

Teaching a Procedure

The learning process

- 1. Stimulating the senses
 - Sight
 - Hearing
 - Touch
 - Smell
 - Taste
- 2. Student's response to stimulus
 - 75% of learned through sight
 - 13% hearing
 - 6% touch

Methods

- Several methods may be employed
- Effective teaching follows a DEFINITE, WELL ESTABLISHED PROCEDURE.
- Usually consists of four major steps
 - Warm up
 - Presentation
 - Application
 - Testing

Warm Up

- Prepares minds of students to receive information
 - Instructor must assess whether or not student has knowledge on which new information may be built
 - Must create an interest & desire on the part of the students to want to learn this material
- Arouses interest in the subject
- Each lesson forms foundation to build on succeeding lessons
 - Students usually can interpret new information better in terms of past experiences.

Presentation

- In the warm up students are being prepared to receive new ideas and information and to have their interest aroused in the subject. They receive very little if any new information in the warm up.
- Presentation is where students receive a lesson in a CLEAR, CONCISE and LOGICAL manner so that maximum learning takes place.

Presentation

- May use various methods and devices, usually this differs depending on instructor and circumstances.
- Telling, Showing, Doing method is the norm in medical school/residencies.
- Following the presentation OF EACH MAJOR POINT in the procedure, instructor should check to make sure the students understand the material presented
- At the close of the of the procedure (presentation) period the major points should be summarized
 - This enables students to organize the material in their minds and provide for better retention

Presentation

- At the close of the presentation, students cannot reasonably be expected to have learned all that was discussed in the lesson (depending on the lesson)
- Instruction must continue at this point and is not complete. Remaining steps must be carried out before stating the training is complete
 - Application
 - Testing

Application

- Permits the student to utilize ideas they have acquired in the other steps
- Also offers the instructor an opportunity to observe the performance of each individual and correct steps if necessary under their supervision
- Instructor has opportunity to answer questions “on the fly” or to stop the procedure and correct mistakes before they happen

Application

- The instructor then makes further explanations and gives additional demonstrations
- No new information is taught that was not already given in the presentation step
- Students must be given ample opportunity to practice what they have learned.

Testing

- For procedures, usually done on an informal basis.
- Again it is important for the instructor to try and gauge the comfort of the student with a particular procedure
 - Complexity of the procedure
 - Risk to the patient by the procedure

Core Elements

- Preparation
 - As the instructor it is **your** responsibility to ensure all material needed for the procedure is ready (both physically and functionally)

Core Elements

- Preparation
- Understanding
 - Indications
 - Contraindications
 - complications
- How to manage complications
- Technical skill
- Recap

Preparation

- As the instructor it is YOUR responsibility to ensure all material that is needed for the procedure is available (both physically and functionally).
- Always test equipment before starting to teach someone a procedure.

Understanding

- Instructor must be fairly well acquainted with the procedure in question
 - ABG
 - NGT/Dobhoff
 - IV
 - Central line
 - Chest tube
 - Thoracentesis
- Must understand the indications
- Must understand contraindications
- Must understand complications

Managing Complications

- Must understand and be able to manage complications of the procedure you are teaching
 - More importantly, must be prepared for RARE complications (i.e. this has never happened to me personally, but I have read about it or seen it etc)
 - Be prepared for complications
 - “there are those who have and those who will”

Technical skill

- Practice, Practice , Practice
- Some skills easy to practice without a patient
 - Knot tying
 - IV insertion on a colleague/intern
- Going over steps repeatedly in your head, or writing them down and looking at them before going to do a procedure (bathroom reading)

Recap

- After a procedure always recap all of the steps.
- Things that went well
- Things that went poorly
- How to improve/not make the same mistake again
- Stress the importance of flexibility and adaptability
 - Don't be afraid to tell student about your own mistakes

Questions?