

Looking to the Future:

Vital Statistics Supporting Public Health Policy

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2008 NAPHSIS Annual Meeting
Celebrating 75 Years of Excellence
Orlando, FL June 1st – 5th, 2008



Public Health

- Understanding Populations
- Improving Environments

Public Health

"Fulfill society's interest in assuring conditions in which people can be healthy."

(Institute of Medicine, 1998)

Public Health

Understanding the patient ...

- Disease patterns and distributions
- Health status and outcomes
- Access to health services
- Health service delivery

... through their vital records

Public Health

Understanding impacts on patient ...

- Emergency response and preparedness
- Environmental hazards
- Socioeconomic status
- Resource allocation and management

... through vital records

Public Health

Beyond the individual ...

- The patient is the population
- Assessment is multi-factorial
- The treatment is the environment

... taking data to policy

Public Health Policy

- Assessment

- **Policy development** –

creation of comprehensive public health policies based on scientific knowledge.

- Assurance



CDC Assessment Initiative

Public Health Policy

Inside Policies

- Running the Business
- Shared Services

Outside Policies

- Ten Essential Services of Public Health
- Laws and Regulations

Inside Policies

- Federated approach
 - Establish shared standards
 - Leverage shared process
 - Maintain autonomy of data
- Shared services
 - EVVE
 - STEVE

Inside Policies

Why improve our business processes?

- Efficiency
- Responsiveness
- Accountability
- Respect and Reputation

Outside Policies

With our inside policies in place, it is time to influence and shape outside policies

- Monitor and Assess
- Establish and Evaluate
- Provide Leadership

Public Health

Vital records through the centuries to ...

- Monitor and Assess
- Establish and Evaluate

Monitor and Assess

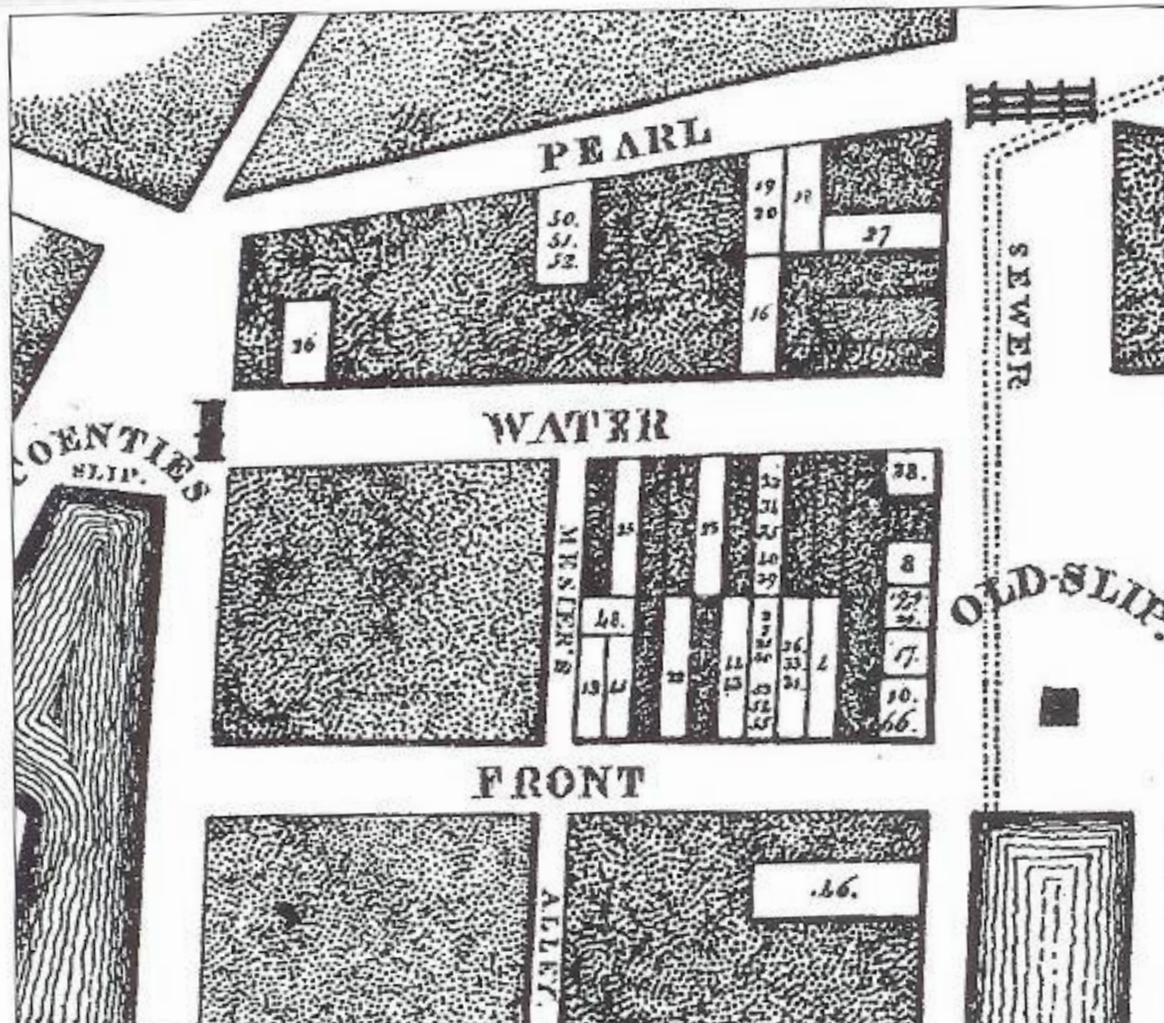


Figure 2.8b Detail in black and white of Pascalis's map of yellow fever cases near Old Slip, New York, 1819. Fatal cases are numbered sequentially by time of death.

Source: New York Academy of Medicine Library.

Source: Cartographies of Disease: Maps, Mapping, and Medicine, 1st Edition, Tom Koch, ESRI, 2005.

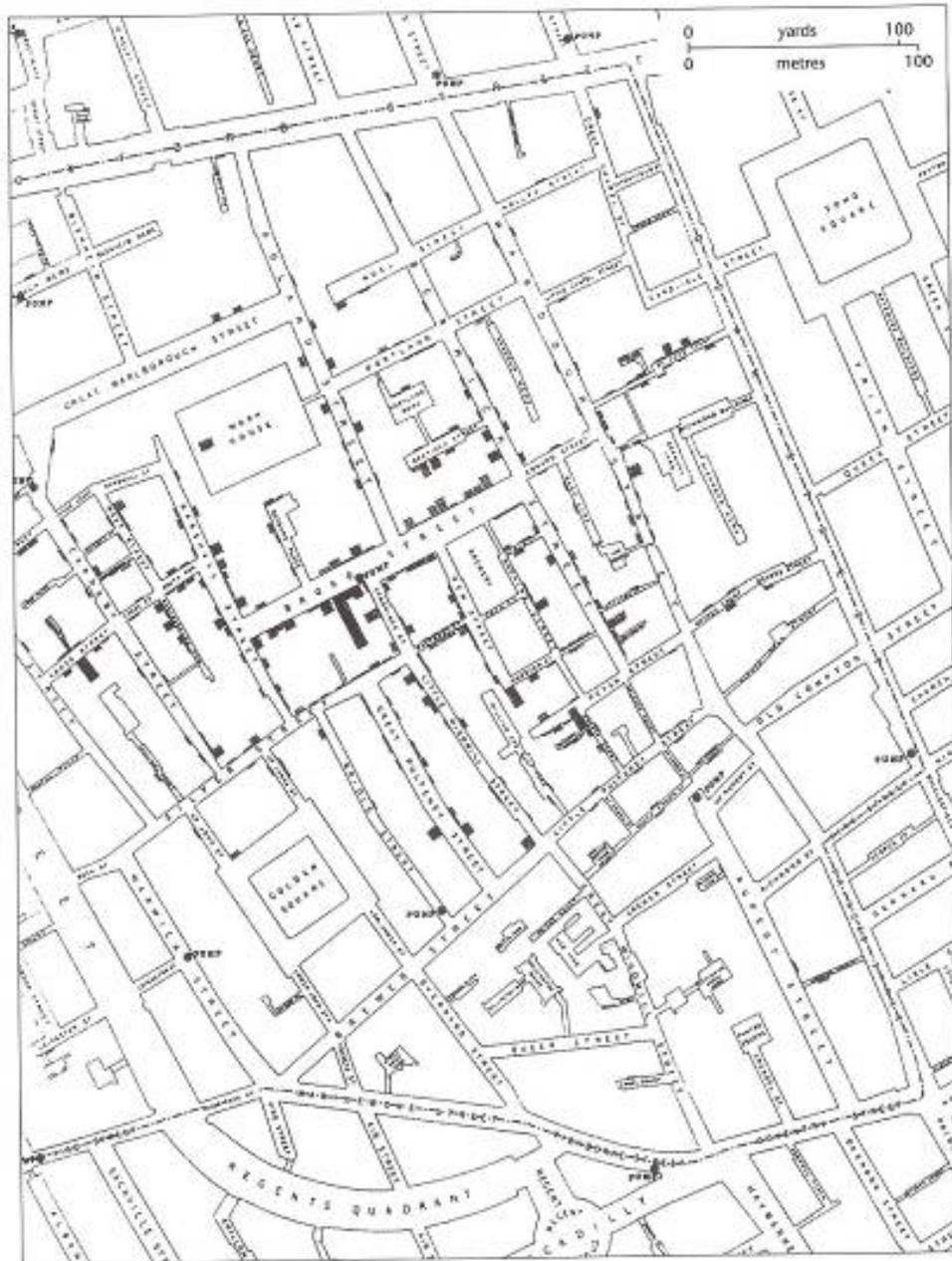


Figure 4.12a Snow's map of the Broad Street outbreak, 1854, from *On the Mode of Communication of Cholera, Second Edition*.

Source: Reproduced courtesy of College of Physicians of Philadelphia.

Establish and Evaluate

Source:
Cartographies of Disease: Maps,
Mapping, and Medicine, 1st Edition,
Tom Koch, ESRI, 2005.

The 20th Century

Leading Causes of Death, 1900

1. **Pneumonia and Influenza**
2. **Tuberculosis**
3. **Diarrhea**
4. Disease of the heart
5. Intracranial lesions of vascular origin
6. Nephritis
7. All accidents
8. Cancer
9. Senility
10. **Diphtheria**

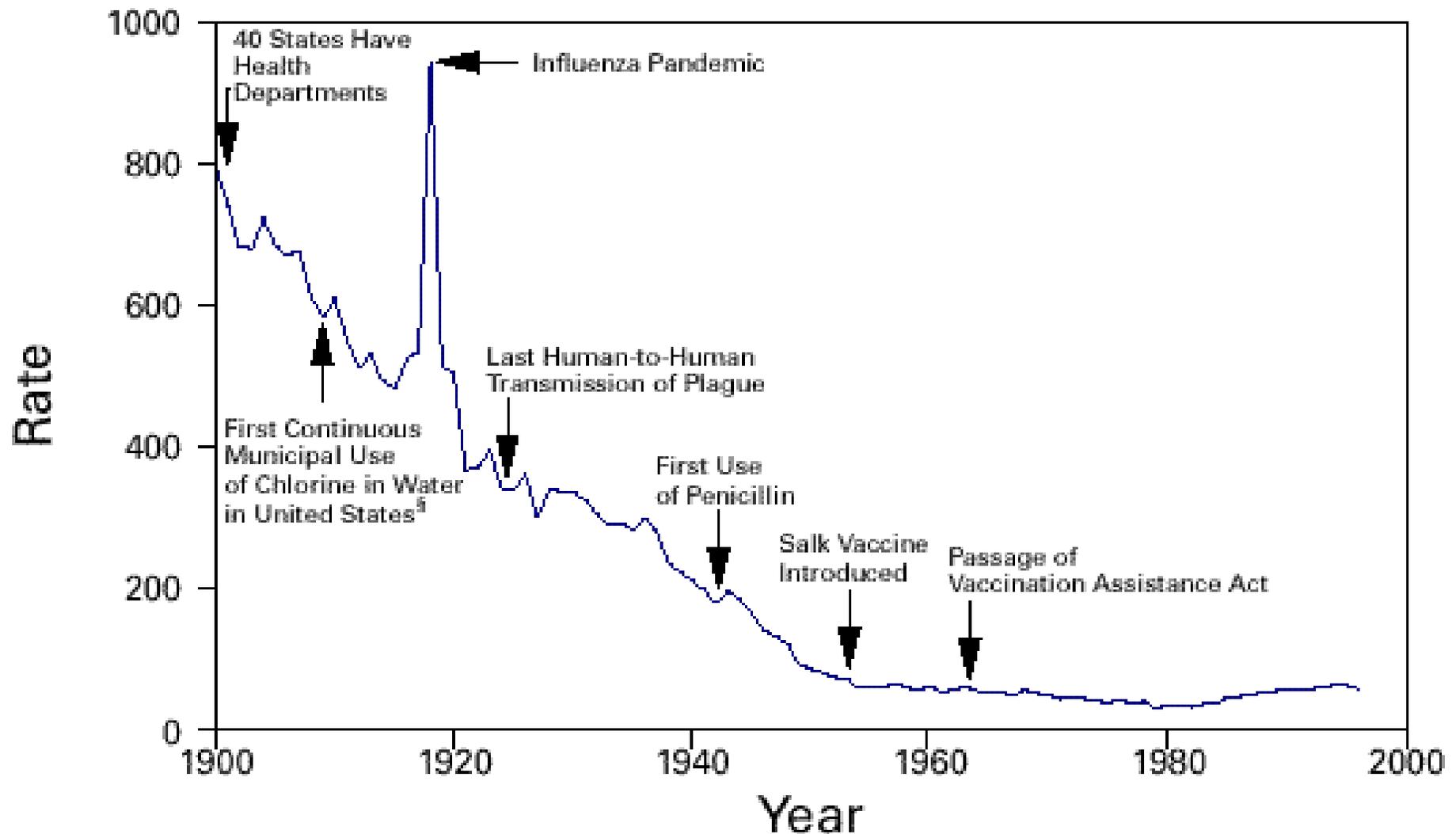
Advances for the 20th Century

Infectious Diseases ...

- Clean drinking water
- Sewage treatment

... changed by Environment

FIGURE 1. Crude death rate* for infectious diseases — United States, 1900–1996†



*Per 100,000 population per year.

†Adapted from Armstrong GL, Conn LA, Pinner RW. Trends in infectious disease mortality in the United States during the 20th century. *JAMA* 1999;281:61–6.

§American Water Works Association. Water chlorination principles and practices: AWWA manual M20. Denver, Colorado: American Water Works Association, 1973.

The 21st Century

Leading Causes of Death, 2000

1. Heart Disease
2. Cancer
3. Stroke
4. Lung Disease
5. Accidents
6. Influenza/Pneumonia
7. Diabetes
8. Alzheimer's Disease
9. Cirrhosis
10. Suicide

Advances for the 21st Century

Chronic Diseases ...

- Land management/City planning
- Safe neighborhoods

... will be changed by Environment

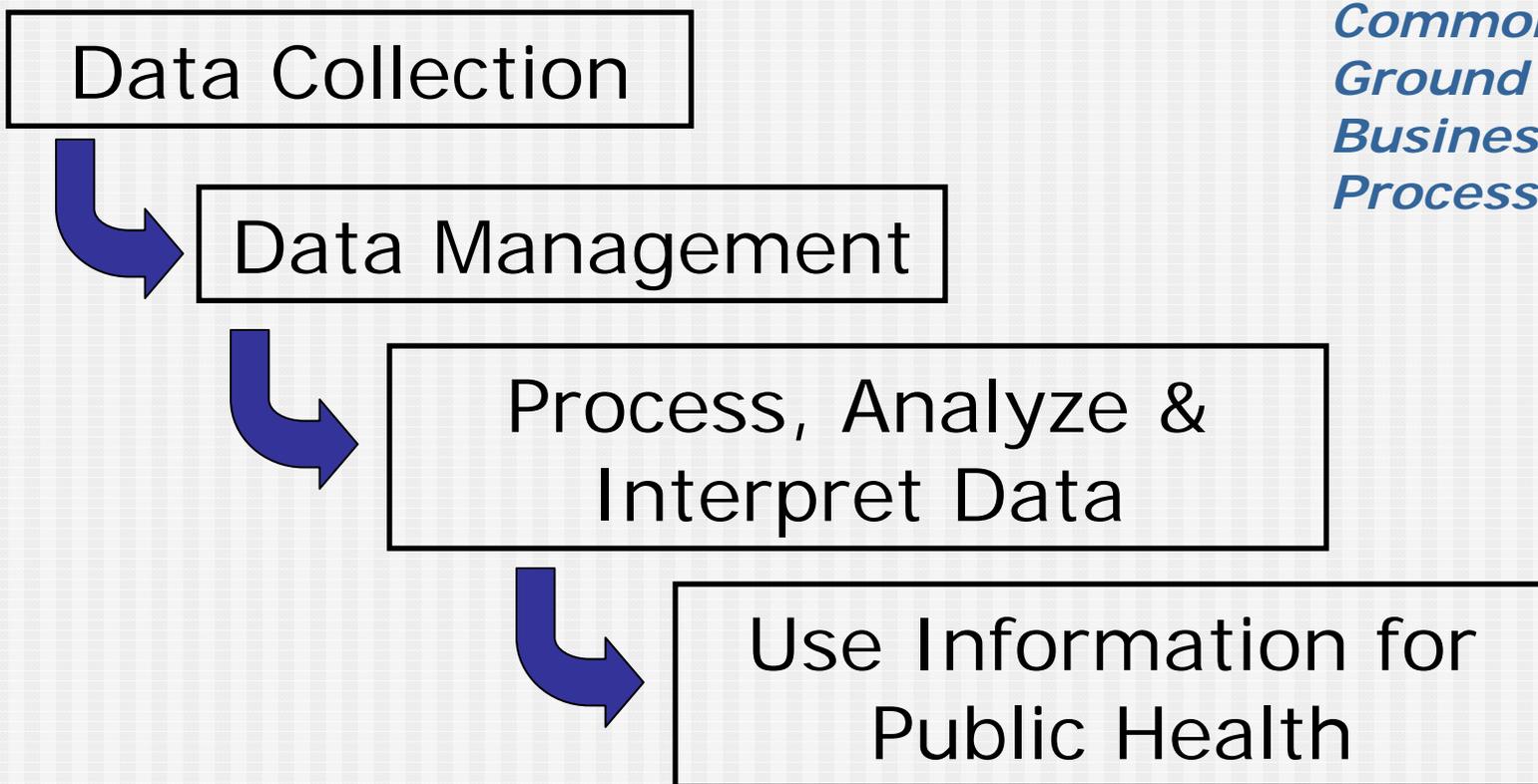
What's Needed

- Data
 - Transformed into Information
 - To create Knowledge
 - To make Decisions

Common Ground Program

- Robert Wood Johnson Foundation
- Improve public health informatics
- Identify shared business processes for chronic disease in public health
- Redesign systems needed to support chronic disease prevention & control
- Identify requirements of this system

The Transformation



*Common
Ground
Business
Processes*

What's Next?

- Electronic health exchange
- Use of hubs to transfer data
- Use of web-based services to meet needs
- Use of real-time data for decision making

Examples:

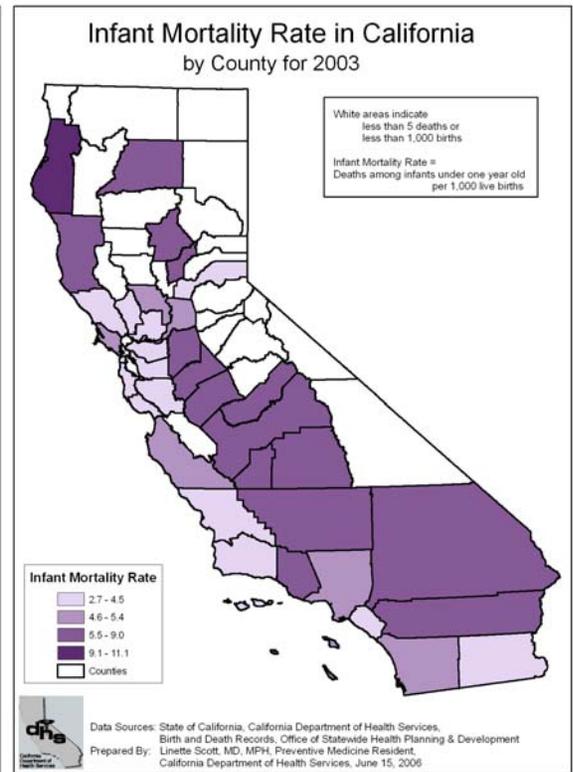
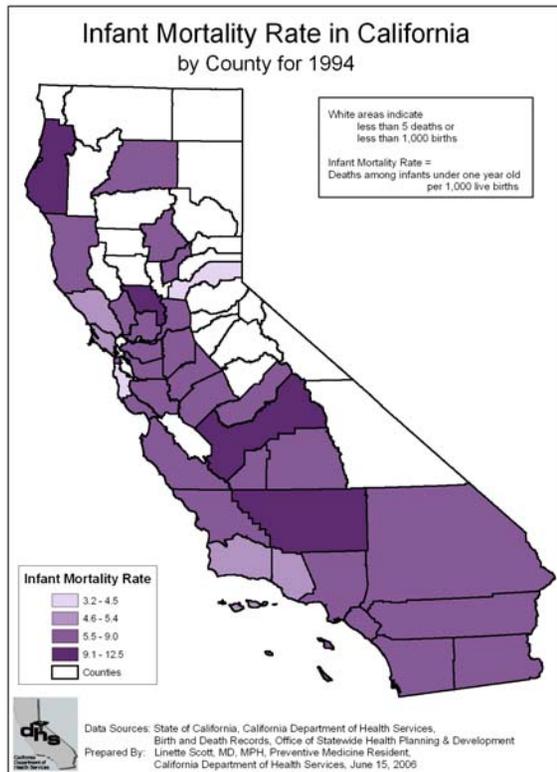
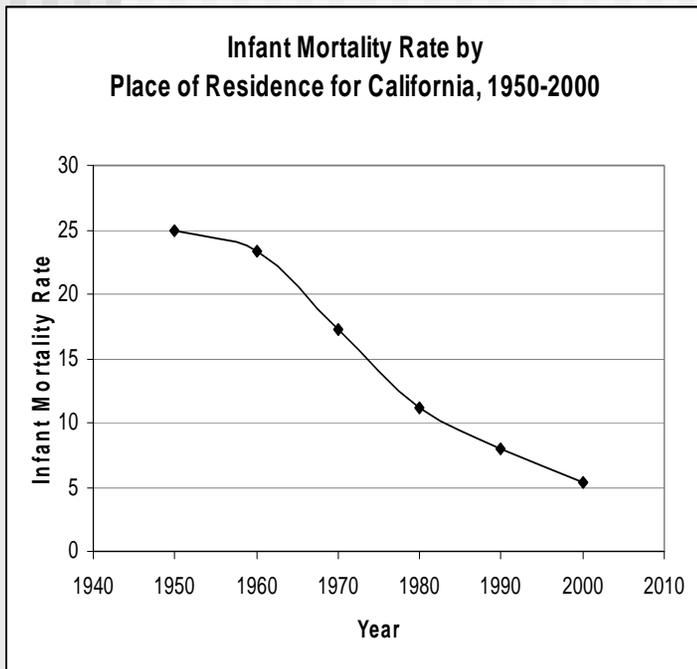
Vital Record Data that can shape public health policy

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Vital Statistics

Center for Health Statistics - responsible for coordinating and overseeing collection, management, and dissemination of public health and vital statistics data in conjunction with other State agencies, local government agencies, and other customers.

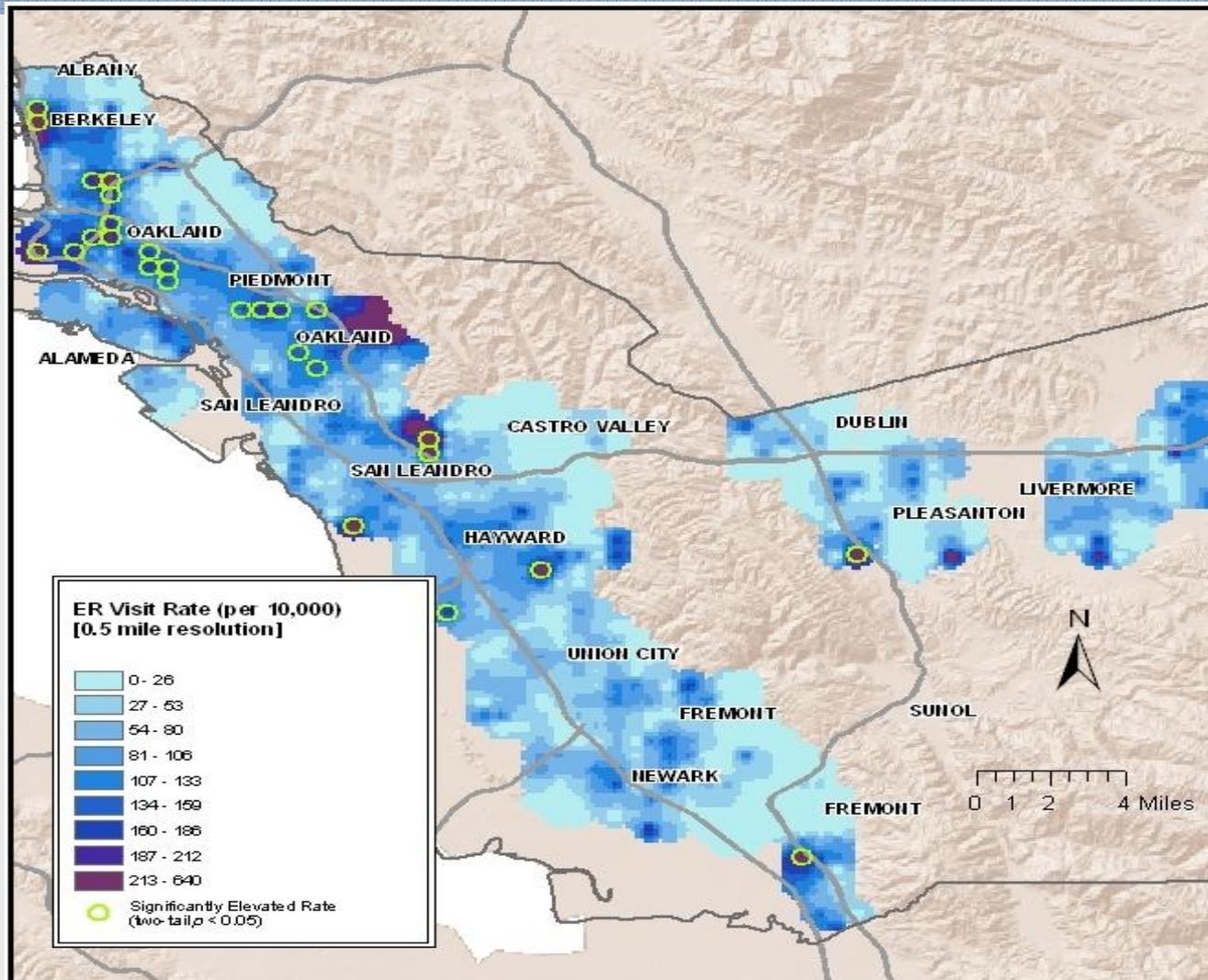


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California Environmental Health Tracking Program

Environmental Health Tracking is the ongoing systematic collection, integration, analysis, interpretation, and dissemination of data about environmental hazards, exposure to environmental hazards, and health effects potentially related to exposure to environmental hazards.



California Healthcare Atlas

This mapping application is an interactive, internet-based GIS that allows users to view and query mapped hospital and other health related data.

The screenshot displays the California Healthcare Atlas web application. At the top left is the logo for the Office of Statewide Health Planning & Development (osHPD), featuring stylized figures. The title "California Healthcare Atlas" is centered at the top, with the State of California logo on the right. A navigation menu includes "Home", "Locate", "Select", "Create", "Results", "Maps", and "Help", along with a "Reset Application" link. Below the menu are tabs for "Legend", "Layers", "Print", and "Map Select", and a "Refresh Map" button. The main map area shows a geographic region with various hospitals and roads. A legend on the left explains the symbols and colors used on the map, including hospitals, streets, major highways, major roads, ramps, ferry crossings, 2003 Diabetes deaths (0-1, 2-4, 5-8, 9-34, No Data), ZIP codes, and counties. The map shows several hospitals such as Oak Valley Care Ctr, Oak Valley District Hosp, Doctors Med Ctr, Stanislaus Behavioral Hlth Ctr, Kindred, and Emanuel Med Ctr. Major roads like 99, 219, 132, and 5 are also visible. A scale bar indicates 9 miles. At the bottom, there is a toolbar with icons for "Info", "Clear", "Zoom In", "Zoom Out", "Move Map", "Previous", "Street", "City", and "CA". The status bar at the very bottom shows "Done" and "Internet".

osHPD
Office of Statewide Health Planning & Development

California Healthcare Atlas
State of California

Home Locate Select Create Results Maps Help [Reset Application](#)

Legend Layers Print Map Select Refresh Map

The map Legend identifies the symbols and colors representing the visible map layers.

- Hospital
- Streets
- Streets
- Major Highways
- Highways
- Major Roads
- Ramps
- Ferry Crossing
- 2003 Deaths: Diabetes
 - 0-1
 - 2-4
 - 5-8
 - 9-34
 - No Data
- ZIP Codes
- Counties

Map labels: Ripon, Salida, Oakdale, Riverbank, Modesto, Kindred, Ceres, Turlock, Oak Valley Care Ctr, Oak Valley District Hosp, Doctors Med Ctr, Stanislaus Behavioral Hlth Ctr, Brandel Manor - Emanuel Med Ctr, Emanuel Med Ctr.

Scale: 0 9mi

Toolbar: Info Clear Zoom In Zoom Out Move Map Previous Street City CA

Status: Done Internet



Home

Locate

Select

Create

Results

Maps

Help

[Reset Application](#)

Location Information

Facility Reports

Inpatient Summary

Other Reports

Hospital ?

No features found.

Medical Service Study Area ?

MSSA ID	215a
MSSA Name	Modesto West
Definition	Urban
Area (Sq Mi)	31.5
Population (2000)	77170
Population Density	2449.8
More Demographics	MSSA Demographic Summary Report

Census Tracts ?

Tract Number	0008.05
More Demographics	Census Tract Demographic Summary Report

ZIP Codes

ZIP Code	95350
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City/Place Boundaries

Place Name	Modesto
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County

Name	Stanislaus
Population	490078

The zip code with the most diabetes deaths

Public Health

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Public Health ...

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- Improving Environments

... through vital records

Thank you!

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