

# Welcome to Columbia University School of Nursing

Foundations of Nursing Science  
M 5015

---

---

---

---

---

---

---

---

## Instructor:

Kristine Qureshi, RN, MSN, CEN

- Office number: 212 305-0540
- Home number: 516 747-4312
- Fax: 212 305-0722
- [Ka95@columbia.edu](mailto:Ka95@columbia.edu)
- Office: Room 245 Georgian Bldg.
- Office hours: every day: walk in or make an appointment.

---

---

---

---

---

---

---

---

## Housekeeping Details

- Getting to know you... (complete info card)
- Expectations:
  - From Course and Instructor
  - From Student
- Skills CD's.
- HW Assignments/ Quizzes/ Final Exam/ Project
- Grading criteria
- Class meeting time

---

---

---

---

---

---

---

---

## History of Nursing

### History of nursing:

- Pre 19<sup>th</sup> Century
- 19<sup>th</sup> Century:
  - Florence Nightingale
  - Clara Barton
  - Lillian Wald
- 20<sup>th</sup> Century:
  - Mary Adelaide Nutting
  - Mary Breckenridge



---

---

---

---

---

---

---

---

## What is Nursing??

The unique function of the nurse is to assist the individual, sick or well, in the performance of those activities contributing to the health or its recovery (or a peaceful death) that s/he would perform unaided if s/he had the necessary strength, will or knowledge. And to do this in such a way as to help him/her gain independence as rapidly as possible.

---

---

---

---

---

---

---

---

## Essential Elements of the Profession of Nursing

- Well defined body of knowledge
- Strong service orientation
- Recognized authority by a professional group
- A code of ethics
- Professional organization that sets standards
- Ongoing research
- Autonomy

---

---

---

---

---

---

---

---

## Aims of Nursing

- Promote Health
- Prevent Illness
- Restore Health
- Facilitate Coping

---

---

---

---

---

---

---

---

## Nursing

### Roles.....Settings

- |                |                                    |
|----------------|------------------------------------|
| • Caregiver    | • Hospital                         |
| • Communicator | • Community Health: school; clinic |
| • Teacher      | • Home                             |
| • Counselor    | • Government Agency                |
| • Leader       | • Industry                         |
| • Researcher   | • Long Term Care                   |
| • Advocate     | • Hospice                          |
| • Manager      | • Pre-hospital Care                |
| • Coordinator  | • Mental health                    |
|                | • Private Practice                 |

---

---

---

---

---

---

---

---

## Nursing

### Paths to...& ...Levels of Ed.

- |                       |                           |
|-----------------------|---------------------------|
| • Diploma             | • Diploma                 |
| • Associates Degree   | • Associates Degree       |
| • Bachelors Degree    | • BSN                     |
| • Entry Level Masters | • MA; M.Ed.; MSN          |
|                       | • Ph.D.; DNSc; DNP; Ed D. |

---

---

---

---

---

---

---

---

## NCLEX (National Council Licensure Examination-RN)

- **A. Safe, Effective Care Environment 12-24%**
  - Management of Care
  - Safety and Infection Control
- **B. Health Promotion and Maintenance 12-24%**
  - Growth and Development through the Life Span
  - Prevention and Early Detection of Disease
- **C. Psychosocial Integrity 10-21%**
  - Coping and Adaptation
  - Psychosocial Adaptation
- **D. Physiological Integrity 36-60%**
  - Basic Care and Comfort
  - Pharmacological and Parenteral Therapies
  - Reduction of Risk Potential
  - Physiological Adaptation

---

---

---

---

---

---

---

---

## Professional Organizations

- National: ANA; ENA; ONA
- State: NYSNA
- Local: County Chapters

---

---

---

---

---

---

---

---

## Health of the Individual, Family and Community

And the Interaction of Each Element

---

---

---

---

---

---

---

---

## Individual

Maslow's Hierarchy of Needs:



---

---

---

---

---

---

---

---

## Family

### Structures:

- Nuclear
- Extended
- Blended
- Single parent
- Cohabiting families
- Single adults

### Functions:

- Physical
- Economic
- Reproductive
- Affective and coping
- Socialization
- Decision support (HCP)

---

---

---

---

---

---

---

---

## Community

- Social Norms
- Housing
- Transportation
- Safety: Fire/Police
- Air and Water Quality
- Sanitation
- Communication infrastructure
- Diversion/recreation
- Education
- Safety Net Programs
- Transportation infrastructure
- Health Services
- Food safety

---

---

---

---

---

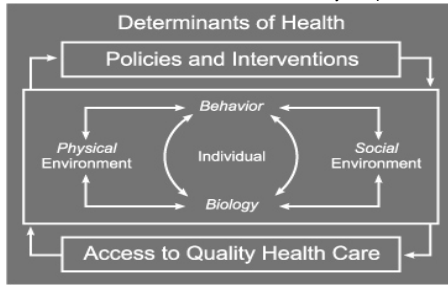
---

---

---

## Relationship of Individual, Family and Community

Determinants of Health Model: Healthy People 2010



---

---

---

---

---

---

---

---

## Culture & Ethnicity

- **Culture:** view of the world, set of values and traditions, handed down through generations.
- **Ethnicity:** Birth heritage
- Culture of the Patient
- Culture of the Healthcare Institution (h.c. profession as a whole, indiv. Professions [RN, MD], specific organization)
- **Cultural Competence:** ability to acknowledge, respect and work within the cultural boundaries of the patient.

---

---

---

---

---

---

---

---

## Cultural Influences

- Communication: who speaks to who, eye contact, disclosure of information, questioning
- Orientation to space and time
- Food and nutrition
- Socio-economic factors
- Influence of family
- Definition of health, illness, healing
- Reaction to pain

---

---

---

---

---

---

---

---

## Communication

Influenced by factors such as: age; culture; physical and psychiatric issues, environment

Privacy issues

Verbal and non-verbal (for both patient and nurse)

Native Language

Direction of conversation (nurse as facilitator)

---

---

---

---

---

---

---

---

## Promoting Health and Preventing Illness

- Age (vulnerability changes with age)
- Genetics (sometimes specific for groups)
- Physiologic (weight, pregnancy)
- Health Habits (smoking, nutrition, adherence to h.c regime)
- Lifestyle (fast paced, multiple sexual partners)
- Environment (social, economic, physical, community)

---

---

---

---

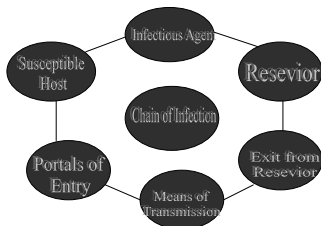
---

---

---

---

## Infection Control



---

---

---

---

---

---

---

---

## Infection Control and the Changing Health Care Delivery System

1960- 2000

- GDP grew 15 fold: \$526 billion to \$8,000 billion
- Proportion of GDP on healthcare grew from 5.1% (27 billion) to 14% (1,120 billion) (41% increase).
- Same time period: number of hosp. 7,126 – 6,291
- Hosp admission dec by 5%
- LOS decreased by 33%
- In-patient surgical procedures decreased by 27%
- Number of Americans > 65 y.o. tripled (36 million).
- By 2035, > 65 yo : 80 million persons

---

---

---

---

---

---

---

---

## Results

Fewer, smaller hospitals, with older, sicker patients, who are discharged sooner!!

Serious implications for Infection Control

---

---

---

---

---

---

---

---

## Nosocomial Infections: Magnitude of the Problem

- 3 – 15 % of hospitalized patients will acquire a nosocomial infection. (48,000 – 240,000 patients est in 1997 and projected 150,000 – 750,000 by the year 2005).
- Types:
  - Bacteremia
  - UTI
  - Pneumonia
  - Wound infection

---

---

---

---

---

---

---

---



## Deaths from Nosocomial Infections

- Estimates: (based upon attack rate, crude rate and attributable rates)
  - Total nosocomial infection (NI) attack rates: 2.5% - 10 %
  - Total % of NI which are bacteremias: 10%
  - Crude mortality: 25% - 40%
  - Attributable mortality 10% - 30%
  - Number of N.I. bacteremia deaths: 8,750 – 105,000 per year in U. S. hospitals

Jarvis, W. Emerging Infectious Diseases(7)2, 2001. CDC

---

---

---

---

---

---

---

---

## Multi Drug Resistant Organisms

- Vancomycin Resistant Enterococcus (VRE)
- Methacillin Resistant Staph Aureus (MRSA)

---

---

---

---

---

---

---

---

## Contributing Causes and Methods to Prevent/Address

| Causes                           | Prevention of Spread         |
|----------------------------------|------------------------------|
| Poor infection Control practices | Hand washing                 |
| Antibiotic selective pressure    | Good infection control       |
|                                  | Judicious use of antibiotics |
|                                  | Isolation techniques         |

Rice, L. Emerging Infectious Diseases (7) 2, 2001. CDC

---

---

---

---

---

---

---

---

## Bacteremia

- Overall 5 % nosocomial infection rate of which 10% are bacteremia, with an attributable mortality rate of 15%:
  - Eighth leading cause of death in US

---

---

---

---

---

---

---

---

## Most Effective Means of Preventing Transmission of Infection to Patients and Others

Hand Washing !!!

---

---

---

---

---

---

---

---

## Universal Precautions/Body Substance precautions

- Utilize a barrier between yourself and ANY body fluid of a patient (except perspiration). Includes: Blood, urine, feces, vomitus, bile, CSF, semen, breast milk.
- Safe disposal of all sharps. (If you use it, dispose it -- safely).
- Do not re-cap or cut needles.

---

---

---

---

---

---

---

---

## Blood Exposure

- What to do if you sustain a blood or body fluid exposure?
  - Local disinfection, (bleed part if puncture wound i.e. milk finger)
  - Inform supervisor IMMEDIATELY
  - Seek care (evaluation of source and determination of need for prophylaxis)
  - Current recommendation: tx. within one hour

---

---

---

---

---

---

---

---

## Use of Gloves

- When to use
- When to take off
- Types
- Cost
- What gloves do and what they don't do

---

---

---

---

---

---

---

---