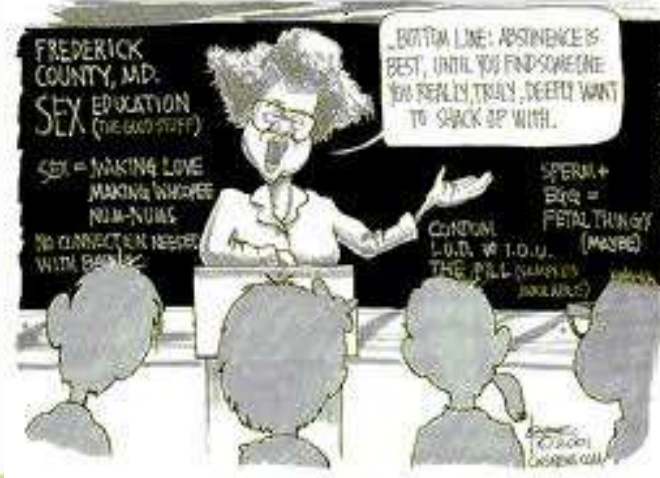# Adult Education

What is learning?

- A process of growth and change
  - transforming new knowledge, insights, skills and values into BEHAVIOR
  - active process, goal-directed
  - involves conflict and resistance
  - decision to change is necessary before learning can occur

Why is learning necessary?

- solve problems
- satisfy curiosity
- acquire new skills
- introduce improvements
- explore new ideas
- work – related needs

Obstacles to learning and compliance

- The objective of many educational programs is to change staff behavior to correct a problem.

- Obstacles to learning/compliance
  - lack of knowledge
  - apathy
  - negative attitude, excuses
  - faulty equipment or inadequate supplies

Other Obstacles to Learning and Compliance

- Knowledge vs. Ability to perform
- Passive Learner Response – depends on the teaching mode
- Intimidated to speak out or participate
- Fear of failure with new information or tasks
- Learning not customized to needs
- Learning blocks – learning capabilities

Learning domains

- Cognitive -- involves development of intellectual abilities
  - knowledge
  - comprehension
  - application
  - analysis
  - synthesis
  - evaluation

Learning domains

- Cognitive -- involves development of intellectual abilities
  - knowledge
  - comprehension
  - application
  - analysis
  - synthesis
  - evaluation
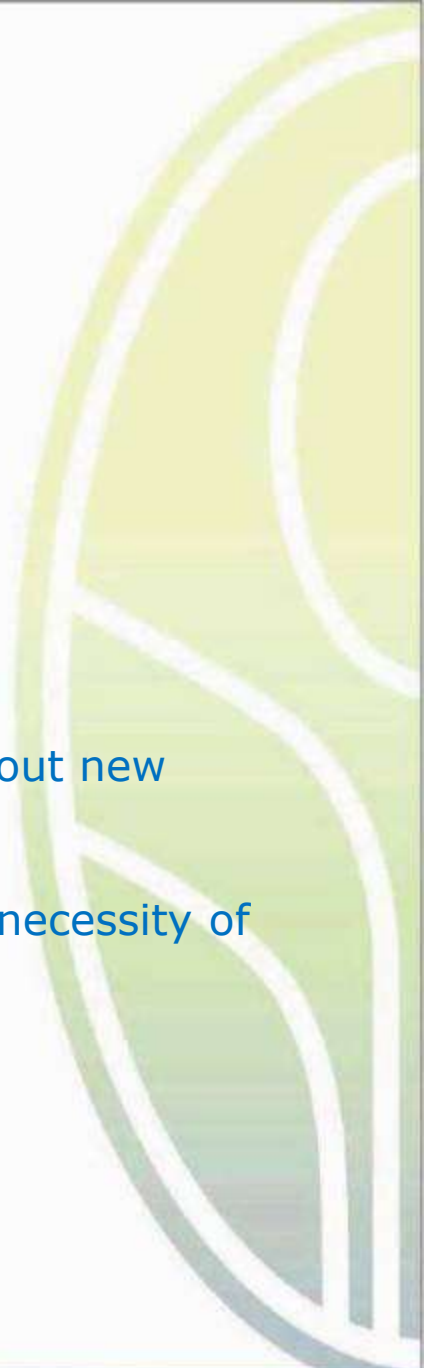
Learning domains

- Cognitive -- involves development of intellectual abilities
  - knowledge — Know the pathophysiology of HA-UTI
  - comprehension — Understand the equipment risks
  - application — Apply principles of asepsis to inserting an indwelling catheter
  - analysis
  - synthesis — Can evaluate a study on UTI infections
  - evaluation

Learning domains

- Affective - involves learning new attitudes, values, beliefs, ways of feeling
  - receiving information
  - responding to information
  - valuing
  - bringing different values together
  - developing caring, respectful relationships
  - developing a value system that results in consistent, predictable behaviors

Learning domains

- Affective - involves learning new attitudes, values, beliefs, ways of feeling
  - receiving information
  - responding to information
  - valuing
  - bringing different values together
  - developing caring, respectful relationships
  - Developing a value system that results in consistent, predictable behaviors

Open to learning about SSI

Responds in positive way about new information and values it

Changes thinking about the necessity of hand hygiene

Learning domains

- Psychomotor - involves learning new skills or new ways of acting or doing
    - perception -- use of senses to obtain clues to guide motor activity
    - mental and physical readiness to act
    - learning complex skills
    - developing habit patterns
    - creating new patterns of behavior to fit a specific situation

Learning domains

- Psychomotor - involves learning new skills or new ways of acting or doing
  - perception -- use of senses to obtain clues to guide motor activity
  - mental and physical readiness to act
  - learning complex skills
  - developing habit patterns
  - creating new patterns of behavior to fit a specific situation

Able to perform the insertion of an indwelling catheter with correct technique

Changes from old method to new method

Performs new method consistently

Stages of learning process

- Awareness
- Information gathering
- Intellectual insight
- Emotional insight
- New learning behavior

Stages of learning process

- Awareness
- Information gathering
- Intellectual insight
- Emotional insight
- New learning behavior

- HCW perceived the need to act or think differently
- Curiosity increases and gathers data to explore this need
- Weighs the advantages and disadvantages of new information "trial run"
- Deals with conflict – get things right
- New behavior integrated into practice

Learning Theories

- Psychoanalytic – Inner motivation –forces, urges

- Behavioral – Conditioned response - Pavlov

- Humanistic – Capacity for growth; whole person – self directed

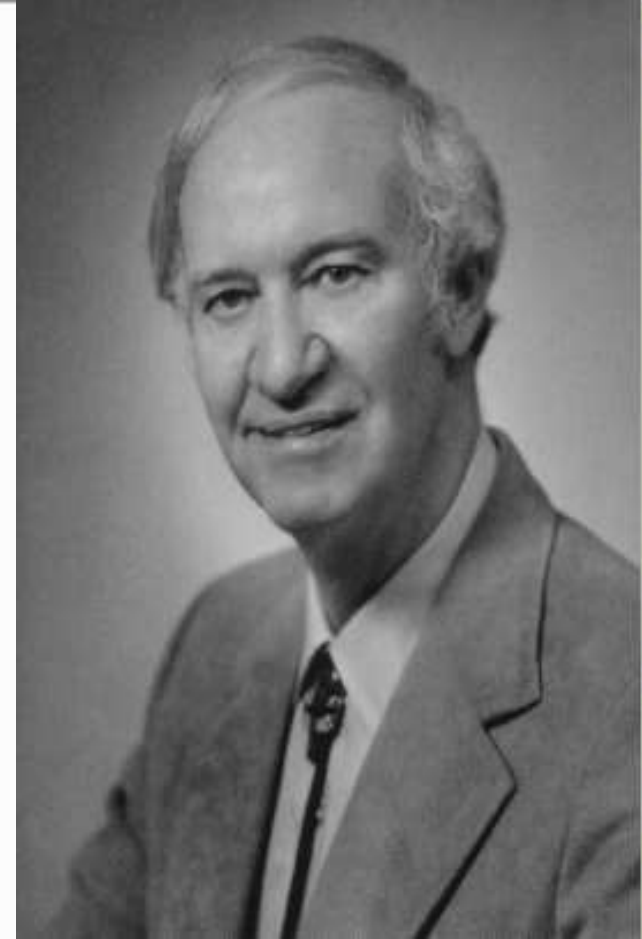- Maslow – need to learn – survival to self actualization
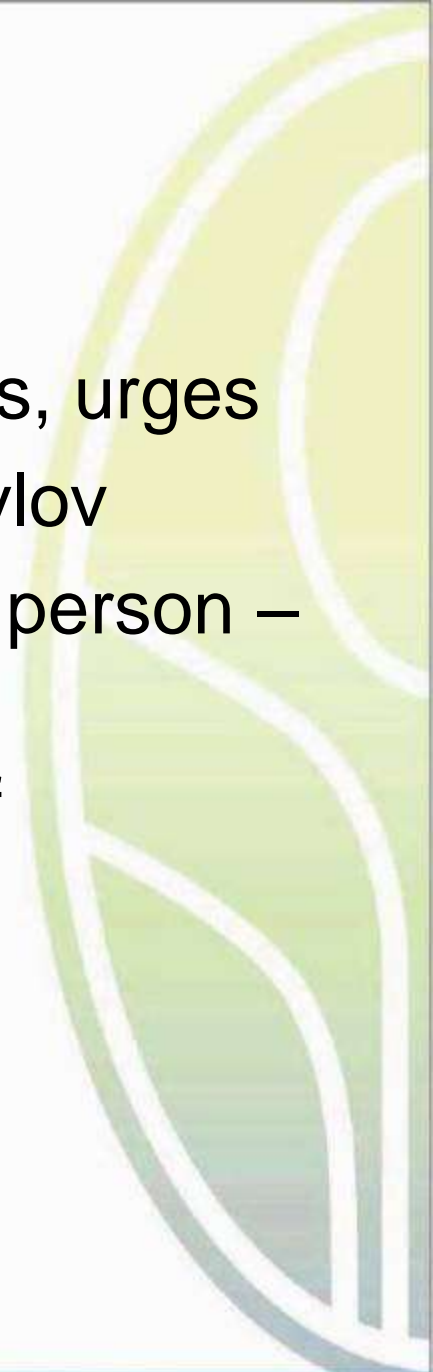
Andragogy vs. pedagogy

- Andragogy -- the art and science of helping adults learn
- Pedagogy - the art and science of helping children learn
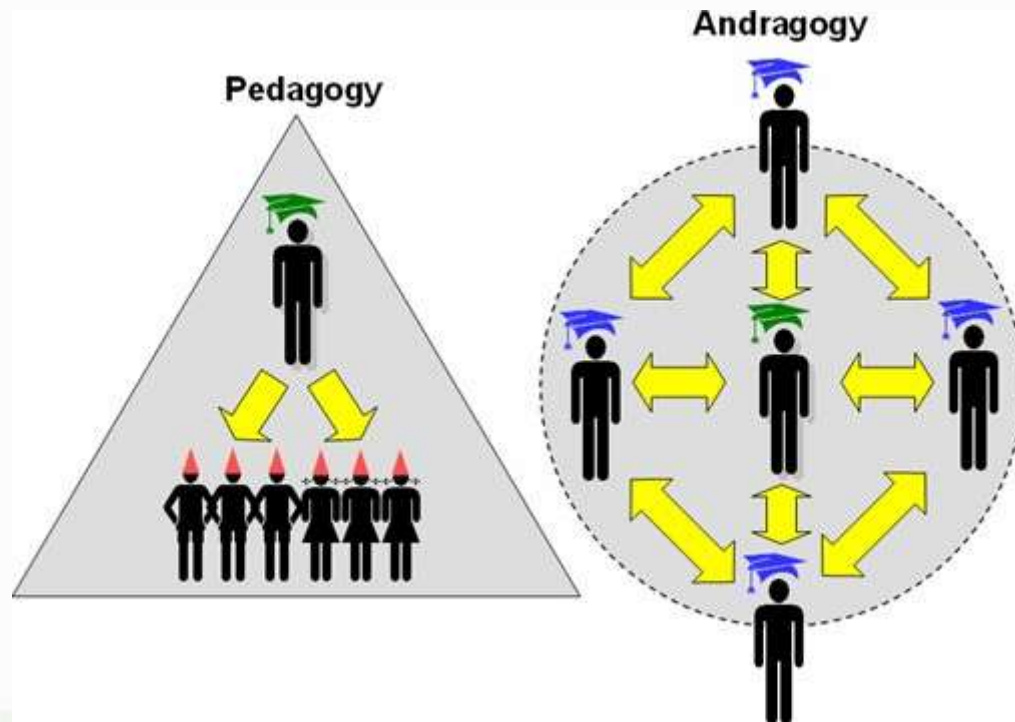
Malcolm Knowles

Knowles made four assumptions about adults as learners:
(1) Adults tend to be more self-directed as a result of their maturity,
(2) Adults possess personal histories which defines their identities and serve as a resource of experiential learning upon which new learnings can be applied,
(3) Motivation in adults is directed to more socially relevant learning, and
(4) Adult learners have interest in immediate application for problem-solving.

Andragogy – The art and science of helping adults learn

The Adult Learner

- Ready to learn
- Practical rather than academic
- Areas of personal experience to learn
- Self directed learner
- Life experiences – use in learning and attach value
- Will speak out about satisfaction or dissatisfaction

Alternative Learning Theories

- Connective thinking movement
  - Bubble maps, tree maps, time lines
- Cooperative learning
  - Problem-based Scenarios- students work together- tutorials
- Outcome-based
  - Objectives established – student sets pace
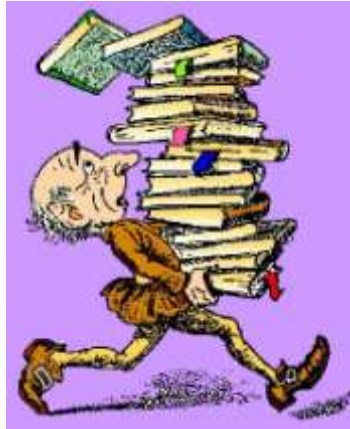
Hand Hygiene

Body Functions

Urine

Bowel

Other

Nutrition

Positioning
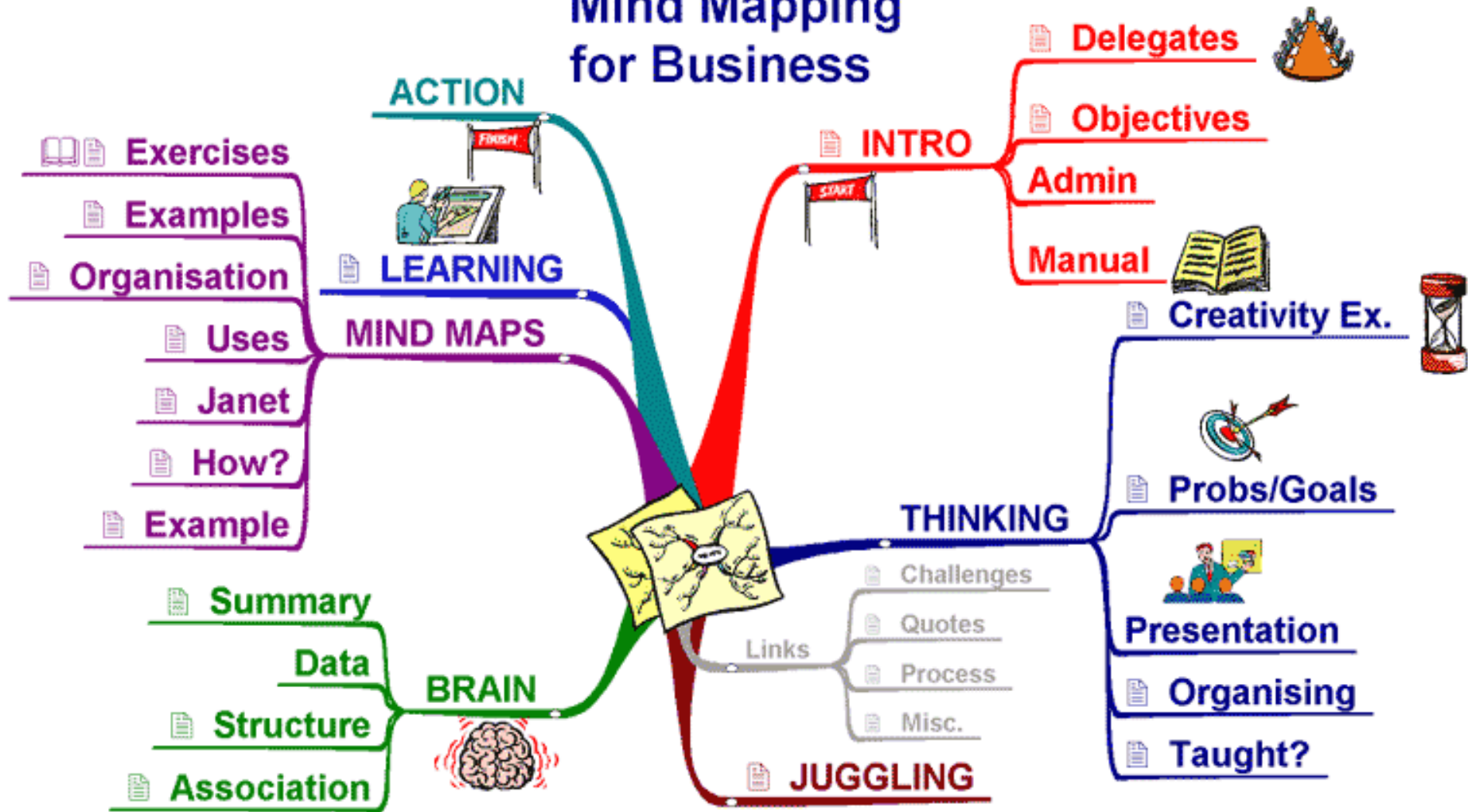
IV Lines

Number

Line Days

Care Techniques

ET Tube

Skin Care

Mindmap Basic Structure

Mind Mapping for Business

www.images.google.comj

Mind mapping

Scenarios

Hospital is notified that hurricane is expected

Patient admitted to MICU with 3 lines, ET tube, urinary catheter. How prevent device – associated infections?

Motivation for learning for Adults

- goal-oriented -- to gain specific objectives
- activity-oriented - seek educational experience to gain the activity
- learning-oriented - pursue learning for sake of learning (have desire "to know")

Educational Program Components

- 1. Plan
  - Assess needs (gap analysis of needs and desired behavior)
  - Develop lesson plan (how the learning will occur)
  - Write goals and objectives
- 2. Teach
  - deliver educational session to achieve goals and objectives
- 3. Evaluate
  - determine whether goals and objectives were met by program

Tools for getting learners involved

- Polling the group
- Subgroup discussions
- Learning partners
- Response cards
- Role play
- Focus groups
- Fishbowl exercise
- Demonstrations
- Games

Educational Plan

- Assess needs
  - Who is audience?
  - What do they need/want to know?
  - Where will session be delivered?
  - Why is it important?
  - How will the ICP know if learning occurred?

Program on Management of TB

- Nursing staff or Housekeepers
- Patient care vs Cleaning
- Transmission
- Classroom, Department, Auditorium
- Provide rationale for TB Mgt
- Patient Teaching, PPE, Other

Methods to Assess Learner Needs

- Self evaluation
- Focus groups
- Surveys
- Tests
- Interviews
- Observation
- Injury Reports

Developing Goals and Objectives

- Goal: overall purpose of learning experience
- Objectives: specific actions learner will perform as result of instruction
  - use action verbs - what is learner expected TO DO?
  - At the completion of this session, the learner will be able to….

Objectives

– verbs should match cognitive level

- Recall -- measures learner recognition of facts, rote recall
  – State, Describe, List

- Application - requires comprehension to discuss or describe (in own words) what was learned
  – Apply, Initiate

- Analysis - requires learner to contrast, differentiate, solve
 – Analyze, Decide, Evaluate
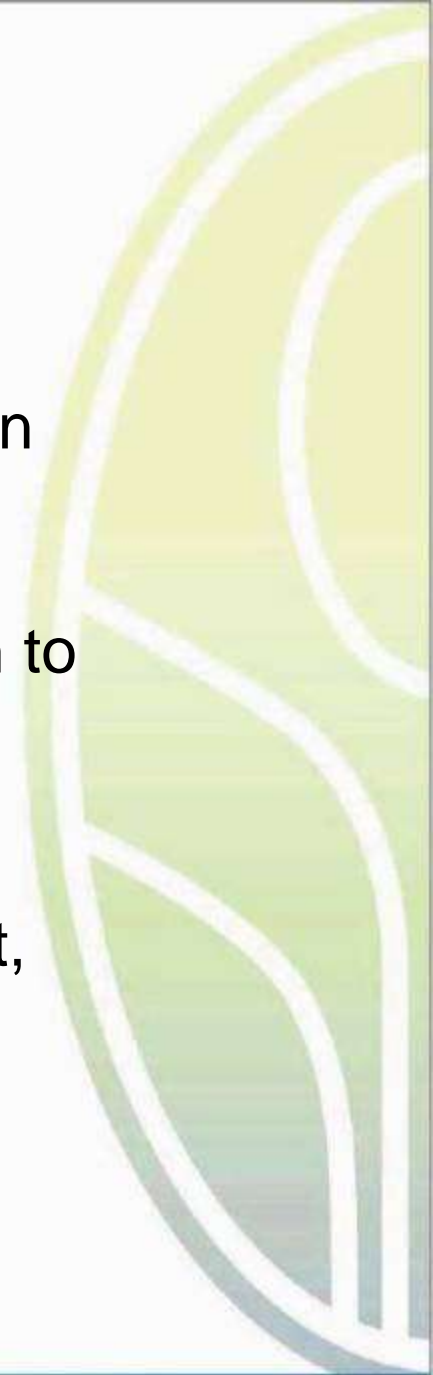
Objectives (2)

- Choose verbs to indicate domain of learning
  - cognitive
  - affective
  - psychomotor
- objectives must be measurable
- objectives clue the learner to content of test or evaluation

IC Goal Objective Examples

- The learner will be able to insert a Foley catheter using aseptic technique

- The learner will be able to describe 3 patient care methods to prevent VAP

- The learner will be able to respond to the human factors in a culture of safety
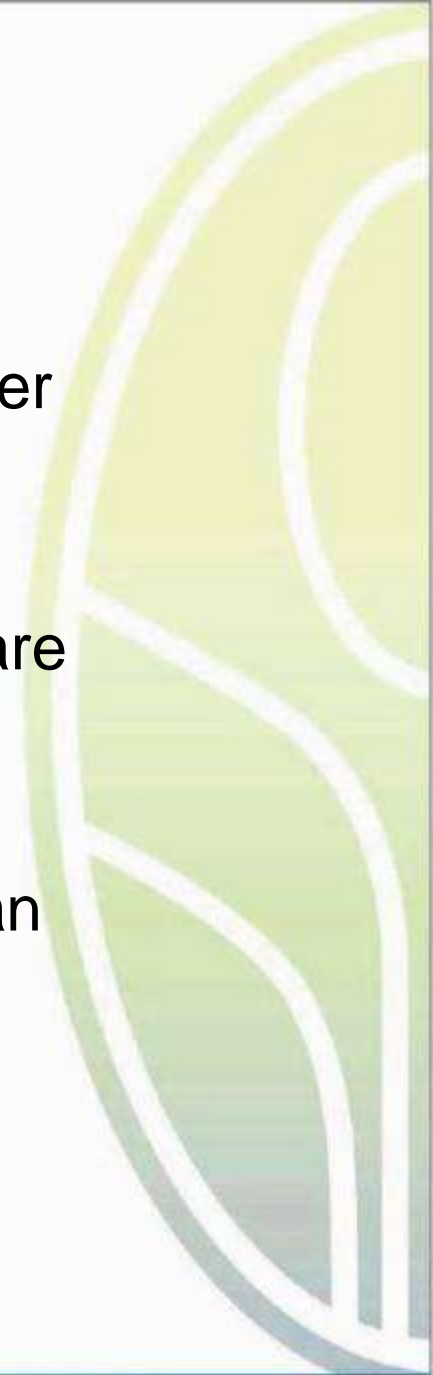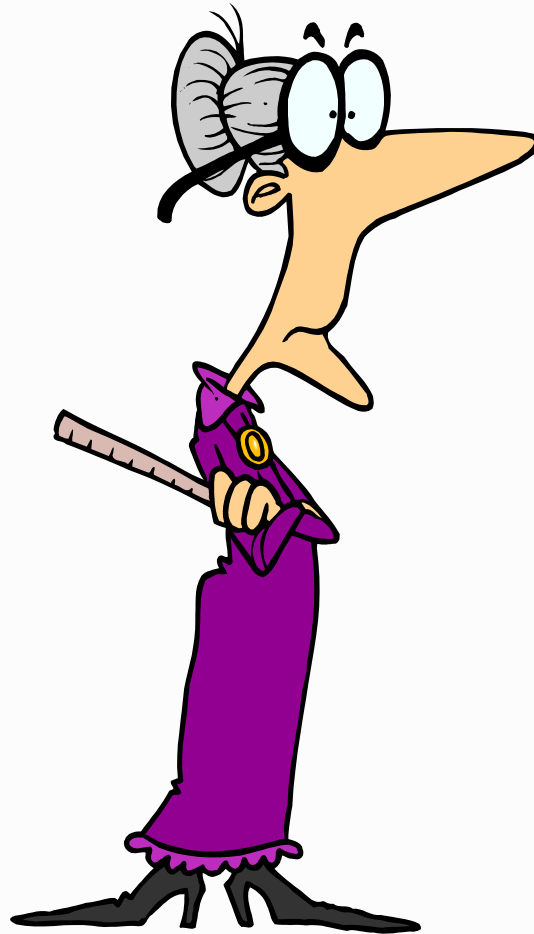
Core Principles of Adult Learning

- The learners have a "need to know".
- Self-directed learning
- Prior experiences
- Readiness to learn
- Orientation to learning and problem solving
- Motivation to learn

Self-directed learning

Prior Experiences of the Learner

Create biases, differences, values and perspectives that shape new learning.

Varicella – own childhood or child's chickenpox

TB – had an older uncle with TB

Hand hygiene – mom taught to always wash hand

Personal and Situational Influences on Readiness to Learn

- age
- health
- life phase
- psychological development
- self concept

Gelula M. The Alan Stoudemire Lecture: residents, students, and adult Learning. Bull Am Assoc Acad Psychiatry. Spring 1998;26;1.

Motivation to Learn

Adults want to

– be successful

– have a choice

– learn something they value

– experience the learning as pleasure

– 3 R's relevancy, relationship, responsibility

Appropriate climate for learning

- Comfortable seating, lighting
- Audio-visual equipment working well
- Eliminate distractions
- Atmosphere of
  - mutual respect
  - friendliness
  - informal and supportive
  - acknowledge questions, opinions

Appropriate climate for learning (2)

- The leaders can enhance understanding and learning retention of participants in these ways:
  - know content
  - try to be visible to all participants
  - make eye contact
  - use handouts and audiovisuals effectively
  - engage participants in discussion, role-play, return demonstration, real-life examples
  - Summarize and review major points

What are the most effective and ineffective instructional methods for adults?

- Lecture
  - straight lecture
  - guided note-taking
  - chalk board/flip chart notes
  - slide-lecture
  - combination of lecture, demonstration, discussion
    - Least Effective Method

Instructional Methods (2)

- Computer-assisted instruction
- Train-the-trainer
- Re-enactment - Role-play
- Personal case history (anecdotes)
- Simulation (e.g., mock isolation room) Multimedia
- Flip charts, slides, transparencies, tapes, videos

Instructional Methods (3)

- Educational cart (mobile unit)
- Multimedia
- Audiovisual aids
  - chalkboards
  - overhead projectors
  - slides
  - videotapes
  - computers

Learning Pyramid

Lecture 5%
(Average Learning Retention Rates)

Reading 10%

Audio Visual 20%

Demonstration 30%

Discussion Group 50%

Practice By Doing 75%

Teaching Others 90%

(National Training Laboratories, Bethel, Maine)

The Learning Pyramid

Average Learning Retention Rates

http://www.tcde.tehama.k12.ca.us/images/pyramid.jpg

Instructional Methods

- Computer-based instruction
- Train the Trainer
- Reenactment (Role Play)
- Case Studies
- Simulation

Computer-Based Training

- Books to Computers
- Passive to Interactive
- Generational Learning Styles

Case Study: An Outbreak of Cutaneous Aspergillosis

Investigations

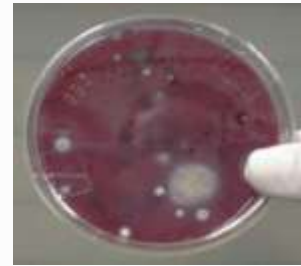### Verify and determine the source of contaminant?

Investigations

To verify and determine the source of contaminant

Case Study: An Outbreak of Cutaneous Aspergillosis

Investigations confirmed:

- Cluster of 4 cases in burn and surgical wounds.
- Traced to outside packaging of dressing supplies.
- Construction in central inventory control area
- Inoculation of large exposed surface areas of wounds by dressing materials.

Infect Control Hosp Epidemiol 1996;17170-172
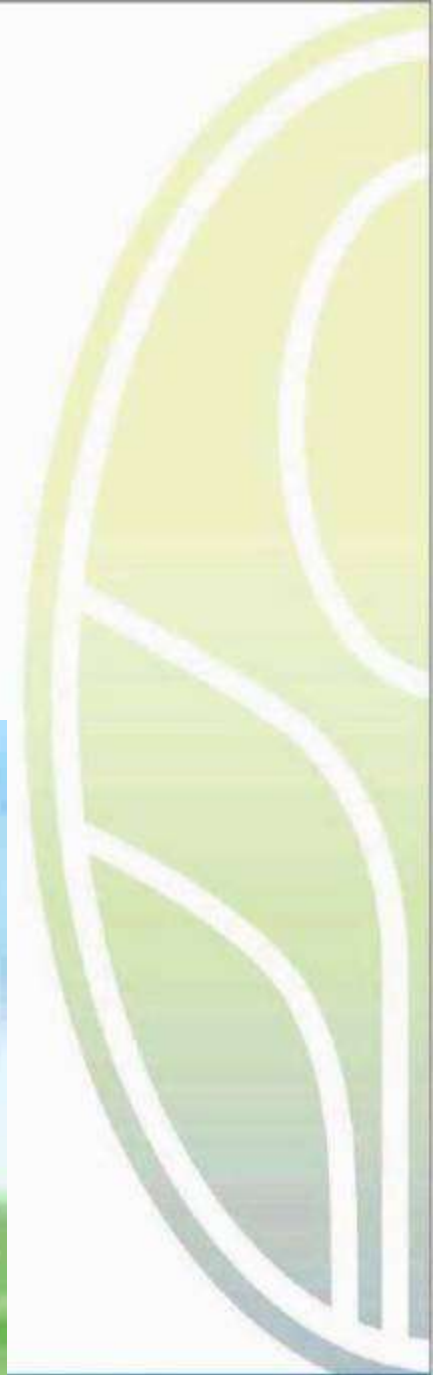
Small Group Tutorials

Hospital Epidemiologist leads a tutorial with physicians about the antibiotic use in patients

ICP meets with ICU nurses to lead a tutorial on preventing VAPS

Instructional Methods

- Self – learning modules
  - Self – paced
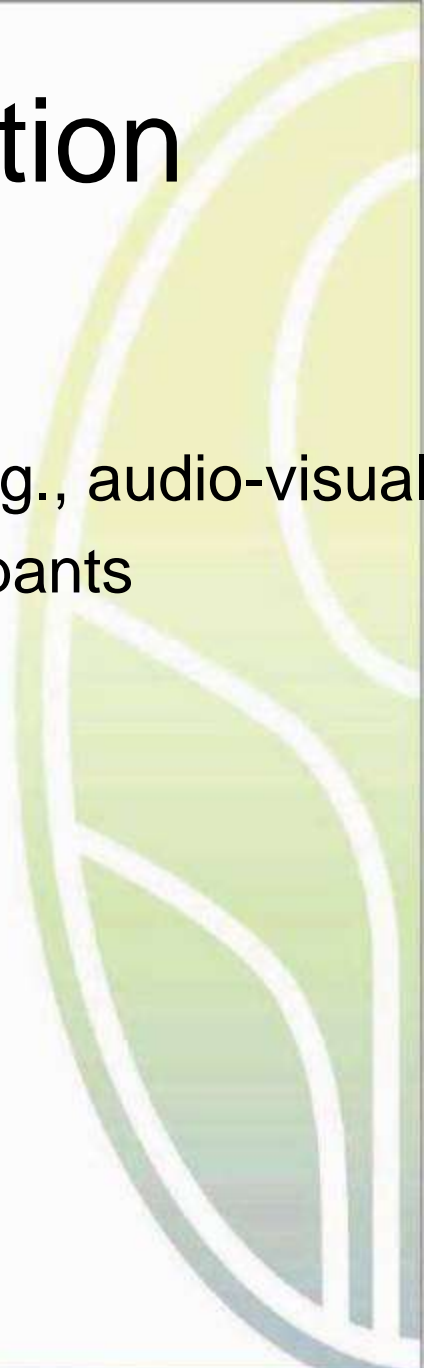- Distant learning – web cast
- Mentoring

Evaluation

- Evaluate behavior change
  - provide evaluation of objectives for participants
  - give feedback to educator
  - provide information to improve next session
  - provide justification and accountability for program

Types of Evaluation

- Formative evaluation
  - conducted during educational session
  - provides immediate feedback
  - allows changes to be made quickly
- Summative evaluation
  - conducted at end of program
  - is used to judge overall effectiveness

Elements of Evaluation

- Appropriateness of program design
- Adequacy of teaching and other resources (e.g., audio-visual
- Knowledge, skills, attitudes learned by participants
- Methods for data collection
  - pre-tests/post-tests
  - direct observation of behavior changes
  - questionnaires
  - interviews

Education and Training

An essential element of ICP education and responsibilities

Acknowledgement and thanks for sharing her materials for this presentation:

Ms Barbara M. Soule, RN, MPA, CIC
Practice Leader, Infection Prevention and Control Professional
Joint Commission International