



# Syndromic Surveillance in California

Debra Gilliss MD. MPH

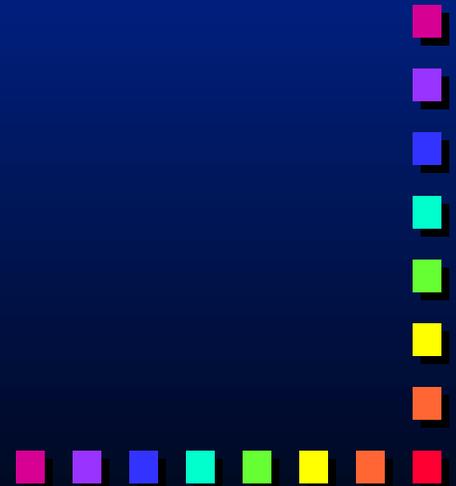
Bioterrorism Epidemiology Section, CDPH

CCLHO Health Data Committee Oct 1, 2008



# BES Mission

- Improve ability to detect a potential bioterrorism event
- Improve ability to respond to a bioterrorism event



# Activities

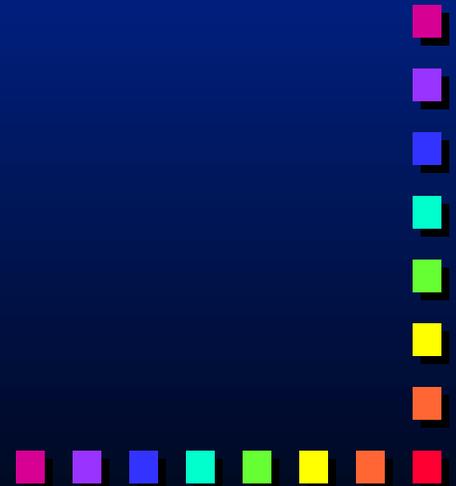
- Maintain knowledge base in syndromic surveillance methods and literature
- Maintain site on CAHAN that lists sources for syndromic surveillance
- Exploring options for statewide ED surveillance, Biosense, HMS
- Sponsored EARS training in coordination with CDC and Southern CA LHDs
- Considering statewide OTC surveillance system (NRDMS, HMS)
- Poison Control Center Data- webinar, exploring data analysis, visualization, reporting
- Electronic Death Registry system- competitive grant proposal declined by CDC



# Syndromic Surveillance Survey

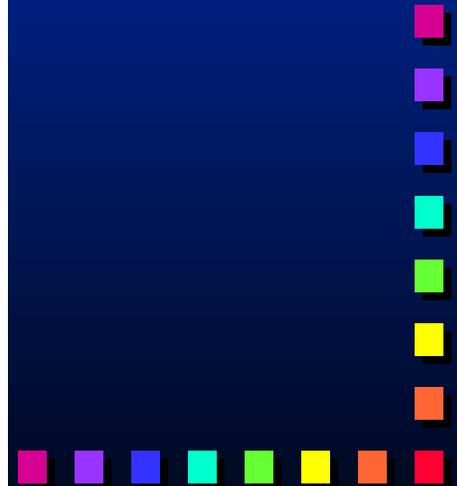
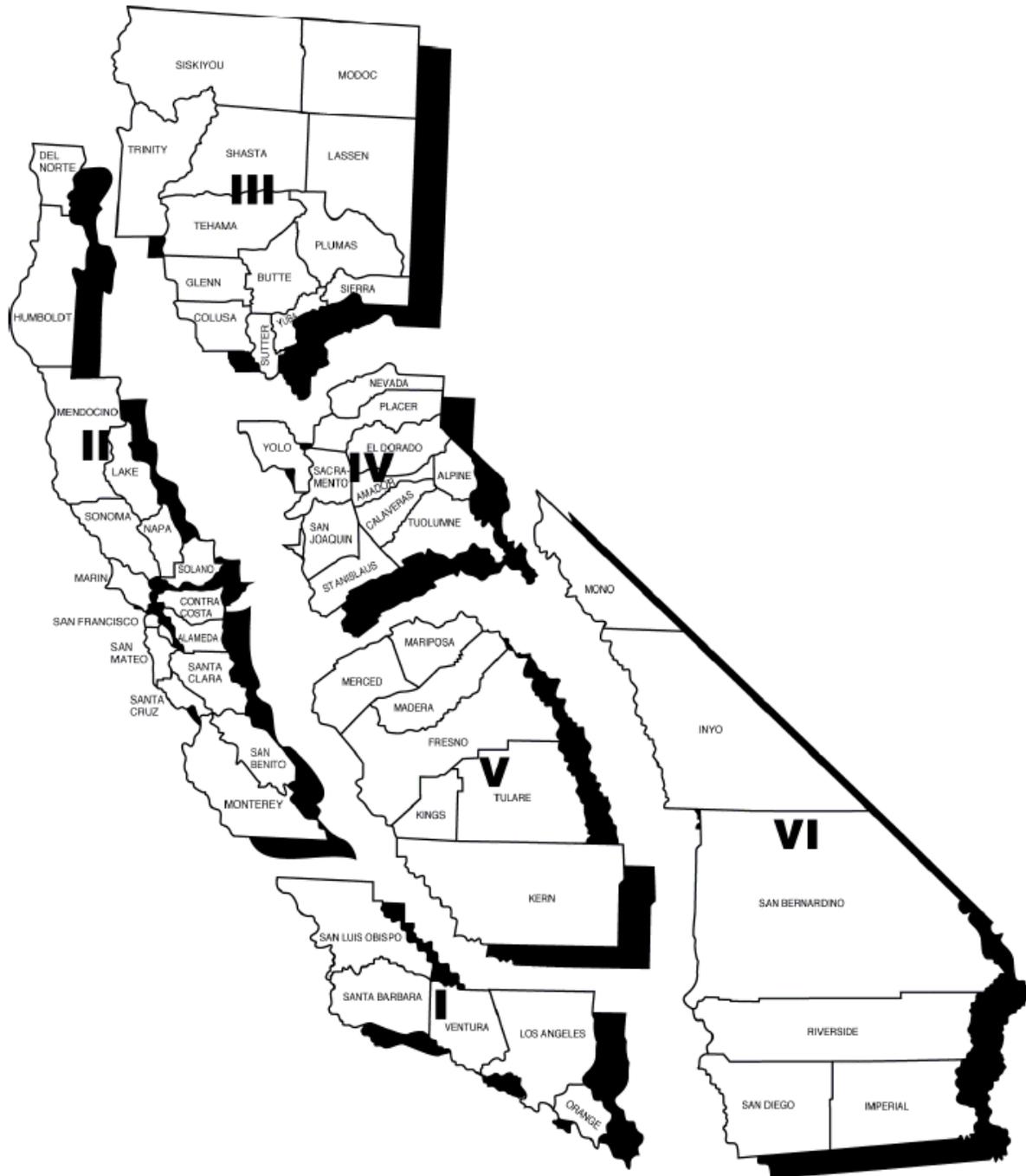
November 2007

- Who uses it?
- Sources of data
- Systems
- Methods
- Evaluations
- Resources
- Plans
- Reasons for not using

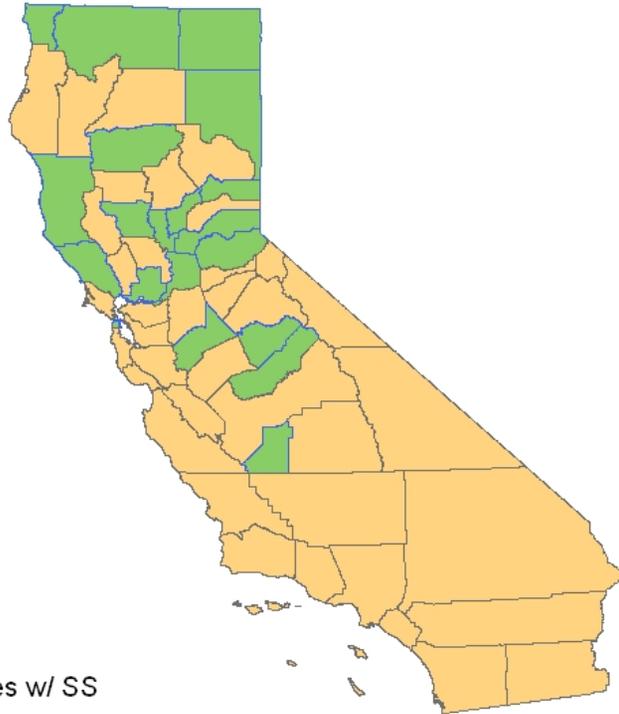


# OES Mutual Aid Regions

Response rate 100%



## California Syndromic Surveillance Map



### Legend

- Counties w/ SS
- Counties w/o SS



Is your jurisdiction engaging in Syndromic Surveillance or other enhanced surveillance to improve situational awareness or early event detection?

Yes =  
40/61  
(66%)



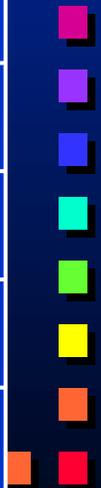
# Data Sources (N=40)

Data Source	No. LHDs (%)
Emergency Department	23 (57.5)
School Absentee data	21 (52.5)
Sentinel Provider data	18 (45)
Foodborne Complaint line	17 (40)
Pharmacy data	14 (35)
Laboratory data	11 (27.5)
Vital Statistics	11 (27.5)
Vector Control	10 (25)
Coroner's data	10 (25)



# Data Sources con't

Data Source	No. LHDs (%)
Emergency Medical Service (EMS)	8 (20)
Urgent Care	6 (15)
Hospital Discharge	6 (15)
Animal Health	6 (15)
911 calls	5 (12.5)
Poison Control	4 (10)
Hazmat Response	4 (10)
Nurse call center	1 (2.5)



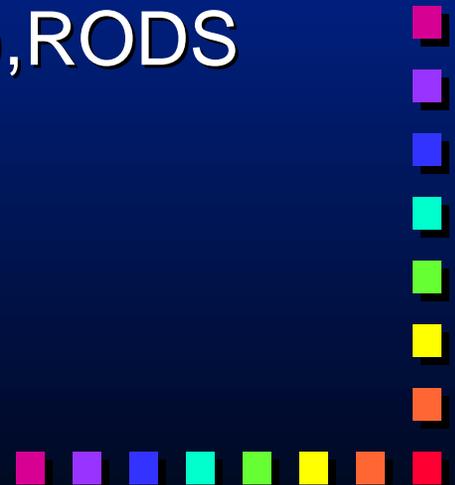
# Systems

## ■ Current Use

- RODS NRDM (14), Reddinet (11), Biosense (9), FirstWatch (3), ESSENSE (1)

## ■ Discontinued

- RODS NRDM (5), ESSENCE (2), RODS (1), Biosense (1), SYRIS (1)



# Other Questions (N=40)

- 37 provide feedback to hospitals or data sources
- 28 have future plans to increase surveillance capacity
- 23 have an algorithm or procedure for deciding when to investigate
- 15 have worked with other jurisdictions on regional projects
- 12 have sufficient resources to set up and maintain systems
- 7 have done any evaluation to determine if SS is beneficial



# Emergency Dept Data (N=23)

- Number of hospitals
  - 1-2 (10)
  - 3-5 (6)
  - 6+ (7)
  - >75% or population covered (10)
- Receive data
  - Real time twice daily (2)
  - Daily (8)
  - Weekly (6)
  - Monthly or as needed (6)
  - Automated data (6)



# Reasons for not using SS (N=21)

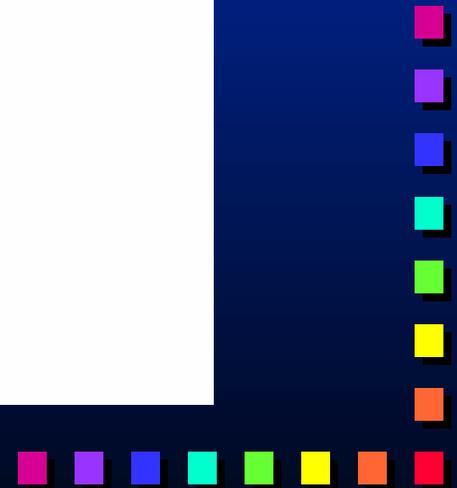
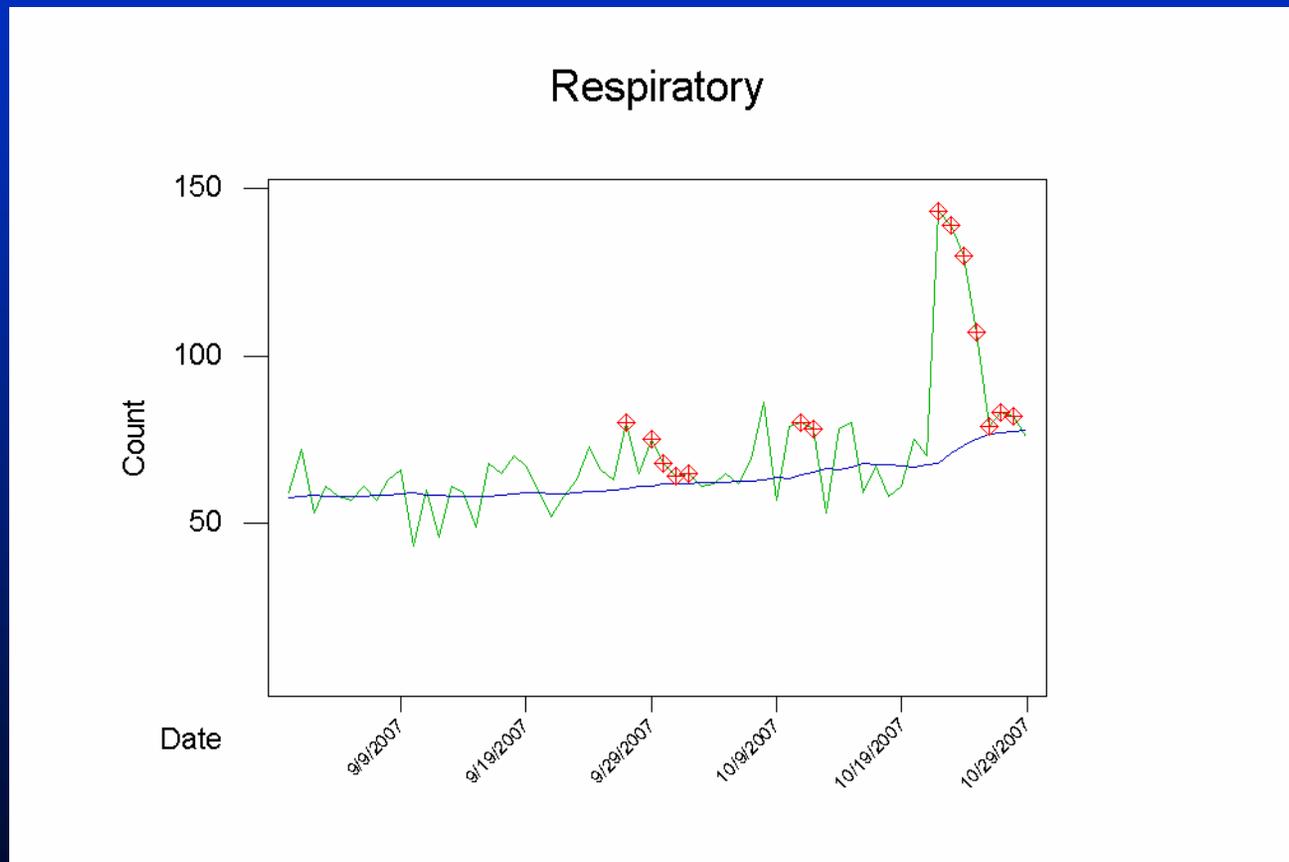
- 10 have done some SS or drop in surveillance in the past
- 17 Lack staff resources
- 12 Lack financial resources
- 8 Cost outweigh benefits
- 8 No benefits
- 8 Lack IT resources
- 6 Lack staff/analytical tools
- 6 Lack data sources/access to hospitals





# Fire Related Syndromic Surveillance Report

## San Diego Aberration Detection and Incident Characterization



# Biosense Southern California Wildfire report

(San Diego hospitals data only shown)

- Respiratory syndrome 8-36% daily increase over 7 day baseline
- Asthma 150-615% increase in hospital admissions
- Burns- 3-9 visits/day
- Cardiac dysrhythmias – 5-6 visits/day
- Total visits 16-85% increase in admissions, 16-40% increase in ED visits

