WHAT IS PUBLIC HEALTH?
What is Public Health?

Public Health is the science of protecting and improving the health of communities through *education*, *promotion of healthy lifestyles* and *research for disease and injury*. 
What is Public Health?

Public health involves the application of many *different disciplines* including:
What is Public Health?

- Biology
- Sociology
- Mathematics
- Anthropology
- Public policy
- Medicine
- Education
- Psychology
- Computer Science
- Business
- Engineering

and more
What is Public Health?

Public health is concerned with protecting the health of entire populations. These populations can be as small as a________________, or as big as an__________________________.

Focus is on entire _______________ rather than then__________________________.
What is Public Health?

Public health is concerned with protecting the health of entire populations. These populations can be as small as a *local neighborhood*, or as big as an *entire country*.

*Focus* is on entire *population* rather than *individuals*.
### Distinction between Public Health and Clinical Health Professions:

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The Ten Essential Functions of Public Health
The Ten Essential Functions of Public Health

- **Monitor** health status to identify community health problems.

- **Diagnose** and **investigate** health problems and health hazards in the community.

- **Evaluate** effectiveness, accessibility, and quality of personal and population-based health services.
The Ten Essential Functions of Public Health

- *Inform, educate, and empower* people about health issues.

- *Mobilize* community partnerships to identify and solve health problems.

- *Develop* policies and plans that support individual and community health efforts.
The Ten Essential Functions of Public Health

- **Assure** a competent public health and personal health care workforce.

- **Enforce** laws and regulations that protect health and ensure safety.

- **Link** people to needed personal health services and assure the provision of health care when otherwise unavailable.
The Ten Essential Functions of Public Health

- *Research* for new insights and innovative solutions to health problems.
Monitor health status to identify community health problems
Monitor health status to identify community health problems

Examples:

- Death certificates
- Birth Certificates
- Immunization registries
- Cancer registries
- Surveillance
Diagnose and investigate health problems and health hazards in the community
Diagnose and investigate health problems and health hazards in the community

Examples:

- Disease outbreak investigations
- Child Fatality Review Boards
Evaluate effectiveness, accessibility, and quality of personal and population-based health services
Evaluate effectiveness, accessibility, and quality of personal and population-based health services

Example:

- Outcome evaluation and Economic Analysis
Inform, educate, and empower people about health issues
Inform, educate, and empower people about health issues

Examples:

- Lead paint displays in hardware stores
- News releases on Rabies and West Nile Virus.
Mobilize community partnerships to identify and solve health problems
Mobilize community partnerships to identify and solve health problems

Examples:
- **Smoke-free Coalitions in** Lubbock and Amarillo
- **Healthy Baby Coalition in** Parmer County
- **Advisory boards**
Develop policies and plans that support individual and community health efforts.
Develop policies and plans that support individual and community health efforts.

Examples:

- Smoking bans
- Helmet laws
- Seat belt laws
- Restaurant inspection laws
Enforce laws and regulations that protect health and ensure safety
Enforce laws and regulations that protect health and ensure safety

Example:

- **Food inspection certificates**
- **Enforcement of smoking regulations**
Link people to needed personal health services and assure the provision of health care when otherwise unavailable
Link people to needed personal health services and assure the provision of health care when otherwise unavailable

Example:

- Children’s Health Insurance Program (CHIP)
- Federally Qualified Health Centers (FQHC)
- Children with Special Health Care Needs
Assure a competent public health and personal health care work force
Assure a competent public health and personal health care work force

Examples:

- Conferences
- Training programs
- Journals
- Schools of Public Health
- Satellite programs
- Certifications
Research for new insights and innovative solutions to health problems
Research for new insights and innovative solutions to health problems

Example:

- Needle exchange programs
Ten Great Public Health Achievements—United States, 1900-1999
Ten Great Public Health Achievements

- Vaccinations
- Motor Vehicle Safety
- Safer Workplaces
- Control of Infectious Disease
- Decline in Death from Health Disease and Stroke
Ten Great Public Health Achievements

- Safer and Healthier Foods
- Healthier Mothers and Babies
- Family Planning
- Fluoridation of Drinking Water
- Recognition of Tobacco Use as a Health Hazard
“Vaccinations”

Vaccinations have resulted in the eradication of smallpox; elimination of polio in the Americas; and control of measles, rubella, tetanus, diphtheria, Haemophilus influenza type B, and other infectious diseases in the United States and other parts of the world.
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 (e.g. use of safety belts, child safety seats, use of motorcycle helmets and decreased drinking and driving). These efforts have contributed to large reductions in motor-vehicle related deaths.

“Safer Workplaces”

Work-related health problems, such as coal workers’ pneumonia (black lung), and silicosis—common at the beginning of the 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 occupational injuries.

Control of Infectious Diseases

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).
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. Since 1972, death rates for coronary heart disease have decreased 51%.

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.
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, **infant mortality** has **decreased 90%** and **maternal mortality** has **decreased 99%**.
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 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 HIV and other STDs.
“Fluoridation of Drinking Water”

Fluoridation of drinking water began in 1945 and in 1999 reaches 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 (40% - 70% in children) and of tooth loss in adults (40% - 60%).

Recognition of tobacco use as a health hazard and subsequent public health anti-smoking campaigns have resulted in changes in social norms to prevent initiation of tobacco use, promote cessation 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.

Impact of Public Health
The dramatic achievements of Public Health in the 20th century have improved our quality of life: an increase in life expectancy, world wide reduction in infant and child mortality, and the elimination or reduction of many communicable diseases.
Impact of Public Health

Since 1900, the average life expectancy for Americans has increased by about 30 years.

Over twenty-five of the 30 years can be attributed to public health initiatives.

Medical advances account for less than 4 years.
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