

# **ORIENTATION TO THE CLASS AND TO LOCAL HEALTH DEPARTMENTS**



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# Objectives for this session

- **Be able to describe expectations for students in HS 438**
- **Be able to define a LHD according to ASTHO, and know how this differs from previous concepts**
- **Be able to describe the core and essential functions of a LHD**
- **Be able to describe the development of LHDs in the United States**

# **Expectations of students in HS 438**

- **Active participation in class**
- **Reading text and supplemental pieces**
- **Project**
  - **Select topic of interest**
  - **Attend, do interviews, reading**
  - **Develop**
    - **a paper**
    - **a presentation.**

# WHAT IS PUBLIC HEALTH?

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- **Mission: Public health fulfills society's interest to assure conditions in which people can be healthy.**
- **Substance: Public health is organized community efforts aimed on the prevention of disease and the promotion of health.**  
**(IOM)**

# One perspective

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- **“Health care is vital to all of us some of the time, but public health is vital to all of us all of the time.”**

**-C.Everett Koop**

# **What is a Local health Department?**

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**Old Definition:**

**Full time medical health officer**

# **ASTHO DEFINITION OF A LHD:**

- **an official (governmental) public health agency which is in whole or in part responsible to a sub-state governmental entity or entities. The latter may be a city, county, city-county, federation of counties, borough, township, or any other type of substate governmental entity.**

# **ASTHO DEFINITION CRITERIA:**

- **It has a staff of one or more full-time professional public health employees (e.g. public Health nurse, sanitarian)**
- **It delivers public health services**
- **It serves a definable geographic area**
- **It has identifiable expenditures, and or budgets in the political subdivision(s) which it serves.**

# Profile of LHDs

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- **Where are they?**
- **Whom do they serve?**
- **What services are provided?**
- **How are they organized?**
- **What are the State/LHD relationships?**
- **Who leads LHDs?**
- **Whom do they work with?**

# Where are they?

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- **How many local health departments exist in the U.S.?**

# **What are the jurisdictions of a LHD?**

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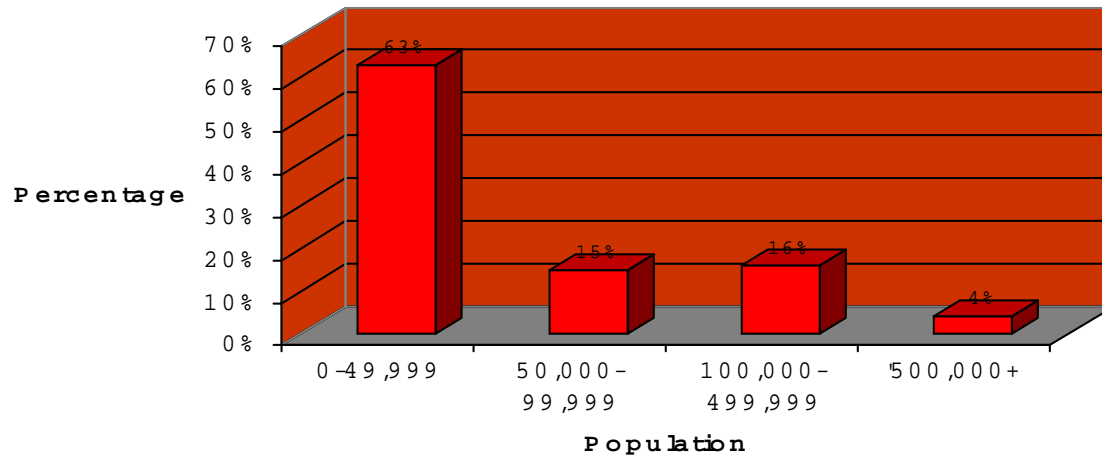
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- **Over 50% are single county**

# Whom do they serve?

## ● Population

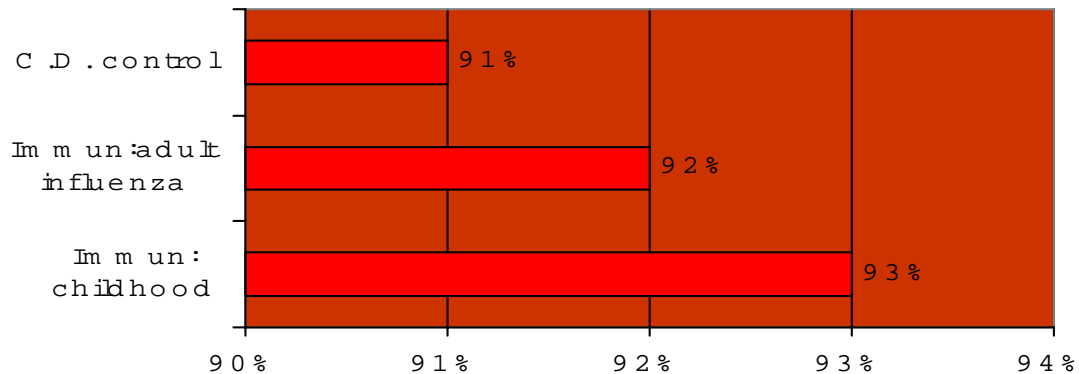
Population of jurisdiction served by  
LH D s , 1997



# What services do LHDs now provide?

- **Services (see 10 essential)**

% LHDs providing or paying for service



# How are they organized?

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- **Separate Health department**
- **Umbrella agency**
- **Integrated health services department**
- **Integrated human resource department**

# How do LHDs relate to the state HD?

- **Centralized**
  - **LHD operated by State, under state authority**
  - **25% (Nevada, New Mexico. Vermont)**
- **Decentralized**
  - **Local government has direct authority over LHD**
  - **50% (Washington, New York, Minnesota)**

# **Relationship with state continued**

- **Shared**
  - **LHD under shared authority with state**
  - **4% (Maryland)**
- **Mixed**
  - **some jurisdictions shared, others centralized**
  - **17 % (California, Texas, Alaska)**
- **Other**
  - **State is LHD (Hawaii, Rhode Island)**

# How are LHD's governed?

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- **Board of Health**
- **Governmental body acting as Board of Health**

# Who leads LHDs?

- **Local health directors are**
  - **Full time (79%)**
  - **In position more than 5 years (67%)**
  - **male (60%)**
  - **Euro-American (96%)**
  - **have a graduate degree**
    - **37 % have MD,DVM, DO)**
    - **11% have MD and graduate PH degree**

# **Whom do LHDs work with?**

- **81% work with a local board of health**
- **83% work with the state health agency**
- **37% work with faith communities**

# HD Services—the classic Emerson six

- **Vital Statistics, or recording, tabulating, interpretation, and publication of the essential facts of births, deaths, and reportable disease**
- **Control of communicable disease, including tuberculosis, the venereal diseases, malaria, and hookworm disease**

# Emerson six, continued

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- **Environmental sanitation,**  
**including supervision of milk and milk products, food processing and public eating places, and maintenance of sanitary conditions of employment**
- **Public Health Laboratory services**

# Emerson six, continued

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- **Hygiene of maternity, infancy and childhood, including supervision of the health of the school age child**
- **Health education of the general public so far as not covered by the functions of departments of education**

# **The three core public health functions are:**

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- **Assessment**
- **Policy Development**
- **Assurance**

- ***The Future of Public Health*, Institute of Medicine, 1988**

# **IOM functions of LH units**

## **● Assessment:**

- monitoring and surveillance of local health problems and needs and resources for dealing with them**

## **● Policy Development and leadership**

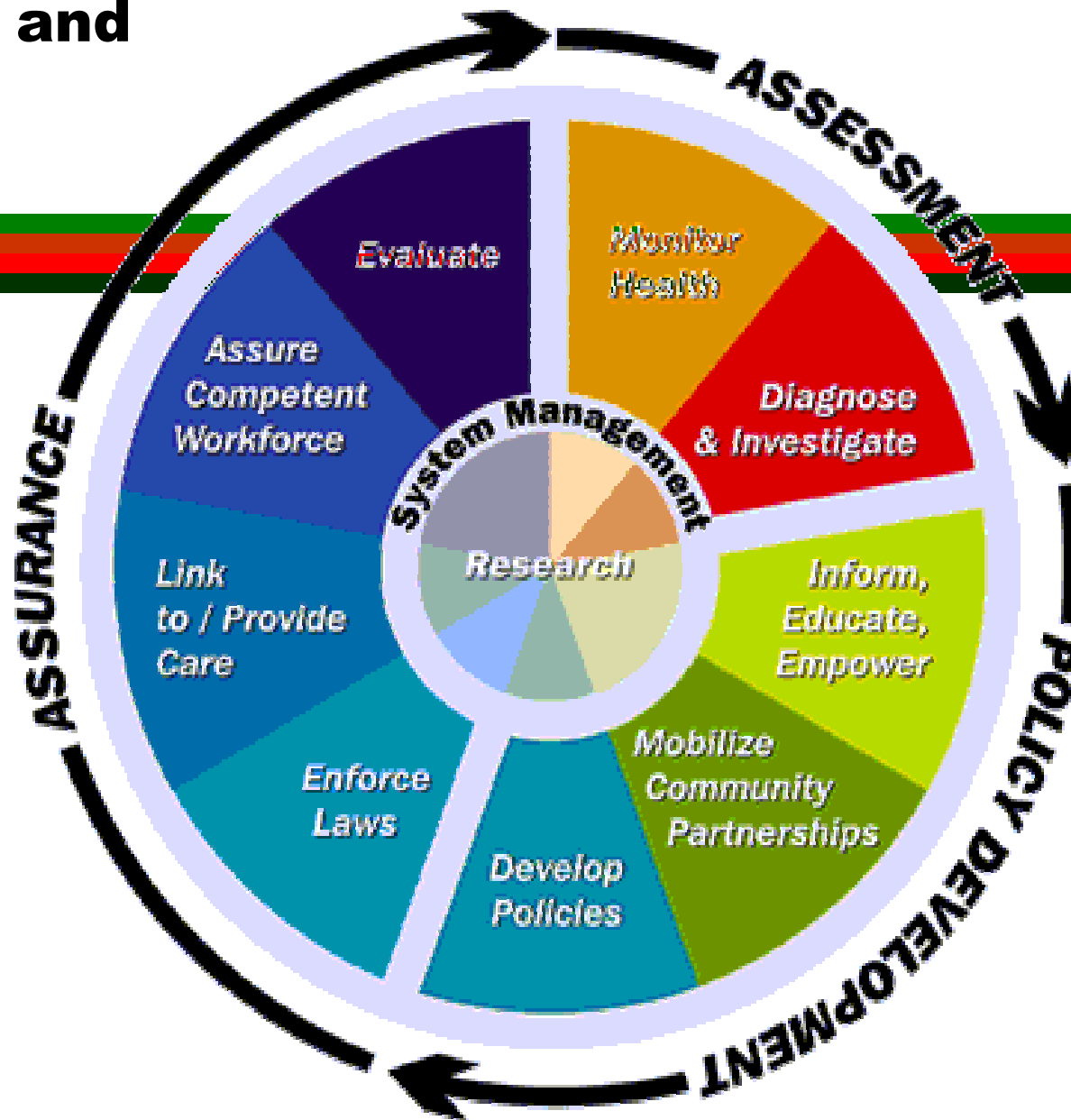
- foster local involvement and a sense of ownership, emphasize local needs, and advocate equitable distribution of public resources and complementary private activity commensurate with community needs**

# **IOM functions of LH units**

## **● Assurance**

- high quality services, including personal health services, needed for the protection of public health in the community are available and accessible to all persons; the community receives proper consideration in the allocation of federal and state as well as local resources for public health, and the community is informed about how to obtain public health, including personal health services, or how to comply with public health requirements**

# Public Health Functions and Activities



*Public Health in America*, from Public Health Functions Steering Committee, 1995

# Ten Essential Public Health Services

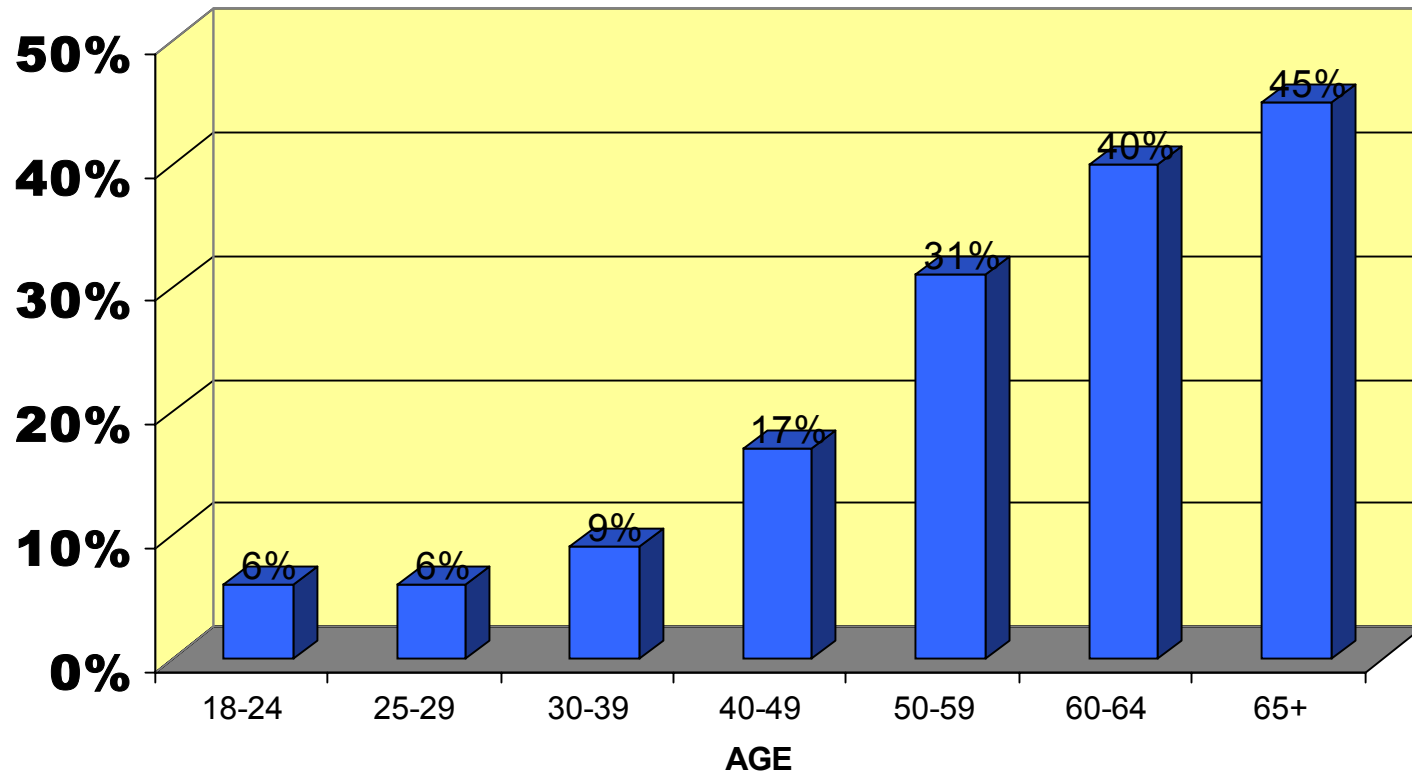
## ● Assessment

### ● 1. Monitor health status to identify community health problems

#### ● Examples:

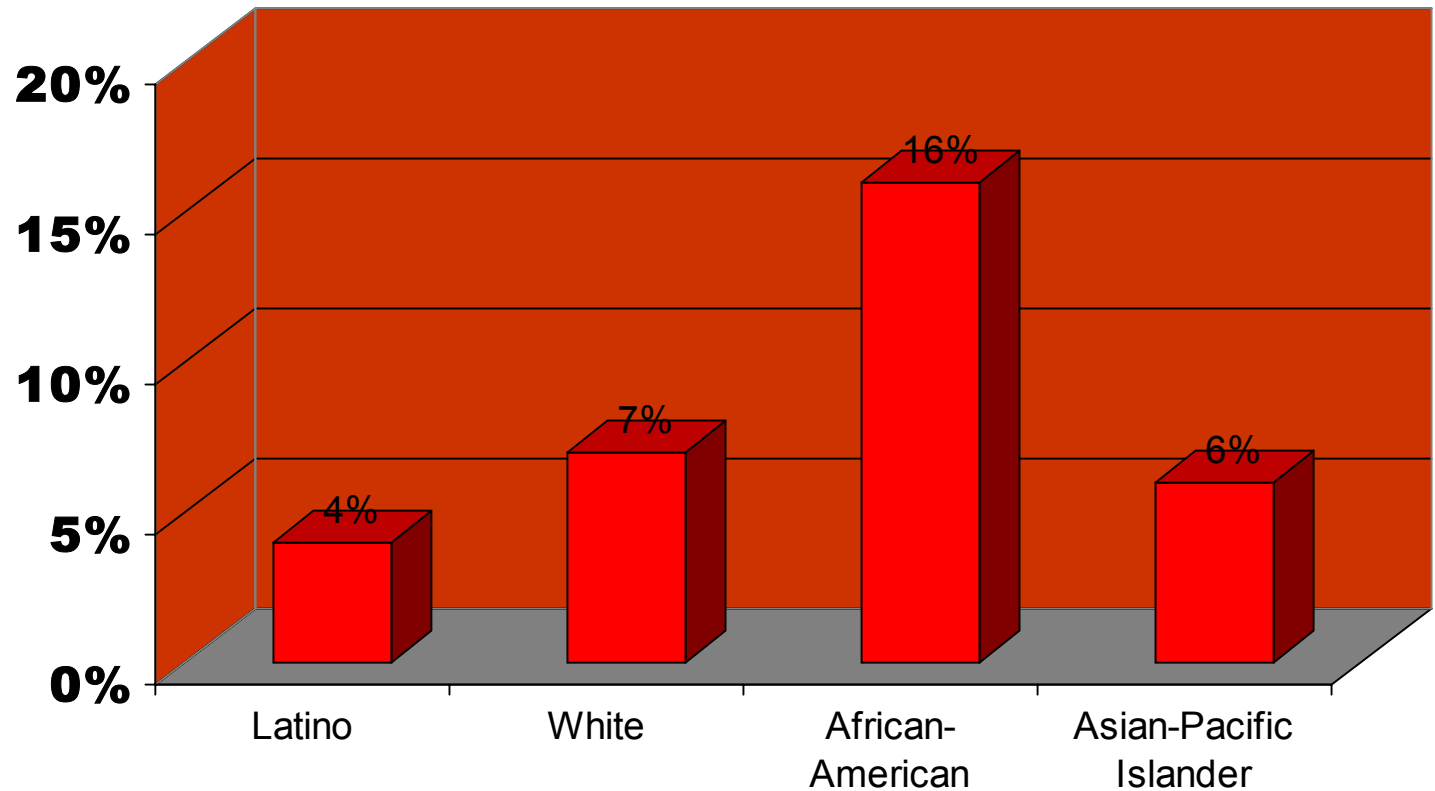
- Collect and analyze birth and death records
- L.A. Health survey
- Sentinel physicians doing surveillance for influenza

# L.A. Health Survey: hypertension in adults, LA County, 1999



Source: L.A. Health Survey, 1999

# CHILDHOOD ASTHMA, L.A. COUNTY, 1999

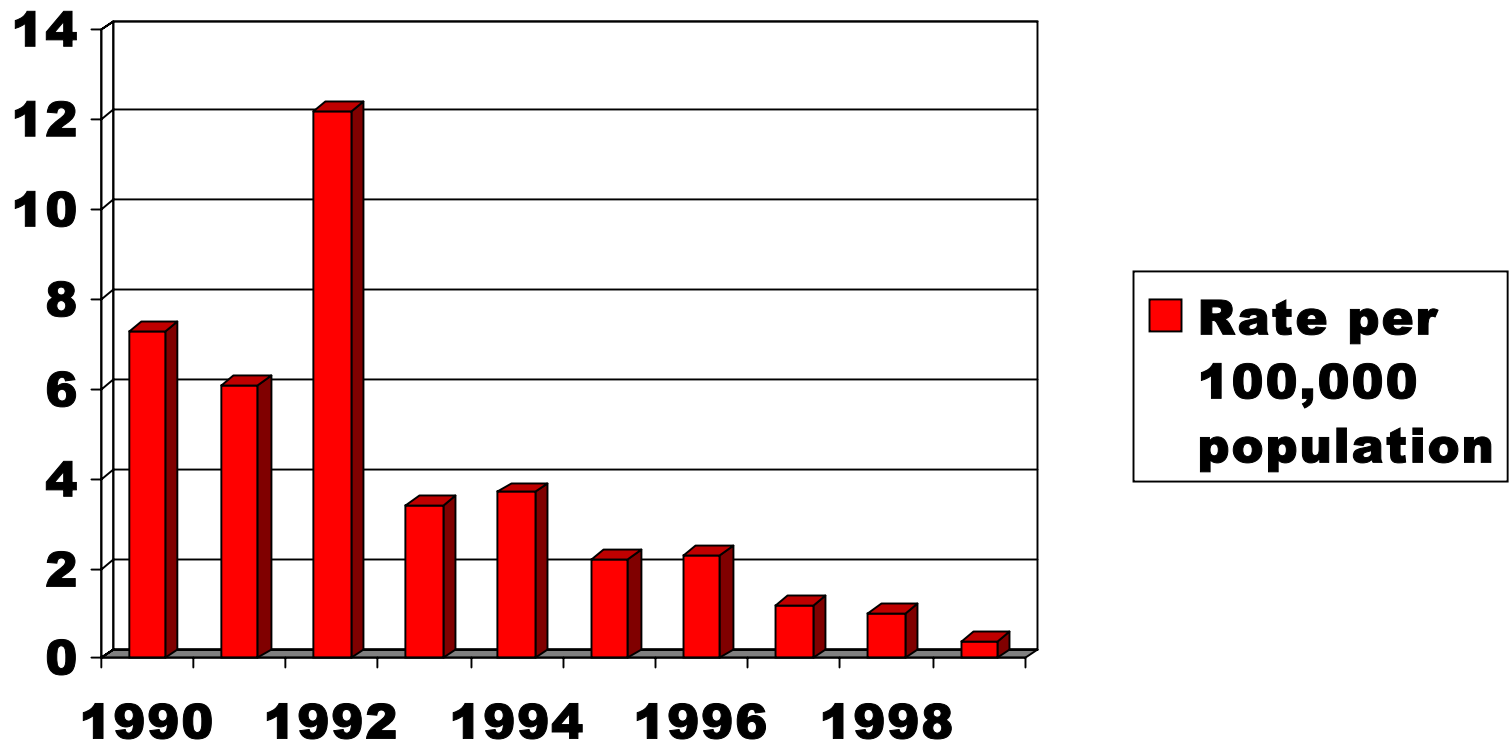


Source: L.A. Health Survey, 1999

# **2. Diagnosis and investigate health problems and health hazards in the community**

- **Examples:**
  - **Receive and act on Communicable Disease Reports**
  - **Childhood lead poisoning surveillance and control**
  - **Monitor bacteria levels in public swimming lakes and beaches**

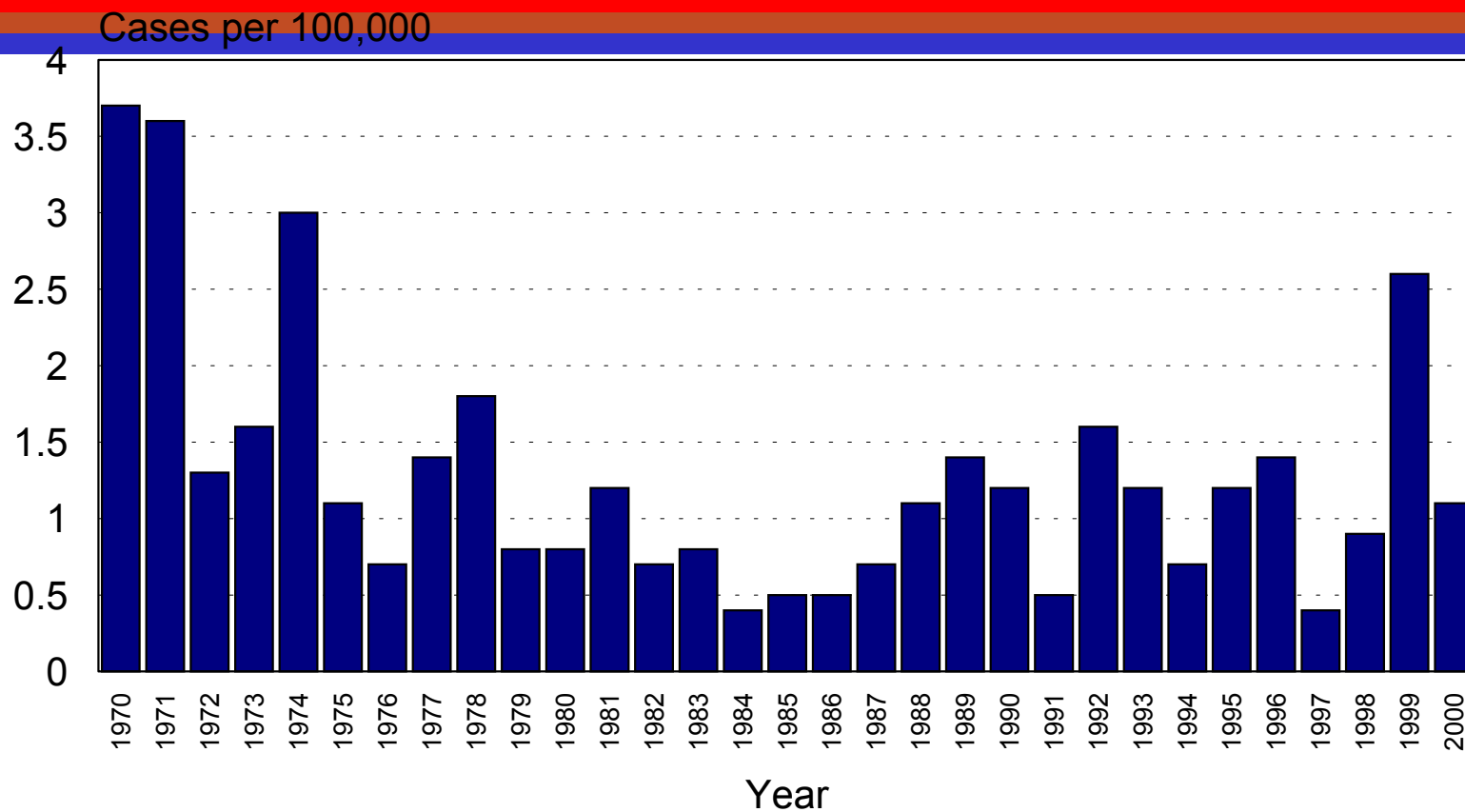
# Diagnosed and investigated Hepatitis B cases, L.A. County



Source: Acute Communicable Disease Control, L.A. County

# Pertussis Incidence Rates by Year\*

## Los Angeles County, 1970-2000



\*excluding Long Beach and Pasadena

Source: L.A. County Immunization Program

# Policy Development

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- **3. Inform, educate, and empower people about health issues**
  - **Examples**
    - **Web page with community specific health information**
    - **Posting of restaurant scores**
    - **“Five a day” nutrition education**

# **The public health web, a vehicle to inform**

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- **[www.lapublichealth.org](http://www.lapublichealth.org)**

# **Restaurant inspection scores, L.A. County**

- **A = Score of 90-100**
- **B = Score of 80-89**
- **C = Score of 70-79**
- **0-69= no score**

**closure if conditions so warrant**

**-no hot water**

**-sewage**

**-cockroaches or rodents**

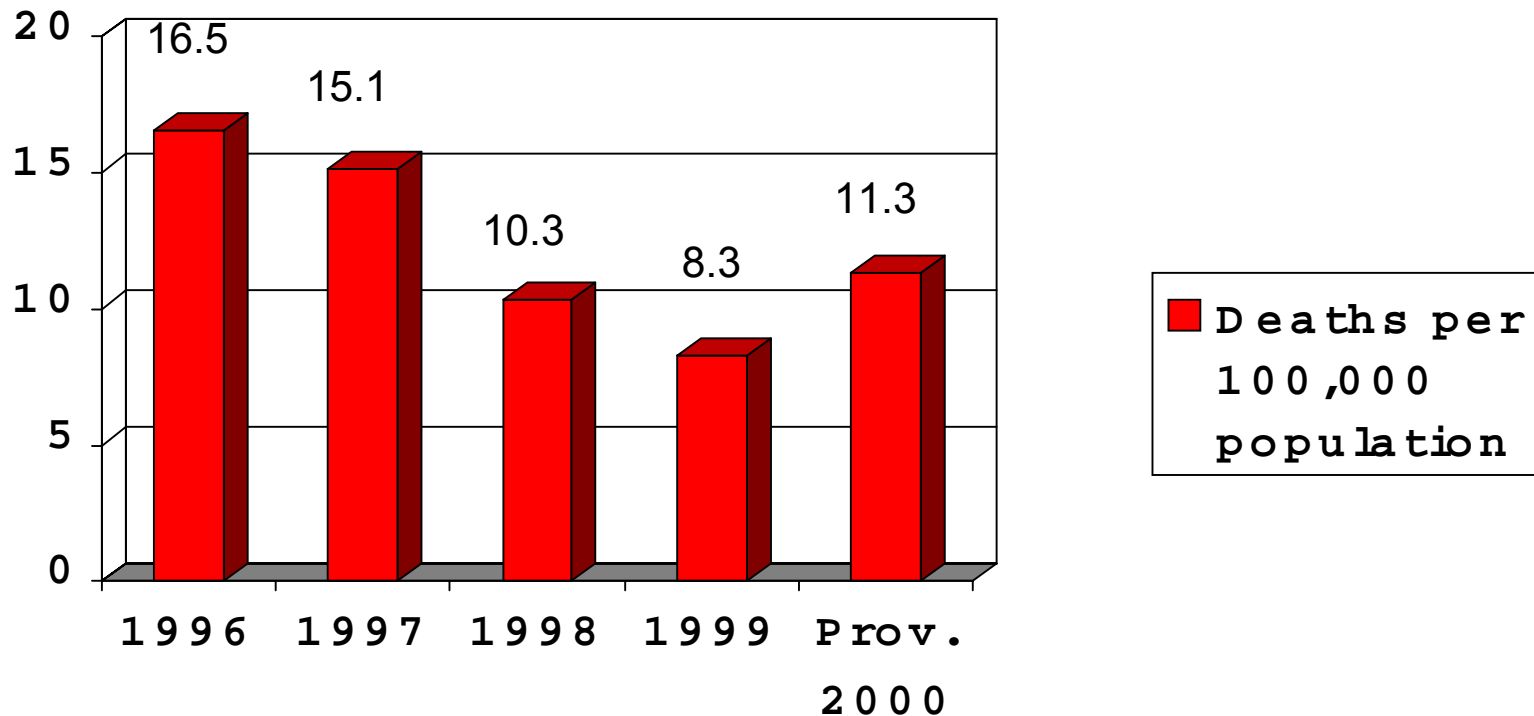
# **Policy Development Continued**

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- **4. Mobilize community partnerships to identify and solve problems**
  - **Examples**
    - **Violence Coalition**
    - **Great Beginnings for Black Babies**
    - **“five-a-day” nutrition coalition**

# The Violence Coalition uses data to mobilize the community: homicide deaths in Los Angeles County



Source: Injury Control Program, L.A. DHS

79% of L.A. County Homicides in 2000 were Firearm Deaths (Provisional)

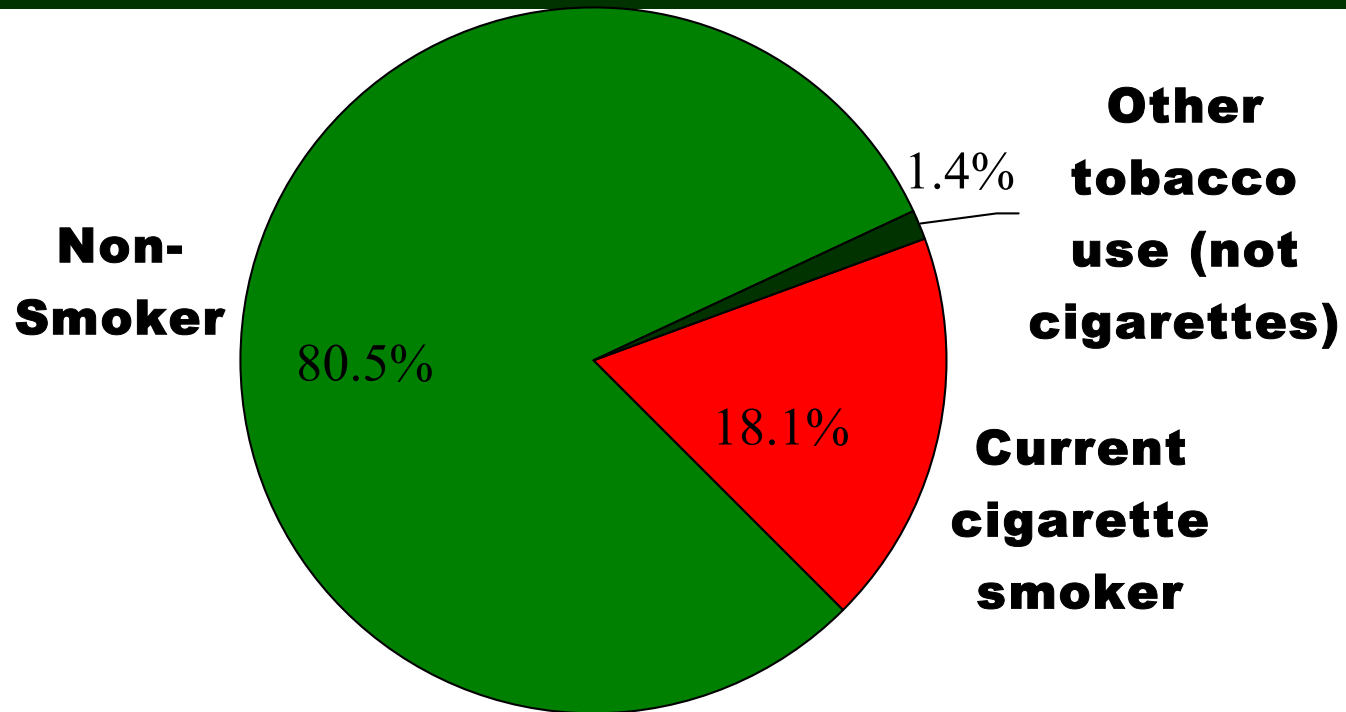
# **Policy Development Continued**

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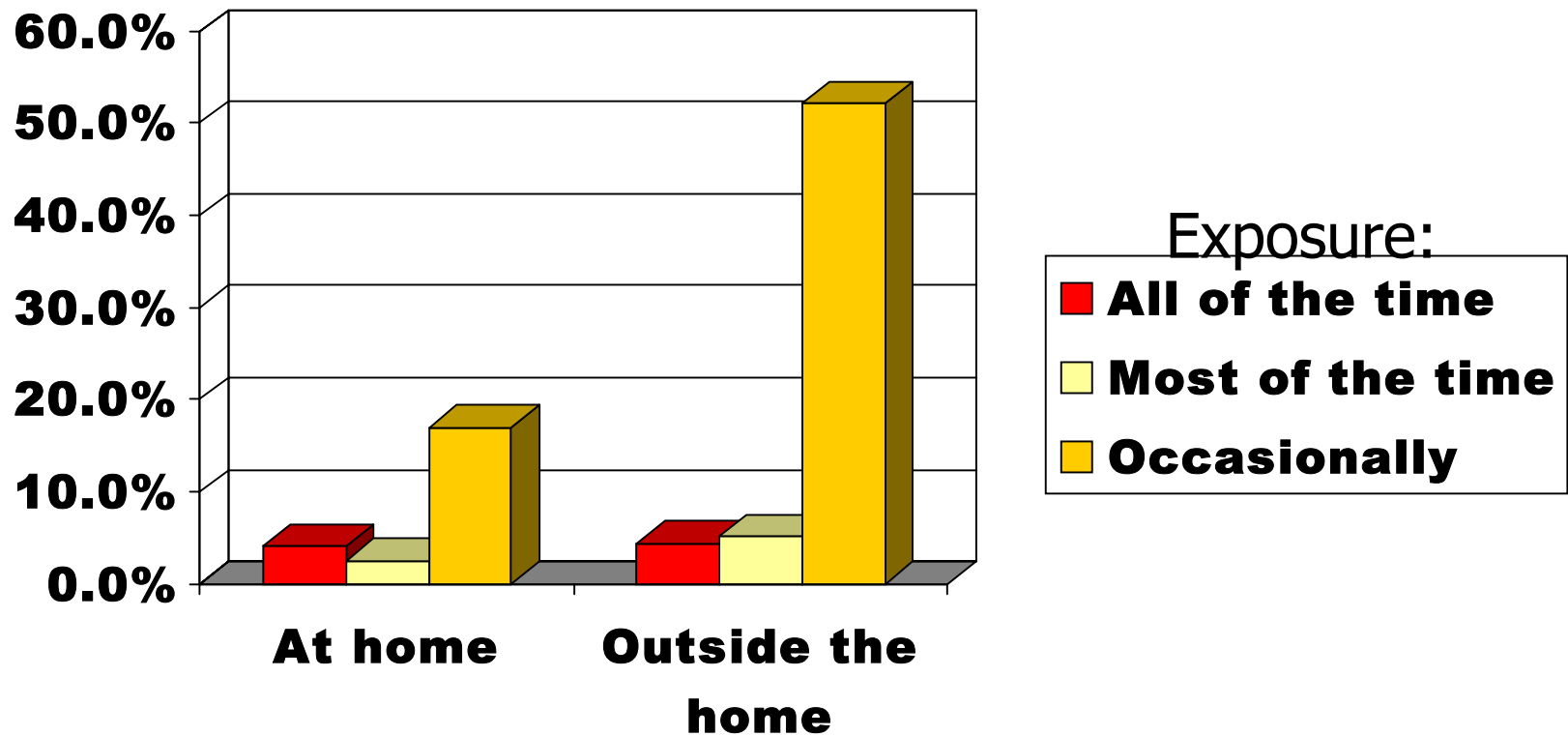
- **5. Develop policies and plans that support individual and community health efforts**
  - **Examples**
    - **No smoking laws and regulations**
    - **Tuberculosis test at school entry**
    - **Immunization mandate for schools**
    - **Ambulatory Care planning**

# Tobacco policies have decreased tobacco use by adults in Los Angeles County



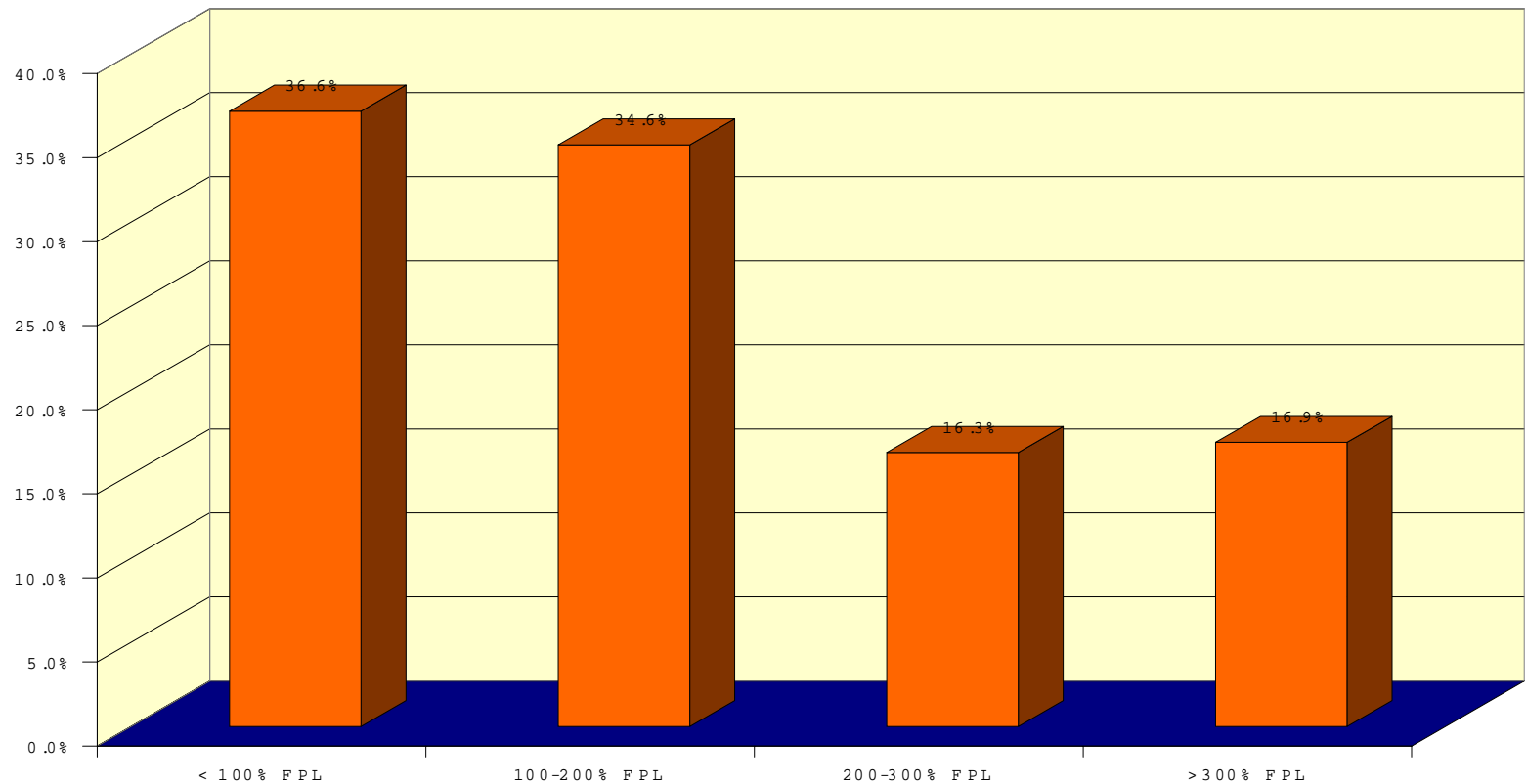
Source: Los Angeles County Health Survey, 1999

# Tobacco policies have decreased non-smoker tobacco smoke exposure, L.A.



Source: Los Angeles County Health Survey, 1999

# ENVIRONMENTAL TOBACCO SMOKE EXPOSURE OF CHILDREN, L.A.



Source: LAC Tobacco Control Program, based on 1999 LA Health Survey

Source: Los Angeles County Health Survey, 1999

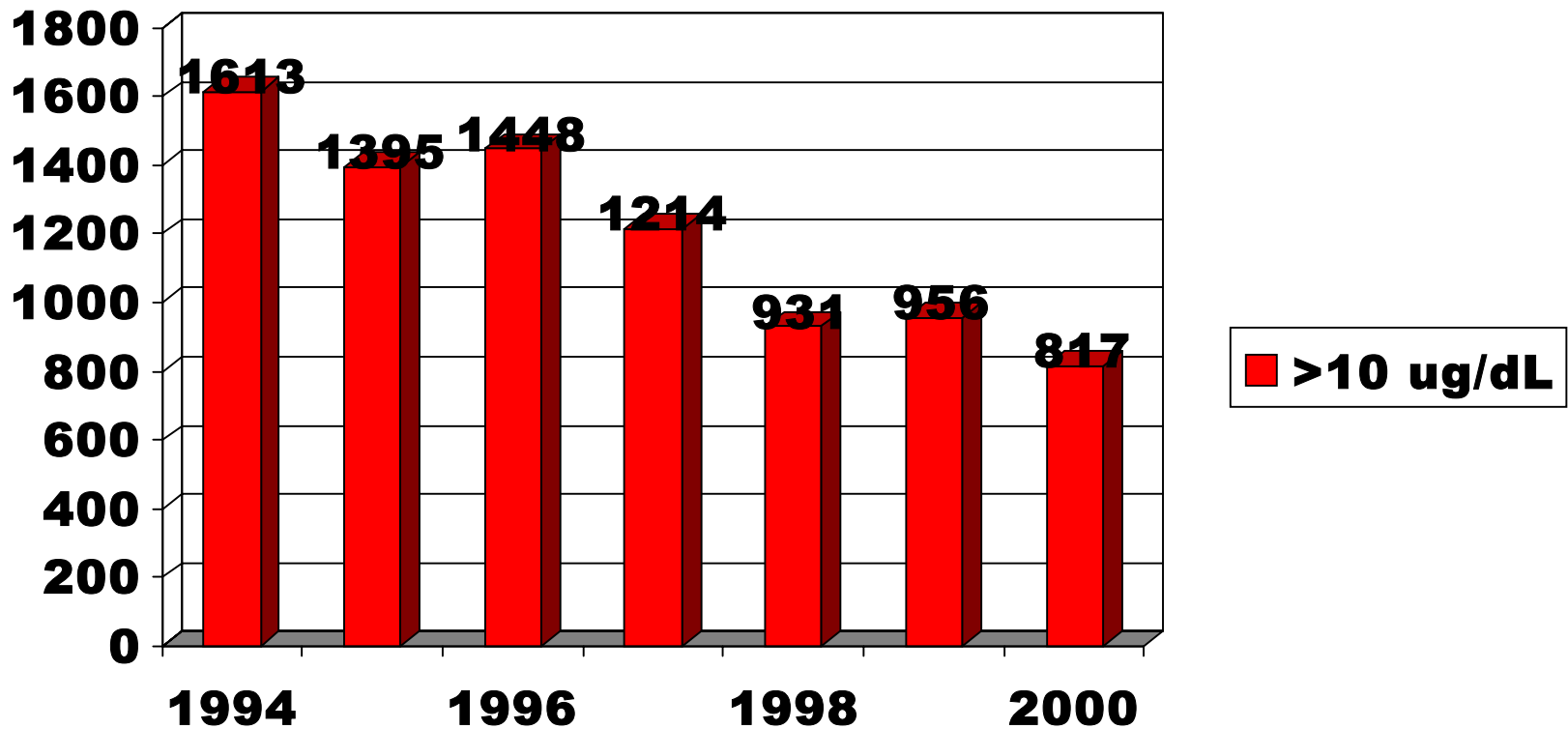
# Assurance

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- **6. Enforce laws and regulations that protect health and ensure safety**
  - **Examples**
    - **Restaurant inspection**
    - **Radiation safety**
    - **Animal control**
    - **Shellfish warnings**
    - **Protection from lead**

# Children with Elevated Blood Lead Levels, L.A. County



Source: L.A. County Childhood Lead Poisoning Program (CLIPP)

(213) 351-5086 -- CLPP

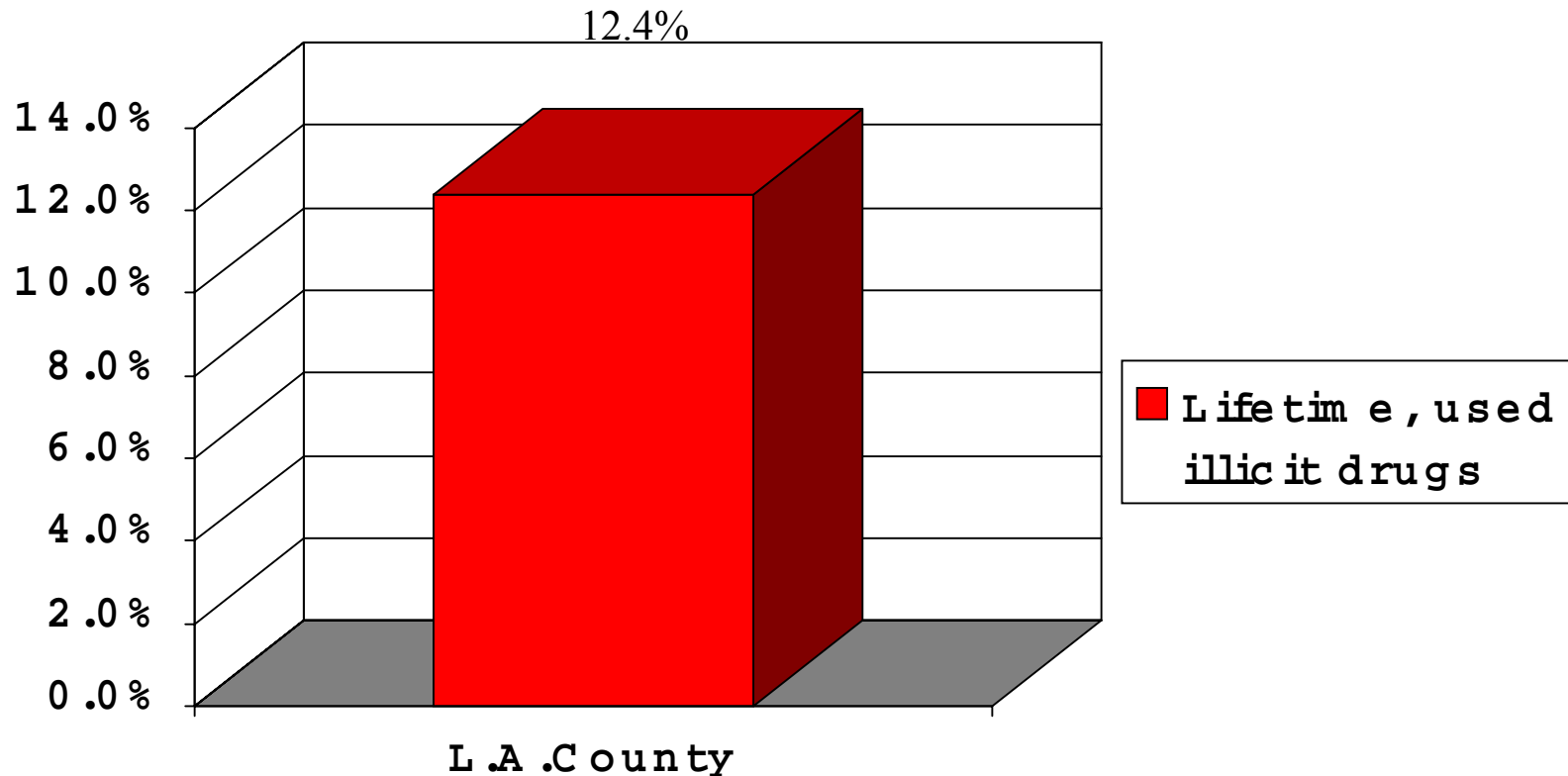
# Assurance, continued

- **7. Link people to needed personal health care services and assure the provision of health care when otherwise unavailable**

- **Examples**

- **Treatment and case management of tuberculosis**
- **Clinics and hospital care**
- **Referral lines, such as for ambulatory care (Health Line 1-800 427-88700)**
- **Contract for drug and alcohol prevention and treatment programs**
- **Public health nursing visits to high risk mothers**

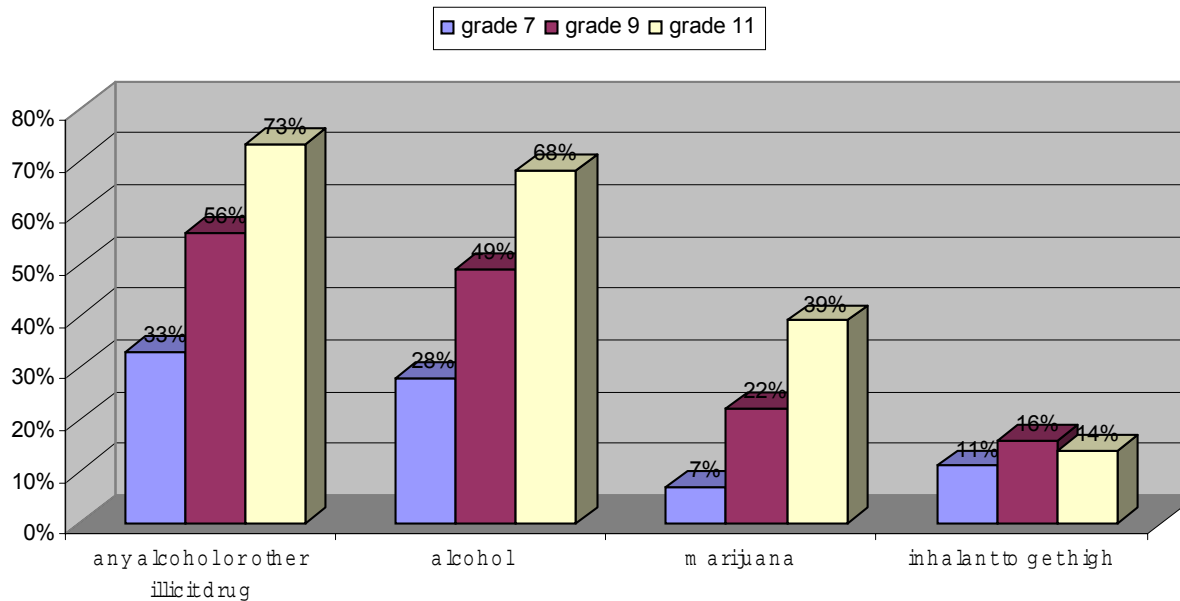
# L.A. County contracts for drug programs. Illicit drug use by adults, Los Angeles County:



Source: Alcohol & Drug Program, DHS, from California Household Substance Abuse Survey, Western Consortium of Public Health, November 1999

# Contracts for substance abuse programs: a need for children

Lifetime use, LAUSD, 1999



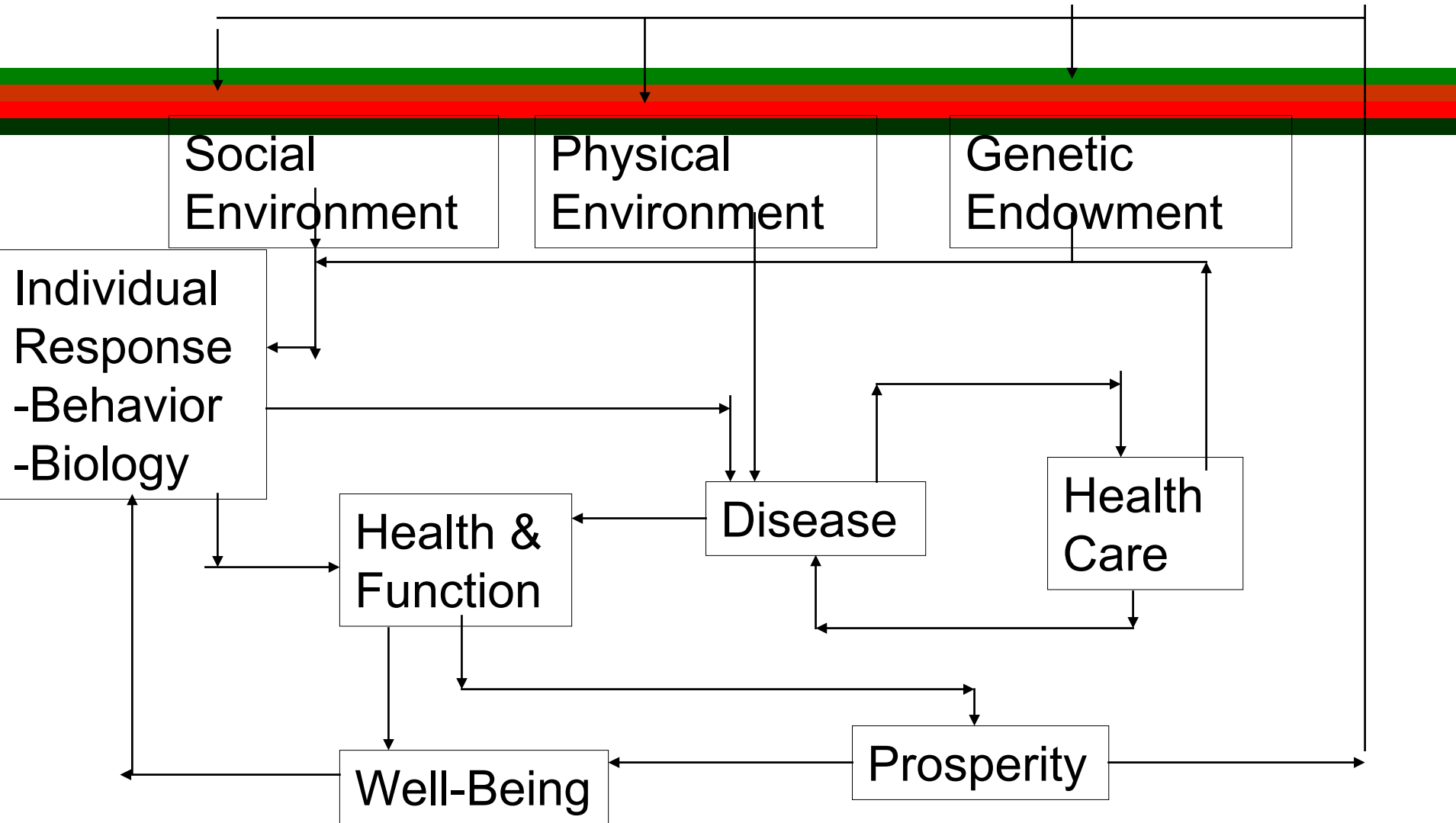
Source: L.A. Kids Survey, 1999

# Assurance continued

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- **8. Assure a competent public health and personal health workforce**
  - **Examples**
    - **Seminars for department and community health professionals**
    - **Cooperation with other departments and agencies such as DHR to provide training**

# Concept for P.H. Workforce: Major Determinants of Health



# **Primary care physicians need to know about the U.S.Clinical Preventive Services Task Force**

- **Intensive expert task force review of evidence of effectiveness of clinical preventive actions**
- **Independent Task Force**
- **Published in Guide to Clinical Preventive Services, 1989, and 2nd ed 1996, and updates on web ([www.ahrq.gov/clinic/uspstfix.htm](http://www.ahrq.gov/clinic/uspstfix.htm) or [www.guidelines.gov](http://www.guidelines.gov) )**
- **Strength of recommendations:**
  - **good evidence**
  - **fair evidence**
  - **insufficient evidence**

# **Public Health staff need to know about: Guide to Community Preventive Services**

- **Provide evidence review and recommendations about population-based interventions relating to**
  - **Changing risk behaviors**
  - **Reducing diseases, injuries and impairment**
  - **Addressing environmental and ecosystems challenges**
- **Created by independent 15-member Task Force**
- **Available chapters: Published in MMWR, and Am J. Prev. Med., for progress see:  
[www.thecommunityguide.org](http://www.thecommunityguide.org)**

# Assurance, continued

- **9. Evaluate effectiveness, accessibility and quality of personal and population based health services**
  - **L.A. County DHS examples:**
    - **UCLA SPH study of Public Health in DHS (Public Health Commission)**
    - **Hospital and nursing home licensure (Health Facilities)**
    - **Quality improvement programs (central and facility based)**

# **Example of Quality Improvement Program re TB medication: Initial steps**

- **Created/Revising:**
  - **Computer generated labels for chart**
    - Lot numbers, expiration dates
    - Lot number tracking system
  - **Laminated tables of doses/side effects**
    - for providers, nurses, community workers
  - **Patient Medication information sheets**
    - Pictures of Medication
    - Side Effects

# **DECREASING MEDICATION ERRORS IN TB CLINICS WILL ALSO NEED**

- **Unit doses – Prepackage Regimens**
  - **Reduce dispensing in health centers**
- **Standardize 80% medication orders**
- **Streamline Medication orders**
- **Eliminate Transcription**
- **Medication Administration**
  - **Improve Patient education/empowerment**

# **FURTHER WORK ON DECREASING TB MEDICATION ERRORS**

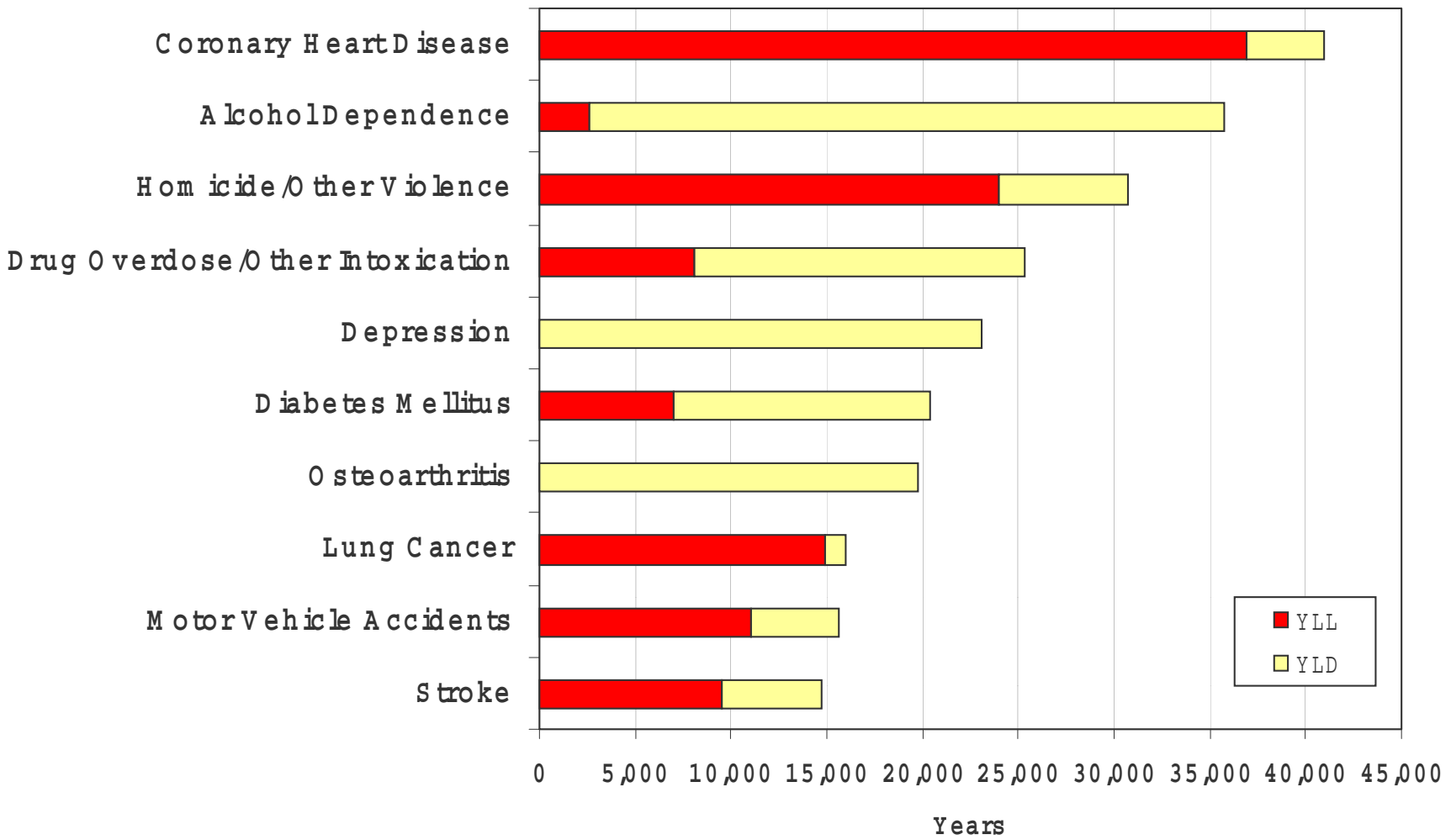
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- **Data Collection**
- **Look for unintended consequences**
- **Assure that desired effect achieved**
- **Prioritize areas for further improvement**
- **Future**
  - **Electronic Medical Record?**
  - **Computer Algorithms**

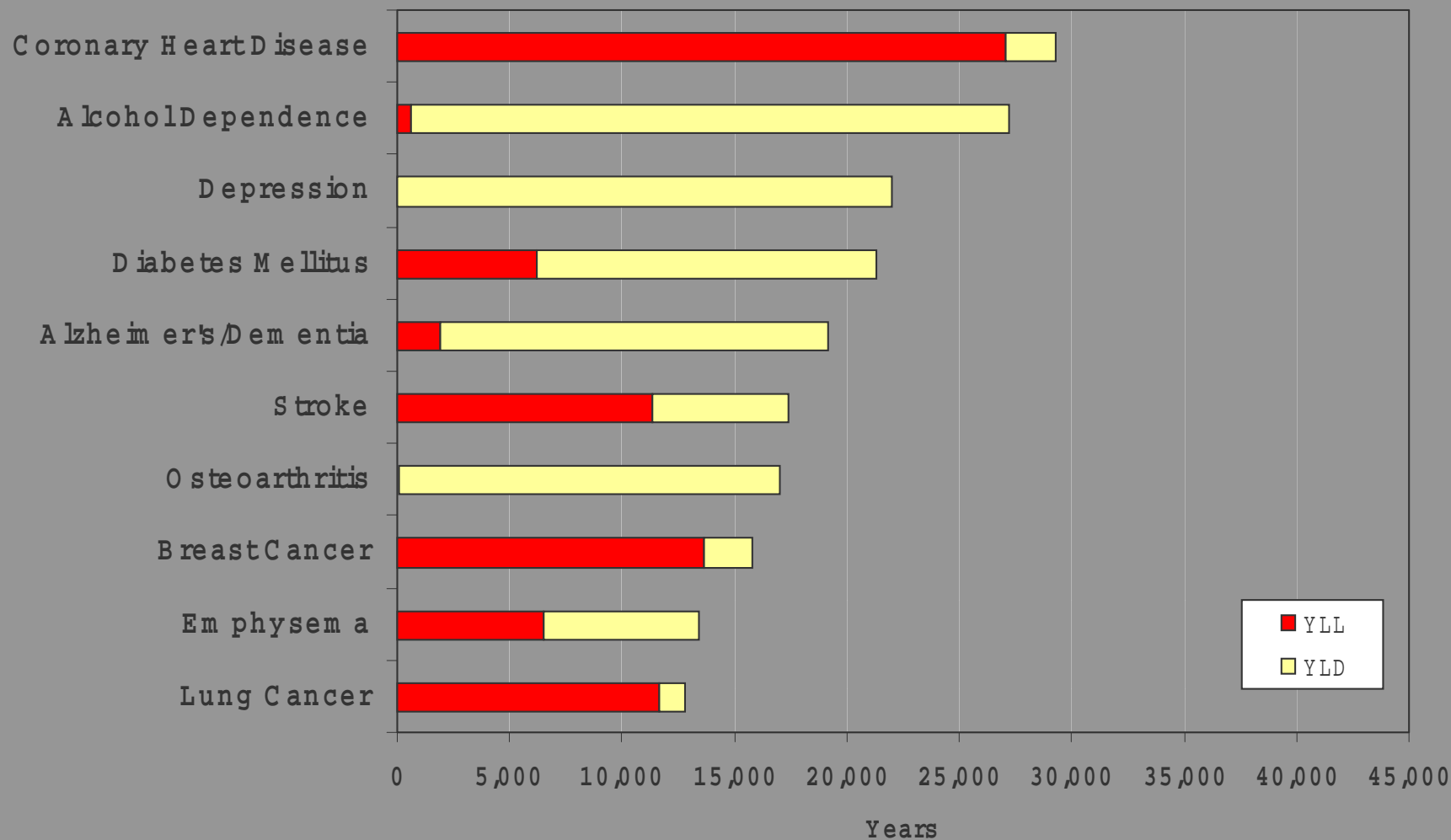
# **A new measure: Disability Adjusted Life Years (DALYs)**

- **Disability Adjusted Life Years (DALYs) is a measure of the Global Burden of Disease and combines into a single measure:**
  - **Premature mortality (Years of Life Lost-YLL)**
  - **Morbidity (Years Living with Disability-YLD)**

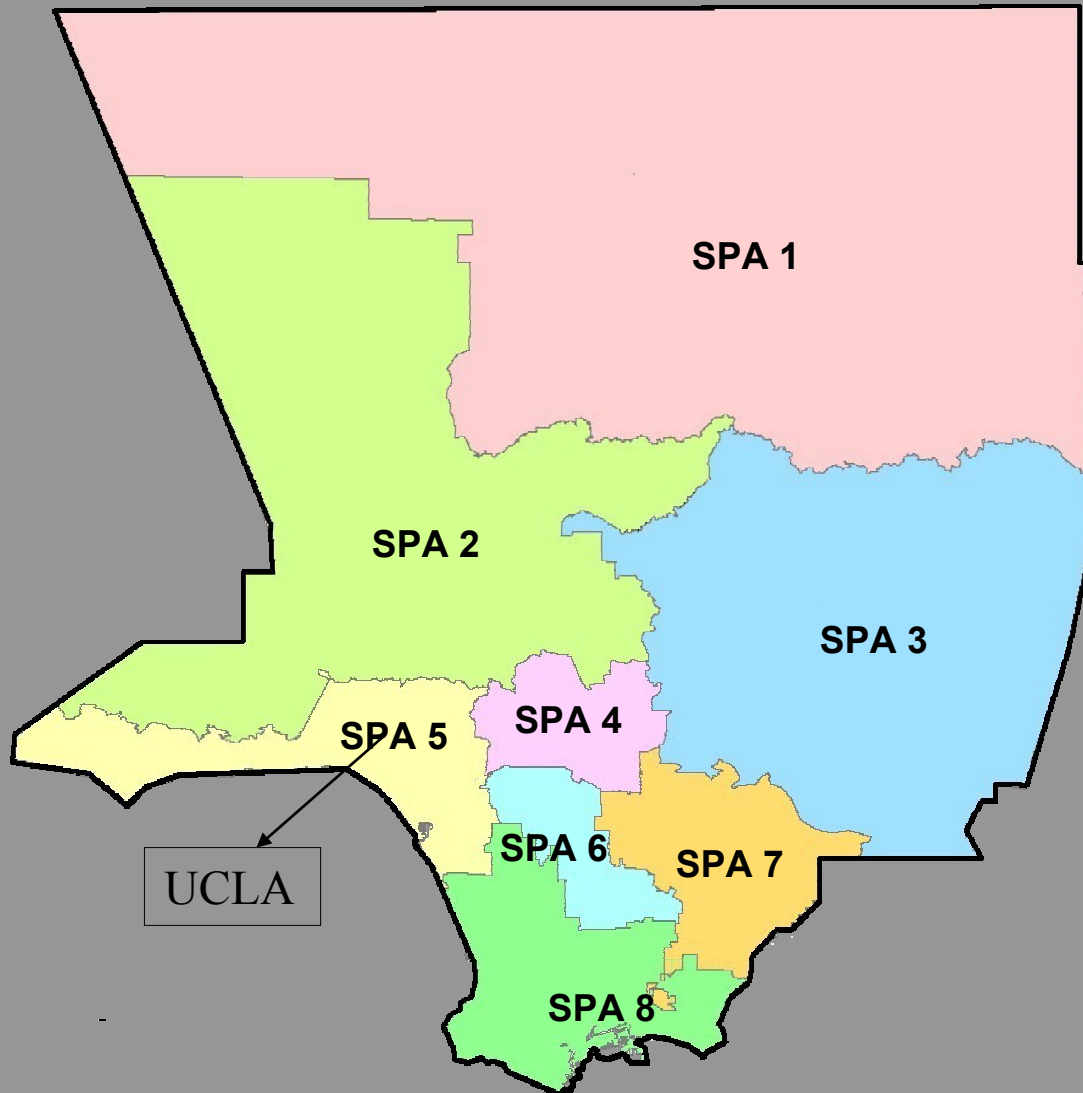
# Years of Life Lost (YLL) and Years Lived with Disability (YLD) Among Males for 10 Leading Causes of DALYs in Los Angeles County 1998



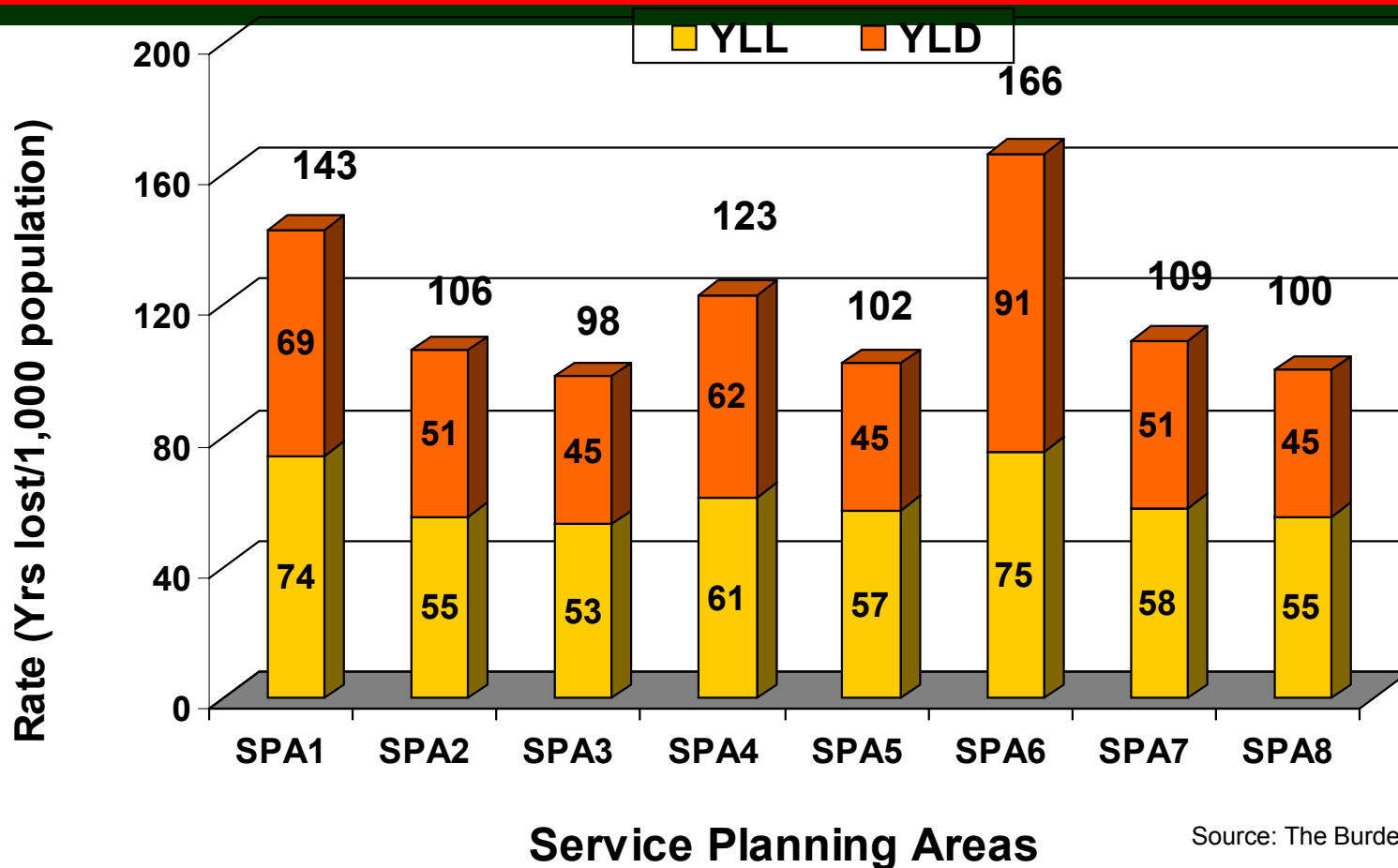
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# Los Angeles County SERVICE PLANNING AREAS



# YLL and YLD Age-adjusted Rates by SPA Los Angeles County, 1999



Source: The Burden of Disease in  
Los Angeles County

# **10th essential public health service**

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- **10. Research for new insights and innovation solutions to health problems**
  - **L.A. County DHS Example:**
    - **TB medication Compliance studies (TB Control)**
    - **Immunization studies (Acute Communicable Disease Control)**
    - **Demonstration programs (all programs)**

# Vaccine study

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- **L.A. County DHS collaborated with CDC on first study of impact of varicella vaccine**
- **This showed 80% drop of chickenpox cases over five years**

# Difference between personal and public health?

- **Focus: individual / population**
- **Emphasis: diagnosis and tx of patient / prevention, health promotion for the whole community**
- **Paradigm: emphasis on medical care / spectrum of interventions including those aimed at the determinants of health (environment-internal and external, behavior, and medical care).**

# **Interactions between personal and public health include**

- **Assessment**

- **The clinician makes the diagnosis and public health uses this information**
- **The clinician monitors the individual, and public health monitors the community**

# CASE EXAMPLE

- **New patient, Maria, age 4, who's working parents have not taken her regularly for care. She has a positive tuberculin, hilar enlargement on chest x-ray, and a lead level of 20 mg/%.**
- **What is the clinician's responsibility and what will Public Health do?**

# **CASE EXAMPLE CONTINUED**

- **Assessment responsibility of clinician**
  - **Confirm the diagnoses (lead burden, Primary TB)**
  - **Identify other problems (lack of insurance)**
  - **Reporting responsibility to Public Health**
- **Assessment responsibility of Public Health**
  - **Investigate case—where did she get lead burden? who in her environment has TB?**
  - **Investigate community—is her family day care a source? Is there lead containing soil?**
  - **Share analysis**

# Interaction, continued

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- **Policy Development**

- **The clinician educates individual patients; and both clinical and public health physicians educate the community**
- **Public health and organized medicine can jointly mobilize the community**
- **Resultant policy should come from all perspectives**

# **CASE EXAMPLE CONTINUED**

- **Clinician responsibility re policy**
  - **Inform Maria's parents of communicability of TB, environmental source of lead, availability of Healthy Families**
  - **Support continued public services**
- **Public Health responsibility re policy**
  - **Assure laws/regulations re lead and TB are followed**
  - **Public information re lead, TB, Healthy Families**

# Interaction continued

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- **Assurance**

- **Public health is responsible for enforcing laws; aided by alert clinicians**
- **The clinician provides health care; public health is concerned with systems of care**
- **Education of the workforce is a personal and community responsibility**
- **Evaluation is everyone's job**

# **CASE EXAMPLE CONTINUED**

- **Clinician responsibility re assurance**
  - **Refer for Healthy Families: 1-877-597-9777**
  - **Medical follow-up/treatment/referral, DOT**
  - **Communicate with Public Health**
  - **Keep up to date**
- **Public Health responsibility re assurance**
  - **Track patient to closure of problems**
  - **Appropriate action re source of lead, and TB**

# **What are factors leading to development of LHDs?**

- **Laws re health**
- **The new Bacteriology**
- **Concern about Epidemics**
- **Awareness of Filth**
- **Desire for vital statistic system**
- **Educational campaign impact shown**
- **Need to get clean milk to children**

# **Laws about health preceded organized efforts (LHD)**

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- **1647-Mass Bay Colony prohibited polluting the Boston Harbor**
- **1799—Boston had a Board of Health**
- **1873—Boston had a Health Department**

# **The 19th Century--the beginning of advancement in science**

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- **Bacteriologic revolution**
  - **Contagion**
  - **Identification of etiologic agents**
  - **Understanding of how to stop spread**
    - **sterilization**
    - **washing hands**

# **Epidemics led to formation and strengthening of LHDs**

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- **1910 Typhoid fever epidemic in Yakima County, WA**
- **1911 Yakima County Health Department Founded**

# **Filth related to diseases**

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- **1864--NY: Citizen's Association Council of Hygiene and P.H. investigation of filth/correlated with disease**
- **1866 New York City Health Department established**

# Vital statistics

- **Lemuel Shattuck's, Report of the Sanitary Commission of Massachusetts, 1850**
  - **1639 Mass. Colony law to record births and deaths**
  - **1840-45-average age of death 21.4 years, down from 27.85 yrs in 1820-25**
- **State Board of Health in Massachusetts formed in 1869**

# **Educational campaigns demonstrated**

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- **Rockefeller foundation sponsored educational campaign about hookworm in the south**
- **Guilford County Health Department , South Carolina, established 1911**

# **Need for clean milk**

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- **Milk stations started in NYC in 1893**
- **The antecedent to MCH programs in NYC HD**

# Health department development

- **Local health department**
  - **Boards of Health: Boston 1799, Petersburg, VA, 1780, Philadelphia 1794, New York 1796, Baltimore 1793**
  - **Staffed departments: Baltimore 1798, Charleston, S.C. 1815, Philadelphia 1818, New York City 1866, Boston 1873**
- **State Health Board of Health**
  - **First: Massachusetts: 1869**
  - **Second: California: 1870**
- **National**
  - **Marine Hospital Service 1798**

# Exercise

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- **Select stakeholders**
- **Determine public health roles**