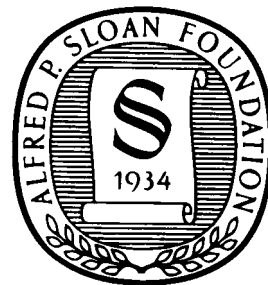


Welcome to the 2003 National Syndromic Surveillance Workshop

October 20th – 22nd, 2003

**Sponsored by the
New York City Department of Health and Mental Hygiene**

**Supported by
The Alfred P. Sloan Foundation**



Brief Workshop Agenda

Due to the large number of participants in the workshop, we have divided the group into two sections, both labeled with either a silver or gold star on the back of your name badge. The color will indicate which room you will be using for the majority of the workshop. Those with a gold star should go to Room 20 on the second floor. Those with a silver star should go to the President's Gallery on the first floor.

Everyone will meet on the first day in Room 20.

Monday, October 20th

8:30 – 9:00 Registration in the Lobby of the New York Academy of Medicine

Breakfast is available on the Second Floor

9:00 – 9:15 Welcoming address, workshop overview and objectives (Room 20)

9:15 – 9:30 National Data Standards (Room 20)

9:30 – 6:00 If you have a Gold Star on the Back of your badge, please stay in Room 20. You will be participating in the *Data Transfer and Transformation for Syndromic Surveillance* portion of the workshop.

If you have a silver star on your badge, please go downstairs to the President's Gallery. You will be participating in the *Space-Time Scan Statistic and SaTScan for Syndromic Surveillance* portion of the workshop.

Tuesday, October 21st

8:30 – 9:30 Breakfast available on the Second Floor

9:30 – 6:00 Gold star participants will be participating in the *Space-Time Scan Statistic and SaTScan for Syndromic Surveillance* portion of the workshop. This will be in Room 20.

Silver star participants will be participating in the *Data Transfer and Transformation for Syndromic Surveillance* portion of the workshop in the President's Gallery.

Wednesday, October 22nd

7:00 – 8:00 Breakfast available on the Second Floor

8:00 – 12:30 Signal Investigation and National Data Sources

Gold star participants will be participating in the Signal Investigation session from 8:00 – 10:00 and in the National Data Sources session from 10:30 – 12:30

Silver start participants will be participating in the National Data Sources session from 8:00 – 10:00 and in the Signal Investigation session from 10:30 – 12:30

12:30 – 3:30 An open session to work on any outstanding issues or questions you might have. All instructors will be available to answer questions. In addition, Research Scientists from the NYC DOHMH will be available to assist in SAS programming questions.

Detailed Workshop Agenda

Day 1 (Advanced SAS Users) or Day 2 (Beginner SAS Users) Data Transfer and Transformation for Syndromic Surveillance

Instructors: Rick Heffernan, Melanie Besculides, Bill Lober, Farzad Mostashari, Claire Broome

This session will review steps in the development of a syndromic surveillance system. National data standards and data transmission methods will be discussed. In a hands-on afternoon session, specific examples of data transformation, management and analysis will be given. Questions and comments are highly encouraged.

- 8:30 – 9:00 Breakfast and Registration
- 9:30 – 9:45 Workshop overview and objectives (FM) (ONLY IF DAY 1)
- 9:45 – 10:00 National Data Standards (CB) (ONLY IF DAY 1)
- 10:00 – 10:30 Negotiating with data providers (MB)
 - Selecting sources
 - Obtaining and evaluating baseline data
 - Managing relationships with data providers
 - Memorandum of understanding
 - HIPAA
- 10:30 – 11:30 Data elements (RH)
 - National data standards - DEEDS
 - NYC DOHMH emergency department data requirements
 - EMS, pharmacy, and absenteeism data
 - Evaluating the quality, completeness and timeliness of data for specific information systems
- 11:30 – 12:00 Break
- 12:00 – 1:00 Data transmission (BL)
 - Background: Data, networks, and encryption
 - Models for data extraction:
 - o Manual, semi-automated, and automated transfers
 - o Occasional, Daily, and Near-real time queries (batch)
 - o Real-time interfaces (HL7)
 - Insecure methods: email, ftp
 - Secure methods: secure ftp, scp, SSL
 - Securing real time interfaces: tunnels and VPNs
 - Reliability: Fault tolerance and notification
- 1:00 – 2:00 Lunch
- 2:00 – 3:00 Data processing (RH)
 - Transforming data (.txt, .csv, .xls)
 - Standardizing dates, times
 - De-duplication
 - Error checks and error notification
- 3:00 – 3:30 Break

- 3:30 – 5:00 Syndrome coding (FM)
- CDC working group categories
 - NYC syndrome coding algorithms
 - Text string normalization
- 5:00 – 5:15 Data warehousing (RH)
- Architecture
 - Archiving and backup procedures
- 5:15 – 5:30 Macros for Simulations (advanced group) (RH)

Detailed Workshop Agenda

Day 1 (Beginner SAS Users) or Day 2 (Advanced SAS Users) The Space-Time Scan Statistic and SaTScan for Syndromic Surveillance

Instructors: Rick Heffernan, Martin Kulldorff, and Farzad Mostashari

The New York City Health Department uses various methods for purely temporal disease outbreak detection, and the space-time scan statistic for the early detection and statistical inference of localized disease outbreaks. During this day, we will give an introduction to these methods with many practical examples. We will also demonstrate the free SaTScan software (www.satscan.org) used for most of these analyses, and give the participants a chance to run their first SaTScan analyses on their own laptops. This will be an interactive session, and questions are highly encouraged.

- 8:30 – 9:00 Breakfast and Registration
- 9:30 – 9:45 Workshop overview and objectives (FM) (ONLY IF DAY 1)
- 9:45 – 10:00 National Data Standards (CB) (ONLY IF DAY 1)
- 10:00 -11:00 Purely Temporal Disease Outbreak Detection Methods (FM, MK)
 - CUSUM
 - Temporal Scan Statistics
 - ARIMA and other Methods
 - Examples of Use at the New York City Health Department
- 11:00 -11:30 Break
- 11:30-1:30 Space-Time Scan Statistics for the Early Detection of Localized Outbreaks (MK)
 - Background on Spatial Scan Statistics
 - Global Clustering Test versus Cluster Detection Tests
 - Purely Spatial Scan Statistics
 - Geographical Cluster Size and Shape
 - Adjusting for Multiple Testing
 - Poisson and Bernoulli Models
 - Aggregated and Non-Aggregated Data
 - Adjusting for Covariates
 - Various Examples with Different Diseases
 - A Prospective Space-Time Scan Statistics
 - Space-Time Scan Statistics
 - Using Population-At-Risk Data: Poisson and Bernoulli Models
 - Adjusting for Natural Spatial and Temporal Variation
 - Using Only Case Data: The Space-Time Permutation Model
 - Repeated Analyses and Occurrence Rates
 - Outbreak Signal Accuracy
 - Outbreak Detection Performance Measures
 - Power of the Prospective Space-Time Scan Statistic
- 1:30 -2:30 Lunch
- 2:30 - 3:30 Examples of Use at the New York City Health Department (FM)
 - Hospital Emergency Room Data
 - Diarrhea
 - Vomiting
 - Respiratory Problems
 - Other data (EMS, Pharmacy, Absenteeism)
 - Today's Findings: The Daily Report

3:30 – 4:00 Break

4:00 - 5:45 The SaTScan Software (MK)
Download and Installation
SaTScan Demonstration
Real Data
Spiked Data
Running SaTScan
Data Requirements
Windows Version
Batch Mode Version
Running Daily Analyses
Practical Experience
Help System and Support

Detailed Workshop Agenda

Day 3: Signal Investigation and National Data Sources

Instructors: Don Weiss, Robert Pinner And Mike Wagner

Learning Goals and Objectives for the Signal Investigation Session

1. How to define and determine a signal
2. What are the aims of investigating a syndromic signal
3. What are the options available to investigate a syndromic signal
4. What are the problems and inherent difficulties in investigating syndromic signals

Upon completion of the session the participant should be able to:

1. Define syndromic surveillance signals
2. List the steps in investigating a syndromic signal
3. Perform a syndromic signal investigation
4. Discuss the pitfalls and difficulties in performing syndromic signal investigations

7:00 – 8:00 Breakfast available on the second floor

8:00 – 10:00 Beginner SAS Users – Demonstration of Biosense and the National Retail Data Monitoring System

Intermediate/Advanced SAS Users – Signal Investigation

10:00 – 10:30 Break

10:30 – 12:30 Beginner SAS Users – Signal Investigation

Intermediate/Advanced SAS Users – Demonstration of Biosense and the National Retail Data Monitoring System

LUNCH ON YOUR OWN

12:30 – 3:30 Open question and answer session with workshop instructors and DOHMH research scientists with SAS programming skills.