NYSNA Continuing Education

The New York State Nurses Association is accredited as a provider of continuing nursing education by the American Nurses Credentialing Center's Commission on Accreditation.

This course has been awarded 9.6 contact hours.

All American Nurses Credentialing Center (ANCC) accredited organizations' contact hours are recognized by all other ANCC accredited organizations. Most states with mandatory continuing education requirements recognize the ANCC accreditation/approval system. Questions about the acceptance of ANCC contact hours to meet mandatory regulations should be directed to the professional licensing board within that state.

NYSNA has been granted provider status by the Florida State Board of Nursing as a provider of continuing education in nursing (Provider number 50-1437).

How to Take This Course

Please take a look at the steps below; these will help you to progress through the course material, complete the course examination and receive your certificate of completion.

1. **REVIEW THE OBJECTIVES**

    The objectives provide an overview of the entire course and identify what information will be focused on. Objectives are stated in terms of what you, the learner, will know or be able to do upon successful completion of the course. They let you know what you should expect to learn by taking a particular course and can help focus your study.

2. **STUDY EACH SECTION IN ORDER**

    Keep your learning "programmed" by reviewing the materials in order. This will help you understand the sections that follow.

3. **COMPLETE THE COURSE EXAM**

    After studying the course, click on the "Course Exam" option located on the course navigation toolbar. Answer each question by clicking on the button corresponding to the correct answer. All questions must be answered before the test can be graded; there is only one correct answer per question. You may refer back to the course material by minimizing the course exam window.

4. **GRADE THE TEST**

    Next, click on "Submit Test." You will know immediately whether you passed or failed. If you do not successfully complete the exam on the first attempt, you may take the exam again. If you do not pass the exam on your second attempt, you will need to purchase the course again.

5. **FILL OUT THE EVALUATION FORM**

    Upon passing the course exam you will be prompted to complete a course evaluation. You will have access to the certificate of completion **after you complete the evaluation**. At this point, you should print the certificate and keep it for your records.

Introduction

Welcome! You are embarking on a journey that will build on your strengths and provide direction for the future. The journey can be self paced, individualized, and can provide you with structures, processes and outcomes that will broaden your perspective on public/community health nursing.

The above photo is available courtesy of the Visiting Nurse Service of New York.

The goal of this course is to provide a dynamic curriculum for nurses practicing in public/community health nursing. Throughout the curriculum, key themes will be competence and advocacy. At the end of each part of the course, you will find activities that you can use to help you in applying the information you learn.

Why take this journey?

Professional development is continual and provides you with the ability to see local individual/family/community in the larger context of our country and world. In public/community health nursing, understanding population-based practice is the foundation for providing care and advocacy to society.

You are familiar with the nursing model focused on caring. Simultaneously, you are working within a medical model focused on curing. As a nurse, you integrate aspects of these two models in your practice. In a similar way, this journey seeks to integrate public/community health nursing and nursing in your practice. This broader perspective allows you to view public/community health and nursing within the structures of public/community health and nursing, while integrating processes and outcomes to better serve and advocate for individuals, families and the population at large.

How is this journey organized?

This journey is organized into **tours**, **sightseeing opportunities**, **key attractions** and **activities**. You can make the entire journey by following the established road map or you can click on a particular sightseeing opportunity at any time.

Key Attractions are threads of the past that lead to the trends of the future and will be essential tools throughout the journey. The key attractions are highlighted in the introduction and will be discussed in depth in the tour.

Sightseeing Opportunities are specific focus areas designed to help you understand the foundation of public/community health and nursing.

Each tour has a group of sightseeing opportunities that will inform your nursing practice. You can take the entire tour in sequence or click on a specific tour.

Tour I	Historical Monuments of Public/Community Health Nursing
Tour II	Landmarks of Importance in Public/Community Health Nursing
Tour III	Countryside Visit to Public/community Health Nursing
Tour IV	Seaports of the Future in Community/ Public/community health Nursing
Tour V	Reflecting Pools in Practice

Activities provide the opportunity for you to slow down on your journey and reflect on the key attractions, the sightseeing opportunities and the tours in general. These activities are interspersed throughout the tours. The more actively you apply what you are learning on your journey, the more useful this journey will be to you. For your convenience, the activities are also available at the end of the course, if you would like to print them out and complete them once you have finished all of the tours.

What can I expect to see on each tour?

Tour I: Historical Monuments of Public/Community Health Nursing

This tour will help you know more about:

- History of public/community health nursing
- The core functions and essential services of public health
- Legislation and public/community health
- Global, regional and local importance of public/community health
- Population based theory and public/community health
- Nursing theory and public/community health
- Socialization to public/community health nursing
- Application to your nursing role

Tour II: Landmarks of Importance in Public/Community Health Nursing

This tour will help you know more about:

- Levels of prevention
- Epidemiology
- Surveillance/tracking/data collection
- Outcomes management
- Environmental management
- Disease outbreak management
- Application to your nursing role

Tour III: Countryside Visit to Public/Community Health Nursing

This tour will help you know more about:

- Population based theory and practice in public/community health nursing
- Community assessment
- Communicable disease management
- Chronic disease management

- Application to your nursing role

Tour IV: Seaports of the Future in Public/Community Health Nursing

This tour will help you know more about:

- World view on culture, diversity and health beliefs
- Vulnerable populations
- Ethical decision making in public health
- Global safety, local safety
- Bioterrorism core competencies

Tour V: Reflecting Pools in Practice

This tour will help you know more about:

- Core competencies for public health professionals and public/community health nursing competencies
- Advancing public/community health nursing
- Life long learning

About the Author(s)

Nancy Michela, DA(c), MS, RN

Nancy J. Michela, MS, RNC, DA (candidate) has been a public/community health nurse for over 20 years, having held multiple clinical and teaching positions in a variety of community settings. She has taught Community Health Nursing at the baccalaureate level for 13 years.

Ms. Michela has a BS in Biology from the State University of New York, University at Albany, BS in Nursing from The Sage Colleges, MS in Community Health Nursing/Oncology Education from The Sage Colleges, Troy, NY and is a Doctoral Candidate in Women's Studies/Education from the State University of New York, University at Albany.

Kathleen Kennedy, MS, RN, CNAA-BC

Kathleen Kennedy, MS, RN, CNAA-BC, has multiple professional accomplishments. Currently she is Assistant Professor of Nursing and Co-coordinator of the Baccalaureate Nursing Program at The Sage Colleges, Troy, New York. As public/community health nurse and supervising public/community health nurse, she successfully implemented multiple public/community health strategies that impacted positively on the community. In her capacity as a Vice President of Patient Services and Chief Nursing Officer, she implemented a public/community health nurse/discharge planning program in an acute care facility.

Ms. Kennedy has multiple additional professional accomplishments in leadership, management, teaching and consulting.

About the Development of This Course

This course is presented in its entirety and is a series of courses in Public/Community Health Nursing designed to provide needed public/community health nursing orientation to nurses new to the specialty. The educational direction was developed by a consortium of Public/Community Health Nursing leaders throughout New York State and is based largely on the Onondaga County Health Department's Public/Community Health Team Staff Development Program developed by Kristine M. Gebbie, DrPH, RN.

This series of courses was made possible by a grant from the New York State Department of Health.

<u>Update and Review</u>

Jacqueline Merrill

Jacqueline Merrill has extensive experience as a nurse in acute inpatient settings as well as in public health. Her focus in recent years has been on emergency preparedness in public health. She has presented on this subject at multiple national and regional conferences. She has authored multiple journal articles and currently has a book chapter in press: Merrill, J. & Gebbie, K. (in press). Competency for Emergency Response, in Fraser, M. (Ed). *Public Health Emergency Response*. New York: Jossey-Bass/Wiley.

Ms. Merrill received a diploma in nursing from the Massachusetts General Hospital, School of Nursing, Boston, MA. She earned a bachelor's in nursing from Columbia University School of Nursing in New York City, a master's in Public Health in Policy from the Columbia School of Public Health; she is currently a doctoral candidate in Informatics at Columbia University, School of Nursing.

Tour I: Historical Monuments of Public/Community Health Nursing

At the completion of this tour, the learner will be able to:

- Describe significant events in the history of public/community health nursing
- Identify the essentials of public/community health services
- Identify major legislation effecting public/community health
- Explain population theory in the development of community programs
- Explain how to apply nursing theory in public/community health program outcomes
- Compare and contrast global, regional and local public/community health initiatives
- Discuss role socialization in professional role development

Key Attractions for Tour I include background information on:

- The Public Health System
- Public/Community Health Knowledge
- Levels of Prevention
- Health Promotion Activities
- Social Advocacy
- Public Policy Influences
- Role of Nursing
- Public/Community Health Nursing Competencies

The Public Health System

The public health system is composed of the complex network of people, systems and organization that are working together at local, state and national levels to improve the health of populations (CDC, 2001). It is one component of the nation's healthcare system, with its primary emphasis on preventing disease and disability, focused on the health of an *entire population*, at the community level, rather that at the individual level.

Public health consists of governmental and nongovernmental agencies. The relationships between these agencies occur at various governmental levels, between public health agencies and other health-related community agencies, between public health and private sector agencies, and between private sector agencies and voluntary agencies (Novick 2001).

Public/Community Health Nursing (PHN/CHN) Knowledge

Public health nursing is "the practice of promoting and protecting the health of populations using knowledge from nursing and social and public/community health sciences" (American Public Health Association, 1996). The goal of public health nursing is the prevention of disease and disability for all people through creating the conditions in which people can be healthy (American Nurses Association, 1999).

Community health nursing is the synthesis of nursing practice and public health practice, applied to promoting and preserving the health of populations. Health promotion, health maintenance, health education and management, coordination and continuity of care are used in a holistic approach to the management of the health care of individual, families and groups in a community (American Nurses Association, 1986). These nursing interventions can occur in a variety of settings, such as in county or city clinics, via community inspections, in schools, the workplace, or home visits.

Levels of Prevention

The Public/Community Health Nursing section of the Minnesota Department of Health (MN-DOH)   (2001, p.14) states that "not every event is preventable, but every event does have a preventable component". Prevention occurs at three levels: primary, secondary and tertiary.

Primary prevention promotes health and protects against threats to health. Primary prevention is implemented before a problem develops to keep problems from occurring in the first place. Childhood immunizations are good examples of primary prevention.

Secondary prevention includes early diagnosis and treatment of problems. It keeps problems from causing more serious or long-term effects or from affecting others. This prevention identifies risks or hazards and modifies, removes, or treats them before a problem becomes more serious. Breast self-exam is an example of secondary prevention.

Tertiary Prevention limits additional negative effects of a problem. It keeps existing problems from getting worse. It alleviates effects of disease and injury and restores individuals to their optimal level of functioning. Rehabilitation following stroke or myocardial infarction is an example of tertiary prevention.

Health Promotion Activities

Health promotion is defined in Stanhope and Lancaster (2000, p.43) as "activities that have as their goal the development of human resources and behaviors that maintain or enhance well-being". Health promotion consists of lifestyle related activities intended to improve or maintain health, such as healthful diet modification, exercise, and health education.

Social Advocacy

One of the many roles in which nurses engage is that of **advocate.** As an advocate, the nurse collects data and confers with the client as to which services are needed and how the services are to be implemented. Together with the nurse, the client becomes more independent in decision making for his/her own care. At the community or population level, the nurse supports efforts for immunization programs, clean water and sanitation projects (Stanhope and Lancaster, 2000, p. 985). As a profession, nursing has a contract with society as documented in the American Nurses Association (ANA) Social Policy Statement (1995). This statement "presents clinical nursing practice as it has evolved according to society's health needs and sets direction for the future" (ANA, 1995).

Public Policy Influences

"**Public policy** is shaped by legislation that specifies the directions for governmental bodies to take" (Stanhope and Lancaster, 2000, p.646). Public health policy is the administrative decisions made by the legislative, executive or judicial branches of government that define courses of action affecting the health of a population through influencing actions, behaviors or resources (Porche, 2004, p. 319). Public health nurses in all settings need to become politically knowledgeable and to use their first hand understanding of public health issues in their

Public/Community Health Nursing Orientation

communities in order to participate in public health policy decision making, and to advocate for policies that promote healthy communities.

Nursing Role

The **nurse role** is the activity for which she/he is responsible, either alone or as a member of a multidisciplinary team in a changing health care environment. This activity can be at the local, state or national level. The *Essential Elements of Public/Community Health Nursing* provides a framework to the role of the nurse. These elements will be discussed in detail later.

Public/Community Health Nursing Competencies

Public/community health nursing competencies are based upon the ANA Standards of Public Health Nursing Practice and the ANA Standards of Professional Performance (American Nurses Association, 1999) and the Core Competencies for Public Health Professionals. These standards will be used and discussed throughout this journey.

History of Public/Community Health Nursing

An historical review of public/community health nursing is essential to examine the dominant cultural ideas and practices of the past. The efforts of public/community health nurses to prevent and/or control communicable disease are useful to understand the current public/community health system and contemporary American public/community health nursing practice (Stanhope and Lancaster, 2000, p.21).

Greek and Roman civilizations made advances with sophisticated medical and nursing care with training of individuals to support the armies. Greeks linked individual health to environment to produce a harmonious relationship with nature. Whereas, the Romans emphasized the larger system with regulation of medical practice along with census taking and environmental sanitation (Stanhope and Lancaster, 2000,p.21).

The **Hebrews** contributions to the promotion of hygiene and sanitation practices are still applicable today. Hebrew Scriptures laid down basic public/community health principles calling for sanitary measures in selecting and preparing foods, system of meat inspection, and disposal of articles contaminated by diseases, among other. Visiting the infirmed in their homes can be traced to the ancient Hebrew commandment "mitzvah" visiting the sick "bikkur cholim" (Benson, 1993, p.55).

In the **medieval period**, nursing practice expanded with the development of "xendochium", the hospital for those people who could not care for themselves in their own homes. These people tended to be travelers, merchants, peasants and pilgrims to the Holy Land (Futch, 1997, pp.4-5). At the same time, there was a decline in community health organization and practices which led to poor sanitary conditions and an increase in communicable diseases (Stanhope and Lancaster, 2000, p.22).

The dramatic period of the **Renaissance** saw an increase in science and technology. These advances led the way to better health, although public/community health measures continued to be rudimentary. Midwives established guilds for their nursing practice, setting precedent for future nursing organizations.

The rise of **Protestantism** in Europe led to the demise of many religious orders, and therefore, hospitals failed in many countries. The collapse of the hospital as a system was one of the greatest tragedies in European history, as it caused social disorder and an increased mortality during the pandemic of the black plague (Iveson-Iveson, 1982c, p. 30).

King Henry VIII was responsible for the breakdown of the monastic system and thus, the English hospital system in the 16th century (Iveson-Iveson, 1982a, p.28). Since the monasteries ran the hospitals and cared for the indigent and disabled, there was no one to care for the sick. Eventually, civilian authorities began to control royal hospitals and started the lay nursing system in England. St. Thomas' Hospital, London, a transformed royal to civilian hospital was where **Florence Nightingale** originated her "training school" for nurses in the 1860s with the stipend received for her services in the Crimean War (Iverson-Iverson, 1982b, p.28).

In early America, public/community health efforts were implemented to control epidemics and improve the health of the colonial population. Collection of vital statistics and establishment of boards of health in larger cities contributed to fighting these diseases. A model of the **Elizabethan Pool Law** (written in 1601) was used to care for the indigent, aged and mentally ill.

After the **American Revolution**, communicable disease epidemics of yellow fever, cholera, typhoid, tuberculosis, and malaria strengthened public support for official Boards of Health. Large municipalities established water quality standards and sewer construction. During the middle of the 19th century, there was more interest in public/community health problems in urban areas. The **Shattuck Report** published in 1850 emphasized the public health of the population of Massachusetts (Stanhope and Lancaster, p. 23). The US **Public Health Service (PHS)** was instituted in 1798 as the Marine Hospital Service and was initially placed within the Department of the Treasury, a consequence of significant public health involvement in the quarantine of merchant ships. The PHS was included within the Department of Health, Education and Welfare when it was created during the administration of Franklin Delano Roosevelt.

During the 1860's, working in Great Britain, Florence Nightingale pioneered a systemic approach to health promotion and disease prevention through advocating clean air and water, adequate housing and attention to infant care. Nightingale undertook ground-breaking statistical work on maternal mortality which looked at the disparities in social classes and place of delivery (e.g. institution or home) and demonstrated that childbirth was a natural condition rather than a disease entity. Her vision of public health advocated for professional nursing for the 'sick poor' comparable to the care offered fee-paying patients in hospitals and she was instrumental in establishing such care on an experimental basis in the Liverpool Workhouse Infirmary and establishing professional nursing in workhouses in other industrial cities. Nightingale's interest in public health extended into the Indian subcontinent where she became involved with re-forestation and the influence of environmental conditions, land tenure systems and local government on population health outcomes (McDonald, 1999).

The growth of American cities, and the influx of immigrants, along with the industrial expansion, led to population overcrowding and congestion, endangering public/community health. **Visiting Nursing** or District Nursing, built upon the British model, became active to meet the new urban health needs. **Lillian Wald** and **Mary Brewster** established a district nursing service in New York City in 1893. Following the settlement movement in the United States at that time, Wald chose to live in the neighborhood of her clients. She was able to secure enough funds from friends, family and benefactors to open the **Henry Street Settlement**. Wald coined the name of **"public health nurse"** for those women working out of the settlement house. She also crusaded for child welfare, establishment of school nurses, and implementation of insurance nurses (Kalish and Kalish 1995, pp. 174-184).

The **Sheppard- Towner Act of 1921** provided federal funding to address the high maternal and infant mortality rates in America. Education, home visits and classes to families, women, infants and children resulted in a well-documented decline of the infant mortality rate during the eight years of the program. It indirectly stimulated organization of *state* health departments (Stanhope and Lancaster, 2000, p. 29). Before this time official health departments had been limited to only the largest cities. The county health movement of the 1920's saw health departments increase in number from 1 in 1908 to 569 organizations in 1933.

The **Social Security Act of 1935** was one of President Roosevelt's New Deal measures to assist Americans during the Depression. Title VI of this legislation provided for health promotion and protection through education by public/community health nurses. Categorical funding was directed toward specific priorities for a comprehensive health program. Each state and local health department established programs based upon their needed and available funds. Nurses received stipends for university study as another part of Title VI (Stanhope and Lancaster, 2000; Kalish and Kalish, 1995).

In 1965, Congress amended the Social Security Act as a part of President Lyndon B. Johnson's Great Society to include **Medicare**, health insurance for the elderly, and **Medicaid**, health care for the indigent. The tertiary level of prevention or post acute care became the emphasis of health care rather than the historic primary prevention of public/community health nursing. The successes of public health immunization and sanitation initiatives engendered the perception that infectious diseases had been conquered and led to decline of the public health system development in the later years of the 20th century. Home health care agencies expanded, while health promotion and disease protection programs were curtailed (Kalish and Kalish, 1995; Stanhope and Lancaster, 2000). In the late 1960s and 1970s, many nurses worked outside the hospital in various settings including ambulatory clinics, work places, and home care, but approximately half had public/community health educational
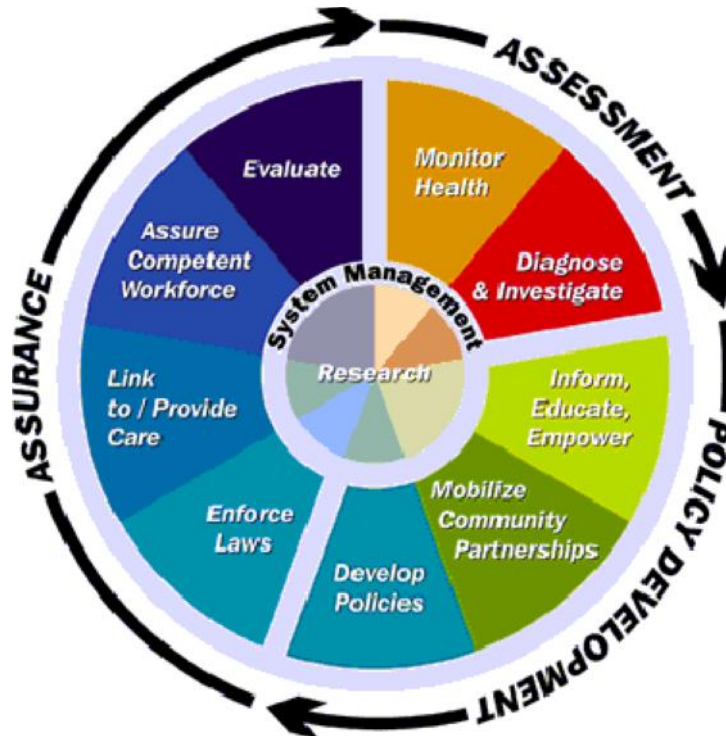
preparation. The term "**community health nurse**" came into use about 1985 when the **American Nurses Association (ANA)** sought to create an entity to which the nurses working in varied community settings could belong. Today these nurses are referred to as "nurses in community-based practice" (Stanhope and Lancaster, pp.12-16).

In 1988 an influential Institute of Medicine report decried the chaotic disarray of the public health systems. Reforms instituted in response to the report resulted in definition of the core functions and essential services of public health, upon which current public health system and workforce development is now based. Interest in rebuilding the nation's public health infrastructure has increased along with occurrence of emerging infectious diseases (e.g. West Nile, Severe Acute Respiratory Syndrome [SARS], Monkeypox, Hantavirus) and threats of bioterrorism.

There are several examples where states have successfully transitioned public health nurses from direct care services to population-focused practice, making significant progress in addressing the overall public health needs of their communities. Washington was perhaps the first state to undertake a comprehensive effort to define the roles of public health nurses related to the core functions of assessment, assurance and policy development and to transition nurses to those roles (McNeil, 1993). Other states have worked to assist public health nurses to identify activities that they are currently performing which directly relate to the core functions and to enhance or expand those types of activities. Such activities include: using community assessment data to rank local health issues; working to contain viruses, such as hepatitis A through community education; providing appropriate sex education to both adults and teens; working with communities to reduce tobacco use; and assuring quality of care through statewide monitoring programs (ANA, 2000).

As the **21st century** begins, public health nursing is more than 100 years old. The concept of public health science is even older than organized nursing. Yet all these roles and functions constitute contemporary nursing practice. There is continued debate regarding educational preparation, title, role and function of the public/community health nurse. It is the position of the Quad Council of Public Health Nursing Organizations (the American Nurses Association; the Association of State and Territorial Directors of Nursing; the Association of Community Health Nurse Educators; and the American Public Health Association) that in order for the essential contributions that nursing can make to the health of a community to continue, it is critical to have a public health nursing workforce that is educationally prepared at the baccalaureate or higher degree level with a strong knowledge base and skills in public health nursing.

Tour I: Activity #1 - History of Public/Community Health Nursing

Directions: Take some time to reflect on what you have learned; use additional paper as needed to complete the activities.

- What aspect or decade of public/community health nursing history is of interest to you?

- Chose one aspect or decade and review the writings of authors during that period.

- What were the healthcare issues and solutions selected at the time?

- Compare and contrast the healthcare issues and solutions in today's healthcare environment.

**The Core Function and Essential Services of Public Health** (USDHHS, 2000)

The **Essential Public Health Services** (from the Essential Public Health Services Work Group of the Core Public Health Functions Steering Committee, Fall 1994) forms an excellent basis for understanding the core of public/community health services (ASTDN, 1998). Nursing activities are included as examples of application of the role.

1. **Monitor health status to identify community health problems.**
   Example nursing activity: participate in community assessment.

2. **Diagnose and investigate health problems and health hazards in the community.**
   Example nursing activity: understand and identify determinants of health and disease.

3. **Inform, educate and empower people about health issues.**
   Example nursing activity: develop and implement community-based health education.

4. **Mobilize community partnerships to identify and solve problems.**
   Example nursing activity: convene groups and providers who share common concerns and interests in special populations.

5. **Develop policies and plans that support individual and community health efforts.**
   Example nursing activity: participate in disaster planning of community.

6. **Enforce laws and regulations that protect health and ensure safety.**
   Nurse activities include: implement ordinances and laws that protect the environment.

7. **Link people to needed personal health services and assure the provision of health care when otherwise unavailable.**
   Example nursing activity: provide clinical preventive services to high-risk populations.

8. **Ensure a competent public health and personal health care workforce.**
   Example nursing activity: participate in continuing education and preparation.

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9. **Evaluate effectiveness, accessibility, and quality of personal and population-based health services.**
   Example nursing activity: review and analyze data on health status of the community.

10. **Research for new insights and innovative solutions to health problems.**
    Example nursing activity: identify research priorities for target communities.

Model Integrating Nursing with the Core Functions and Essential Services of Public Health (ASTDN, 1996)
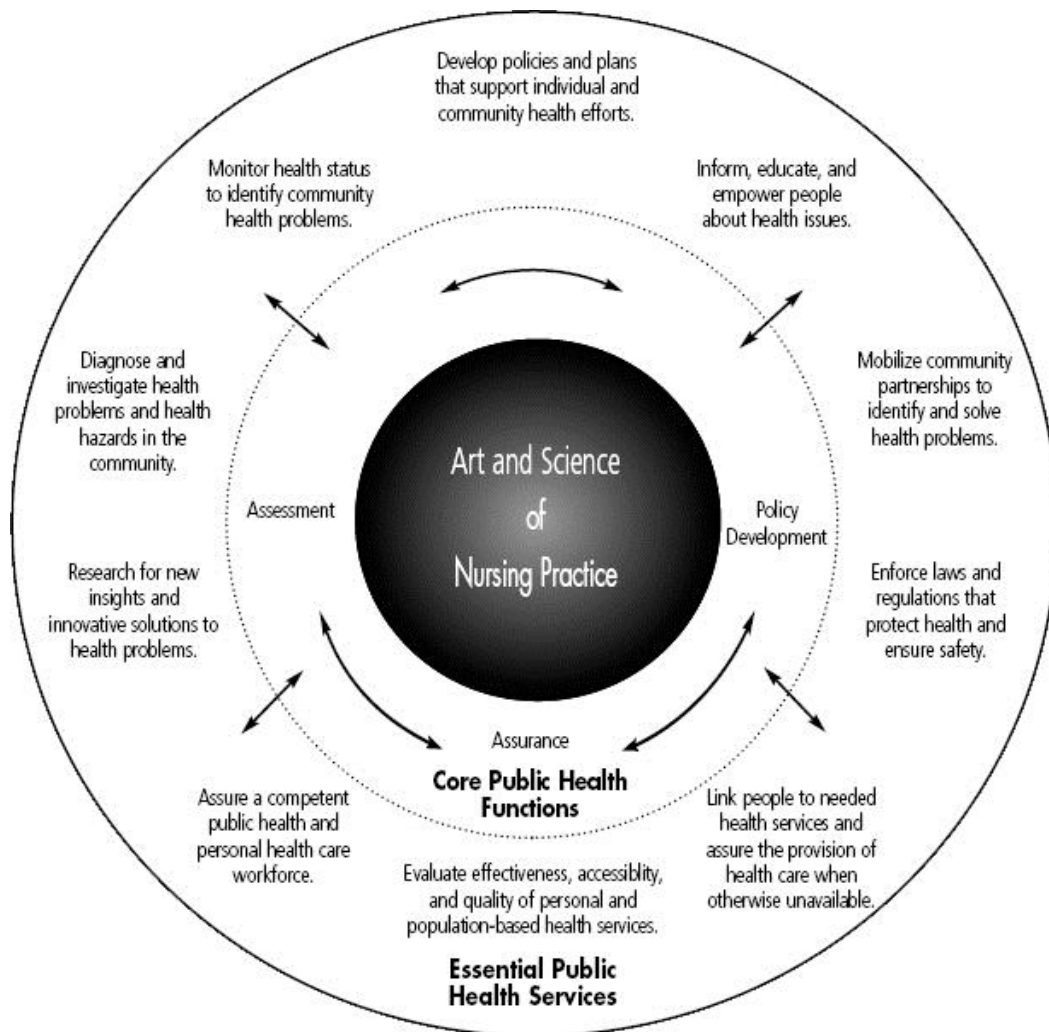
Tour I: Activity #2 - Essential Public Health Services

Directions: Take some time to reflect on what you have learned; use additional paper as needed to complete the activities.

- Review the Essential Public Health Services.

- List at least one other nursing activity that can be implemented for each service.

<u>Legislation and Public Impact</u>

Much of the work of public health is performed through the agencies of state and local governments. At the national level the Department of Health and Human Services (DHHS) is the government's principal agency for protecting the health of all Americans and providing essential human services, covering a wide spectrum of activities, including:

- Health and social science research
- Preventing disease, including immunization services
- Assuring food and drug safety
- Medicare (health insurance for elderly and disabled Americans) and Medicaid (health insurance for low-income people)
- Financial assistance and services for low-income families
- Improving maternal and infant health
- Head Start (pre-school education and services)
- Preventing child abuse and domestic violence
- Substance abuse treatment and prevention
- Services for older Americans, including home-delivered meals
- Comprehensive health services for Native Americans
- Medical preparedness for emergencies, including potential terrorism.

DHHS works closely with state and local governments**,** and many DHHS-funded services are provided at the local level by state or county agencies, or through private sector grantees. The Department's programs are administered by 11 operating divisions, including eight agencies in the US Public Health Service and three human services agencies. In addition to the services they deliver, the DHHS programs provide for equitable treatment of beneficiaries nationwide, and they enable the collection of national health and other data.

U.S. DEPARTMENT OF HEALTH & HUMAN SERVICES
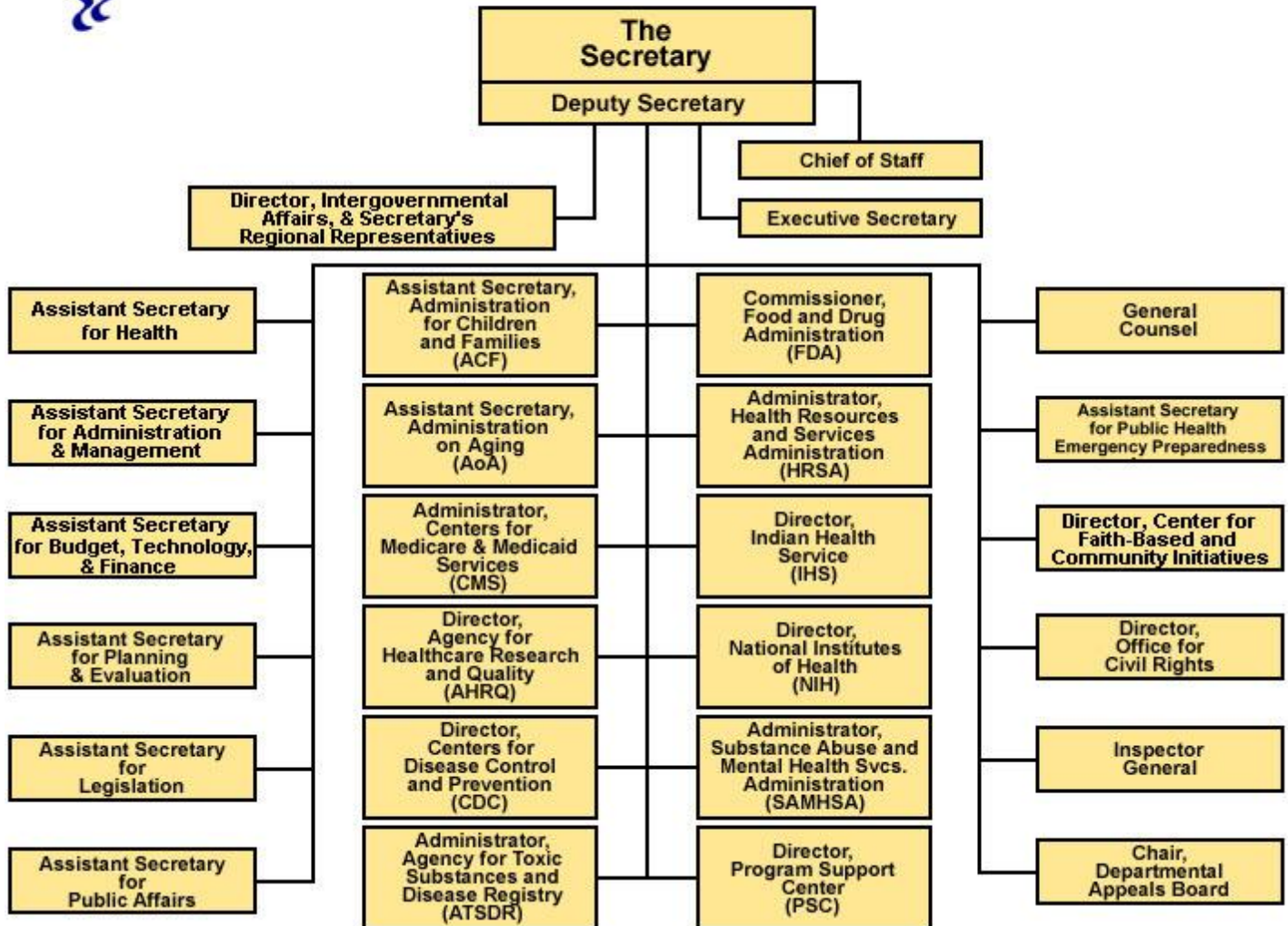
The Department of Health and Human Services sets the priorities for national health policy with specific health outcomes in **Healthy People 2010.** Healthy People 2010 will be covered in more detail in Tour II.

Policy can be made by governments including the federal, state and local levels as well as by institutions and professional organizations. Political actions contribute to the development of policies and influence the outcomes of the policy process.

Laws "govern the relationships of individuals and organizations to other individuals and to government" (Stanhope and Lancaster, 2000, p.178). Political action continues to influence the process by providing pressure for a policy to become law. When the law is established, it is necessary to develop **regulation** to define how the law is going to be implemented.

Examples of important legislation that affects the health of the public includes the following (Allender and Spradley, 2001, p.112**):**

- Social Security Act of 1935
- Hill Burton Act of 1946

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- Community Mental Health Centers Act of 1963
- Medicare and Medicaid Social Security Act amendments of 1965
- The Occupational Safety and Health Act of 1970
- The Health Maintenance Organization Act of 1973
- National Health Planning and Resources Development Act of 1974
- Tax Equity and Fiscal responsibility Act of 1982
- Stewart B. Mc Kinney Homeless Assistance Act of 1988
- Preventive Health Amendments of 1992
- Personal Responsibility and Work Opportunity Reconciliation Act of 1996
- Federal Balanced Budget Act of 1997
- State Child Health Insurance Program Amendments 1998

As noted, the US Department of Health and Human Services (DHHS) functions to improve the health of the entire population though the agencies of the **US Public Health Service.** The **Division of Nursing,** located within the Health Services and Resources Administration at DHHS, focuses on primary healthcare, public/community health and promoting nursing's contribution to meeting the goals of Healthy People 2010 (Stanhope and Lancaster, 2000).

On the **state** and **local** level, **health departments** implement the national and state laws concerning public/community health. The **New York State Health Department** website can be accessed by clicking. Examples of services that state health departments provide include medical assistance, mental health and addiction services, licensing boards, agency surveys, health planning and development, preventive medicine, environmental and water safety programs, and developmental disabilities service. In New York State, the county health departments websites can be accessed here http://www.health.state.ny.us/nysdoh/lhu/map.htm. Examples of services provided by local health departments include nursing, child health clinics, environmental health, epidemiology and disease control, family planning, elder care, nutrition, physical therapy, health education, immunization services and mental health.

Nursing influences the development of laws and nursing practice is impacted by legislation regarding nursing practice and public/community health. Because of the unique knowledge nurses have about health, it is important to be an **active participant** in the political process. The nurse needs to know the legislative process and participate by speaking at public hearings, communicating with legislators and professional organizations on pending legislation, advocating for specific health initiatives through community groups. Nurses have first hand knowledge and experience with the effects of health legislation on members of society and can give a voice and human face to health concerns. The nurse is a significant advocate in these situations.

Tour I – Activity 3: Legislation and Public Impact

Directions: Take some time to reflect on what you have learned; use additional paper as needed to complete the activities.

- Select one of the laws that is of interest to you. Select a journal or newspaper article that identifies and describes how the selected law functions in the current healthcare environment.

- Use a professional nursing organization as source of information on pending legislation. Communicate your views on the legislation to your state representative.

Population Based Theory and Public Health

In **population based theory,** the focus is on a defined population or a subpopulation in which problems are assessed and diagnosed using population based data, for which interventions are developed and implemented on an aggregate level. Population based practice differs from assessment, diagnoses, interventions and treatments that are focused on individuals and families (Stanhope and Lancaster, 2000, p.9). Population-based interventions affect the determinants of disease within an entire community rather than simply those of a single, high-risk individual.

Principles that characterize the population-based approach are (Novick, 2001):

    a) a community perspective,
    b) a clinical epidemiology perspective (using population-based data),
    c) evidence-based practice
    d) an emphasis on effective outcomes, and
    e) an emphasis on primary prevention.

Public health/community health nursing operates on a continuum of care that extends from individual and family interventions targeting community problems (e.g. individual smoking cessation counseling), to community targeted interventions (e.g. school-based smoking cessation program).

Block and Josten's **Ethical Theory of Population Focused Nursing** combines aspects of public/community health and nursing. Their theory contains three essential elements (Allender and Spradley, 2001, p. 345):

- An obligation to population;
- The primacy of prevention;
- The centrality of relationship-based care.

In this theory, the first two elements are crucial to public/community health and the third is foundational to all nursing. Several of the leading health indicators in **Healthy People 2010** meet the essential elements of Block and Josten's theory.

- Provide additional guidance for understanding population based theory and practice.
- Population-based assessment, policy development and assurance is systematic and comprehensive.
- Partnerships with representatives of the people are essential.
- Primary prevention is given priority.
- Creating healthful environmental, social and economic conditions in which people can thrive guides intervention strategies.
- The practice incorporates an obligation to actively reach out to all who might benefit from an intervention or service.
- The dominant concern and obligation are for the greater good of all of the people.
- The stewardship and allocation of available resources are supported to gain maximum population health benefit.
- The health of the people is most effectively promoted and protected through collaboration with members of other professions and organizations.

When these theoretical frameworks and the 1999 American Nurses Association (ANA) *Scope And Standards Of Public Health Nursing* (which supercedes the *ANA Standards of Community Health Nursing*, dating from 1986) are combined with *Nursing's Social Policy Statement*, a clear road map emerges that speaks to the accountabilities and responsibilities of public/community health nurse to society. The *Scope and Standards* and *Social Policy Statement* are publications of the American Nurses Association and can be purchased through their website **http://nursingworld.org.**

ANA SCOPE AND STANDARDS OF PUBLIC HEALTH NURSING PRACTICE AND PERFORMANCE (ANA, 1999)

PRACTICE STANDARDS

I.   ASSESSMENT
The nurse assesses the health status of populations via data, citizen input, and professional judgment.

II.   DIAGNOSIS
The nurse analyzes collected data and in partnerships with the people attaches meaning to it.

III.   OUTCOME IDENTIFICATION
The nurse identifies changes in health status that are expected to occur in the populations.

IV.   PLANNING
The nurse promotes and supports the development of interventions (programs, policies, and services) which improve the health status of populations.

V.   IMPLEMENTATION
The nurse assures access and availability of interventions (programs, policies, and services).

VI.   EVALUATION
The nurse monitors the health status of the community on a systematic, ongoing basis.

PERFORMANCE STANDARDS

I.   QUALITY OF CARE
The nurse systematically evaluates the availability, accessibility, acceptability quality, and effectiveness of nursing practice for the population.

II.   PERFORMANCE APPRAISAL
The nurse evaluates her/his own nursing practice in relation to professional practice standards and relevant statues and regulations.

III.   EDUCATION
The nurse acquires and maintains current knowledge in public health practice.

IV.   COLLEGIALITY
The nurse establishes collegial partnerships and contributes to the professional development of peers, colleagues, and others.

V.   **ETHICS**
The nurse applies ethical standards in advocating for health and social policy and delivery of public health programs to promote and preserve the health of the population.

VI.   **COLLABORATION**
The nurse collaborates with representatives of the population, other health and human service organizations, and professionals providing and promoting the health of the population.

VII.   **RESEARCH**
The nurse uses research findings in practice.

VIII.   RESOURCE UTILIZATION
The nurse considers using available resources in a manner that enables the maximum possible health benefit to the population.

Tour I – Activity 4: Scope and Standards

Directions: Take some time to reflect on what you have learned; use additional paper as needed to complete the activities.

• Identify a population-based initiative in Health People 2010.

• Use online resources to identify implementation plans for the selected initiative.

• Identify how this population-based initiative could affect the community in which you work.

• Identify gaps in the population-based initiative that need to be addressed in the future.

Nursing Theory and Public/Community Health

As a member of society, a person experiences changes continually. Nurses witness the clinical practice changes that result from societal changes. The changes in public/community health practice are often based on new research findings developed in a theoretical framework. The **theoretical framework** provides a systematic, organized method for analyzing the **practice** findings.

At the same time, data collection about public/community health practice patterns yields new insights, which foster further research. The **research** provides a disciplined analysis of the data collected and gives insights for the usefulness of a particular public/community health practice approach. Since all knowledge and assumptions can be critically challenged and debated, this systematic cycle seeks to refine and redefine approaches to practice.

As the nurse thinks about the link among practice, theory and research, **outcomes** become an important aspect to consider. Outcomes can be measured to professional standards, functional outcomes (cost, efficiency), satisfaction or quality of care. The outcomes identify the actual results that occur using a specific methodology. This leads to the evolution of "best practices"
that are the foundation of quality programs and policy (Stanhope and Lancaster, 2000).

From a nursing perspective, the question might be phrased as "Did this initiative change the health status of the population?" It is often important to view the **structure, process and outcomes** to fully understand the impact of the initiative. When viewing the population as a whole, the personal or environmental characteristics that are held in common are identified (Stanhope and Lancaster, 2000, p. 9). This aligns with theories such as population based theory and nursing theory.

In **nursing theory**, the focus is on the interacting systems of environment, person, health and nursing. Specific theories such as Orem's self-care model, Neuman's health care systems model, Roger's model of the science of unitary man, Pender's health promotion model and Roy's adaptation model have applicability in public/community health nursing.

For example, **Roy's adaptation model** is an **outcome theory,** which describes:

- Input (stimuli and adaptation level)
- Control process (coping mechanisms of regulator and cognator)
- Effectors (physiological function, self concept, role function and interdependence)
- Output (adaptive or ineffective responses)
- Feedback loop (Marrriner-Tomey and Alligood, 1998, p.249)

Roy describes people or a population as an open adaptive system which experiences a stimulus and produces a response. The response process has a regulator and cognator aspect. The regulator aspect receives internal and external stimuli and develops a response. The cognator includes perceptions, judgments, and emotions when forming a response. The regulator aspect might include a community's desire to have lead free housing (internal stimuli), while a state regulation might focus on funding for lead abatement (external stimuli). The combination of these stimuli might lead to a community based lead poisoning prevention and treatment program as the coping mechanism. The effectors might include the community's perception of the lead poisoning problem, their past experiences with absent landlords, or the emotion of seeing children diagnosed with lead poisoning. The effectors and control processes combine to form an output, or adaptive response by the community. The feedback provides the outcome evaluation of the community's response and sets the stage for further actions (Allender and Spradley, 2001, p.344; Marriner-Tomey and Alligood, 1998, p. 249).

Evidence-Based Practice and Public Health

The diagnosis and treatment of disease is increasingly based on the "best available evidence" rather than solely upon the expertise of the practitioner or clinician, as a means to ensure quality of care and patient safety. **Evidence-based Medicine** has been defined as "the conscientious, explicit, and judicious use of current best evidence in making decisions about the care of individual patients. The practice of evidence-based medicine

means integrating individual clinical expertise with the best available external clinical evidence from systematic research." (Sackett, et. al.,1996).

Evidence-based resources have great relevance for public health practice, particularly in the area of policy development. These include reports of public health practices with successful and measurable outcomes, the CDC's recommendations and guidelines for prevention, control and treatment of public health conditions, systematic reviews of public health interventions, and economic effectiveness findings for public health programs. Resources for public health evidence based practice may be found at
http://library.umassmed.edu/ebpph/ebresources.pdf

Public Health Informatics

Public health informatics is the systematic application of information and computer science and technology to public health practice, research and learning. In practice public health informatics uses information science and technology to improve human health. Informatics processes allow management of data and information so that it can be used by practitioners to generate knowledge and drive informed decision-making and practice. The emphasis in public health on collaborative population-based activities makes the efficient and timely availability of information between public health partners in the community invaluable.

Accurate and dependable information must be exchanges between state and federal public health agencies and localities, and within communities between public health and the hospital and clinic system, and municipal services such as housing and law enforcement. It is necessary for every public health nurse to be familiar with basic principles and practices of informatics. Informatics competencies for public health professionals have been developed at the University of Washington, in collaboration with the CDC and with the participation of many public health organizations and individual practitioners. They may be found at
http://healthlinks.washington.edu/nwcphp/phi/comps/bg.html

Tour I – Activity 5: Nursing Theory and Public Health

Directions: Take some time to reflect on what you have learned; use additional paper as needed to complete the activities.

• Select a population (i.e. teenagers who are pregnant).

• Using Roy's adaptation model identify the input, control processes, effectors, output and feedback loop for the selected subpopulation.

• Identify three specific health outcomes for this population.

Global, Regional and Local Importance of Public/Community Health

Global health deals with issues and concerns that transcend national boundaries; may be influenced by circumstances or experiences in other countries; and are best addressed through cooperative actions and situations (Howson, et. al., 1998). There are multiple driving forces that contribute to the urgency to understand global health. Some of the forces are international travel, international commerce and communication, trade liberalization and privatization, contaminated food, terrorism, emergency and resurgent infectious diseases, shifting demography, environmental disasters, unstable economies and technology advances. When the world is the community, an event in one country strongly effects another country often in a matter of moments or hours. Another perspective includes the ethical principle of **justice** particularly when vulnerable (marginalized) populations are at risk (Howson, et. al., 1998).

Interventions often include education, resource management, coordination of government and private agencies, global research, global health surveillance, social and political reforms, ethical reforms or technological advances. Examples of global health agencies include the World Health Organization, the World Bank and the Global Health Council. **The World Health Organization** seeks to decrease health disparities between social groups, provide access to health care services, ensure survival and healthy development of children, eradicate, eliminate or control major communicable diseases, ensure nutrition, safe and healthy environments and help people adopt a healthy lifestyle (Allender and Spradley,2001, p. 414).

The World Health Organization study of the *Global Burden of Disease* quantified key information about the disparities among the **world burden of disease** especially among children (Allender, Spradley, 2001, p. 415), for example, 98% of all deaths in children 15 years or younger are in developing countries. Five of the ten leading causes of death are communicable, perinatal and nutritional conditions particularly affecting children. When these statistics are compared with data from economically developed countries such as the United States, the disparity is profound.

Nurses find global health concerns of particular interest because they are aligned with the values, beliefs and ethics of the nursing profession. **The International Council of Nursing (ICN)** make this a direct link to http://www.icn.ch/ represents the interests of nurses around the globe and is an excellent source of information on global nursing. For example global nursing may involve policy development, education of populations about primary prevention and infection control, or provision of primary care to specific subpopulations.

Nurses can participate on **local** and **regional** levels in preventing healthcare issues and promoting health in subpopulations. Grass roots efforts to institute primary prevention are vital to the health of a community. The nurse may think globally while acting locally to impact a global issue such as the nutritional status of a population. The nurse may teach nutrition to vulnerable populations and advocate for regional food bank contributions while recognizing hunger as a global concern. Global, regional and local health concerns present nurses with unique opportunities to actualize population based theory and profoundly impact the health status of the world.

Tour I – Activity 6: Global, Regional, and Local Health Concerns

Directions: Take some time to reflect on what you have learned; use additional paper as needed to complete the activities.

• As a nurse, identify recent situations with reflect global health concerns.

• In contrast, reflect on an emerging global health concern, and identify the effect it will have on nursing practice.

• Use online resources to identify community initiative to address a global health concern.

<u>Socialization to Public/Community Health Nursing</u>

As you recall, **role socialization** involves activities the nurse uses to obtain knowledge, skill sets and specific behaviors to become a competent member of a group (Arnold and Boggs, 2003, p. 171). In this instance, the nurse focuses on learning about the expected behaviors in public/community health nursing. Cohen (1981) developed socialization steps that bridge the gap between where the nurse is presently and where he/she expects to be in meeting the society's needs.

Cohen' socialization steps are:

- Learn the technology of the profession: the facts, skills and theory
- Internalize the professional culture
- Find a version of the role that is personally and professionally acceptable
- Integrate this professional role into all other life roles (Arnold and Boggs, 2003 p. 175).

Since learning is life long, the nurse can identify where she/he is in Cohen's steps and use this journey as a bridge to a deeper understanding of the theories and practice within public/community health and nursing. At the same time the nurse can think about the professional culture in the work environment.

The insights the nurse can gain while reflecting on responses to the questions in Activity 7 will assist in developing a socialization plan tailored to individual needs. The goal is to incorporate the values and beliefs of the personal self and professional self into role behaviors that are consistent. Knowledge about theories, practices, skills, cultures and roles of public/community health nurses are of assistance in developing role behaviors.

For example, if children at risk for lead poisoning are of concern to the nurse, the professional role may involve screening clinics and educating citizens about the human and environmental risks. The personal role may involve selecting housing that is lead free and joining an advocacy group working with lead abatement activities in the community or as a consumer participant in public policy initiatives seeking federal funding.

Tour 1 – Activity 7: Socialization

Directions: Take some time to reflect on what you have learned; use additional paper as needed to complete the activities.

Using Cohen' steps in socialization as a framework, answer the following questions now and six months from now as they apply to your personal and professional role and work environment.

- Is the role of the nurse as advocate and care agent visible? Is the climate one of professional growth in the area of disease prevention and protection of health?

- Are sources of support and commitment present to integrate the nurse role with your multiple life roles?

- Who are the heroes and mentors you can use as role models?

- What professional activities spark your interest? Are you ready to be active on a local, regional or national level in public health initiatives?

- How are you active in a professional organization focused on public health and nursing?

Tour I: Conclusion

You have completed Tour I: **The Historical Monuments of Public/Community Health Nursing**. You have learned about the history of the public health system; core function and essential services of public health; legislation and public/community health; global, regional and local importance of public/community health; population based theory and public/community health; nursing theory and public/community health; socialization to public/community health nursing and the application to your nursing role.

You have had seen the key attractions on this tour: public/community health knowledge; levels of prevention; health promotion activities; social advocacy; public policy influences; role of nursing; and the scope and standards of public health nursing.

You have also had the opportunity to engage in activities for this tour. These activities should help you to assimilate what you have experienced on this tour.

Tour II: Landmarks of Importance in Public/Community Health Nursing

At the completion of this tour, the learner will be able to:

- Examine the purposes and models of Epidemiology
- Apply common health status statistics used in public/community health including appropriate rates, ratios and proportions
- Utilize levels of prevention in outcome management
- Apply environmental concepts in public/community health
- Compare and contrast disease management across health care settings
- Integrate an epidemiologic framework to the nursing role within the essential public health services:
    1. Monitor health status to identify community health problems
    2. Diagnose and investigate health problems and health hazards in the community
    3. Inform, educate and empower people about health issues
    4. Mobilize community partnerships to identify and solve problems
    5. Develop policies and plans that support individual and community health efforts
    6. Enforce laws and regulations that protect health and ensure safety
    7. Link people to needed personal health services and assure the provision of health care when otherwise unavailable
    8. Assure a competent public/community health and personal health care workforce
    9. Evaluate effectiveness, accessibility, and quality of personal and population-based health services
    10. Research for new insights and innovative solutions to health problem

Key Attractions for Tour II include information on:

- Epidemiology
- Levels of Prevention
- Surveillance/tracking/data collection
- Outcomes management
- Environment management
- Disease outbreak management
- Application to your nursing role

Epidemiology

Nurses work in a variety of community settings. Clients and their families live in the community. To deliver the best care, nurses must understand community influences on the health of those clients and families (Lindell 1997, p. 618). **Epidemiology** is one method nurses employ in planning, implementing and evaluating their work. Gordis (2000, p. 3) provides a broad definition, epidemiology is the study of the distribution and determinants of health-related states or events in specified populations and the application of this study to manage health problems.

History of Epidemiology

A historical review of epidemiology is essential to examine the development of the science and health practices of the past. The efforts of public/community health nurses to prevent
and/or control disease is useful to understand current public/community health system and contemporary American public/community health infrastructure (Stanhope & Lancaster, 2000, p.21).

Hippocrates used a form of epidemiology in the fourth century BC to describe health and illness in a community. His approach was a precursor to current descriptive epidemiology investigation techniques. He attempted to explain disease by logical deduction; disease as an occurrence can affect groups or populations as well as individuals (Stanhope & Lancaster, 2000, p. 228).

During Biblical times, the **Hebrews** instituted many health measures including prohibition of eating pork and isolation of persons with leprosy. These measures were based upon observational data and the association to illness because the causes were unknown (Benson, 1993; Valanis, 1999, p. 5).

The **Renaissance** was a dynamic period for medical advances including the invention of the microscope by Leeuwenhoek around 1600. The amazing discovery of "animalcules" under the microscope was the first identification of bacteria, protozoa in fluids (Porter, 1997, p. 225).

In the United Kingdom, **James Lind** studied British sailors diagnosed with scurvy in the 16th century. Through observation and comparison of the sailor's diet he concluded that adding citrus fruits to a sailor's diet could alleviate or prevent the disease (Stanhope & Lancaster, 2000, p. 229; Valanis, 1999, p.5).

John Snow was a physician for the royal family, but his passion was Epidemiology. His documented investigation of cholera outbreaks in London gained him the title of "patron saint" or the "father" of Epidemiology (Stanhope & Lancaster, 2000, p. 229).

If John Snow was the "father" of Epidemiology, then **Florence Nightingale** was the "mother". Throughout her life, Nightingale recognized the value of statistics and used them as a basis of health reform in the 19th century (Kopf, 1916, 274). Among the efforts Nightingale initiated was a plan of recording morbidity and mortality data of the military hospitals in the Crimea. From data collected, she determined that more deaths were attributable to acquired disease than from the direct results of combat. Nightingale instituted immediate reforms in sanitation and hygiene that ultimately changed Army practices.

After World War II, because many infectious diseases were able to be controlled by immunization or antibiotics, there was a change of focus in "**Modern Epidemiology"** from infectious diseases to lifestyle or noninfectious diseases. There was shift from single agent of causation (as in infectious diseases) to multiple factors that cause acute or chronic or illnesses (Stanhope & Lancaster, 2000, p. 232). During the last half of the 20th century, epidemiologic investigations have expanded to include all diseases entities as well as to health-related patterns of populations.

Tour II - Activity 8: History of Epidemiology

Directions: Take some time to reflect on what you have learned; use additional paper as needed to complete the activities.

- What aspects of the history of Epidemiology are of interest to you?

- Choose one aspect of the history of Epidemiology and review writings of authors during that period.

Concepts of Epidemiology

The **concepts** of **Epidemiology** in this discussion are the:
- epidemiologic triangle
- web of causation
- natural history of disease
- levels of prevention
- rates
- epidemiological study designs

These concepts provide a unifying approach for nurses studying disease processes and thus the interventions needed to control or eliminate them as a part of the **essential public health services.**

Epidemiologic Triangle

Nurses understand that disease results from a complex interaction between agents, persons (hosts) and environmental factors. This association is called the "**epidemiologic triangle**" (Stanhope & Lancaster, 2000, p. 231).

Agents include:
- biological agents
- chemical agents or heavy metals
- physical agents
- nutritional agents

Host susceptibility is determined by:
- genetics
- age or gender,
- acquired characteristics
- lifestyle

Environmental factors can be:
- temperature
- noise
- overcrowding
- access to care

A change in any one of these factors in the epidemiologic triangle can influence the risk of occurrence of disease. Risk, as defined by Valanis (1999, p. 11) is the probability or likelihood that an unfavorable event will occur.

Agent

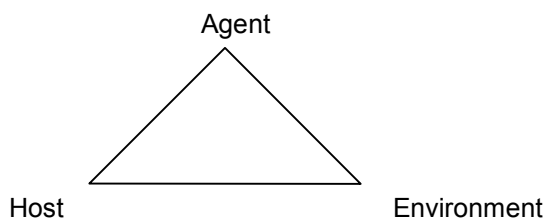Host   Environment

Figure 1. Epidemiologic Triangle

Tour II - Activity 9: Epidemiologic Triangle

Directions: Take some time to reflect on what you have learned; use additional paper as needed to complete the activities.

- Give an example of each component (agent, host and environment) of the epidemiologic triangle.

Web of Causation

Stanhope and Lancaster (2000, p. 230) write that there was "an associated shift from looking for single agents…
to seeking multifactorial etiology". This complex association is considered as the **web of causation** (Valanis,
1999, p. 32). This model can be best used with chronic or lifestyle diseases such as cardiovascular disease.
There are numerous risk factors, such as smoking, obesity, cholesterol level and stress that contribute to
cardiovascular disease; the more risk factors that are present, the greater is the risk for disease. Although there
is more to learn as to how these factors work together and/or how they interact with other factors, nurses can
intervene to reduce the risk of cardiovascular disease at all levels of prevention (Valanis, 1999, p. 32).

Web of Causation

Positive Factors	Negative Factors
genetics	genetics
exercise	sedentary life
balanced diet	high fat/sodium diet
	obesity
cholesterol below 200mg/dl	cholesterol above 200mg/dl
high HDL	low HDL
	smoking cigarettes/cigars
stress management	"type A" personality
reproductive hormones	post menopausal status
	co-morbidity: diabetes
Hypertension Atherosclerosis Cardiovascular Disease	

Figure 2. Web of Causation

Tour II - Activity 10: Web of Causation

Directions: Take some time to reflect on what you have learned; use additional paper as needed to complete the activities.

- Trace the web of causation for diabetes mellitus.

Natural History of Disease

The course of a disease from onset to resolution is the natural history (Stanhope and Lancaster, 2000, p. 232). The **natural history** of disease is divided into two periods of time, **prepathogenesis and pathogenesis**.

There are two stages within the prepathogenesis period: **susceptibility and adaptation**. The exposure to an agent occurs during the susceptibility stage. The presence of risk factors makes it more likely for pathogenesis to occur. For example, poor eating habits and smoking present among young adults represent risk factors that favor the occurrence of cardiovascular disease. Agent exposure usually warrants a response. Initial response reflects a physiologic adaptation. Shortness of breath or productive cough may be responses to smoking. The time period from exposure to symptom onset may be months to years. Elevated blood pressure or occluded arteries may require years of exposure to poor nutrition and smoking.

Pathogenesis is divided into early pathogenesis and clinical disease (Valanis, 1999, p. 22). The pathogenic changes have begun in the **pre-symptomatic** stage of the natural history. When signs and symptoms are detected, the fourth stage or the clinical disease state is met. **Clinical disease** defined by Valanis (1999, p. 23) as "disease that is detectable because of symptoms experienced by the [client] or signs apparent to a clinician…". Once the client enters the clinical disease stage there are several outcome possibilities, recovery, disability or death. Clients with cardiovascular disease may need long term monitoring, medical or surgical follow-up, diet control and lifestyle modification (Valanis, 1999, p.24).

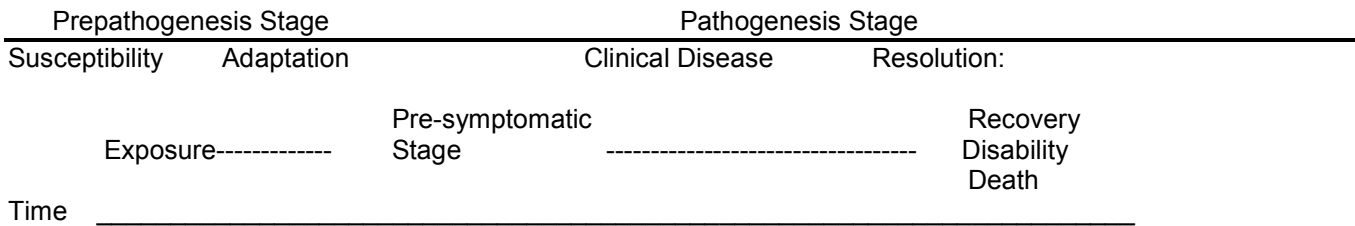| Prepathogenesis Stage		Pathogenesis Stage	
Susceptibility Adaptation		Clinical Disease	Resolution:
	Pre-symptomatic		Recovery
Exposure------------	Stage --------------------------------		Disability
			Death
Time _____			

Figure 3. The Natural History of Disease (Adapted from Valanis [1999] and Stanhope and Lancaster [2000])

Tour II - Activity 11: The Natural History of Disease

Directions: Take some time to reflect on what you have learned; use additional paper as needed to complete the activities.

- Trace the natural history of one diagnosis of a client.

<u>Levels of Prevention</u>

Each stage in the natural history of disease is associated with a **level of prevention:** primary, secondary and/or tertiary. You have been introduced to these three levels in Tour II. The nurse plays an important role in understanding disease process and the corresponding prevention intervention(s) at each stage.

Primary prevention occurs before pathogenesis occurs to prevent the problem or disease. Diet and exercise are primary prevention interventions for obesity and cardiovascular disease.

Secondary prevention measures include screening and prompt treatment of the problem. Blood pressure or cholesterol screening and subsequent antihypertensive prescriptions are examples of this level of prevention.

Tertiary prevention limits the untoward effects of a problem. Rehabilitative adjustment to the activities of daily living after stroke is an example of this level of prevention

Prepathogenesis Stage   Pathogenesis Stage

_____

Susceptibility   Adaptation   Clinical Disease Resolution

                                              Pre-symptomatic
                                                     Stage
Primary------------------------ Secondary------------- Tertiary--------------------------
                  Levels of Prevention
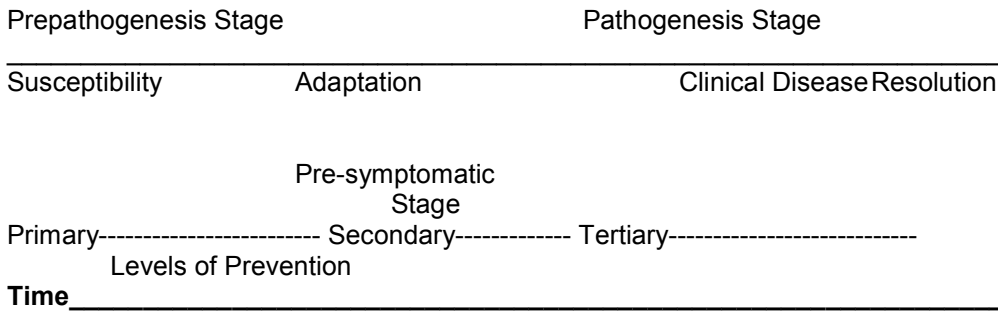**Time_____**

Figure 4. Levels of prevention, adapted from Valanis (1999) and Stanhope & Lancaster (2000).

Rates

Rates are basic epidemiologic tools and are commonly used as indices of health. Rates are expressed by a numerator, denominator and specified constant (Valanis, 1999, p.39). In order to study patterns of health and illness, nurses must measure indices of health to compare frequencies among populations or individuals or across time (Valanis,1999, p.37).

The nurse can learn about the health of the community by analysis of data available from various sources. Relevant data to the nurse include **demographic** and health status statistics. Census survey data contain demographic information e.g., age, employment, housing type, race/ethnicity and income (Lindell 1997, p. 623; Stanhope and Lancaster, 2000, p. 234).

Health status statistics are used to provide information about events in the community: births, deaths (**mortality**), illnesses (**morbidity**), and communicable diseases or injuries (**incidence and/or prevalence**). According to Stanhope & Lancaster (2000, p. 236) common measures of mortality include crude mortality rate and infant mortality rate. See the formulas below. Common measures of illness or injury frequencies are known as **incidence** and **prevalence**. Incidence reflects the new cases of illnesses in a community, whereas, prevalence reflects the total (new and existing cases) at a specified time (Stanhope and Lancaster, 2000, p. 238). See formulas below.

Mortality Rates

Crude mortality rate:

> **Number of deaths among persons over a specified time**
> Midyear population   x K (1000)

Infant mortality rate:

> **Number of deaths of infants (0-1 year old) in a year**
> Number of live births in the same year   x K

Morbidity Rates

Incidence rate:
> **Number of new cases of a disease in specified period of time**
> Population at risk for the disease in the time period   x K

Prevalence rate

Number of total cases of a disease in a specified period of time
Total population at risk in the time period   x K

For Example:

A study was conducted to look at the possible effects of radon on the development of lung cancer. The following data was obtained. A population of 9000 men and women aged 45-55 were examined in January 1999. Of these people, 6000 lived and worked in areas that exposed them to radon, and 3000 did not. Upon examination, 60 cases of lung cancer were discovered among those men and women exposed to radon and 10 cases were found among those people not exposed to radon. Calculate the incidence rate of lung cancer.

The incident rate of those men and women exposed to radon was:

Out of the sample of 9000 men and women

6000 people were exposed
3000 people were not exposed

60 (cases of lung cancer)/6000(sample exposed to radon) x 1000 (K constant)= incidence rate of those people exposed to radon

60/6000=0.01x1000=10/per 1000= incidence rate of those people exposed to radon

10 (cases of lung cancer)/3000 (sample not exposed to radon) x 1000 (K constant) = incidence rate of those people not exposed to radon

10/3000=0.0033 x 1000=3.3/per 1000= incidence rate of lung cancer of those people not exposed to radon

Tour II - Activity 12: Rates

Directions: Take some time to reflect on what you have learned; use additional paper as needed to complete the activities.

- Calculate the mortality rate per 100,000 for the following years:

    1980: 179,300 persons 711 deaths _____ mortality rate

    1990: 203,255 persons 921 deaths _____ mortality rate

- Calculate the incidence rate per 100,000 for the following diseases:

    Heart disease 2,480 new cases 150,000 population _____ rate
    at midyear

    Accidents 695 new cases 115,000 population _____ rate

- Calculate the prevalence rate per 100,000 for the following diseases:

    Cancer 12,000 (total cases) 150,000 population _____ rate

    Diabetes 1,200 (total cases) 123,000 population _____ rate

- Calculate the infant mortality rate per 1000 (usual constant) for the following years:

    1980: 100,000 live births 20,000 deaths _____ rate

    1990: 200,000 live births 1500 deaths _____ rate

Adapted from The Sage Colleges, 2003.

Tour II - Activity 12: Rates (Answers)

- Calculate the mortality rate per 100,000 for the following years:

  1980: 179,300 persons 711 deaths 397 per 100,000 **mortality rate**

  1990: 203,255 persons 921 deaths **453 per 100,000** mortality rate

- Calculate the incidence rate per 100,000 for the following diseases:

  Heart disease 2,480 new cases 150,000 population **1653 per 100,000** rate
  at midyear

  Accidents 695 new cases 115,000 population **604 per 100,000** rate

- Calculate the prevalence rate per 100,000 for the following diseases:

  Cancer 12,000 (total cases) 150,000 population **8000 per 100,000** rate

  Diabetes 1,200 (total cases) 123,000 population **976 per 100,000** rate

- Calculate the infant mortality rate per 1000 (usual constant) for the following years:

  1980: 100,000 live births 20,000 deaths **200 per 1000** rate

  1990: 200,000 live births 1500 deaths **7.5 per 1000** rate

<u>Epidemiological Study Designs</u>

There are several methods that epidemiologists and researchers use to identify factors that influence health and disease. Major categories of research design are **observational** and **experimental epidemiology**. Two types of **observational studies** to be discussed are **descriptive epidemiology** and **analytical epidemiology**. Stanhope and Lancaster (2000, p.239) define **descriptive epidemiology** as the method that "describes the distribution of disease, death and other health outcomes in the population according to person, place and time".

Personal characteristics used in descriptive epidemiology are: age, gender, race, ethnicity, occupation, education and income. US census data collected every 10 years provide an excellent source of this population data (Stanhope and Lancaster, 2000). For example, breast cancer is rare in men and more frequent in women, especially in older age groups (Valanis,1999, p. 52).

The second component of descriptive epidemiology is **place**. A geographic location may influence the pattern of disease, death and other health outcomes. For example, breast cancer rates are higher in western developed countries than in less developed countries (Valanis, 1999, p, 52).

The third component of descriptive epidemiology is **time**. The pattern of disease, death and other health outcome are studied with time. Long term patterns or **secular trends** reflect changes in social behaviors with relation to disease entities. For example, breast cancer mortality had increased since 1900, but in the last 50 years, the rates have leveled off (Valanis, 1999, p.52).

In addition to secular trends, there are other **cyclic time patterns** of disease, death and other health outcomes. Seasonal fluctuation is a common cyclic pattern. Seasonal changes may influence the agent (increased Lyme disease in spring and summer), or population densities (summer outdoor concerts) or human behaviors (staying indoors in winter) (Stanhope and Lancaster, 2000, p. 239).

Another observational study of epidemiology is **analytical epidemiology**. This method of study searches for the determinants of the patterns of disease, death and health outcomes. Analytical epidemiology answers a hypothesis suggested by the descriptive epidemiology (Stanhope and Lancaster, 2000, p. 241).

One type of analytical epidemiology is the **cohort study**. Valanis (1999, p.392) defines cohort study as "a study in which…a defined population can be identified as exposed or not exposed…to factor or factors hypothesized to cause a disease or other outcome. Subjects are followed over time and frequency of disease is determined".

The Framingham Study (FS) is one of the best-known cohort studies. The FS investigated the risk for coronary heart disease (CHD) in residents of Framingham, MA since 1949. This prospective study provided abundant information about the natural history of CHD. Much of what we know about the risks for CHD emerged from this lengthy cohort study. The FS continues today with the offspring of the original 5000+ men and women subjects (Gordis, 2000, p. 130; Valanis, 1999, p. 60-61).

Experimental Epidemiology is an intervention study design. These studies are conducted to confirm a causal association and/or to test strategies for treatment. One type of study is **clinical trial**. Clinical trial randomizes individuals to receive or not receive an intervention (drug or education or behavior modification). This study tests the efficacy of the assigned intervention (Valanis, 1999, p. 62).

Tour II - Activity 13: Epidemiologic Study Designs

Directions: Take some time to reflect on what you have learned; use additional paper as needed to complete the activities.

- Review epidemiological study designs.

- Identify a type of study design in a public health or nursing journal

Surveillance

Surveillance is a fundamental role of the nurse and an essential public/community health service. Gordis (2000, p. 56) defines surveillance as "the ongoing systematic collection, analysis, and interpretation of health data essential to the planning, implementation, and evaluation of public/community health practice, as well as the timely dissemination of these data to those who need to know" . The greatest impact on the health of an individual can be made through control activities or interventions directed at high-risk groups identified through surveillance.

The overall purpose of surveillance is to detect changes in health/illness trends in order to initiate control measures (Valanis, 1999, p. 295). Surveillance uses all aspects of the natural history of disease and biostatistics including incidence and prevalence rates to effect control measures. The value of surveillance lies in the outcomes produced. The nurse plays an important role in surveillance. Through identification of cases, the nurse becomes aware of potential and/or actual problems in terms of risk of person, place, time and frequencies. Surveillance data is used to (Porche, 2004):

- Estimate the magnitude of a health problem
- Describe the natural history of disease
- Determine incidence or prevalence of disease
- Document the distribution of a disease in a population
- Facilitate research efforts
- Evaluate public health programs
- Monitor changes in disease states over time
- Monitor effectiveness of isolation measures
- Direct changes in public health practice
- Facilitate program planning

Many surveillance systems exist today to track data of disease outbreaks. The CDC monitors infectious diseases as well as reproductive health, respiratory diseases and birth defects to name a few. The American Hospital Association (AHA) establishes requirements for surveillance of infectious diseases in hospitals nationwide. The American Public Health Association (APHA) develops the disease classification system of reportable communicable diseases. Other surveillance systems include the WHO, which establishes surveillance for mandatory reportable communicable diseases worldwide (Valanis, 1999, p. 295). The *Mortality and Morbidity Weekly* (MMWR) publishes reportable diseases for American cities of 100,000+ people and internationally. Electronic subscription to MMWR is available at **http://www.cdc.gov/mmwr**.

Surveillance data is critical for tracking local and national progress toward the goals of the strategic agenda to improve the nation's health found in Healthy People 2010, an initiative of the Department of Health and Human Services. *Healthy People 2010* (HP2010) is a comprehensive set of disease prevention and health promotion objectives for the nation to achieve over the first decade of the new century. Created by scientists both inside and outside of government, it identifies a wide range of public health priorities and specific, measurable objectives. The 28 focus areas of HP2010 illustrate both the scope of the nation's public health concerns and the scope of surveillance data required. Background information on HP2010 and the 467 detailed health objectives, and their measures, are found at **http://www.healthypeople.gov/**.

HEALTHY PEOPLE 2010 FOCUS AREAS

1. Access to quality health services
2. Arthritis, osteoporosis and chronic back conditions
3. Cancer
4. Chronic kidney disease
5. Diabetes
6. Disability and secondary conditions
7. Education and community-based programs
8. Environmental health
9. Family planning
10. Food safety
11. Health Communication

12. Heart disease and stroke
13. Human immunodeficiency virus
14. Immunization and infectious diseases
15. Injury and violence prevention
16. Maternal, infant and child health
17. Medical product safety
18. Mental health and mental disorders
19. Nutrition and overweight
20. Occupational safety and health
21. Oral health
22. Physical activity and fitness
23. Public health infrastructure
24. Respiratory diseases
25. Sexually transmitted diseases
26. Substance abuse
27. Tobacco use
28. Vision and hearing

The Nursing Process, Surveillance & Essential Public Health Services (Adapted from Stanhope and Lancaster, 2000)

Nursing Process	Surveillance	Public Health Services
Assessment	Risk: Person Place Time Frequencies	Monitor health status to identify community health problems
Diagnosis	Health event Identification	Diagnose and investigate health problems and health hazards in the community
Plan	Health event Investigation	Investigate health problems… Mobilize community partnerships to identify and solve problems
Implement	Interventions: Primary Secondary Tertiary	Inform, educate and empower people about health issues Link people to needed personal health services and assure provision of healthcare when other-wise unavailable
Evaluation	Outcome Measures	Evaluate effectiveness, accessibility and quality of personal and population-based health services Research for new insights and innovative solutions to health problems

Tour II - Activity 14: Nursing Process, Surveillance and Essential Public Health Services

Directions: Take some time to reflect on what you have learned; use additional paper as needed to complete the activities.

- Identify surveillance activities in your nursing practice.

- Review your role in regard to surveillance activities.

Environmental Management

The environment influences public/community health practice. Environmental hazards exist in several categories including physical, biological and chemical/gaseous. When thinking about physical hazards, the following topics surface: radiation, lead and heavy metals, and noise. Radiation may be ionizing radiation, non-ionizing radiation or ultraviolet radiation. Lead and heavy metals include lead, mercury, arsenic and cadmium. Noise includes work environments, vehicles and recreation. As nurses, we have seen the effects of these physical hazards on the health of the community's citizens. Children have ingested lead from older dwellings, mercury has been ingested in fish from waterways, and excessively loud music has altered the hearing ability of teenagers.

Biological hazards include infectious agents, as will be discussed in communicable disease management. Other sources of biological hazards include insects, animals, plants, air, water and medical waste. Lyme disease, West Nile disease, and rabies are examples of biological hazards. Plants may be poisonous to humans and animals, while air may carry chemicals, gaseous materials, manufacturing exhaust, acid rain and indoor contaminants. In addition, water may be a source of acid rain, manufacturing and agricultural by products. Medical waste provides an unidentified source of hazard to the community.

Chemical and gaseous hazards may be found as poisons from industries, household sources and medications. Nurses working in public/community health are keenly aware of the consequences of medications inadvertently used by children in home settings. Household cleaners left on low shelves provide a high risk to children who ingest the solutions unaware of the health impact.

Stanhope and Lancaster (2000) describe the connectedness between population growth and the environmental consequences that adds another perspective to the management of the environment. As the population grows, there is increased oxygen demand, increased pollution from human activity and increased building which leads to a loss of trees, increased paved surfaces and increased source pollution. In turn, there is an increase in water demand, less arable land and increased food demand which leads to increased animal population grown for food and increased waste products.

The web of causation discussed earlier in "Epidemiology" helps to identify the relationship between people and their environment. Is the environment an infinite source of resources or is it endangered and vulnerable to man's progress? This is a key question asked on the local, regional, national and global level as the ecosystem is viewed as fragile and interrelated. In the United States, Healthy People 2010 defines multiple environmental concerns (go to http://www.healthypeople.gov/Document/HTML/Volume1/08Environmental.htm#_Toc490564699 for detailed information). These environmental concerns include goals related to:

- Outdoor air quality
- Water quality
- Toxics and waste
- Healthy homes and healthy communities
- Infrastructure and surveillance
- Global environmental health

The role of the public/community health nurse is vital to eliminating or decreasing the impact of environmental hazards. The role includes identification and assessment of environmental influences on health, planning to control the environmental influences and implementing environmental measures on the individual, family and community level. As an advocate, the public/community health nurse participates in local efforts to clean the environment, while working on legislative efforts on the regional and national level.

Tour II - Activity 15: Environmental Management

Directions: Take some time to reflect on what you have learned; use additional paper as needed to complete the activities.

- Select one of the national objectives for environmental health and evaluate the extent to which the objective has been met in your community.

- Review local news media for stories related to environmental health objectives and create a risk profile for your community.

Outcomes Management

Several quality management frameworks exist to evaluate and improve public/community health services to the citizens of the community. Outcome measurement is a periodic function that should involve stakeholders, Data sources and collection methods must be identified using valid and reliable pre-tested instruments. The measurement process must be monitored. Data analysis will then yield findings that can be used to guide budgets and resource allocation and to communicate program results to stakeholders, such as the local board of health or legislative bodies responsible for funding public health programs (Porche, 2004).

Whether the approach is evidence-based practice, clinical protocols, Joint Commission for the Accreditation of Health Care Organization (JCAHO) standards, benchmarking, plan-do-study-act (PDSA), or the traditional "structure, process, outcome", the emphasis on outcome is essential. In the fast paced world of healthcare, clarity about the desired outcome is crucial in selecting the quality management framework (Stanhope and Lancaster, 2000).

If the desired outcome is a specific percentage of increase in reporting of a specific disease, the current structure and process needs to be identified. Inconsistencies or gaps in either the structure or process are illuminated and strategies are developed to improve the outcomes. The revised processes and structures are monitored for a prescribed time period to assure the desired outcome is met over time. If monitoring indicates difficulty in meeting the outcome, the plan is reassessed, new strategies are developed and the monitoring process begins again.

Successful outcomes management flourishes in a blame free environment, where personal and professional accountability, continuous learning and stakeholder involvement is routine to the process. Skills in negotiation, priority setting and measurement are useful tools in the development of process improvement in organizations. External sources, for example Medicare's Outcome Assessment Information Set (OASIS), provide benchmarking opportunities among organizations with similar health care populations (Allender and Spradley, 2001).

The organization selects high risk, high volume areas of concern and applies an outcomes management approach to further improve the care and service. Outside agencies may be contracted to provide valid and reliable tools, such as patient satisfaction surveys. The results are used to determine if the agency is reaching the benchmark set for particular services. The organization may choose to continuously monitor certain indicators, such as patient satisfaction, while others may change as the organizations goals and initiative change. Outcomes management may be broadened to include administrative outcomes, such as recruitment and retention of nurses, where a specific vacancy rate and retention rate are established as a benchmark, and actions are taken to meet the standard.

The Joint Commission on Accreditation of Healthcare Organization's (JCAHO) **2004 National Patient Safety Goals** includes accurate medication administration as an outcome. An organization can use this standard as a base for examining their own patient population's ability to take/receive medications accurately. The population served by a public/community health organization often finds it a challenge to take multiple medications accurately. Structures and processes can be established to support accurate medications administration, with the outcome of decreased recidivism and increased safety in administration of medications. The structures may include levels of prevention, as discussed earlier. An approach would include primary, secondary and tertiary prevention measures in the management of outcomes (JCAHO, 2004).

Monitoring of actual caseloads against established standards may lead to the development of risk criteria for patients in medication administration, as is developed in risk to fall criteria. The outcome could be that the organization implements standards for safe medication administration, and meets or exceeds the standards resulting in decreased recidivism and patients accurately administering their own medications. This outcome alone would alter the casework of many nurses in public/community health, while improving the overall health of the population at risk.

Tour II - Activity 16: Outcomes Management

Directions: Take some time to reflect on what you have learned; use additional paper as needed to complete the activities.

- Select and use an outcomes management framework to:

    a) Determine what changes are to be made

    b) Plan the change using standards/benchmarks

    c) Carry out the plan

    d) Evaluate the results for lessons learned

    e) Modify the plan based on the evaluation

    f) Monitor the outcomes at specific intervals

- Communicate the structure, process and outcomes to co-workers.

Disease Outbreak Management

New, emerging and resurging diseases present challenges for the public/community health organizations. A background in nursing process and epidemiology, surveillance and data collection offers a framework for management of disease outbreaks. The following graphic assists in understanding the relationship between nursing process and the epidemiological process:

Nursing Process	Epidemiological Process

Assessing (data gathering)	Determine nature, scope and extent of problem
	 a) Natural life history of disease
	 b) Influencing conditions
	     1) Agent
	     2) Host
	     3) Environment
	
	 c) Distribution patterns
	     1) Person
	     2) Place
	     3) Time
	 d) Condition frequencies
	     1) Prevalence
	     2) Incidence
	     3) Other bio-statistical measures

Analyzing (forming a diagnosis/hypothesis)	Formulate tentative hypothesis. Collect and analyze further data to test hypothesis
Planning	Plan for control
Implementing	Implement control plan
Evaluating	Evaluate control plan
Revising or Completing	Reassess plan or report results
Research	Conduct research

Clemen-Stone, S, Eigisti, D and McGuire, S. (1998) 5th ed. *Comprehensive Family and Community Health Nursing.* St. Louis: Mosby.

This framework is applicable to multiple disease outbreaks and provides a standardized structure for timely and accurate primary, secondary and tertiary prevention based on the data collection through surveillance. A case study demonstrates the applicability of this process.

Case Study

Two young couples went out to dinner at a local steak house on a Friday evening at 6PM. One person ordered Salisbury steak, two persons ordered prime rib of beef and one person ordered a rib-eye steak. The children of the two couples were together and ate a delivered pizza for dinner. On Saturday, the person who ate a rib-eye steak had a sudden onset of severe abdominal pain, bloating, diarrhea, lightheadedness at 4PM while attending a school event. She became ill so rapidly that physicians at the same event assessed her symptoms as acute and requiring hospitalization. She was admitted to the hospital, with symptoms continuing. Stool samples, radiology studies, and physical exam revealed severe dehydration, bloody stools, and abdominal distention. Stool samples revealed E. coli 0157.

Assessment: The natural life history of E. coli 0157 matches the person's course of symptoms. Agent, host and environment information states that E. coli 0157 can be in cows that are processed at meat plants and shipped as meat to distributors and to individual restaurants. The other source to be considered is the pizza left over from the children's meal. Both the restaurant environment and the home environment are sources of information. The distribution pattern indicates that the other three persons who dined at the restaurant are symptom free, as are the children of the two couples. No other patrons of the restaurant have reported onset of illness. The condition E. coli 0157 has a high incidence and prevalence in the involved state.

Analysis: Since the stool sample reveals E. coli 0157 and no other members of the involved group have become ill, the tentative hypothesis of E. coli 0157 in the restaurant steak is made. Further information reveals the pizza is negative for organisms, and the restaurant inspection of other steaks reveals E. coli 0157 in two of the 24 remaining steaks. The distributor obtained the steaks from a specific meat processing plant, which was inspected. Meanwhile an elderly woman and a child became ill at a fast food restaurant sixty miles from the first incidence. Follow up information confirms E. coli 0157 in the meat products and the same meat processing plant.

Plan: A plan was established that dealt with the agent, host, environment as well as the original cattle, meat processing plant, distributor and restaurants. The plan was constructed using primary prevention on specific E. coli 0157 education to food handlers, the public through the media, hospital staff and in high-risk groups. Secondary prevention was planned for the people who accompanied the ill persons. They were to be screened for E. coli 0157. Tertiary prevention focuses on acute care and medical management for the hospitalized person using the CDC guidelines for E. coli 0157 management.

*Implementation***:** The plan as developed above was implemented on all levels of prevention.

*Evaluation***:** The plan initially focused on tertiary prevention, with emphasis on diagnosis and care for the ill person. The fact that the hospital admission was on a weekend provided laboratory challenges for the hospital in order to meet the turn around time for the specimen analysis. The secondary prevention screening of the other individuals occurred on the weekend and the results were negative. The primary prevention methods used mass media initially and a hotline at the public/community health agency to educate the community about E. coli 0157. Subsequently brochures in three languages were made available to the community.

Revision or Completion: The final report on this case was forwarded to centralize the information on E. coli 0157 outbreaks. The public/community health agency was able to communicate centrally with other agencies in the state to contribute incidence and prevalence information as well as case study data.

*Research***:** Case studies such as this one contribute to qualitative and quantitative research on disease outbreak management and lead to new insights into case finding, surveillance, and prevention levels. In combination with regional and national data, key trends in health care are explicated and ultimately impact health care delivery.

The public/community health nurse has a unique vantage point for viewing the community and the individual through the lens of epidemiology. The epidemiological framework provides for the identification of diseases causes through incidence, morbidity and mortality rates, based on data collection and surveillance. Assessment of the environment and identification of hazards contributes to the database and assists in determining a hypothesis about the health of the community and its vulnerabilities.

The knowledge of outbreak management frameworks provides the nurse with a systematic approach to solving the health problems. Evidence based practice and best practice can be used as benchmarks for improving the health of the community. The nurse can glean this information from community health leaders, experts in the field, literature searches and networking with national centers for public/community health issues.

When a disease outbreak occurs within a community, the public/community health nurse is able to efficiently and effectively assess the health issues in the community while assessing the health issues of the involved individuals. The framework of epidemiology, knowledge of outbreak management and continual use of the nursing process are integrated in organizing and solving the disease outbreak. This approach keeps the nurse's efforts focused on the outcome of improving the health of the community and the individual simultaneously.

The public/community health nurse is continually assessing based on " host, agent and environment", critically thinking about patient diagnoses through the web of causation and the natural history of a disease, and developing interventions with focused outcomes. This approach keeps the nurse from becoming enmeshed in process and loosing sight of the outcomes.

In your next nursing assignment, think about the individual and community through the frameworks discussed in this tour, and generate a new level of practice that uses community and nursing process as a basis instead of a medical model. This will assist you in gaining a broader perspective on the health care issues at hand and also

provide direction for actions to occur in the future that are preventive in nature. This approach assist nurses in focusing on primary and secondary prevention, instead of a high percentage of their effort being spent in tertiary prevention. Ultimately, this shift in approach will lead to well informed citizens, knowledgeable nurses, and a healthier community.

Tour II - Activity 17: Disease Outbreak Management

Directions: Take some time to reflect on what you have learned; use additional paper as needed to complete the activities.

- Identify an outbreak of a disease in your community.

- Use the nursing and epidemiological process model to trace the steps to completion.

- Identify three improvements that would be useful in future outbreaks based on the information gleaned from the epidemiological and nursing process.

Tour II: Conclusion

In this tour, among the landmarks in public/community health are the key attractions, or important public/community health nursing concepts, of epidemiology, levels of prevention, surveillance, data collection, outcomes management, environmental management and disease outbreak management were emphasized. Additionally, you had the ability to test your knowledge as you continued on your journey. You experienced a number of activities that allowed for application of these concepts to your role as a public/community health nurse.

Tour III: Countryside Visit to Public/Community Health Nursing

Objectives:

At the completion of this tour, the learner will be able to:

- Use population based theory in public/community health nursing practice
- Use community assessment in development of public/community health improvement strategies
- Apply chronic and communicable disease management principles to a specific community
- Use knowledge of community strategies in one's own caseload management and program development

Key attractions for this tour will help you know more about:

- Population based theory and practice in public/community health nursing
- Community assessment
- Communicable disease management
- Chronic disease management
- Application to your nursing role

Each of the key attractions on this tour site will provide information that enhances your knowledge base in public/community health. The **community assessment** will help you determine the health status of the community at a given time, and reveal specific populations needing health teaching and care. **Communicable disease** and **chronic disease** information will assist in providing primary, secondary and tertiary prevention to the community as well as individuals. Hopefully you will gain new insights and knowledge that will assist you in the development of your **public/community health nursing role.**

Population Based Theory and Practice in Public/Community Health Nursing

In Tour II Historical Monuments of Public/Community Health Nursing, population based theory and public/community health were discussed. In addition, the *Scope and Standards of Public/Community Health Nursing Practice* was provided as guidance for practice.

In this section, population based theory is applied to practice in public/community health nursing. Linkage is made to an environmental objective in **Healthy People 2010** which aims at reducing the prevalence of blood lead levels in children to zero. By nature, population based assessment is interdisciplinary and includes the key stakeholders who are closest to the health issue. In the instance of lead poisoning prevention, the direct recipients may include children, parents, property owners, and individuals significant to the child's development; providers of service include nurses, physicians, social workers community workers often employed in child health clinics, physician offices, schools, daycare center workers, community centers, and employment organizations. Policy makers and organizations may include local, regional and state health departments and legislatures, hospitals, environmental protection agencies, and research agencies.

The community is assessed for risk and may be found to contain homes built prior to 1978, which can contain lead based paint (Stanhope & Lancaster, 2000). While this housing condition may occur in urban poverty areas, it also may exist in rural homes being restored, or in neighborhoods with older housing stock that is being rehabilitated. In addition, the soil may be a source, along with lead pipes or poorly glazed ceramic-ware purchased in other countries. An acid such as orange juice in a poorly glazed pitcher would leach the lead out of the pottery and unwittingly the child could receive doses of lead with their orange juice. Therefore, professionals with expertise in environmental lead are integral to the lead poison eradication.

Public/Community Health Nursing Orientation

The community and the specialists in lead poisoning prevention, treatment and eradication must partner to systematically rid the community's children of the risk of lead poisoning. Primary prevention provides the focal point. Education is multi-lingual and offered in all settings that connect to the population at risk and the property owners. Various approaches via the media, school education campaigns, awareness programs, and website information are focused on reaching concerned citizens. Leaders within the community are pivotal in determining the most effective means and location for primary prevention. Secondary prevention includes screenings for children at sites convenient to the children's care providers as well as the dwellings the children inhabit. Often multiple locations need to be screened in addition to the children's home. The emphasis is on reaching the populations at risk, not expecting them to come to the service. Screenings may be held in neighborhood church halls, community centers or schools.

The public/community health nurse is integral to the team of planners and providers while advocating for the population at risk in the policy development arena. The nurse may provide the voice for the children at risk and participate in the development of public policy and effective legislation. Nurses who demonstrate a passion for serving populations at risk make convincing representatives in legislative and resource allocation settings. They are eager to participate in research efforts and new technology that will further the prevention of lead poisoning. Nurses become experienced in developing exemplars that weave the intricate threads of healthcare relationships, community partnerships and clinical expertise and give a human voice to the needs of children.

The plan to reduce the prevalence of blood lead levels in children is designed to reach the greatest number of children possible with the allotted resources. The focus is clearly on populations, not individuals; the focus is to build connections between the environment, children at risk, stakeholders, regulators and public policy in an effort to improve the health of the community. All aspects of the multidimensional plan work in concert to move the effort forward and meet the Healthy People 2010 objective.

Tour III - Activity 18: Population Based Theory and Practice in Public/Community Health Nursing

Directions: Take some time to reflect on what you have learned; use additional paper as needed to complete the activities.

- Identify the role nurses can play in a specific population based initiative.

- Identify the role nurses can play in the development of public policy concerning a specific population based initiative.

- Identify the role nurses can play in the development of legislation concerning specific populations at risk.

- Select a public policy or legislative initiative of interest to you and actively participate in the process.

Community Assessment

A community needs assessment is a systematic process to determine the health status of the community and is the essential first step in the process of health planning. Assessment is done to identify the health status of the community, to provide a baseline to evaluate planned and potential interventions, to identify factors which may be influencing the health status (both positive and negative), to identify community resources, to identify gaps and overlaps in existing resources, to identify key stakeholders in the community, to solicit the opinions of community members, to engage stakeholders and community members in thinking about the health of their community and to identify at-risk populations in the community.

The nurse views the community as the client and collects data that is later analyzed to develop a diagnosis of the health of the community. It is important to determine a working definition of community. **Community** may describe people and geographic locations, social settings and structures, and groups that share certain beliefs or have common goals, groups that share certain risks, or some other common denominators   Flexibility is required in defining community. Initially, a qualitative description of the community is developed and includes the history of the area, a windshield or sneaker survey, and descriptions of the climate, terrain, industry, government, transportation, environmental services and disaster planning. Windshield surveys refer to actual drives through the area or sneaker surveys which include walking to familiarize the nurse with the area being assessed.

In addition, demographic data is collected which includes selected census data for the community and the larger geographical region in which the community is contained. The pertinent data includes age, types of family units/households, race, ethnicity, number of years of education completed, housing units, occupations and income. Other assessment information includes the leading causes of death for the community, infant mortality rates and major communicable diseases. Data in each of these categories is compared to the comparable data for the larger geographical area. This data is easily secured from the most current census surveys online and from health departments.

Gaps in service, external competition, available resources, stakeholders and barriers are assessed for their impact on the health of the community. Data from community focus groups, discussions with consumers and providers of healthcare is collected using methods that will yield the most information. Methods may include surveys, focus groups, informational meetings, town meetings, electronic discussions, and attendance at community events. A rationale is provided for the method employed.

Analysis of the data leads to the identification of community health problems. The community health problem is validated by the identified data and leads to the development of a plan for the population at risk. The plan design includes primary prevention, secondary prevention and tertiary prevention goals and interventions at the individual/family and population/community level. A specific evaluation and measurement plan is developed to monitor the progress toward goals.

The Institute of Medicine (1997) has identified essential features of successful community assessment and improvement: use of an iterative process that cycle continuously though the tasks of assessment action and evaluation; use of a team approach, though which decisions are made largely by consensus among community representatives; use of an incremental strategy for improvement, whereby progress is accomplished through a series of small steps rather than through major breakthroughs. Several approaches to community needs assessment are available for the public/community health nurse to use. These include the national health objectives found in **Health People 2010;** the Planned Approach to Community Health (**PATCH**) developed by the CDC in 1985; or the Assessment Protocol for Excellence in Public Health (**APEXPH**), developed by the National Association of County and City Health Officials in 1991.

Tour III - Activity 19: Community Assessment

Directions: Take some time to reflect on what you have learned; use additional paper as needed to complete the activities.

- Obtain a completed community needs assessment for the area in which you work.

- Use the completed community needs assessment to analyze the data that was pertinent to the identification of a community health problem.

- Identify a primary, secondary and tertiary intervention that would have a measurable impact on the health of the community.

Communicable Disease Management

The **World Health Organization** has stated that the infectious disease burden today comprises a global crisis (Valanis, 1999, p. 113). Historically, epidemiologic investigations originated with infectious disease outbreaks, i.e., cholera and smallpox. Once again, infectious diseases have the attention of epidemiologists and researchers.

Primary prevention of communicable disease control employ interventions aimed
at preventing the spread of the infectious agent and by increasing the host resistance (Valanis, 1999, p. 27). One preventive measure is changing or eliminating the reservoir where the infectious agent lives, such as eliminating standing water where mosquitoes carrying West Nile virus thrive. A second protective measure is increasing host immunity such as immunization (Valanis, 1999, p. 27).

As a secondary prevention measure, surveillance programs facilitate control of communicable diseases. These programs quickly identify new cases and perform follow-up with isolation techniques or specific treatment to limit communicability (Valanis, 1999, p. 27). The CDC conducts surveillance of communicable disease incidence by gathering data from reportable disease reports and/or field visits to healthcare facilities to identify new cases of a disease. Another example of secondary prevention is the placement of a person with AFB+ culture in respiratory isolation; this decreases the transmission of tuberculosis.

Tertiary prevention measures limit disability and promote the optimal level of functioning of the client. Appropriate medical treatment for a sexually transmitted infection and referral of contacts are interventions for tertiary prevention (Valanis, 1999, p. 27, Stanhope & Lancaster, 2000, p.786). Further, counseling a client to use barrier protection and avoid sex until the treatment is completed and infection is gone are good additional tertiary preventive measures.

Because infectious disease result from the interaction between agent, host, and environmental factors, control methods are aimed toward changing one or any these factors. For example: Spot, the family dog (host) is protected from rabies (agent) by vaccination from the veterinarian. Keeping the yard (environment) free of rubbish helps eliminate potential carrier of rabies (rodents and other wild animals) from the dog and family.

Infectious diseases are transmitted by **vertical or horizontal modes of transmission. Vertical transmission** is the passing of the infection from parent to offspring via sperm, placenta, milk or vaginal canal contact (Stanhope & Lancaster, 2000, p.782). Infection of HIV is a good example of **vertical transmission** from mother to baby during pregnancy, by vaginal birthing and/or by breastfeeding.

Horizontal transmission is the person-to-person spread of infection by various means: direct/indirect contact, common vehicle, airborne or vector borne (Stanhope & Lancaster, 2000, p. 782)). Sexually transmitted infections are spread by direct sexual contact. Cholera can spread by indirect contact with contaminated bedding of an infected person. Common vehicles are inanimate substances, e.g., water or food that transport infectious agents to other susceptible hosts (Valanis 1999, p. 98). Giardiasis (Beaver Fever) can be spread by contaminated water. Contaminated air droplets spread both Legionellosis and Tuberculosis. Vectors such as mosquitoes, ticks or turtles spread infectious agents by biting or depositing contaminated material near a susceptible host.

There are several infectious diseases that the WHO has classified as part of the global crisis of infectious disease. The first category is the *old diseases-old problems* which includes measles, poliomyelitis and dracunculosis. Given the commitment and resources already available these infectious diseases could be eradicated. Other diseases that the WHO predicts could be eliminated as public/community health problems are leprosy, neonatal tetanus, measles, intestinal worms, hepatitis, and typhoid (Valanis, 1999,, p. 113). For more information regarding these eradication programs see www.who.org.

The *old diseases-new problems* category includes tuberculosis, malaria, dengue and other vector borne diseases. Primary and secondary prevention measures are crucial because drug and pesticide resistance has made tertiary prevention interventions more difficult (Valanis, 1999, p. 113).

The third category, *new diseases-new problems* includes Ebola, other hemorrhagic fevers, hantavirus pulmonary syndrome, HIV/AIDS, and new strains of water and food borne infections (Valanis, 1999, p.114).

In the US, vaccines are one of the most valuable and effective methods of primary prevention of communicable diseases. According to the CDC, the recommended childhood immunizations for children include:

Hepatitis A (Hep A)	Measles
Hepatitis B (Hep B)	Mumps
Diphtheria	Rubella
Tetanus toxoid	Varicella
Pertussis	Pneumococcal (PCV or PPV)
Haemophilus Influenza type B (HiB)	Influenza (www.cdc.gov/nip)
Poliomyelitis virus (IVP)	

These vaccines as well as vaccines for meningococcal meningitis, plague, rabies and yellow fever are given under special circumstances, such as military service or travel to areas where the diseases are endemic. The role of the nurse is to provide primary prevention, identify new cases and follow-up on existing cases when necessary as part of the essential public health services.

Tour III - Activity 20: Communicable Disease Management Activities

Directions: Take some time to reflect on what you have learned; use additional paper as needed to complete the activities.

- Apply the epidemiologic triangle to a communicable disease.

- Investigate the immunization program in your agency.

Chronic Disease Management

Chronic disease occurs across the life span. In infancy and childhood, accidents, infectious diseases, and child abuse may contribute to health problems. As adolescence occurs, pregnancy, alcohol and drug abuse, suicide, homicide, sexually transmitted diseases, sports injuries and mental illness may occur. Issues of bonding, trust, developmental tasks, independence and family process exist.

In adulthood, accidents, diabetes, arthritis, cancer, AIDS, alcohol and drug abuse and mental illness affect people in their career choices, marriages and family structure. Roles and goals are impacted by the health status of the person. As adults age, the previously mentioned conditions may intensify and sensory losses and cardiac conditions may emerge. These conditions may continue into older age with changes in mental status, suicide, and loneliness presenting a challenge to healthcare professionals.

When the public/community health examines the trajectory of the disease at specific phases, she/he is able to anticipate potential outcomes. Confirmation of a chronic disease diagnosis affects all aspects of the person's life. There may be changes in roles, social life, independence levels, self image, economic status and quality of life. At one end of the continuum might be stigma and shame, which disqualifies an individual from full social acceptance. At the other end of the continuum might be self care management and minimal effects on quality of life. To an extent the chronic condition is managed, the person has a choice as to how to view this condition in their life. Does the chronic condition represent a force to be managed and integrated into a healthy life style or does it represent illness to the individual? The nurse assesses the person's perception of their chronic condition and works to support efforts of self care management.

The needs of the person with a chronic condition may focus on nutrition, safety, exercise, economics, access to care, housing, psychological support, spirituality and the maintenance of independence. Primary, secondary, and tertiary prevention measures are the focus for the public/community health nurse. Primary prevention may include accident prevention education, stress management, nutrition education, substance abuse information and crime prevention. Secondary prevention includes emphasis on routine health screening, assessment related to adjustment, teaching and promoting normal development, coordination of re-entry to work force, family support and normalizing activities. Often the nurse functions as advocate and facilitator of self care through maintenance of scheduled health assessment and involvement of referral resources. Tertiary prevention may involve provision of nursing care, physical therapy, support groups, day care services, respite and family care.

Employed adults who are diagnosed with arthritis are at the intersection of several needs at once. Nutritionally they may need education on foods that are beneficial to their joints and modify the current diet to include these items. From a safety perspective, the individuals may need an environmental assessment of their home, workplace, and hobby/sport settings to adapt the environment to keep them safely functioning. The economic challenge of the employed adult with arthritis may be in balancing the need for income with the physical energy limitation they experience.

Access to healthcare that is specialized to meet the needs of the arthritic persons is crucial to receive contemporary treatment and prevent further damage to joints. This often involves nurses teaching about the linkage between response to medications, exercise, stress and rest. Self care management support group often provide a safe harbor for discussing feelings and image issues, while also learning newer treatment and technical assistance. At first the employed adult may be hesitant to identify with a support group, or may be fearful that their employment or career advancement is in jeopardy. Family and friends need to be involved in the self care plan of employed adults, both as support and as actual assistance when the individuals experience flare ups of their arthritis. A spiritual assessment helps employed adults think about the meaning this chronic condition may have in their life. The combination of all these actions provides employed adults with strategies for continuing their productive lives, maintaining a healthy self image and preventing further deterioration of their joints. With this support, employed adults may progress from viewing arthritis as limiting and full of losses, to evolving roles as advocates for legislation on universal design of work and living spaces and community speakers on self management of arthritis.

Tour III - Activity 21: Chronic Disease Management

Directions: Take some time to reflect on what you have learned; use additional paper as needed to complete the activities.

- Select a specific population by age grouping and chronic health condition and identify the barriers and challenges experienced by the selected group.

- Identify primary, secondary and tertiary prevention strategies for the selected group.

Application to Your Nursing Role

The emphasis in this tour is on community as the client and gaining insights in the application of population based theory in actual public/community health nursing practice. When the community is assessed systematically for validated healthcare needs, planning and implementation of healthcare programs is possible. Skill sets in data collection and analysis are useful in understanding the complex factors that affect the health of a community.

When communicable disease management is viewed from a population based approach, key patterns of epidemiological information emerges which leads to an understanding of the relationship among host, agent and environment. The reason for the strong emphasis on levels of prevention, especially primary prevention is evident. In turn, when chronic disease management is discussed, the role of the public/community health nurse as facilitator of self care management is evident.

Within this tour, the public/community nurse applies her/his expertise to the community as the client. This requires a shift in thinking from individual/family to community/population. The data collection is more extensive and the planning process needs to be more rigorous. Often the public/community health nurse partners with several community health leaders to launch programs in schools, correctional institutions, counties that impact the health of the community. These programs may be county wide immunization efforts, smoking cessation education, arthritis self care management programs, or community nutrition education for obesity.

The public/community nurse functions in the role of negotiator, **facilitator, active listener, and advocate** within community groups and with local action task forces. Data driven practice remains the focus and the nurse works to build coalitions among stakeholders interested in improving the health of the community.

Tour III - Activity 22: Application to Your Nursing Role

Directions: Take some time to reflect on what you have learned; use additional paper as needed to complete the activities.

- Select a communicable disease or chronic disease of interest to you.

- Identify population-based resources available for the population with the disease.

- Prepare a report on the community resources for the staff at your organization.

Tour III: Conclusion

You have completed Tour III. Key attractions on this tour provided information that enhances your knowledge base in public/community health. This included: population based theory and practice in public/community health nursing. This perspective is a critical component of the public/community health nurse. The community assessment helps determine the health status of the community at a given time, and reveals specific populations needing health teaching and care. Communicable disease and chronic disease information assists in providing primary, secondary and tertiary prevention to the community as well as individuals. This information helps the nurse to add to or gain new insights and knowledge that assist in the development of your public/community health nursing role.

Tour IV: Seaports of the Future in Public/Community Health Nursing

At the completion of Tour IV, the learner will be able to:

- Define her or his own world view on cultural diversity
- Use knowledge of vulnerable populations in program planning and caseload management
- Apply global and local safety frameworks to the community in which they work
- Apply terrorism information to their personal and professional preparation for emergencies and survival

Key Attractions on this tour are:

- World view on culture, diversity and health beliefs
- Vulnerable populations
- Global and local safety
- Terrorism

This tour builds on the essentials and principles of public/community health discussed in the first two tours. Tour III has population based information that is the foundation for understanding the global community presented here in Tour IV. Particular emphasis is placed on discussion of several vulnerable populations as well as terrorism.

Worldview on Culture, Diversity and Health Beliefs

The way in which the public/community nurse views the world is influenced by history, philosophical underpinnings, core values, and life experiences. These values and beliefs help shape the behaviors the nurse exhibits in practice. These values, beliefs and behaviors are defined as culture and are integral to public/community health planning and care (Allender and Spradley, 2000).

When the nurse theorist Madeleine Leininger (Marriner-Tomey &and Alligood, 1998) developed a Sunrise Model to depict **the theory of cultural care diversity**. she stated that culturally congruent nursing care was the result of generic or folk systems and professional healthcare systems working in harmony to maintain the culture while accommodating the repatterning needed in providing care. The knowledge of the cultural and social influences may include the following factors: technological, religious and philosophical, kinship and social, cultural values and lifeways, political and legal, economic and education. Leininger believed that transcultural knowledge was essential to understand and assess before developing interventions for care. Her work as a nurse leader and anthropologist provided nursing with a framework for expanding the nurse's worldview on culture, diversity and health beliefs.

In community, cultural diversity refers to several cultural patterns that exist at the same time in a particular geographical area. For example, the community may be residents of an urban high rise apartment building, healthcare providers in a healthcare system, residents of a particular city, or students at a college. In any of these settings, culture exists, and within the identified cultures, sub-cultures exist. When you are raised in a particular culture, behaviors are understandable and you know what behaviors are expected from you. The subtleties of verbal and non-verbal communication take on a whole new meaning when viewed through the lens of culture.

The public/community health nurse learns about the cultures of the community she/he serves and integrates that information in the assessment, plan, implementation and evaluation of care. Learning about cultures may come from academic references, cultural studies or by actively participating in cultural events and interacting with people from a variety of cultures. As the nurse becomes cognizant of the ideas and practices of cultures, creative and innovative strategies for primary, secondary and tertiary prevention emerge. For example, exposure to multiple cultural approaches to death and dying provides insight into core values surrounding personal dignity, family, support, religion, pain management, privacy, work ethics, and support systems. In one culture, it might be vital for all relatives to gather at the bedside, while in another culture, the presence of relatives is seen as interfering with the process of dying. The nurse may be seen as a welcome healthcare presence or an intruder, depending on the cultural environment.

Another important base of knowledge for the public/community health nurse is familiarity with health problems within specific cultural populations. The nurse identifies health patterns, such as tuberculosis, alcoholism and obesity among specific groups and adapts the prevention strategies to their culture. Assessment of nutrition, housing and, economic status may be helpful in determining factors affecting the health problems and lead to further educational strategies.

Tour IV - Activity 23: Worldview on Culture, Diversity and Health Beliefs

Directions: Take some time to reflect on what you have learned; use additional paper as needed to complete the activities.

- Select a cultural group served by your organization.

- Identify the cultural values and beliefs of the selected group.

- Identify three culturally driven healthcare strategies that would be important to use in providing public/community health nursing to the selected group.

<u>Vulnerable Populations</u>

As the complexity of health and social problems in the US has increased over time, public/community health nurses have intervened at all levels: individual, family, group and community to address these problems. They also work with public policy makers to increase understanding in the disparity in access to care, inequitable quality of care and health outcomes of the vulnerable populations. **Vulnerable populations** are defined by Stanhope and Lancaster (2000, p. 639) as "social groups who have an increased relative risk or susceptibility to adverse health outcomes" . Nurses and other healthcare professionals target interventions to these vulnerable populations to help break the cycle of vulnerability. Vulnerable population groups of special concern to nurses include (Stanhope and Lancaster, 2000, p. 643):

- o Poor and homeless persons
- o Pregnant adolescents
- o Migrant workers
- o Severely mentally ill individuals
- o Substance abusers
- o Abused individuals
- o Persons with communicable disease
- o Persons HIV+ or Hepatitis B + with STI.

Because of the high volume and high risk, the vulnerable population groups to be discussed will be the poor and homeless, migrant workers and families experiencing violence.

Tour IV - Activity 24: Vulnerable Populations

Directions: Take some time to reflect on what you have learned; use additional paper as needed to complete the activities.

- Examine health statistics and demographic data in your area to determine which vulnerable groups predominate.

- Investigate which agencies provide services for these vulnerable groups.

Poverty

Poverty has existed throughout the ages. The gap between the rich and the poor has increased dramatically throughout the 20th century in the US. Poverty remains a global problem with disparities between rich and poor nations. In India and Japan, for example, the poor are accorded respect because of the religious and political structures which give meaning to their lives. Western countries tend to accord the poor with disdain. People who are poor are more likely to have inadequate access to healthcare, live in hazardous environments, work at high-risk jobs, eat less nutritious diets and have multiple stressors. Women, children and the elderly are more likely to be poor than other groups. Yet, people who live in poverty are not a homogenous group (Stanhope and Lancaster, 2000, p. 640).

Definitions of poverty vary. Sebastian (2000, p. 668) defines **poverty** as "having insufficient financial resources to meet basic living expenses. These expenses include costs of food, shelter, clothing, transportation, and medical care".

According to the Federal government, there are two different versions of poverty measure: **poverty thresholds and poverty guidelines. Poverty thresholds** were the original version of the federal poverty measure. The US Census Bureau updates these figures every year. This information is used for statistical purposes (Stanhope and Lancaster, 2000, p. 668; USDHHS, 2003).

Poverty guidelines are the other measure of poverty in America. These numbers are issued annually in the *Federal Register* by the Department of Health and Human Services. Guidelines (or percentage multiples of the guidelines) are used for various programs such as the Food Stamp Program, Head Start and the National School Lunch Program. Cash public assistance programs, such as Temporary Assistance for Needy Families (TANF) do not use poverty guidelines for eligibility determination (USDHHS, 2003).

A **historical perspective** is important to examine the development of the concept and culture of poverty. The American perspective is based upon the Western European values and history. The Elizabethan or English Poor Law was consolidated in 1601. The poor, sick, informed or aged were supported by a poor tax levied on each household in each parish. Porter (1997, p. 239) states that the Poor Law could be seen as the nationalization of religious charity and a form of social regulation as a deterrent against disorder.

The concept of poverty as a social problem in the US was not recognized before the Civil War. During the Progressive Era, the first federal document resembling any information about low-income population was the United States Commission on Industrial Relations published in 1916. As part of the document's description of the distribution of wealth and income, it was estimated that one-third to one-half of the families earned annually less than enough to support themselves in a comfortable and decent condition (Fisher, 2000, p. 2).

After the US Commission on Industrial Relations report there were no federal documents regarding poverty until the Great Depression and Roosevelt's New Deal in 1934. Most public policy during that time was focused on unemployment and ignoring poverty. The government documented from Brookings Institution research that 42% of families lived in "subsistence and poverty in 1929, with annual incomes of $1500 or less" (Leven, Moulton and Warburton, 1934, p. 87).

The next effort to alleviate the poor in America came in the 1960s. Fisher (2000) points out that there were a number of books and articles that influenced President Kennedy to begin the process that eventually led to President Johnson's War on Poverty. Among the books and articles were *The Affluent Society* by John Kenneth Galbraith, *The Other America* by Michael Harrington and *Our Invisible Poor*, in the *New Yorker,* 38(48), January 19, 1963 p. 82-132*.* Harrington's qualitative analysis of the poor despite the affluence of America in the 1950s and 1960s discussed the major poverty problem of dispossessed workers, rural poor, Negro poor and aged poor (Fisher, 2000, p. 6). These groups are still considered vulnerable today.

In 1963, a social science research analyst in the Social Security Administration, Mollie Orshansky, published an article in which she described an initial version of the poverty threshold that is still used today. Her initial purpose was to redefine the standard for measuring poverty and the need for research as to the cause and cure for chronic poverty. In 1965, the US Office of Economic Opportunity (OEO) adopted the Social Security Administration or the Orshansky poverty threshold as a working definition of poverty. Finally there was an index

against which progress could be measured (Fisher, 2000, p.8-9).

The Medicaid program, Title XIX of the Social Security Act of 1965, provides medical services for the poor, disabled and families with dependent children. Coverage included: hospital care, laboratory and radiology services, physician services, skilled nursing care and early childhood screening. This program was part of President Johnson's "Great Society" legislation. The 1972 amendment added other medical services including prescriptions, eyeglasses, and intermediate care facilities, family planning services (Stanhope and Lancaster, 2000, p. 98-99). Managed care for Medicaid initiated in the 1980s helped to control cost of healthcare and to provide continuity of healthcare services. "A major challenge…is developing flexible new care delivery strategies for high-risk populations that are responsive to local cultural mores and social context, and that result in improved clinical outcomes at an affordable cost" (Stanhope and Lancaster, 2000, p. 645).

Today, public policy makers are still working on an equitable poverty measure as social scientists and healthcare professionals are developing strategies to alleviate and ultimately prevent poverty.

Homelessness

Like poverty, homelessness is a complex social issue for nurses. Extreme poverty can lead to homelessness. The National Coalition for the Homeless (1998, p.1) defines a homeless person as "a person who lacks a fixed regular and adequate night time residence…and/or has a primary night time residency that is a

a) supervised publicly or privately owned shelter,
b) temporary residence for individuals intended to be institutionalized, or
c) public or private place not designed for regular sleeping.

Rosenheck, Bassuk and Salomon (1999) describe the homeless in America as exceptionally diverse and includes representatives from all segments of today's society-old and young; men and women; single people and families; city dwellers and rural residents; white and people of color; able-bodied workers and seriously ill or disabled individuals. This diversity presents a challenge to those advocates as to how assist them. One commonality across all subgroups of homeless remains: the lack access to decent affordable housing and adequate income.

The profile of homelessness in America today reflects our history. In colonial times, there were the "wandering poor" (Neibacher, 1990, p. 3). At the beginning of the 20th century, homeless population included the amputees from the US Civil War and railroad accidents, the blind and uninstitutionalized persons with syphilis. The Great Depression of the 1930s saw able-bodied men and women forced into homelessness due to the huge unemployment rates. After the outbreak of World War II, homelessness was eliminated in part due to increased employment and military service for both men and women. In the 1950s, the population of homeless was comprised of urban "skid row" older alcoholic men. Social security disability and retirement benefits assisted in alleviating the risk of homelessness for the elderly (Rosenheck et al., 1999).

The Stewart B. McKinney Homeless Assistance Act of 1987 provided funding to coordinate and direct federal homeless activities, toward research and identify models of care to maintain difficult (alcoholic and mentally ill, substance abuse) clients in stable housing. It also created the Interagency Council on the Homeless (ICH). The ICH targets the most vulnerable segments of the homeless population to influence the problem. Children are priority for the ICH (Stanhope and Lancaster, 2000, p. 679).

The rate for homelessness for Washington, DC is calculated at 150/10,000 population and a rate of 33/10,000 for the whole DC metropolitan area. Los Angeles County estimates a homeless rate as 88/10,000 to 90/10,000 for the whole county (Burt, 1999, p. 2-5). Nearly 1 in 20 New York City residents have experienced homelessness (Coalition for Homeless, 2003).

The basic demographics as documented by Burt (1999) of American homeless include:

Men	• It was more likely to have more single men in the urban/central city (> 83% -Los Angeles, CA), than in suburban/rural areas (< 39% in rural Kentucky). • Every night in New York City (NYC) there are more than 8000 single adults sleeping in the city shelter system (Coalition for the Homeless, 2003).
Women	• It was more likely to have single women and/or women head of household (HOH) in suburban/rural areas (> 29% in KY), than in urban/central city areas (< 3% -Los Angeles, CA). • More than 50% of the homeless mothers in NYC have a history of intimate partner violence (Coalition for the Homeless, 2003).
Families	• There were more families (female HOH or 2 parent) in the suburban/rural areas (20 % in KY) than in urban/central city areas (12% in Los Angeles, CA). • In NYC, families make up 78% of the homeless shelter population (Coalition for the Homeless, 2003). • Homeless children are young children. A representative family consists of a single mother, 30 years of age with two children under the age of five years (Rosenheck et al, 1999, p. 5).
Youth/Children	• Homeless/runaway youth are difficult to count because many venues only serve adults and many are reluctant to use services. Estimates run from about half a million to a million and a half youths nationwide (Rosenheck, et al 1999). • Homeless children are young children. A family- a single mother, 30 years of age with two children under the age of five years (Rosenheck et al, 1999, p. 5). • More than 25% of children living in NYC live in poverty. An average homeless child is less than 5 years old (Coalition for the Homeless, 2003).
Race/Ethnicity-	• Regardless of location, African-Americans were over-represented among the homeless compared to the general population. Compared to 12 percent of the US population, African Americans comprise 41% of the homeless people in large American cities. • Hispanics do not have a consistent over-representation among the homeless. The research conducted in Washington, DC found that Hispanics comprised 5.9 percent of the homeless population compared to 5.2 % of the total population of Washington, DC. • Nearly 90% homeless New Yorkers are black or Latino, when only 53% of New York City's total population is black or Latino (Coalition for the Homeless, 2003).
Education/Employment	• 52-62 percent of homeless have completed high school or have higher degree. • In New York City, almost 17% of homeless individuals in the adult shelter system are employed (Coalition for the Homeless, 2003).

Tour IV - Activity 25: Homelessness

Directions: Take some time to reflect on what you have learned; use additional paper as needed to complete the activities.

- Identify nurses who work with the homeless population in your area.

- Interview the nurses about their workday, challenges and barriers faced.

- Travel with a nurse to increase understanding of vulnerable persons.

Migrant Workers

A special subgroup of the poor and homeless are migrant workers. The Institute of Medicine defines migrants as "episodically or hidden homeless" (1988, p. 23) due to the seasonal and temporary work of these workers. The definition of a migrant farm worker is taken from the Office of Migrant Health, "An individual whose principle employment is in agriculture on a seasonal basis, who has been employed within the last 24 months and who established for the purpose of such employment a temporary abode" (USDHHS, p. 8). It is estimated that there are 3-5 million migrant farm workers in the US (Stanhope and Lancaster, 2000, p.712).

As a vulnerable population migrant workers face many problems. These problems include:

- Health conditions. The working conditions expose the worker to pesticides. Effects from chronic pesticide exposure include nausea, vomiting, memory loss, abdominal pain, headache, malaise, skin rashes and eye irritation. Long-term effects include cancers, infertility, blindness and neurological problems. Acute exposure can cause death.
  Musculoskeletal injuries occur due to the physical demands of bending and lifting on the job (Stanhope and Lancaster, 2000, p. 703-704).
- Economic stability. Many workers face questionable payment practices, inadequate record keeping, minimum wage discrepancies and inadequate government inspection. There is little or no compensation for vacation, sick or personal time. As Stanhope & Lancaster state, "if they do not work, they do not make money" (p. 703). Healthcare must be sought after work hours.
  Housing for migrant workers and their families may be trailers, houses, cabins, camps, cars, garages or tents. Housing is usually connected with the job, therefore, when the job is completed, the worker is both unemployed and homeless (Stanhope and Lancaster, p. 704).
- Societal differences. Recognition of social norms and respect of cultural differences assist the nurse to provide the best care for the migrant worker. The concept of machismo keeps the man at work when he is sick or hurt. As head of the family, he approves decisions related to the family. Healthcare is a family decision. Culturally, health is viewed as harmony between the social and spiritual sides of beings. Although traditional medicine is used, folk remedies maybe tried first (Stanhope and Lancaster, p. 707-708).
- Political Advocacy. Legislation for migrant health was initiated as amendments to the Farm Security Act of 1944. This legislation provided basic healthcare and housing for worker and their families until it was dissolved in 1947. It took 25 years to enact the Migrant Health Act in 1962. This amendment authorized federal aid for clinics and Migrant Health Centers (MHC). These MHC provide comprehensive healthcare to those seasonal workers and their families. Partnerships with state and local health departments, hospitals and social service providers promote cost-effective services to the most workers. Payments are usually fee-for-service, sliding scale for those migrant workers without insurance and Medicaid (Stanhope and Lancaster, 2000, p .710-711 and Clemen-Stone, McGuire and Eigisti, 1998). In 1992, additional preventive health amendments to the Migrant Health Act provided more comprehensive services to MHC for maternal-child health and community education (Stanhope and Lancaster, 2000, p. 710). There are 364 clinics serving approximately one half million migrant workers and dependents in 40 states and Puerto Rico. It is estimated that only 12-15% of eligible workers and families use clinic services (Stanhope and Lancaster, 2000, p. 705).

Tour IV - Activity 26: Migrant Workers

Directions: Take some time to reflect on what you have learned; use additional paper as needed to complete the activities.

- Interview community leaders to determine the presence of migrant workers in your area.

- Investigate your agency's partnership with healthcare to migrant workers and their dependents.

Family Violence

Violence occurs within the family structure in many ways: a wife belittled, a child burned, a grandfather intimidated. This violence is disturbingly prevalent in the US at all ages, child abuse, domestic abuse or intimate partner violence and elder abuse. "Generally, violence within families is perpetrated by the most powerful against the least powerful" (Stanhope and Lancaster, 2000, p. 763). Abuse crosses all elements of society: social, racial, ethnic, economic, religious, age and educational lines. These vulnerable individuals need assistance to bring normalcy back into the home. As mandated reporters, nurses must understand the complex dynamics of family violence to effectively assess and intervene in situations of family violence.

Child Maltreatment/Neglect/Abuse: Definitions

Child abuse is defined as "a child less than 18 years of age whose parent or guardian inflicts or allows injury by other than accidental means. Anyone who creates or allows creation of *substantial risk* of physical injury likely to cause death, disfigurement, protracted impairment of physical, emotional health, loss or impairment of function of body organs. Anyone committing or allowing a sexual offense against a child allows, permits or encourages a child to engage in prostitution, obscene sexual performance or conduct, including pornography (NYS Social Services Law 412).

Maltreatment/Neglect is defined as the withholding of, or failure to, provide a child adequate food, shelter, clothing, education, hygiene, medical care and/or supervision needed for optimal growth and development.

Physical Abuse is defined as the non-accidental physical injury of a child inflicted by a parent or caretaker, which ranges from superficial bruises and welts to broken bones, burns, serious internal injuries and, in some cases, death.

Sexual Abuse is the sexual exploitation of a child by a parent, relative, caretaker, or other person, which may range from non-touching offenses, such as exhibitionism to fondling, intercourse or use of child in the production of pornographic materials (Federation on Child Abuse and Neglect, 1990).

Behavioral/Environmental Indicators for Abuse: Parents/Caregivers (NYSED, 1990)

- Little or no emotional/social support
- Immaturity/unrealistic expectations
- Lack of parenting knowledge
- Number of life crises
- Parental history of abuse or neglect
- Alcohol/drug/substance abuse history
- Childcare stresses

Interactions Between Parent and Child (NYSED, 1990)

- Unrealistic expectations of physical/emotional needs
- Lack of or little bonding
- Absence of nurturing
- Delays in seeking healthcare
- Parent use disparaging remarks
- Angry demeanor

Behavioral Clues of Children (NYSED, 1990)

- Wary of contact with parents/adults
- Overly compliant or aggressive, demanding actions
- Apprehensive when other children cry
- Running away from home/Afraid to go home
- Role reversal-child to-adult

- Developmental delays
- Habitual/compulsive disorders

Reasonable Cause

The nurse, as a mandated reporter in New York State, has the legal obligation to report child abuse. As the law (Social Services Law, Section 419) states: "A person can have 'reasonable cause' to suspect that a child is abused or maltreated if, considering what physical evidence he/she observes or is told about, and from his/her education and experience, it is POSSIBLE that the injury or condition was caused by non-accidental means or neglect" (NYS Education Department, 1990, p. 20).

Failure to Report

The nurse, as a mandated reporter, has the legal obligation to report child abuse.
As the law (Social Services Law, Section 419) states: "Any person required to make a report but who willfully fails to do so is guilty of a Class A Misdemeanor. A person required to report who knowingly and willfully fails to do so is civilly liable for damages proximately caused by such failure" (NYS Education Department, 1990, p. 26).

Immunity

The nurse, as a mandated reporter, has the legal obligation to report child abuse.
As the law (Social Services Law, Section 419) states "Any persons, officials, or institutions who in good faith make a report, take photographs and/or take protective custody, have immunity from any liability, civil or criminal, that might be a result of such actions" (NYS Education Department, p. 26).

Child Abuse Prevention

The public/community nurse can promote child abuse prevention al each level: primary, secondary and tertiary.

Primary Level of Prevention

- Strengthen family unit to be able to cope with stress.
- Teach family developmental stages of childhood
- Teach means of punishment (i.e., time out) other than corporal punishment
- Teach children "Good Touch-Bad Touch"

Secondary Level of Prevention

- Encourage communication between parent and teacher and school nurse
- Identify/Screen potential abuser:
  - Assess history of mental illness/depression/chemical dependency
  - Assess for antisocial personality disorder
  - Assess parent risk appraisal

Tertiary Level of Prevention

- Referral to self-help groups for survivors/batterers
- Referral to shelters
- Permanent removal to foster care system (Action of last resort)

(Adapted from The Sage Colleges Nursing Department, 2002).

Domestic/Intimate Partner Violence

Domestic/Intimate Partner Violence is defined as a pattern of physical, sexual psychological, emotional, economic, and/or spiritual abuse and/or attacks that are used to control a partner's/adult's/adolescent's behavior in intimate relationships. Abuse is a criminal offense.

History of domestic abuse

Stanhope and Lancaster (2000, p. 767) document the evolution of domestic or intimate partner violence. They state that legally and historically:

- men had a right to force their wives to have sex;
- traditional English law stated that a woman gave " irrevocable and perpetual consent to her husband on marriage to have sex whenever and however he wanted";
- Until 1980 many states had a marital rape exemption in its laws.

Frameworks for studying violence:

Domestic or intimate partner violence was first documented as a repetitive pattern or cycle by Walker in 1979. Three phases were identified:

    Phase 1 - Tension-building Phase
    Phase 2 - Acute Battering Incident
    Phase 3 - Loving Reconciliation or Honeymoon Period

In the 1980s, the scope of domestic violence was broadened by the intervention in the city of Duluth, Minnesota. Nine city, county and private agencies under the umbrella title of the Domestic Abuse Intervention Project (DAIP), also known as the Duluth Model organized to coordinate intervention strategies in domestic violence intimate partner violence cases. The Duluth Model is widely recognized and provided a better understanding of the dynamics of domestic or intimate partner violence with development of the " Power and Control Wheel" (www.duluthmodel.org) . This model illustrates the struggle for power and control as the basis for violence. The Duluth Model maintains that violence is not cyclic but a constant presence.

Public/Community Health Nursing Orientation
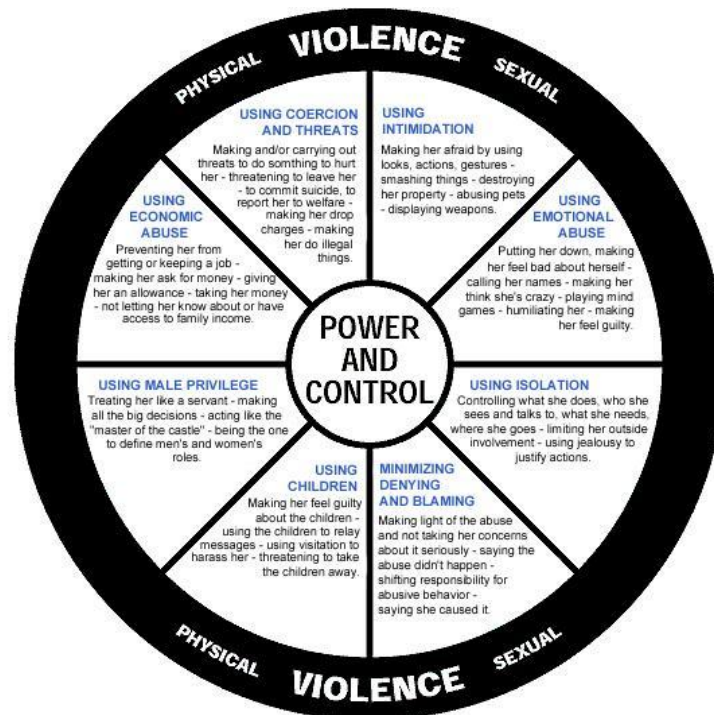
Again, evolution in thought and perspective occurred. The ideal Duluth Model was criticized by Hoff (1998) and Graves (2000) for attributing domestic violence to only male oppression of women (despite the available statistics). Hoff wants the "gender-polarizing" wheel changed (www.batteredmen.com/duluwomn.htm). Graves' model (2000) is called the "inverted model and is designed for female perpetrators and same sex male perpetrators of domestic violence (tomgraves.co.au).

The new millennium brings suggested revisions of gender-neutral to the Duluth Wheel methodology by Graves (2000):

Graves states:

- Violence by both sexes is included in the discussion, by stating that the different gendered forms of violence are opposite sides of the same coin.
- Violence is acknowledged to be a human problem with some socially-mediated gender-overtones, rather than a gender-problem as such.
- The problem of evasion of responsibility by attempting to shift blame to "the other" is resolved by stating that each person *only* has responsibility for their own behavior, but it includes behavior which may invite abuse by others, as well as that which is abusive of others.
- Wherever possible, programs should be facilitated by peers of the participants, people of the same sex, race and socio-economic group.

Role of the Nurse

The public/community health nurse needs to be aware of the dynamics of domestic violence, partner assault. Sheehan (2001, pp. 59-63) discusses effective ways to help an adult including:

- Understand the both the perpetrator's and the abused's world
- Why he/she stays
- Ask the right questions
- What to say if one denies abuse
- How to measure success

Screening tools can be assistance to the nurse in assessing for violence. The RADAR screening tool developed by the Massachusetts Medical Society (1999) assists healthcare professionals screen women when they access healthcare services. As pointed out by Hoff (1998) and Graves (2000) everyone who may experience violence in the home needs an assessment. This tool was developed for assessment of women.

RADAR SCREENING TOOL

R: ROUTINELY screen all women over the age of 14 years.

- Most women present with stress-related signs and symptoms.
- A calm, unhurried, non-judgment approach helps the woman to disclose information. Some women want to be asked, so they bring it out into the open.

A: ASK direct questions.

- Make these screening questions as a usual as "When was your last period?"
- Provide privacy for the woman away from the perpetrator/abuser.
- Ask simple, specific questions: "Have you been hit, kicked, slapped, etc., by someone in the last year?"

D: DOCUMENT findings.

- Objective data and subjective data are vital as evidence to report abuse.

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- Objective: describe the demeanor and actions of the woman and any obvious physical signs: bruises, marks, etc.
- Subjective: Use direct quotes, "He put his hands around my neck until I couldn't breathe".

A: ASSESS client/child safety.
- Ask the woman if she is afraid to go home.
- Ask what actions have kept her safe in the past.
- Find out if anyone can stay with her at home.
- Assess her readiness for getting help now and in the future.
- Respect her decision to go home; that maybe the safest option today.
- Ask about violence toward children, pets, family and/or friends.
- Determine her willingness to go to a shelter.
- Ask her about the need for police intervention and/or protection.

R: REVIEW options and referrals.

- The Emergency Department (ED) or clinic may have a Sexual Assault Nurse Examiner (SANE) or women's advocate/counselor to discuss options. If not, have a prepared sheet of referral information for the woman including:
  - crisis hotline contacts/numbers
  - police phone contacts/numbers
  - advocacy agencies contacts/numbers
  - advocacy web site addresses
  - shelter phone numbers
  - healthcare provider contacts/numbers
  - other specific information for your agency

- Involve the Medical Social Worker (MSW) as necessary
- Help the woman plan follow-up visits, counseling, etc. before she leaves the ED/clinic/agency to help facilitate changes.
(Massachusetts Medical Society, 1999)

Elder Abuse/Maltreatment

The abuse of the elderly has become more apparent in the US. Stanhope and Lancaster (2000, p. 768) estimate that there are about 4 percent of elders who suffer from abuse, neglect or exploitation. Similar to the other types of abuse, cases of elder abuse go unreported.

Two risk factors related to elder abuse and maltreatment reported by Allender and Spradley (2001) are first, the invisibility of elders and the abused elders specifically; and second, the vulnerability of older adults. The authors continue that vulnerability increases when the following characteristics are present:

- Impairment and isolation
- Poverty and pathologic caregivers
- Learned helplessness and living in a violent subculture **and**
- Deteriorating housing and crime-ridden neighborhoods (p.501)

Definition of **elder abuse/maltreatment**: "An act or acts of commission or omission that result in harm or threatened harm to the health or welfare of an older adult. **Maltreatment**
of an elder may include intentional or unintentional physical, psychological, or financial abuse or neglect (American Medical Association, 1992).

RADAR Elder Abuse Screening

R: ROUTINELY screen all elders.

- Elders with diminished cognitive capability still can describe maltreatment.
- Conduct mini mental status examination prior to interview to evaluate the elder's cognitive status.
- If the elder has significant impairment, seek an appropriate respondent (CHHA, PCA/PHN/CHN) who is not the perpetrator/abuser.
- Assess injuries that are incongruent with elder's disability.

A: ASK direct questions.
- Make screening questions as routine as "When was your last bowel movement?"
- Provide privacy for the elder away from the perpetrator/abuser.
- In the event of a hearing impairment, the interviewer may have to raise his/her voice.
- Ask simple, direct questions: "Has anyone at home hurt you?"; "Are you afraid at home?"

D: DOCUMENT findings.
- Objective data and Subjective data are vital as evidence to report elder abuse.
- Objective: Obvious physical signs- bruises, lacerations, fractures, etc.
- Subjective: Use direct quotes: "She puts my glasses across the room, so I can't see what papers I'm signing. She gives them back to me after the work is done."

A: ASSESS elder safety.
- Ask if the elder is afraid to stay at home (if away from home).
- If the elder answers yes, follow-up is necessary to determine:
  o how and when maltreatment occurs;
  o who perpetrates the maltreatment;
  o how the elder feels about the maltreatment;
  o how the elder copes with the maltreatment;
  o and what the elder thinks can be done to prevent
  o reoccurrence.
- Ask the elder if there is someone who can stay with him/her at home.
- Determine the need for police intervention and/or protection.
- Determine the need for Adult Protective Services.

R: REVIEW options and referrals.
- Nursing home placement is a fear for many elders at home (action of last resort).
- Consult Adult Protective Services, Area Agencies for Aging and/or Public/Community Health Agencies.
- Involve the MSW as necessary to contact above resources.

(Adapted from the Massachusetts Medical Society, 1999).

Ethical Decision-making in Public Health Nursing

Ethical dilemmas in public health nursing practice can be complex and may involve the spectrum from individual, family, institutions and communities. Commonly recognized ethical principals as applied to public health are (Porsche, 2004):

- Beneficence, or providing benefit typically weighed against risk and cost
- Non-maleficence, or "do no harm" particularly assuring that no harm comes through allocating resources to one group or another
- Justice, or fair and equitable distribution of benefits risks and cost considered in light of what is owed *by* society and what is owed *to* society by individuals or groups..
- Autonomy, or "respect for persons" is viewed as free and uncoerced and informed self-determination
- Fidelity, known as promise keeping, particularly in delivery of services
- Veracity, or truth telling and honesty in delivering information to individuals, groups or communities.

Gostin and Lazzarini (1997) have developed a six point ethical decision making framework to assist public health professionals reflect on the ethical implications of interventions and policies.

1. What are the public health goals of the proposed program?
2. How effective is the program in achieving its stated goals:
3. What are the known potential burdens of the programs?
4. Can the burdens be minimized: are there alternative approaches that create less of a burden?
5. Is the program implemented fairly?
6. How can the benefits and burdens of the program be fairly balanced?

Tour IV - Activity 27: Family Violence

Directions: Take some time to reflect on what you have learned; use additional paper as needed to complete the activities.

- As part of your New York State RN licensure process, you have completed Child Abuse Identification and Reporting education. Using information you learned and the RADAR screening tool, conduct a RADAR screening for a potential child abuse case.

    R: Routinely screen all children 0-5 years.

    - Who conducts the screening?
    - Who conducts the screening after 5 years?
    - For what would you assess?

    A: Ask direct questions.

    - What questions would you ask?
    - How would you approach the child?

    D: Document findings.

    - Distinguish between objective and subjective data
    - When would you take photographs?

    A: Assess child safety.

    - What do you look for related to child safety?

    R: Review options and referrals.

    - List resources and services for child and family.

Global Safety and Local Safety

When disasters occur, the community need outweighs the available resources. The framework for examining disasters involves the nursing process, levels of prevention and the epidemiological perspective that was discussed in Tour II. Disasters can be natural or man made and may include avalanches, chemical spills, earthquakes, epidemics, explosions, famine, fire, floods, radiation leakage, or storms. The disaster may be the result of violence through gang activity on a local level or through militia groups on a global level.

The assessment of the environmental factors in disasters includes the environment: physical, psychological and social aspects. What is the potential for flood, or features that impede access to disaster victims; what are the community's coping abilities; what is the community's potential for inner group violence, wars, battles and the economic ability to recover from a disaster. An assessment of the lifestyle of the community includes the consumption patterns, occupations, industries present; leisure pursuits that pose a potential hazard and community activities that promote safety.

Levels of prevention in disasters include primary, secondary and tertiary prevention. Primary prevention focuses on preventing the occurrence of disaster or limiting its consequences, while eliminating the risk factors for potential disasters. Secondary prevention involves the response to the disaster, stopping the disaster and resolving the problems caused by it. Tertiary prevention involves recovery of the community and prevention of a re-occurrence. The community response is affected by the magnitude of the disaster, the adaptive capacity of the community and the context in which the disaster occurred.

The dimensions of the disaster include the stages of the community's response to the disaster, pre-event planning, warning and pre-impact mobilization, post-event response, and recovery response. There are clearly zones of impact where the disaster is totally impacting, partially impacting and outside areas. Each of these stages and zones has a response plan and determine the role of the disaster worker. One of the challenges for public/community health nurses is the fact that they are often disaster workers and victims of the disaster simultaneously. For that reason and those discussed above, planning on a community and global level is important to reduce the vulnerability to the disaster. When planning occurs, there is a decrease in loss of human lives and economic damage and an increase in the ability to respond with speed and accuracy.

Large segments of the population are involved and coordination and communication among services are outlined in the plan, with clear lines of authority to activate and modify the plan. Public/community health nursing is involved in all levels of plan development, education of the public about personal preparedness, and education of workers and recovery of the community, population and workers.

Tour IV - Activity 28: Global Safety and Local Safety

Directions: Take some time to reflect on what you have learned; use additional paper as needed to complete the activities.

A tornado hit a small tight-knit industrial community on a Sunday afternoon. The tornado struck a path through the city and continued to damage outlying farmland. Communication was unavailable to the zone of total impact and partial impact and the only ambulance was damaged in the tornado. The city was declared a total disaster.

- Based on the information provided, determine the specific assessment information that would be needed by the public/community health nurse.

- Identify issues which impede the community's response to the disaster and develop three strategies to meet these needs.

- Identify strategies for coping with the psychological aspects of disasters for victims and disaster workers.

Terrorism, Disaster and Public Health Nursing

In addition to the global burden of disease, terrorism is included among crises that affect communities. Over the past 100 years, public health nurses have been actively involved in disaster planning and response. The terrorism events of September 11th, 2001 have created an opportunity to articulate public health nurses' past, present and future role in preparing for and responding to disasters and terrorist events (ASTDN, 2003). The global community, as well as the local community, faces terrorism as a part of the fabric of today's society. Allender and Spradley (2000, p. 403) define **terrorism** as "unlawful use of force or violence against persons or property to intimidate or coerce a government or civilian population in the furtherance of political or social objectives". As you know, nuclear, biological or chemical agents may be used along with explosives to intimidate and kill populations.

Again, the levels of prevention and epidemiological approach of identifying host, agent and environment serve as a framework. The difference lies in the magnitude and depth of planning for the prevention of terrorist attacks. Increased resources on all levels are necessary along with community alertness to any signs of terror. Since industries, water supplies, transportation systems, military installations, nuclear plants are at risk, highly developed prevention and security plans are necessary.

Education is vital for the public/community health nurse in preparing personally and professionally for terrorism. Public/community health organizations have lists of essential provisions that the nurse as well as each community member must have available to themselves in the case of a terrorist attack. Public/community health nurses must prepare their own survival kits and teach others to do the same. Particular emphasis is placed on the special needs of vulnerable populations.

The public/community health nurse must be prepared to maintain personal safety while providing direct care, maintain communication among health services, provide clinics rapidly for immunizations, and assist in triage of victims. The public/community health nurse has unique knowledge of the community and can be of assistance in the formulation of the community terrorism response plan, as well as participation in practice drills and evaluation of modifications needed in the plan.

Specific education in the public/community health aspects of bioterrorism agents such as anthrax, smallpox, and plague is centralized on the national, state and local level. Public/community health organizations, along with other healthcare agencies, are providing continuing education for public/community health nurses in the current plan for managing bioterrorism. Nurses are accountable for attending educational sessions and being prepared to activate their roles in mock or actual terrorist attacks. Websites for updated clinical and public/community health information exist and should be accessed for timely review of current criteria and treatment. The key is to remember the epidemiological and prevention frameworks for rapidly organizing the nursing function.

Over the past decades, public health nurses have been called on to respond to numerous emergencies and disasters. The term **emergency** refers to any extraordinary event or situation that requires an intense, rapid response and that can be addressed with existing community resources. **Disaster** refers to an event or situation that is of greater magnitude than an emergency; disrupts essential services such as housing, transportation, communication, sanitation, water and health care; and that requires the response of people outside the community affected (ASTDN, 2003).

The CDC has recently described the emergency preparedness competencies for all public health workers. During a range of recent natural and man made disasters (Hurricane Floyd, forest fires in the western states, the 9/11 terrorist attacks), public health nurses have already demonstrated competencies in several of these areas, including:

   a) readiness to apply professional nursing skills to a range of emergency situations;
   b) ongoing ability to maintain regular communication with partner professionals in other agencies involved in emergency response; and
   c) an eagerness to participate in continuing education to maintain up to date knowledge in areas relevant to emergency response.

As public health nurses continue to prepare for emergency response in their communities, it will be essential that they persist in developing and enhancing their expertise in these competencies (ibid). Emergency Preparedness

Core Competencies for All Public Health Workers may be found at
http://cpmcnet.columbia.edu/dept/nursing/institute-centers/chphsr/ERMain.html

Competencies for public health professionals that specifically address bioterrorism may be found at
http://cpmcnet.columbia.edu/dept/nursing/institute-centers/chphsr/btcomps.html

Selected resource websites include:

- U.S. Department of Homeland Security www.ready.gov or www.dhs.gov
- Centers for Communicable Disease Control And Prevention (bio terrorism) www.bt.cdc.gov
- Federal Emergency Management Agency www.fema.gov/areyourprepared
- CDC Morbidity and Mortality Report www.cdc.gov/mmwr
- New York State Office of Public Security www.state.ny.us/security
- New York State Department of Health www.health.state.ny.us
- New York State Nurses Association www.nysna.org
- American Nurses Association www.nursingworld.org
- U.S. Department of Health and Human Services www.dhhs.gov/disasters or www.hrsa.gov/bioterrorism

Tour IV - Activity 29: Terrorism Management

Directions: Take some time to reflect on what you have learned; use additional paper as needed to complete the activities.

Select a specific biological agent that could be introduced into the community water supply. Use the information on the **www.state.ny.us/security** and **www.health.state.ny.us** websites to assist in completing this activity.

- Identify the primary, secondary and tertiary prevention measures that would be effective in eradicating the biological agent.

- Prepare a personal/family survival kit based on public health checklists; www.ready.gov is a good resource for this activity.

Tour IV: Conclusion

You have completed Tour IV. This tour has built on the essentials and principles of public/community health discussed in Tours I and II. Tour III provided population based information that is the foundation for understanding the global community that was presented here in Tour IV. Concepts that were covered include world view on culture, diversity and health beliefs. Particular emphasis was placed on discussion of several vulnerable populations. Community emergencies, as well as terrorism were reviewed. In Tour IV, you had the opportunity to apply these concepts to your nursing role through activities.

Tour V: Reflecting Pools in Practice:

Objectives

At the completion of this tour the learner will be able to:
*   Describe the public/community health nursing core competencies
*   Use knowledge of career advancement in public/community health nursing to develop a professional career trajectory

This tour is a stepping off point for your career advancement in public/community health nursing. Discussion focuses on knowledge of public/community health nursing core competencies. Frameworks for advancing in public/community health nursing and life long learning are offered.

Key Attractions will help you know more about:
*   Public/community health nursing core competencies
*   Advancing public/community health nursing and life long learning

Public/Community Health Core Competencies

The **Council on Linkages Between Academia and Public Health Practice** is comprised of leaders from national organizations representing the public health practice and academic communities.The Council developed a list of **core competencies for public health professionals**. This list represents ten years of work on this subject by the Council and numerous others in public health academia and practice settings. They are based upon the Essential Public Health Services to ensure that the competencies help build the skills necessary for providing these essential services. These competencies will ultimately help guide curriculum and content development of public health education and training programs for preparation of practitioners and for the ongoing development of practitioners in the field. The competencies may also be used by those in practice settings as a framework for hiring and evaluating staff. (**http://trainingfinder.org/competencies/list.htm**)

The competencies are divided into the following eight domains: Analytic Assessment Skills, Basic Public Health Sciences Skills, Cultural Competency Skills, Communication Skills, Community Dimensions of Practice Skills, Financial Planning and Management Skills, Leadership and Systems Thinking Skills, Policy Development/Program Planning Skills. Skills and knowledge levels are listed first within each domain, followed by important attitudes relevant to the practice of public health. While attitudes may be more difficult to measure, they can be part of what is taught and should be included in curriculum and content development efforts.

The American Nurses Association (ANA) Scope and Standards of Public/community health Nursing Practice (1999) and the Essential Public Health Services (1994) together provide building blocks for core competencies for the public/community health nurse. The ANA Standards provide guidance for understanding population based theory and practice. The Essential Services provide a basis for understanding public/community health activities. Nursing interventions are included as examples of the application of the nursing role.

ANA Standards of Care	Essential Public Community Health Services	Nursing Interventions
Assessment: assess health of the community	Monitor health status to identify community health problems	Participate in community assessment
Diagnosis: attach meaning to data collected	Diagnose and investigate health problems/hazards	Monitor/investigate/contain disease/injuries
Outcome Identification: identify expected outcomes in population	Mobilize community partnerships to identify/ solve problems	Build coalitions
Planning: promote/ support development of programs to improve health of population	Inform/educate/empower people about health issues	Disseminate information
	Develop policies/plans that support individual/ community health efforts	Provide targeted direct services to populations
Assurance: ensure access /availability of programs /services to the population	Link people to needed provision of health care services when otherwise unavailable	Provide targeted outreach
	Enforce laws/regulations that protect health/ ensure safety	Mobilize community for action
	Ensure competent public health/personal health care workforce	Acquire/maintain current knowledge public/community health nursing practice
Evaluation: evaluate outcomes/health status of population	Evaluate effectiveness/ accessibility/quality of health services	Measure performance outcomes of case-management
	Research for new insights and innovative solutions to health problems	Uses evidenced-based practice

Adapted from Stanhope & Lancaster, 2000.

Public Health Workforce Shortage

An adequate supply of competent public health professionals is a vital component of the governmental public health infrastructure. A number of factors are having an adverse affect on the ability of state and local public health to fill current and rapidly growing vacancies. Chief among these are that the current workforce is rapidly aging and nearing retirement while there are few students and young professionals who are interested in careers at public health agencies. The combination has resulted in a critical narrowing of the public health workforce pipeline in a majority of the states. If left unchecked, time will exacerbate the crisis (Association of State and Territorial Health Officials 2004). Employment in a government agency carries with it a complex set of limitations and barriers to creating positions, offering hiring incentives, raising salaries, and sustaining programs even when

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they are making a difference. These barriers make recruitment and retention of workers, including public health nurses more difficult.

In the wake of the 1988 Institute of Medicine's report--which indicated that public health should focus on the core functions of assessment, assurance and policy development--many state and local health departments eliminated nursing positions in an attempt to move away from a focus on care of individuals. This was often done without considering if these public health nurses were needed in different and perhaps even more central roles related to the core functions. This downsizing was compounded by the ongoing nursing shortage which emerged nationwide during the early 1990's. Competition for nurses by means of increased salaries and additional benefits such as sign-on bonuses and educational leave has created incentives which attracted nurses from public health settings into institutional settings.

Job vacancy rates alone are not an adequate indicator of the shortage in public health nursing because vacant positions are generally eliminated to cover local or state budget deficits or registered nurse positions are converted to other types of positions. Such substitution has important implications. For example in lieu of nurses, environmental health specialists/sanitarians are in some cases made responsible for follow-up of elevated blood lead levels. Their focus on inspection and enforcement leaves out critical nursing elements related to screening and educating those at high risk, providing clinical follow-up of those with blood lead levels of 10 or higher, and working with schools to assure that children with elevated levels are not inappropriately diagnosed and treated as having attention deficit disorder (ADD)

Strategies identified by public health nursing leaders with potential to improve the shortage of public health nurses academically prepared for population-focused care include: improving benefit packages, increasing collaboration between health department and schools of nursing, providing rewards and incentives public health nurses with a baccalaureate degree or who achieve this educational level while employed, active recruitment from underserved populations, and capitalizing on the autonomy of public health nursing as a way of recruiting young people into nursing and then into public health (Quad Council, 2001).

Planning Your Career as a Public/Community Health Nurse

The information on the previous page represents the beginning of a blueprint for you to follow as you seek experiences that will enhance your career advancement. Use the list of *ANA Standards of Care* and the *Essentials of Public Health* and reflect on your responses to the third column.

- Can you demonstrate involvement in any of these nursing interventions?
- How would you gain access to these experiences?
- Is there a new project at your agency or in your community that would be skill building and career enhancing for you by:
  - Participating in a community assessment
  - Investigating disease or injuries
  - Disseminating educational information on a specific topic
  - Mobilizing a community for action
  - Providing outreach to a specific sub-population
  - Providing services to a specific population
  - Acquiring new knowledge in public/community health nursing
  - Measuring performance outcomes through evidenced-based practice

Mentoring

Mentoring is used in several disciplines to develop competence, expertise and often leadership. Mentoring can be across disciplines and gender and provide the nurse with a colleague or group of colleagues who value the growth of a beginner public health nurse.

In the Yoder model, the role of mentor, as it relates to career development includes (Byrne and Keefe, 2002):

<div style="padding-left:2em">
Career enhancing: Sponsoring
                                 Exposure
</div>

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Teaching the role
Teaching the informal system
Protection

Psychosocial: Role modeling
Encouragement
Personal counseling

Other work on mentoring identifies a variation of categories. The categories identified by Stewart and Krueger (Byrne and Keefe, 2002) are:

- Teaching-learning process
- Reciprocal role
- Career development relationship
- Knowledge differential between participants
- Duration of several years
- Resonance

What is important is that you establish a relationship with an expert who is interested in you and your career. A particular professional may come to mind as you look at the various mentoring characteristics. Approach the person and discuss your interest in being mentored. You may find that you have multiple mentors, depending on the aspect of your profession you are addressing. One may be from an academic setting, another colleague at work, or in a parallel discipline.

The advantages of mentors include their ability to challenge you, listen to you, coach and teach as you broaden your career. They are able to identify opportunities for you to consider in gaining experience and exposure to public/community health nursing on a broader scale or in a different environment. Attending professional organizations and educational symposiums on public/community health/community initiatives will deepen your perspective on the complexity of public/community health in this global environment. Participating in cutting edge research on topics pertinent to this field enhances your knowledge and creativity. In addition, there are times when you become uncertain and confused about multiple paradigms that exist simultaneously in your professional world. A mentor is able to assist in comparing thinking and feeling perspectives, while clarifying competing priorities and values. A mentor is able to help in establishing professional goals, and the implementation plan and timeline for achieving the goals.

Advancing Public/Community Health Nursing and Life Long Learning

Tim Porter-O'Grady (2003) identifies a changing context for nursing practice aligned with advancement in public/community health nursing. He describes emerging nursing realities as mobility based (multisettings), outcome driven, best practice oriented, health based, and user driven with advanced technology, early interventions and horizontal clinical relationships. This contrasts sharply with institutional-based, process and treatment oriented traditional nursing practice. Public/community health settings are ideal for practicing the new realities in nursing. The portability of public/community health and the frameworks of nursing process, levels of prevention and the epidemiological approach provide a rich background for client/community involvement in health.

Career Settings

Advanced nursing roles may include clinician, educator, administrator, consultant, researcher, clinical nurse specialist, nurse practitioner, informatics specialist, public policy specialist, program planning and evaluation specialist and other emerging functions. The geographical location in public/community health is the world, with international, national, state, regional, and community level settings. The opportunities are with government, the military, professional organizations, not for profit and for profit healthcare organizations, lobbying groups, academia, schools, correctional facilities, health centers, parishes, and many more (Stanhope and Lancaster, 2000). The breadth of knowledge possessed by the public/community health nurse and additional education obtained on the graduate level in advanced nursing with the unique skill set of community as focus, makes the professional marketable to many employers.

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Professional Growth

It is important for the nurse to set measurable career goals and establish milestones to accomplish over specific time periods. As was discussed earlier, establishing a relationship with a mentor is invaluable in helping design a career path that best suits you. Porter-O'Grady (2003, p. 177) concludes that the new leadership includes " helping others discern changes, enumerating options, challenging past practices, translating contextual realities, creating the "pressure" to change, extinguishing non-relevant expectations, shifting from volume to value, transforming work content, creating a vision for adaptation and doing the correct work" . Often as part of career planning, individuals complete self assessment tools that discern strengths and areas for growth. The self assessment findings can be compared to Porter- O'Grady's new leadership dimensions for matching strengths and areas for growth. This gives structure to education and experience opportunities that the nurse needs to obtain to continually change to meet new demands in healthcare.

Multigenerational Colleagues

At the present time, there are four generations of nurses practicing. It is helpful to analyze the characteristics of your generation and again assess your strengths and areas for growth. Identify the environment in which you developed and review the values of that generation. How are you and others affected by the value system of their generation? Which generation's value system is compatible with your life?

Ulrich (2001) uses the following values:

Traditional	Baby Boomer	Generation X	Millennial
Hard work	Optimism	Diversity	Diversity
Conformity	Personal Growth	Balance	Optimism
Respect for authority	Personal Gratification	Techno literacy	Civic Duty
Delayed rewards	Team Play	Self reliance	Achievement

As you process the information on multigenerational colleagues, identify colleagues in the **various** generations and reflect on the values they hold. Do they match their generation? What aspect of their values would you like to build into your career plan? What opportunities exist for you in choosing mentors within the various generations?

Along with your mentor, schedule time to review progress toward milestones and goals. Identify areas for growth and actions that will help you attain your goals. Assess emerging areas of new knowledge and seek opportunities for learning about topics, whether through websites, research projects, grants or technology. The nurse who continually seeks opportunities for creativity and innovation remains self directed, energized and balanced in the profession of nursing.

Tour V - Activity 30: Mentoring Activities

Directions: Take some time to reflect on what you have learned; use additional paper as needed to complete the activities.

- Select a mentor as a role model.

- With a mentor, develop a two year career plan including goals, milestones and educational foundations for advancing practice.

- Read advertisements for public/community health nursing positions of interest and identify key skill sets you would need to fill the position.

Tour V: Conclusion

You have completed Tour V. This tour has been a stepping off point for your career advancement in public/community health nursing. The discussion focused on knowledge of public/community health nursing core competencies. Frameworks for advancing in public/community health nursing and life long learning were offered.

Conclusion of the Public/Community Health Nursing Curriculum

You have completed all five tours. Through the sightseeing tours and key attractions of the five tours, you learned about multiple aspects of Public/community health nursing. Among the concepts covered were:

Tour I
- History of public/community health nursing
- Ten essentials of public/community health services
- Legislation and public/community health
- Global, regional and local importance of public/community health
- Population based theory and public/community health
- Nursing theory and public/community health
- Socialization to public/community health nursing
- Application to your nursing role

Tour II
- Levels of prevention
- Epidemiology
- Surveillance/tracking/data collection
- Outcomes management
- Environmental management
- Disease outbreak management
- Application to your nursing role

Tour III
- Population based theory and practice in public/community health nursing
- Community assessment
- Communicable disease management
- Chronic disease management
- Application to your nursing role

Tour IV
- World view on culture, diversity and health beliefs
- Vulnerable populations
- Global safety, local safety
- Bio-terrorism core competencies

Tour V
- Public/community health nursing core competencies
- Advancing public/community health nursing
- Life long learning

You have just completed a critical piece of your professional development as a public/community health nurse. Professional development is a process; it is continual and provides you with the ability to see local individual/family/community in the larger context of the country and world. In public/community health nursing, understanding population based practice is crucial to providing care and advocacy to society. This broader perspective allows public/community health nurses to better serve and advocate for individuals, families and the population at large.

References

Allender, J. & Spradley, B. (2001). *Community Health Nursing: Concepts and Practice.* Philadelphia, PA: Lippincott Williams & Wilkins.

American Nurses Association. (2000). *Public Health Nursing: A Partner for Healthy Populations*. Washington, DC: Author.

American Nurses Association. (1999). *Scope and Standards of Public/community health Nursing*. Washington, DC: Author.

American Nurses Association (1995). *Nursing's Social Policy Statement.* Washington,DC: Author.

American Medical Association (1992). *Diagnostic and Treatment Guidelines on Elder Abuse and Neglect.* Chicago, IL: The Author.

American Public/community health Association (1996). *Definition and Role of Public/community health Nursing.* Washington, DC : Author.

Arnold, E. and Boggs, K. (2003). *Interpersonal Relationships.* 4th Ed. St. Louis, MO: Saunders.

Association of Community Health Nursing Educators (ACHNE), Task Force on Basic Community Health Nursing Education. 2000. *Essentials of Baccalaureate Nursing Education for Public/Community Health.* Pensacola, FL: Author

Association of State and Territorial Directors of Nursing (1998). *Public/community health Nursing: A Partnership for Progress.* Washington, DC: Author.

Association of State and Territorial Directors of Nursing. (2003) Public health nurses' vital role in emergency preparedness and response. Available at www.astdn.org. Accessed 5/27/04.

Association of State and Territorial Health Officials (2004) State Public Health Employee Work Shortage Report: A Civil Service Recruitment and Retention Crises. Washington, DC: Author.

Benson, E, (1993). Public/community Health Nursing and the Jewish Contribution. *Public/community Health Nursing,* 10(1), pp. 55-57.

Bullough, V. and Bullough, B. (1984). *History,Trends and Politics of Nursing.* East Norwalk, CT: Appleton-Century-Crofts.

Burt, M. (1999). Demographics & Geography: Estimating Needs. In L. Fosburg & D. Dennis (Eds.). *Practical Lessons: the 1998 National Symposium on Homelessness Research*. Washington, DC: United States Department of Health & Human Services.

Byrne, M. & Keefe, M. (2001). Building research competence in nursing through mentoring. *Journal of Nursing Scholarship,* 34 (4), 391-396.

Centers for Disease Control and Prevention. (2002). *Recommended Childhood Immunization Schedule- United States, 2002*. Retrieved June 1, 2003, from www.cdc.gov/nip

Clemen-Stone, S, McGuire, S. & Eigisti, D. (1998). *Comprehensive Community Health Nursing. (5th Ed.).* St. Louis, MO: Mosby.

Federation on Child Abuse and Neglect. (1990). *Indicators of Abuse.* Albany, NY: Author.

Fisher, G. (2000). *Reasons for measuring poverty in the United States in the Context of Public Policy-a Historical Review, 1916-1995*. United States Department of Health and Human Services. Retrieved June 11, 2003.

Futch, C. (1997). History of nursing. In K Chitty (Ed.). *Professional Nursing: Concepts and Challenges* (pp.1-32). Philadelphia: Saunders.

Gordis, L. (2000). *Epidemiology*. 2nd Ed. Philadelphia, PA: Saunders.

Gostin, L & Lazzarini, Z. (1997). *Human rights and public health in the AIDS pandemic*. New York: Oxford University Press.

Graves, T. (2000*). Neutral Version*. Retrieved September 28,2003 at tomgraves.com.au.

Graves. T. *Suggested revisions [to the Duluth Model]* Retrieved September 28,2003 from http://www.batteredmen.com/duluwomn.htm

Hoff, B. (1998). *The faulty Duluth model*. Retrieved September 28, 2003, from http:// www.batteredmen.com/duluwomn.htm

Howson, C. P., Fineberg, H. and Bloom, B. R. The Pursuit of Global Health: The Relevance of Engagement for Developed Countries. *The Lancet*, 351 (2002), 586-590.

Institute of Medicine (1988). *The Future of Public Health.* Washington, DC: National Academy Press.

Institute of Medicine. (1988). *Homelessness, Health and Human Needs*. Washington, DC: National Academy Press.

Institute of Medicine (1997). *Improving Health in the Community: A Role for Performance Monitoring.* Washington, DC: National Academy Press.

Iveson-Iveson, J. (1982a). Past caring. *Nursing Mirror,* 154 (17). 27-30.

Iveson-Iveson, J. (1982b). Life and times. *Nursing Mirror,* 154 (16), 28-30.

Iveson-Iveson, J. (1982c). Knight nurse. *Nursing Mirror,* 154 (15), 27-30.

Joint Commission for the Accreditation of Healthcare Organizations. (2002). Chicago: Author.

Kalish, P. and Kalish, B. (1995). *The Advance of American Nursing.* 3rd Ed. Philadelphia: Lippincott.

Kopf, E. (1916). Florence Nightingale as Statistician. In B. Spradley (Ed.), *Readings in Community Health*. 4th Ed. (pp. 274-285). New York, NY: Lippincott.

Leavell, A. R. and Clark, E.G. (1965). *Preventive Medicine for the Doctor in his Community: An Epidemiological Approach.* 3rd Ed. NewYork: McGraw-Hill.

Leven, M., Moulton, H. & Warburton, C. (1934). *America's Capacity to Consume*. (Publication No. 56 of the Institute of Economics of the Brookings Institution). Washington, DC: Brookings Institution.

Lindell, D. (1997). Community Assessment for the Home Healthcare Nurse. *Home Healthcare Nurse,* 15(9), September, pp. 618-627.

Marriner-Tomey, A. & Alligood, M. (1998). 4th ed. *Nursing Theorists and Their Work.* St. Louis: Mosby.

Massachusetts Medical Society. (1999). *Partner Violence: How to Recognize and Treat Victims of Abuse-A Guide for Physicians and Other Healthcare Professionals*. Boston, MA: Author.

Mcdonald, L. (1999). Florence Nightingale and the Foundations of Public Health Care. Avaiable at http://www-fhs.mcmaster.ca/women/flo.html. Accessed 6/4/04.

McNeil, Carol (Ed). 1993. *Public Health Nursing Within Core Public Health Functions – a Progress Report from the Public Health Nursing Directors of Washington.* Olympia, WA: Washington State Department of Health.

Minnesota Department of Health (2001). *Public/community health Interventions-Applications for Public/community health Practice.* St. Paul, MN: Author.

National Association of City and County Health Officials. (1994). *Blueprint for a Healthy Community*: *a Guide for Local Health Departments*. Washington, DC: Author.

National Coalition for the Homeless. (1998). *How Many People Experience Homelessness? fact sheet # 3*. Washington, DC: Author.

Neibacher, S. (1990). *Homeless People and Healthcare: An Unrelenting Challenge*. New York, NY: United Hospital Fund of New York.

New York State Education Department. (1990). *The Identification and Reporting of Child Abuse and Maltreatment: New York syllabus*. Albany, NY: Author.

Nightingale, F. (1984). Sick nursing and health nursing. In J.S. Billings and H. M. Hurd (Eds.). *Hospitals, Dispensaries and Nursing.* New York: Garland (Original work published 1894).

Nightingale, F. (1969). *Notes on Nursing – What it is and What it is Not.* New York: Dover. (Original work published 1859).

Novick, LF., & Mays, GM. (2001). *Public health administration: Principles for population-based management.* Gaithersburg MD: Aspen.

Porche, DJ. 2004. *Public and community health nursing practice: a population based approach.* Thousand Oaks, CA: Sage.

Porter, R. (1997). *The Greatest Benefit to Mankind: A Medical History of Humanity.* New York, NY: W. W. Norton & Company.

Porter-O'Grady, T. (2003). A different age for leadership, part 2. *Journal of Nursing Administration,*(33,3), 173-178.

Quad Council of Public Health Nursing Organizations. 2001. The impact of the nursing shortage on public health nursing. Available at www.astdn.org. Accessed 6/01/04.

Quad Council of Public Health Nursing Organizations. 2003. Public Health Nursing Competencies. Available at www.astdn.org. Accessed 6/01/04.

Rosenheck, R., Bassuk, E. & Salomon, A. (1999). Special populations of homeless Americans. In L. Fosburg & D. Dennis (Eds.). *Practical Lessons: The 1998 National Symposium on Homeless Research*. Washington, DC: United States Department of Health and Human Services.

Sackett DL, Rosenberg WMC, Gray JAM, Haynes RB, Richardson WS. Evidence based medicine: what it is and what is isn't. *BMJ* 1996; 312: 71-2.

The Sage Colleges (2002). Guidebook for Family/Community Nursing III. Troy, NY: The Sage Colleges.

Sebastian, J. (2000). Vulnerable Populations in the Community. In M. Stanhope & J. Lancaster (Eds.). *Community and Public/community health Nursing: Process and Practice for Promoting Health (5th Ed.)*. St. Louis, MO: Mosby.

Sheehan Berlinger, J. (2001, August). Violence-how you can make a difference. *Nursing 2001,*31(8), 59-63.

Stanhope, M. & Lancaster, J. (2000). *Community Health & Public/community health Nursing.* 5th Ed. St. Louis. MO: Mosby.

Turnock, B. (2001) *Public health: What it is and how it works.* Gaithersburg, MD: Aspen.

Ulrich, B. (2001). Successfully managing multigenerational workforces. *Seminars for Nurse Managers* 9 (3), 147-153.

United States Department of Health & Human Services. (2003). *The 2003 HHS Poverty Guidelines- One Version of the [US] Federal Poverty Measure*. Retrieved June 11, 2003.

Valanis, B. (1999). *Epidemiology in Healthcare.* 3rd Ed. Stamford, CT: Appleton & Lange.

Walker, L. E. (1979). *The Battered Woman.* New York, NY: Harper & Row.

Public/Community Health Nursing Curriculum Activities

*A separate downloadable document of the activities can be found online in the menu bar across the top of the course. This version contains a Table of Contents and room for writing out your answers. For the activities below, use additional paper as needed.

Activity 1 – Tour I: History of Public/Community Health Nursing

- What aspect or decade of public/community health nursing history is of interest to you?
- Chose one aspect or decade and review the writings of authors during that period.
- What were the healthcare issues and solutions selected at the time?
- Compare and contrast the healthcare issues and solutions in today's healthcare environment.

Activity 2 – Tour I: Ten Essential Public Health Services

- Review the Ten Essential Public Health Services.
- List at least one other nursing activity that can be implemented for each service.

Activity 3 – Tour I: Legislation and Public Impact

- Select one of the laws that is of interest to you. Select a journal or newspaper article that identifies and describes how the selected law functions in the current healthcare environment.
- Use a professional nursing organization as source of information on pending legislation. Communicate your views on the legislation to your state representative.

Activity 4 – Tour I: Scope and Standards

- Identify a population-based initiative in Health People 2010.
- Use online resources to identify implementation plans for the selected initiative.
- Identify how this population-based initiative could affect the community in which you work.
- Identify gaps in the population-based initiative that need to be addressed in the future.

Activity 5 – Tour I: Nursing Theory and Public Health

- Select a population (i.e. teenagers who are pregnant).
- Using Roy's adaptation model identify the input, control processes, effectors, output and feedback loop for the selected subpopulation.
- Identify three specific health outcomes for this population.

Activity 6 – Tour I: Global, Regional, and Local Health Concerns

- As a nurse, identify recent situations with reflect global health concerns.
- In contrast, reflect on an emerging global health concern, and identify the effect it will have on nursing practice.
- Use online resources to identify community initiative to address a global health concern.

Activity 7 – Tour I: Socialization to Public/Community Health Nursing

Using Cohen' steps in socialization as a framework, answer the following questions now and six months from now as they apply to your personal and professional role and work environment.

- Is the role of the nurse as advocate and care agent visible? Is the climate one of professional growth in the area of disease prevention and protection of health?
- Are sources of support and commitment present to integrate the nurse role with your multiple life roles?
- Who are the heroes and mentors you can use as role models?
- What professional activities spark your interest?
- Are you ready to be active on a local, regional or national level in public health initiatives?
- How are you active in a professional organization focused on public health and nursing?

Activity 8 – Tour II: History of Epidemiology

- What aspects of the history of Epidemiology are of interest to you?
- Choose one aspect of the history of Epidemiology and review writings of authors during that period.

Activity 9 – Tour II: Epidemiologic Triangle

- Give an example of each component (agent, host and environment) of the epidemiologic triangle.

Activity 10 – Tour II: Web of Causation

- Trace the web of causation for diabetes mellitus.

Activity 11 – Tour II: Natural History of Disease

- Trace the natural history of one diagnosis of a client.

Activity 12 – Tour II: Rates

*The answers can be found below.

- Calculate the mortality rate per 100,000 for the following years:

  1980: 179,300 persons 711 deaths _____ mortality rate

  1990: 203,255 persons 921 deaths _____ mortality rate

- Calculate the incidence rate per 100,000 for the following diseases:

  Heart disease 2,480 new cases 150,000 population _____ rate
  at midyear

  Accidents 695 new cases 115,000 population _____ rate

- Calculate the prevalence rate per 100,000 for the following diseases:

  Cancer 12,000 (total cases) 150,000 population _____ rate

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Diabetes 1,200 (total cases) 123,000 population _____ rate

- Calculate the infant mortality rate per 1000 (usual constant) for the following years:

    1980: 100,000 live births 20,000 deaths _____ rate

    1990: 200,000 live births 1500 deaths _____ rate

Adapted from The Sage Colleges, 2003.

Activity 12 – Tour II: Rates, Answers

- Calculate the mortality rate per 100,000 for the following years:

    1980: 179,300 persons 711 deaths <u>397 per 100,000</u> **mortality rate**

    1990: 203,255 persons 921 deaths **453 per 100,000** mortality rate

- Calculate the incidence rate per 100,000 for the following diseases:

    Heart disease 2,480 new cases 150,000 population **1653 per 100,000** rate
    at midyear

    Accidents 695 new cases 115,000 population **604 per 100,000** rate

- Calculate the prevalence rate per 100,000 for the following diseases:

    Cancer 12,000 (total cases) 150,000 population **8000 per 100,000** rate

    Diabetes 1,200 (total cases) 123,000 population **976 per 100,000** rate

- Calculate the infant mortality rate per 1000 (usual constant) for the following years:

    1980: 100,000 live births 20,000 deaths **200 per 1000** rate

    1990: 200,000 live births 1500 deaths **7.5 per 1000** rate

Activity 13 – Tour II: Epidemiologic Study Designs

- Review epidemiological study designs.
- Identify a type of study design in a public health or nursing journal.

Activity 14 - Tour II: Nursing Process, Surveillance and Essential Public Health Services

- Identify surveillance activities in your nursing practice.
- Review your role in regard to surveillance activities.

Activity 15 - Tour II: Environmental Management

- Select one of the national objectives for environmental health and evaluate the extent to which the objective has been met in your community.
- Review local news media for stories related to environmental health objectives and create a risk profile for your community.

Activity 16 - Tour II: Outcomes Management

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- Select and use an outcomes management framework to:

    a) Determine what changes are to be made
    b) Plan the change using standards/benchmarks
    c) Carry out the plan
    d) Evaluate the results for lessons learned
    e) Modify the plan based on the evaluation
    f) Monitor the outcomes at specific intervals

- Communicate the structure, process and outcomes to co-workers.

Activity 17 - Tour II: Disease Outbreak Management

- Identify an outbreak of a disease in your community.
- Use the nursing and epidemiological process model to trace the steps to completion.
- Identify three improvements that would be useful in future outbreaks based on the information gleaned from the epidemiological and nursing process.

Activity 18 - Tour III: Population Based Theory and Practice in Public/Community Health Nursing

- Identify the role nurses can play in a specific population based initiative.
- Identify the role nurses can play in the development of public policy concerning a specific population based initiative.
- Identify the role nurses can play in the development of legislation concerning specific populations at risk.
- Select a public policy or legislative initiative of interest to you and actively participate in the process.

Activity 19 - Tour III: Community Assessment

- Obtain a completed community needs assessment for the area in which you work.
- Use the completed community needs assessment to analyze the data that was pertinent to the identification of a community health problem.
- Identify a primary, secondary and tertiary intervention that would have a measurable impact on the health of the community.

Activity 20 - Tour III: Communicable Disease Management Activities

- Apply the epidemiologic triangle to a communicable disease.
- Investigate the immunization program in your agency.

Activity 21 - Tour III: Chronic Disease Management

- Select a specific population by age grouping and chronic health condition and identify the barriers and challenges experienced by the selected group.
- Identify primary, secondary and tertiary prevention strategies for the selected group.

Activity 22 - Tour III: Application to Your Nursing Role

- Select a communicable disease or chronic disease of interest to you.
- Identify population-based resources available for the population with the disease.
- Prepare a report on the community resources for the staff at your organization.

Activity 23 - Tour IV: Worldview on Culture, Diversity and Health Beliefs

- Select a cultural group served by your organization.

- Identify the cultural values and beliefs of the selected group.
- Identify three culturally driven healthcare strategies that would be important to use in providing public/community health nursing to the selected group.

Activity 24 - Tour IV: Vulnerable Populations

- Examine health statistics and demographic data in your area to determine which vulnerable groups predominate.
- Investigate which agencies provide services for these vulnerable groups.

Activity 25 - Tour IV: Homelessness

- Identify nurses who work with the homeless population in your area.
- Interview the nurses about their workday, challenges and barriers faced.
- Travel with a nurse to increase understanding of vulnerable persons.

Activity 26 - Tour IV: Migrant Workers

- Interview community leaders to determine the presence of migrant workers in your area.
- Investigate your agency's partnership with healthcare to migrant workers and their dependents.

Activity 27 - Tour IV: Family Violence

- As part of your New York State RN licensure process, you have completed Child Abuse Identification and Reporting education. Using information you learned and the RADAR screening tool, conduct a RADAR screening for a potential child abuse case.

  R: Routinely screen all children 0-5 years.

    - Who conducts the screening?
    - Who conducts the screening after 5 years?
    - For what would you assess?

  A: Ask direct questions.

    - What questions would you ask?
    - How would you approach the child?

  D: Document findings.

    - Distinguish between objective and subjective data
    - When would you take photographs?

  A: Assess child safety.

    - What do you look for related to child safety?

  R: Review options and referrals.

    - List resources and services for child and family.

Activity 28 - Tour IV: Global Safety and Local Safety

A tornado hit a small tight-knit industrial community on a Sunday afternoon. The tornado struck a path through the city and continued to damage outlying farmland. Communication was unavailable to the zone

of total impact and partial impact and the only ambulance was damaged in the tornado. The city was declared a total disaster.

- Based on the information provided, determine the specific assessment information that would be needed by the public/community health nurse.

- Identify issues which impede the community's response to the disaster and develop three strategies to meet these needs.
- Identify strategies for coping with the psychological aspects of disasters for victims and disaster workers.

Activity 29 - Tour IV: Terrorism Management

Select a specific biological agent that could be introduced into the community water supply. Use the information on the www.state.ny.us/security and www.health.state.ny.us websites to assist in completing this activity.

- Identify the primary, secondary and tertiary prevention measures that would be effective in eradicating the biological agent.
- Prepare a personal/family survival kit based on public health checklists; www.ready.gov is a good resource for this activity.

Activity 30 - Tour V: Mentoring Activities

- Select a mentor as a role model.
- With a mentor, develop a two year career plan including goals, milestones and educational foundations for advancing practice.
- Read advertisements for public/community health nursing positions of interest and identify key skill sets you would need to fill the position.

Public/Community Health Nursing Orientation
Course Exam

1. Social advocacy is a primary role for public/community health nurses. Social advocacy includes all the following **EXCEPT**:

    A. Conferring with the client as to which services are needed and how the services are to be implemented.
    B. Promoting independence in decision making for her/his own care, in consultation with the nurse.
    C. Occurring on an individual and family level, as well as on the community or population level.
    D. Implementing primary prevention in order to intervene before a problem develops.

2. The ancient Hebrews contributed to the promotion of hygiene and sanitation practices that are still applicable today. This includes:

    A. Sanitary measures in selecting and preparing foods and system of meat inspection, and the disposal of articles contaminated by disease.
    B. The emphasis on regulation of medical practice along with census taking.
    C. The linking of individual health to the environment to produce a harmonious relationship with nature.
    D. The establishment of guilds.

3. "Public/community health Nurse" was the name, given by Lillian Wald, to women working out of the Henry Street Settlement.

    A. True.
    B. False.

4. Among the essential public/community health services is the linking of people to needed personal health services and assuring for the provision of healthcare when otherwise unavailable.

    A. True.
    B. False.

5. Nursing theories that have applicability to public/community health nursing are: Orem's Self-Care Model, Neuman's Healthcare Systems Model, Roger's Model of the Science of Unitary Man, Pender's Health Promotion Model and Roy's Adaptation Model.

    A. True.
    B. False.

6. The epidemiological study design which focuses on the amount and distribution of health problems within a population using person, place and time is called:

    A. Experimental Epidemiology
    B. Analytical Epidemiology
    C. Descriptive Epidemiology
    D. Biostatistical Epidemiology

7. The epidemiology study design of a clinical trail is most often used to:

    A. Monitor the frequency of disease occurrence
    B. Evaluate the natural history of disease
    C. Identify the causes of disease
    D. Test the effectiveness of treatments for disease

8. If a new drug is developed which is highly effective in the treatment for pancreatic cancer, a serious form of cancer, which of the following rates would be LEAST affected by the widespread use of the drug:

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A. Five year survival rate for pancreatic cancer
B. Prevalence rate
C. Mortality rate
D. Incidence rate

Questions 9-10 refer to the following information:

A study was conducted to investigate the possible effects of sunlight exposure of lifeguards on the development of melanoma. The following data were obtained. A population of men and women aged 20-29 were examined in June 2000. Of these people 2000 worked as lifeguards that exposed them to sunlight and 1000 were not employed as lifeguards. Upon examination, 40 cases of melanoma were discovered among the lifeguards and 15 cases were found among those people who were not lifeguards. The incidence rates of melanoma for June 2000 were calculated.

9. The incidence rate of melanoma among men and women exposed to sunlight as lifeguards was:

   A. 13.3 per 1000
   B. 133 per 1000
   C. 20 per 1000
   D. 2 per 1000

10. The incidence rate of melanoma among men and women not exposed to sunlight as lifeguards was:

   A. 4 per 1000
   B. 15 per 1000
   C. 40 per 1000
   D. 1.5 per 1000

11. The surveillance process includes the following:

   A. systematic collection, analysis, and interpretation of health data essential to the planning, implementation; evaluation of public/community health practice; and timely dissemination of data.
   B. Laboratory reports, individual case investigation and reimbursement reports
   C. Epidemiological report, obesity percentages and demographic data
   D. Surveys, journal articles and immunization rates

Questions 12-16 refer to the following information:

The public/community health nurse is conducting a screening clinic for tuberculosis in a women's shelter.

12. This intervention is an example of which level of prevention

   A. Primary prevention
   B. Specific protection
   C. Secondary prevention
   D. Tertiary prevention

13. The PHN returns to administer medications with direct observation to the women diagnosed with tuberculosis. The intervention is an example of which level of prevention.

   A. Primary prevention
   B. Specific protection
   C. Secondary prevention
   D.Tertiary prevention

14. The agent in the above example is:

A. The tuberculosis bacterium
B. The shelter
C. The women
D. The PHN

15. The host of the above example is:

A. The tuberculosis bacterium
B. The shelter
C. The women
D. The PHN

16. The environment in the above example is:

A. The tuberculosis bacterium
B. The shelter
C. The women
D. The PHN

17. When the analysis of the community needs assessment data is completed:

A. An immunization clinic is built
B. Specific services are instituted for a sub population
C. A plan is established for primary, secondary and tertiary prevention goals with interventions at the individual/family and population/community level
D. A plan is established for primary, secondary, and tertiary prevention goals with interventions at the community level

18. An individual with a chronic condition sets a goal of self care management. The PHN may assist the person attain his/her goal by anticipating potential disease outcomes and integrating stress management measures in the action plan.

A. True
B. False

19. Nursing interventions with men and women who are abused include all of the following EXCEPT:

A. Assess all men and women for signs and symptoms of abuse
B. Help the man or woman develop a safety plan for him/herself and children
C. Discuss shelter information, access to counseling and legal resources
D. Encourage the man or woman to leave the abuse relationship immediately whether or not he/she is ready.

20. When migrant workers seek medical care, their expectations may be:

A. They will have time off for recovery
B. They will be cared for in a hospital for as long as needed
C. They will recover and return to work expeditiously
D. They believe that medications will be the best solution for all problems

21. Federal poverty guidelines issued annually by the Federal Register are used
primarily to:

        A. Determine financial eligibility for government programs
        B. Determine statistical data
        C. Identify those people with inadequate resources for basic needs
        D. Provide guidelines for reform of social programs

22. Healthcare professionals are mandated reporters. Those professional who do not
report suspected child abuse are:

        A. Legally protected by the Good Samaritan Law
        B. Showing professional restraint
        C. Acting as parent advocates
        D. Legally liable as a Class A Misdemeanor

23. Which of the following characteristics distinguish the homeless from the poor?

        A. Mental illness diagnoses
        B. A neatly categorized population group
        C. Lack of social and family supports
        D. Avoidance of confrontation with the law

24. Vulnerable populations are those people who are different than the population as a whole in which of the
following ways:

        A. Vulnerable populations are more sensitive to risk factors and have worse health
        outcomes
        B. Vulnerable populations have a single risk factor and experience worse health outcomes
        C. Vulnerable populations have multiple risk factors but have equal health outcomes
        D. Vulnerable populations have worse outcomes with better access to healthcare

25. In a terrorism situation, the role of the public/community health nurse includes
the following:

        1.. Maintaining personal safety
        2. Participation in development of the community terrorism response plan
        3. Educating the public on preparedness against biological, nuclear, chemical and
          and radiological agents
        4. Continually updating her/his knowledge of steps in handling possible terrorism events
            A. 1
            B. 2 and 3
            C. 4
            D. All of the above

26. Porter- O'Grady identifies emerging nursing realities that include:

        A. Mobility based, outcome driven, institution based
        B. Best practice oriented, health based, user driven
        C. Process and treatment oriented, traditional nursing practice
        D. Changing environment, institutional based, disease management

27. Mentoring in public/community health nursing involves mutual goal setting that includes:

    A. Role modeling and preceptorship
    B. Psychosocial support and line authority
    C. Coaching, career development and psychosocial support
    D. Active listening, controlling, and directing

28. It is important to understand your generational value system in the context of:

    A. the work environment
    B. colleagues' perceptions
    C. community participation
    D. all of the above

29. You have decided to be a mentor for a novice nurse. The characteristics you need to possess include:

    1. Mastery in your field
    2. Communication skills
    3. Knowledge of organizational opportunities, financial resources
    4. All of the above

        A. 1 and 2
        B. 2 and 3
        C. 4
        D. 1 and 3

30. Public/community health core competencies include:

    1. Assessment, diagnosis, outcomes and planning
    2. Evaluating effectiveness/accessibility and quality of health services
    3. Enforcing laws, regulations that protect health and ensure safety
    4. Identification of expected outcomes in the population

        A. 1 and 2
        B. 1 and 4
        C. 1, 2 and 3
        D. 2 and 3