GREATEST ACHIEVEMENTS OF PUBLIC HEALTH
1900-2010
The achievements in public health over the last century in the US have:

- lengthened our lifespans (by over 30 years since 1900),
- reduced the number of child deaths, and
- made us stronger and more productive
Ten Greatest Public Health Achievements
United States, 1901-2000

- Vaccination
- Motor Vehicle Safety
- Safer Workplaces
- Control of Infectious Diseases
- Decline in Deaths from Coronary Heart Disease and Stroke
- Safer and Healthier Foods
- Healthier Mothers and Babies
- Family Planning
- Fluoridation of Drinking Water
- Recognition of Tobacco Use as a Health Hazard
Additions:

- Cancer Prevention
- Childhood Lead Poisoning Prevention
- Public Health Preparedness and Response
What Is Public Health?
- Prevent
- Promote
- Protect
Is public health just for those who fall through the cracks..?
Medical care typically treats illnesses after someone is sick.

Public Health attempts to prevent the illness in the first place.

Upstream versus Downstream

Public Health makes good fiscal sense because it is cheaper to prevent health problems than to fix them after the fact.
Mass Immunization Clinics
In 1900...

• Five leading causes of death (in order)
  - Pneumonia & Influenza
  - Tuberculosis
  - Diarrhea
  - Heart Disease
  - Stroke
ACHIEVEMENT: Vaccinations
Vaccine-Preventable Diseases

- 1900 - 21,064 cases of Smallpox
  - 894 patients died
- 1920 - 147,991 cases of Diphtheria
  - 13,170 patients died
- 1920 - 469,924 cases of Measles
  - 7,575 patients died
- 1922 - 107,473 cases of Pertussis (Whooping Cough)
  - 5,099 patients died.
Today

• Vaccine-Preventable Diseases at record low levels in the United States
• Smallpox Eradicated
• Polio Has Been Eliminated In The Americas
• WHO (World Health Organization) Seeks Total Elimination of Polio in 2015
What Works?

- Development of new vaccines
- Immunization requirements for children in school and child care (supported by all major medical organizations)
- Immunization requirements for health care workers
- Influenza vaccine widely available
ACHIEVEMENT: Prevention and Control of Infectious Diseases
SOPHRONIA
WIFE OF
PETER MOORE
DIED
MAY 9, 1855
age 35.

CHILDREN OF
PETER & SOPHRONIA MOORE

Lura A.E. 6 yrs.
Melissa E. E. 5 yrs.
Lehins E. E. 4 yrs.
Wallace W. E. 11 yrs.

Died in infancy Sept. 8, 1852.
At the beginning of the 20th Century

- Infectious diseases took many lives, especially among children
- Pneumonia, tuberculosis and diarrhea were the top 3 causes of death in 1900
- Very few prevention measures or treatments were available to control the spread of diseases
Prevention and Control of Infectious Diseases

ACUTE ANTERIOR POLIOMYELITIS (A COMMUNICABLE DISEASE)

Keep Out of this House

By Order of BOARD OF HEALTH

Health Officer
What Works?

Control of infectious diseases has come from:
- Clean drinking water
- Improved sanitation
- Vaccinations
- Animal control regulations and services
- Improvements in laboratory testing
- Surveillance (disease reporting) laws and systems
- Antibiotic treatments
ACHIEVEMENT: Safer and Healthier Foods
Safer and Healthier Foods

- Contaminated food, milk, and water caused many foodborne infections in the past, including typhoid fever, tuberculosis, botulism, trichinosis and scarlet fever.
- The diseases are different today, but still very common. About 1 in 6 Americans gets sick every year from contaminated food (48 million people). Of those, 128,000 are hospitalized and 3,000 die.
Progress has been made:

- Product labeling standards, refrigeration and pasteurization
- Handwashing, sanitation, temperature controls and pesticide application
- Healthier animal care, feeding, and processing
- Strong inspection programs
- Enforcement through regulations on food processing, retail sales and restaurants
Safer and Healthier Foods
Mistakes are still made—LPHAs must maintain vigilance through inspections, food recall enforcement, disease surveillance and outbreak detection.

Mass food production and distribution means more multi-state outbreaks and food recalls.
Safer and Healthier Foods
ACHIEVEMENT: Maternal and Infant Health
In 1900, 10% of infants died before age 1 and only 41% survived to age 65; in 1991, 80% survived to age 65

Maternal death rates were high, caused by sepsis, hemorrhage and toxemia
Healthier Mothers And Babies

Improvements:

- Better hygiene and nutrition
- Safe drinking water and waste disposal
- Safe milk supplies, pasteurization
- Longer spacing of pregnancies, smaller families through family planning
- Early entry into prenatal care
- Management of pregnancies
- Safe delivery in general hospitals
The US still has higher maternal and infant mortality rates than other countries do, and rates are higher for black women and infants.

Incidence of low birth weight (LBW) has not decreased in recent decades. Can have many long-term effects.
Healthier Mothers And Babies
ACHIEVEMENT:
Decline in Deaths from Heart Disease and Stroke
Decline in Deaths from Heart Disease and Stroke

Importance of Physical Activity
Decline in Deaths from Heart Disease and Stroke

- Although still the #1 killer, the cardiac death rate is 50% less than in 1900.
- Death rates from coronary heart disease have decreased 51% since 1972.
- These gains are threatened by increasing obesity rates (children and adults), physical inactivity and diabetes.
Decline in Deaths from Heart Disease and Stroke
What Works?

- Risk-factor modification (diet, exercise, cholesterol reduction)
- Smoking cessation
- Blood pressure control
- Access to early detection and better treatment
- LPHAs can lead their communities to healthier habits!
ACHIEVEMENT: Recognition of Tobacco Use as a Health Hazard
Recognition of Tobacco Use as a Health Hazard

There Are Old And New Challenges for Public Health
Recognition of Tobacco Use as a Health Hazard

- US adult cigarette smoking decreased from 24% (1998) to 19% (2010)
- US teen cigarette smoking decreased from 35% (1999) to 16% (2011)
- States with strong smoke-free laws grew from zero (1998) to 31 (2012)
Recognition of Tobacco Use as a Health Hazard

Second Hand Smoke
What Works?

- Public awareness campaigns
- Restrictions on smoking in workplaces and public places
- Availability of smoking cessation services
- Higher taxes on tobacco that discourage teen smoking
Missouri Lags Behind

- Smoking rates are 24% for adults (7th highest in US in 2012) and 18% for teens
- We are in the bottom 11 states for clean indoor air, given an “F” rating by the American Lung Association
- Lowest tobacco taxes in the nation
ACHIEVEMENT: Fluoridation of Drinking Water to Prevent Dental Caries
Water Fluoridation and Dental Health
Water fluoridation began in 1945 and reached an estimated 144 million people (in 2000)

72.4% of the US population has fluoridated water

Safely and inexpensively prevents tooth decay (regardless of socioeconomic status)

Reduction of tooth decay in children by 40-70%

Reduction of tooth loss in adults by 40-60%
Many Young People Have Never Had A Cavity...

Due to regular check-ups, dental sealants, fluoridation of water and fluoride treatments
In Missouri, more than 3.9 million citizens (79.8%) have access to fluoridated water. Missouri ranks 21st in the nation for water fluoridation. We don’t do as well in access to dental care, esp. for low-income children and adults. Other factors, such as diet, still contribute to caries formation.
References

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Thanks!

Questions