for:

- Syndromic surveillance based on reported sales of over-the-counter pharmaceuticals
- Electronic data capture and storage
- Multi-dimensional analysis and reporting of OTC patterns
- Centralized OTC data warehouse and Web site
- Interactive GIS analysis and reporting
- Interactive data mining capabilities
- Integrated alerting based on critical pattern changes

small communities (neighborhoods) to large populations (states and territories). OTC PSS is effective during emergent situations (such as the spread of SARS) as well as supporting day-to-day public health preparedness and response activities.

Data Collection—The system provides for the capture and storage of OTC sales data via electronic means.

Data Analysis - OTC sales data are organized in multiple dimensions and spatial granularities in the integrated data warehouse. Basic statistical analysis methodologies have been applied. A new analysis algorithm specific to OTC data has been developed. Field deployment of this new methodology signals changes in public health consumer patterns earlier than



The figure above illustrates the conceptual architecture of the OTC PSS system

STC has developed a core OTC PSS solution that can be replicated and implemented quickly in any organization. Implementation efforts can be minimized based upon the similarity of the existing system template and an organization's specific requirements.

Syndromic Surveillance—The system can be used to augment local, state, or federal public health active syndromic surveillance efforts and can be scaled from

any other surveillance methodology.

Centralized Data Warehouse and Web Site— The system is based on data warehousing techniques. A Web application allows for the interactive analysis of the data. Access to data is controlled via user-role relationships.

Internal Reports and Mapping—The system provides for interactive analysis of the OTC data through the creation of summary and detailed diagrams, tabular reports, as well as informational maps from the spatially enabled data warehouse.

KEY BENEFITS

- Earliest detection of possible changes in consumer health behaviors
- Successful real-world deployment history
- Near-real time data processing resulting in critical time savings for public health response efforts
- Increased integrity of surveillance and control data
- Integration of applied science with syndromic surveillance methodology (patent pending)

STC PROFESSIONAL SERVICES

- Strategic planning for implementation of syndromic surveillance efforts
- Needs assessment and feasibility studies
- Confidentiality and risk assessments
- Data provider recruitment
- Installation and system configuration on-site

- On-Site training on the system
- Customization and/or integration with other surveillance solutions (optional)

SOFTWARE REQUIREMENTS

- MS Windows 2000 or higher
- ArcIMS, and supporting software
- Webserver (IIS, Apache, etc.)
- Application Server (JRun, Tomcat, etc.)
- Oracle RDBMS, Oracle Discoverer

HARDWARE REQUIREMENTS

- Spatial Server (optional)
- Web Server (can host spatial services)
- Database Server
- Networking Infrastructure

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