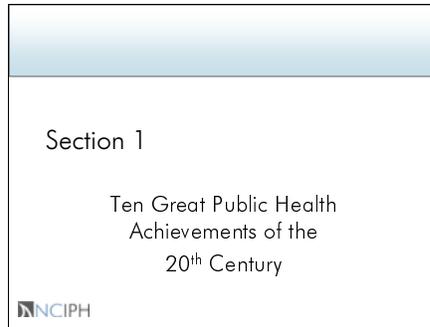


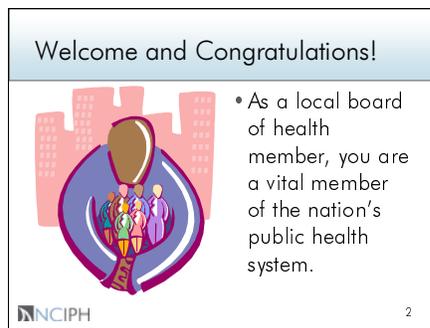
Slide 1



Section 1: Ten Great Public Health Achievements of the 20th Century

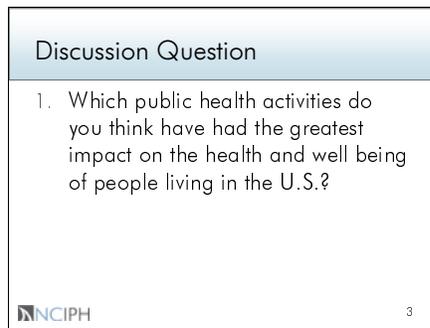
Public health has made major contributions to the quality of life in North Carolina. Around 1900, our average lifespan was less than 50 years. Now, it is about 75 years. Much of this increase has occurred because of public health programs to prevent and control infectious diseases and improve environmental health.

Slide 2



You and thousands of other volunteer local board of health members all over the United States provide the necessary guidance, oversight and leadership for your local public health agency. This role is important because it is up to you and your fellow board members to make sure that the health needs of your community are met.

Slide 3



Discussion Question:

1. Which public health activities do you think have had the greatest impact on the health and well being of people living in the U.S.? Hint: Think about what are the greatest opportunities for prevention.

Now write down your ideas and compare your list with the ten achievements highlighted in this presentation.

Slide 4

Top Ten Achievements	
• Vaccination	• Decline in deaths from coronary heart disease and stroke
• Motor vehicle safety	
• Safer workplaces	
• Control of infectious diseases	• Safer and healthier foods

 4

Before you learn about the roles and responsibilities of board members, let's take a moment to learn about some of the greatest public health achievements in the 20th century. We will review these achievements as a way to introduce you to the scope, impact and practice of public health. This list of achievements was compiled in a report for the Centers for Disease Control (CDC) and can be found on the web at: <http://www.cdc.gov/mmwr/preview/mmwrhtml/00056796.htm>.

The achievements chosen for this list were based on the opportunity for prevention and the impact on death, illness and disability in the United States, during the 20th century. These top 10 achievements are not ranked by order of importance. As you read, keep in mind that the focus of public health is prevention and the way this is achieved is through health promotion and disease prevention.

The top ten achievements are:

- Vaccination
- Motor vehicle safety
- Safer workplaces
- Control of infectious diseases
- Decline in deaths from coronary heart disease and stroke
- Safer and healthier foods

Slide 5

Top Ten Achievements

- Healthier mothers and babies
- Family planning
- Fluoridation of drinking water
- Recognition of tobacco use as a health hazard

NCIPH 5

- Healthier mothers and babies
- Family planning
- Fluoridated drinking water to prevent tooth decay and
- Recognition of tobacco use as a health hazard

Now, let's take a closer look at each of these achievements.

Slide 6

Vaccination



- Eradication of smallpox and polio
- Control of measles, rubella, tetanus, diphtheria, etc.

NCIPH 6

The first on the list is vaccination, which has resulted in the eradication of smallpox (other than as a terrorist event), the elimination of poliomyelitis in the Americas, control of measles, rubella, tetanus, diphtheria, Haemophilus influenzae type b, hepatitis B, chickenpox, mumps and other infectious diseases in the United States and other parts of the world.

Public health in North Carolina educates parents on the importance of immunizing children. In 1994, North Carolina became a universal vaccine state, meaning it provides vaccines for all children from birth through 18 years of age. According to national statistics, North Carolina is one of the top five states leading the nation in the percentage of 2-year-old children who have received all age-appropriate immunizations.

Slide 7

Motor Vehicle Safety

- Increased use of safety belts, child safety seats and motorcycle helmets
- Decrease in drinking and driving



NCIPH 7

Improvements in motor vehicle safety have resulted from engineering efforts to make both vehicles and highways safer and from successful efforts to change personal behavior, such as increased use of safety belts, child safety seats, the use of motorcycle helmets and decreased drinking and driving.

In August 2005, the National Highway Traffic Safety

Administration proposed new requirements for child safety seat manufacturers that choose to make booster seats for older and heavier children. The new proposal requires these manufacturers to build seats capable of protecting children up to 10 years old and weighing up to 80 pounds from death or serious injury in 30 mile-per-hour crashes.

In North Carolina, public health conducts public education to increase use of safety belts, bicycle helmets, infant and child safety seats and other protective devices. These efforts have contributed to large reductions in motor vehicle-related deaths.

Source: Bolen JR, Sleet DA, Chorba T, et al. Overview of efforts to prevent motor vehicle-related injury. In: Prevention of motor vehicle-related injuries: a compendium of articles from the Morbidity and Mortality Weekly Report, 1985-1996. Atlanta, Georgia: US Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Injury Prevention and Control, 1997.

Source: The NHTSA web site:
<http://www.nhtsa.dot.gov>

Slide 8

Safer Workplaces

- Better control of work-related health problems
- Decrease in severe injuries and deaths



NCIPH 8

Work-related health problems, such as coal workers' pneumoconiosis or black lung and silicosis, both common at the beginning of the 20th century, have come under better control. Severe injuries and deaths related to mining, manufacturing, construction and transportation also have decreased. Since 1980, safer workplaces have resulted in a reduction of approximately 40% in the rate of fatal occupational injuries.

Source: CDC. Fatal occupational injuries -- United States, 1980-1994. MMWR 1998;47:297-302.

The North Carolina labor department saw a major decline in occupational fatalities in 2001. The total dropped to 203 from a previous high of 234 the year before. In 2002, the total dropped to 169, the record low for fatalities since recordkeeping began under the Occupational Safety and Health Administration Act. Last year, the total of 182 was the state's third-lowest total. Figures released in August 2005 by the N.C. Department of Labor show that work fatalities in North Carolina totaled 183 in 2004, the fourth-lowest total seen in the state since labor officials started keeping detailed records.

Source: The NC Department of Labor web site:
<http://www.dol.state.nc.us>

Slide 9

Control of Infectious Diseases

- Reduced by clean water and improved sanitation
- Discovery of antimicrobial therapy



NCIPH 9

Control of infectious diseases has resulted from clean water and improved sanitation. Infections such as typhoid and cholera transmitted by contaminated water, a major cause of illness and death early in the 20th century, have been reduced dramatically by improved sanitation. In addition, the discovery of antimicrobial therapy has been critical to successful public health efforts to control infections such as tuberculosis and sexually transmitted diseases (STDs).

In North Carolina, public health tests your water to make sure that it is safe to drink, finds and treats people who have been exposed to communicable diseases, and works to protect the public from rabies and other animal-borne diseases.

Slide 10

Decline in Coronary Heart Disease and Stroke



- Smoking cessation and blood pressure control
- Improved access to early detection and better treatment

NCIPH 10

While there is an increase in the incidence of coronary heart disease and stroke in North Carolina, nationwide the death rates, since 1972, for coronary heart disease have decreased 51%.

In North Carolina, over the past 25 years, public health disease prevention programs have led to declines of more than 50 percent in stroke deaths and 40 percent in coronary heart disease deaths.

Decline in deaths from coronary heart disease and stroke have resulted from risk-factor modification, such as smoking cessation and blood pressure control coupled with improved access to early detection and better treatment.

Source: Anonymous. The sixth

report of the Joint National Committee on Prevention, Detection, Evaluation, and Treatment of High Blood Pressure. Arch Intern Med 1997;157:2413-46.

Slide 11

Safer and Healthier Foods

- Decreases in microbial contamination
- Increases in nutritional content



Supplement Facts		
	Amount Per Serving	% Daily Value
Total Fat	10g	20%
Total Carbohydrate	20g	40%
Total Protein	10g	20%
Vitamin A	1000 IU	20%
Vitamin C	100mg	20%
Calcium	100mg	20%
Iron	10mg	20%
Folate	100mcg	20%
Vitamin B12	100mcg	20%
Vitamin D	1000 IU	20%
Vitamin E	100 IU	20%
Vitamin K	100mcg	20%
Selenium	100mcg	20%
Zinc	10mg	20%
Copper	100mcg	20%
Manganese	100mcg	20%
Chromium	100mcg	20%
Molybdenum	100mcg	20%
Potassium	1000mg	20%
Sodium	100mg	20%
Magnesium	100mg	20%
Phosphorus	100mg	20%
Chloride	100mg	20%
Iodine	100mcg	20%
Fluoride	100mcg	20%

NCIPH 11

Since 1900, safer and healthier foods have resulted from decreases in microbial contamination and increases in nutritional content. Identifying essential micronutrients and establishing food-fortification programs have almost eliminated major nutritional deficiency diseases such as rickets, goiter and pellagra in the United States.

Slide 12

Healthier Mothers and Babies

- Better hygiene and nutrition
- Availability of antibiotics
- Greater access to health care
- Technologic advances



NCIPH 12

Healthier mothers and babies have resulted from better hygiene and nutrition, availability of antibiotics, greater access to health care and technologic advances in maternal and neonatal medicine. Since 1900, in the U.S., infant mortality has decreased by 90% and maternal mortality has decreased by 99%.

In 1970, the infant mortality rate, in North Carolina, was 24.1 deaths for every 1,000 live births. By 1997, this rate had dropped to 9.2 per 1,000 live births, a 61 percent decrease in just 27 years. Public health's emphasis on early and adequate care for expectant mothers was largely responsible for this dramatic improvement.

According to the Office of Minority Health and Health Disparities report, "Racial and Ethnic Health Disparities Report Card 2003", by the year 2001, the infant mortality rate in North Carolina was at 8.6 per 1000 live births.

We know there is still room for improvement, since the infant mortality rates are dramatically higher for African Americans at 15.1 and for Native Americans at 11.9 per 1000 live births. Public health is working to improve the health and quality of life for all North Carolinians when it reduces the health status gap between racial and ethnic minorities and the White population.

Source: NC Office of Minority Health and Disparities, State Center for Health Statistics - <http://www.schs.state.nc.us/SCHS/pdf/FinalReportCard.pdf>

Slide 13

Family Planning

- Smaller family size
- Longer interval between birth of children



NCIPH 13

Access to family planning and contraceptive services has altered social and economic roles of women. Family planning has provided health benefits such as smaller family size and longer interval between the birth of children; increased opportunities for preconception counseling and screening; fewer infant, child and maternal deaths, and the use of barrier contraceptives to prevent pregnancy and transmission of human immunodeficiency virus (HIV) and other Sexually Transmitted Diseases (STDs).

Slide 14

Fluoridation of Drinking Water

- Reduction in tooth decay and tooth loss



NCIPH 14

Fluoridation of drinking water began in 1945 and by 1999 reached an estimated 144 million persons in the United States. Fluoridation safely and inexpensively benefits both children and adults by effectively preventing tooth decay, regardless of socioeconomic status or access to care. Fluoridation has played an important role in the reductions in tooth decay by 40-70% in children and of tooth loss in adults by 40-60%.

Source: Burt BA, Eklund SA. Dentistry, dental practice, and the community. Philadelphia, Pennsylvania: WB Saunders Company, 1999:204-20.

Slide 15

Recognition of Tobacco Use as a Health Hazard



- Changes in social norms to prevent initiation of tobacco use, promote cessation, and reduce exposure to smoke



NCIPH 15

Recognition of tobacco use as a health hazard and subsequent public health anti-smoking campaigns have resulted in changes in social norms to delay the start of tobacco use, promote cessation of use and reduce exposure to environmental tobacco smoke.

Since the 1964 Surgeon General's Report on the health risks of smoking, the prevalence of smoking among adults has decreased and millions of smoking-related deaths have been prevented.

Source: Public Health Service. For a healthy nation: returns on investment in public health. Atlanta, Georgia: US Department of Health and Human Services, Public Health Service, Office of Disease Prevention and Health Promotion and CDC, 1994.

Slide 16

Threats and Emerging Issues
<ul style="list-style-type: none">• Emergence of bioterrorism• Re-emerging infectious diseases• Increasing chronic diseases• Health problems related to obesity• Increasing threats to clean water and air
 16

You've now reviewed some of the greatest public health achievements that occurred in the 20th century-- through the year 2000. In your role as a member of your local board of health, you should also be aware of those threats and emerging issues that currently challenge the health of your community, and the nation, as the 21st century unfolds.

Issues such as:

- the emergence of bioterrorism,
 - re-emerging infectious diseases resistant to previously successful treatment methods,
 - increasing chronic diseases among the older and other vulnerable populations,
 - the many health problems related to obesity, and,
 - increasing threats to our supply of clean water and air
- are forcing a shift in focus in public health research and practice.

Such issues are a reminder that new challenges will routinely surface in the years to come, requiring both the attention, and resources, of the public health community.

Slide 17

Summary
<ul style="list-style-type: none">• Public health = Health promotion and disease prevention!• Achievements highlight important contributions of public health and impact on health and well being<ul style="list-style-type: none">– Since 1900, average lifespan has lengthened by more than 25 years
 17

How did your list compare with the ten achievements highlighted in this presentation? Were you close?

The key words when thinking about public health are “health promotion” and “disease prevention”. The common thread in all of these achievements is the creation of a safer environment that helps people to be as healthy as they can be and prevents serious health problems, diseases and disabilities before they start.

The list of achievements highlights the contributions of public health and describes the impact of these contributions on the health and well being of persons in the United States.

While new challenges will continue to arise, thanks to these successful initiatives during the 20th century, we are living longer, healthier lives and our communities are safer and healthier places in which to live.