

Patient Training and Staff Education

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Outline

- This talk reviews the recommended steps to prepare the nurse to educate patients for home PD. Continuing education for the nurse and the roles of nephrologists and clinic administrators are also addressed. In addition, the principles of adult learning are applied to the specific needs of home PD patients who must learn both procedures and problem solving. A literature review is included to evaluate research in patient education for peritoneal dialysis.

Nurses as teachers:

- Most health professionals have little or no formal background in the principles of education
- The complexity of the task of teaching is often overlooked
- Many (*especially MD*) assume the skills will develop automatically
- Even with the best intentions, the results may be haphazard, inefficient and ineffective

www.ISPD.org

Bernardini J, Price V, Figueiredo A. ISPD Guidelines/Recommendations.
Peritoneal Dialysis Patient Training, 2006.
Perit Dial Int 2006;26(5);625-632

A vertical rectangular logo with a gradient background from red at the top to yellow at the bottom. The text "PD Patient Training Guidelines" is written in a bold, white, sans-serif font with a black outline, centered within the rectangle.

**PD Patient
Training
Guidelines**

- ISPD Nurse Liaison Committee developed a video for preparing nurses to teach patients to compliment the published ISPD Guidelines.
- Guidelines and handouts available for download
- May be used for individual nurses or for groups of nurses

How are nurses prepared to train home dialysis patients?

- **Many simply given the job**
 - **Assumption that the skills will be acquired**
- **Sent to a course on home therapy**
 - **Often has little or no instruction on teaching /learning**
 - **Assumption that if know how to do dialysis, can teach it to the patient**
- **Sent to a course on teaching and learning**
- **Sent to an experienced training nurse for mentoring**

***The role of doctors and administrators is to plan the preparation and continuing education of training nurses.*

Becoming a Patient Educator

- Learn the principles of education
- Develop training skills
- Find a mentor
- Never be complacent about acquiring new skills and new methods of teaching

After one becomes an experienced trainer, should be a mentor for other nurses.

Who is the learner?

- Patient only
 - ISPD recommends 1:1 nurse patient ratio for PD
 - Some centers have 1:2 or 1:3 or even 1:4 ratios
 - There are no studies to confirm effectiveness
 - There are no recommendations for home HD training ratios.
- Patient with a partner
- Partner only
- Parent / Guardian

The Science of the Learner

Ballerini and Paris, KI, Nosogogy: When the learner is a patient with chronic renal failure, 2007, 70, 122-126.

| <u>The Learner</u> | PEDAGOGY dependent | ANDRAGOGY independent | NOSOLOGY dependent aiming to independence |
|----------------------------|-------------------------------|--------------------------------------|---|
| <u>Previous experience</u> | of little worth | rich resource for learning | something to modify |
| <u>Subjects</u> | learn what society expects | learn what they choose to know | learn what renal staff expects and what they need to perform |

What is to be learned?

- Specific motor skills
- Concepts
- Procedures
 - which require both motor skills and concepts
- Problem solving

Learning is not just memorizing facts.

A Teaching Plan

- An outline or a detailed course
- Teaching aids
 - Mannequin or apron with practice PD catheter
 - Blackboard, felt board or paper board
- Video or audio tapes, internet

Where to train?

clinic

hospital

home

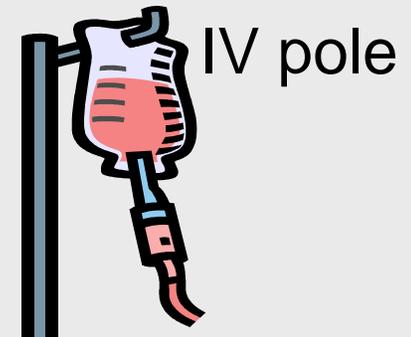
alternate site

No other activities in the room during training

A room with a door for privacy and quiet

Work surface and sink for hand washing

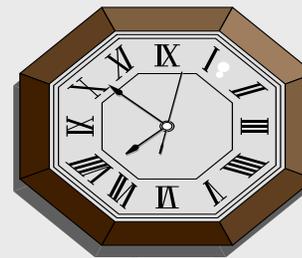
Chair for patient rest



Able to wash up spills



scale



clock



How long should training last?

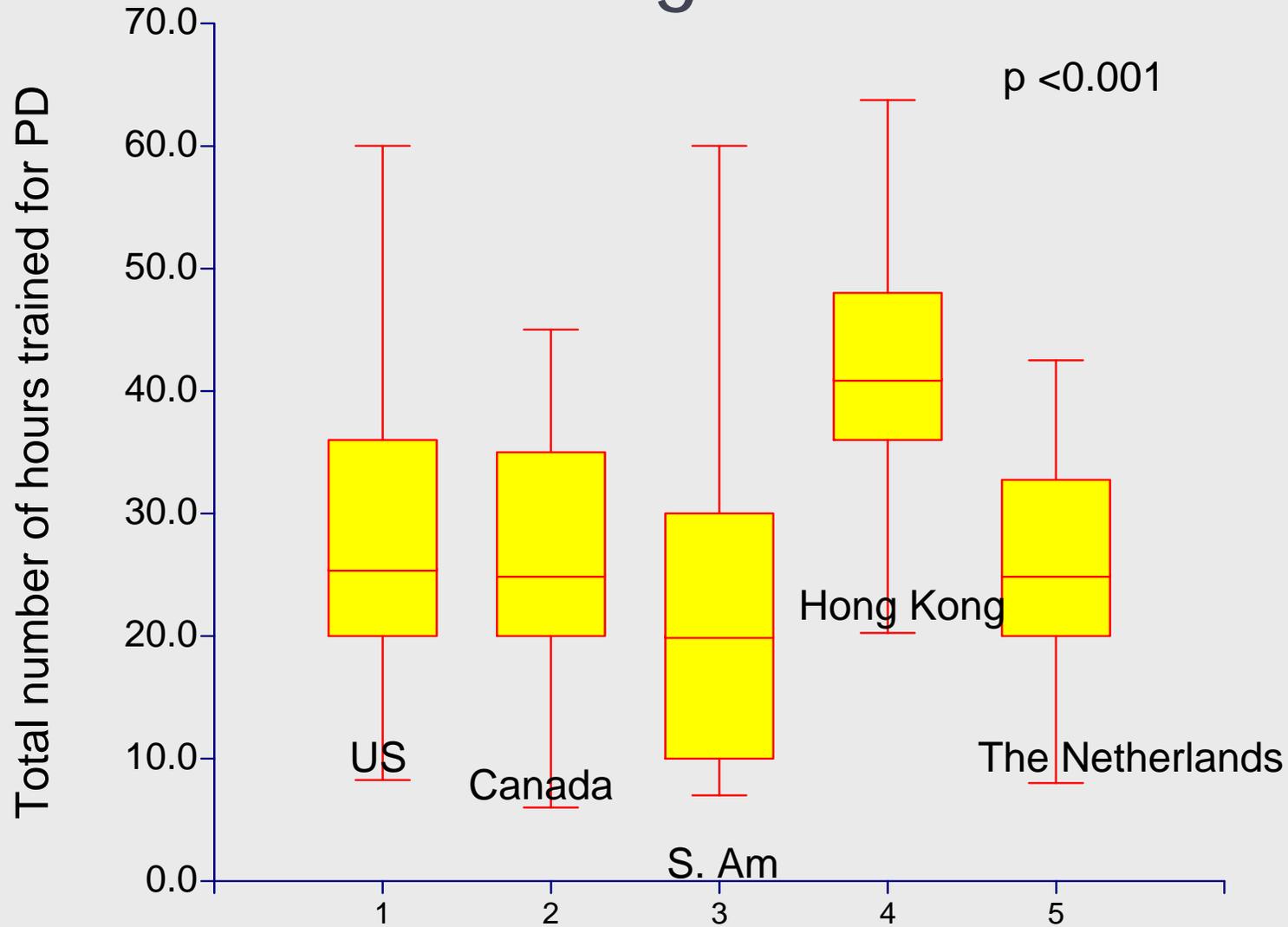
- There are no randomized trials to compare the length of training with outcomes
- Training should continue **until** the patient can
 - safely perform all required procedures
 - recognize a contamination and an infection and appropriate responses

How do nurses train patients today?

Bernardini J, Price V, Figueiredo A, Riemann A, Leung D. International survey of peritoneal dialysis training programs, *Perit Dial Int* 2006;26(5):658-663.

- ISPD Nurse Liaison Committee distributed a survey in 2005 in US, Canada, S. America, China and The Netherlands.
- 317 responses from PD nurses

Total Hours Training for PD



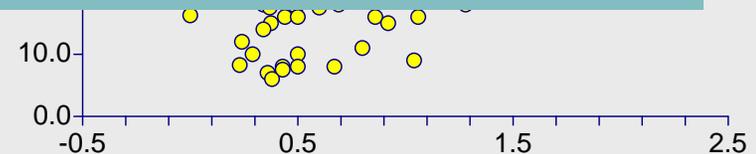
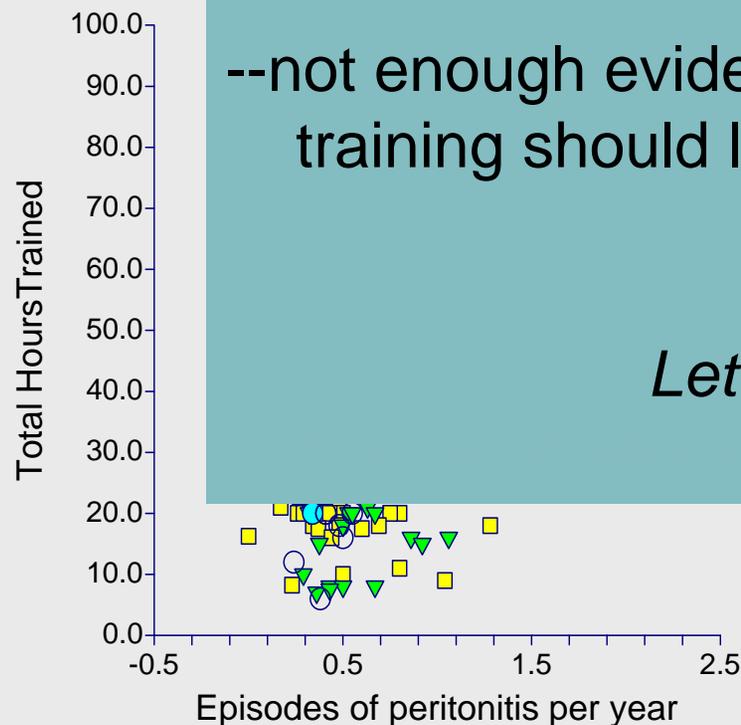
Relationship of Hours Trained to Peritonitis:

Relationship of Days Trained To Peritonitis:

What can we conclude from the survey?

--not enough evidence to suggest how long training should last.

Let's look at other research...



New Directions in Peritoneal Dialysis

Training Hall G et al. NNJ 2004;31(2)

- Centers randomly assigned 621 patients to
 - Enhanced training, 246 patients
 - Standard training, 374 patients
- Follow-up for 418 patient years, 1.5 years/patient
- Enhanced training group had lower infection rates for both ESI and peritonitis.

Pediatric Peritoneal Dialysis Training: Characteristics and Impact on Peritonitis Rates. Holloway M. PDI 2001;21

- Evaluated 76 pediatric PD training programs
 - Lowest peritonitis rates found in
 - Programs with >15 patients
 - Programs with longer training time focused on theory and technical skills

Influence of Peritoneal Dialysis Nurse's Experience on Peritonitis Rates.

Chow KM et al, CJASN;2:2007

- Retrospective study
- Evaluated nurse trainer's length of PD experience with patient incidence of peritonitis
 - Paradoxically, found that patients trained by nurses with the **most** experience had the highest rates of peritonitis
 - Speculated that those who have practiced PD for many years may not be as familiar with the substantial changes in our understanding of adult learning and curriculum

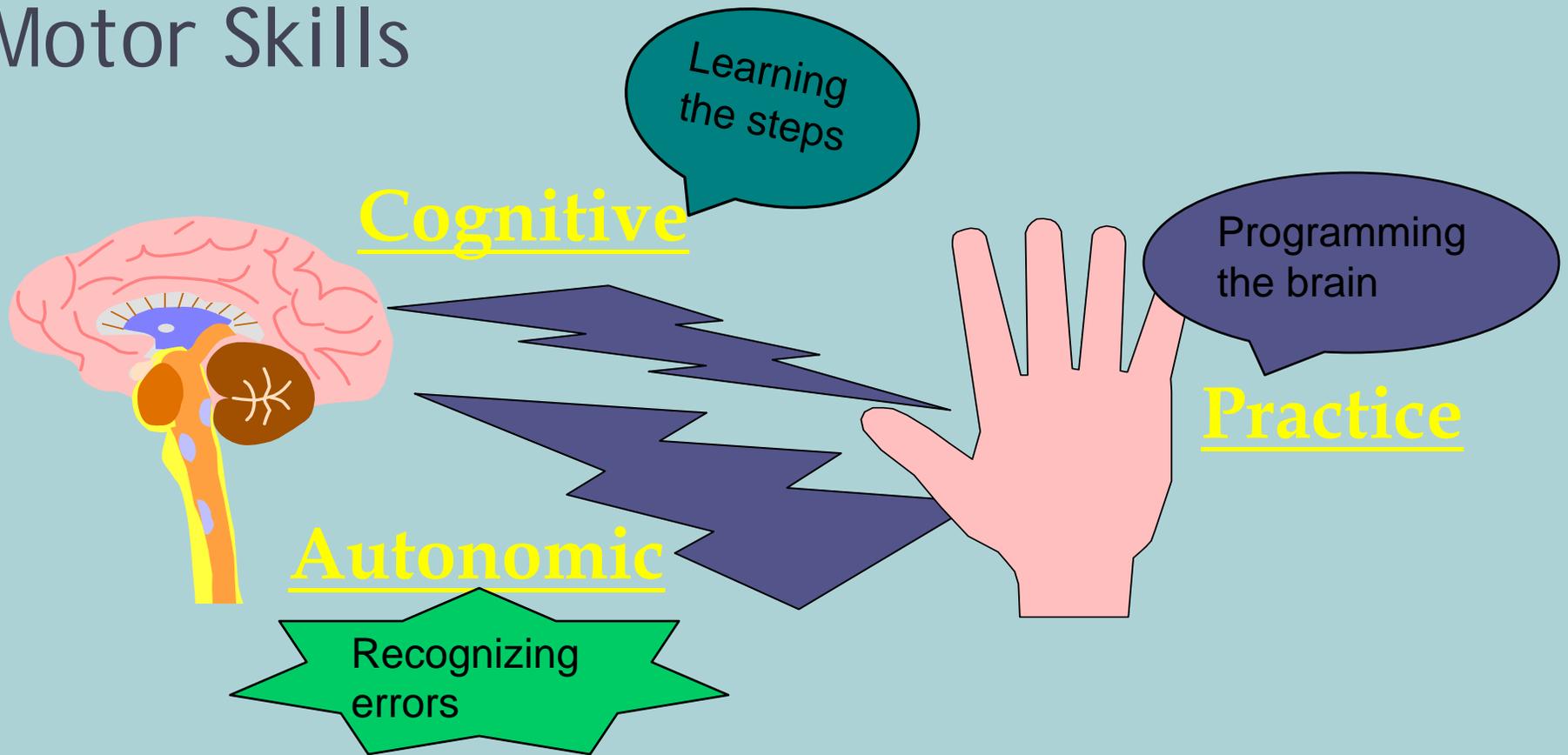
How should the patient be taught?

- Tell the patient
 - what they are going to learn
 - what they must do
 - what the trainer will do
 - how both will know that learning has occurred

Example: The nurse says...

- You are going to learn how to make a sterile connection from the bag to your catheter.
- First you will learn the steps of the procedure.
- You will watch me as I do the steps, and then read aloud each step as I do it.
- When you are able to say all the steps in the right order, you will perform the steps on the mannequin while repeating aloud each step.
- You will be ready to do the connection on your own catheter when you can perform the steps without a mistake 3 times in a row.

Acquiring PD Procedural Motor Skills



- Muscles learn to follow the brain's instructions through 3 distinct stages of learning.

Learning Motor Skills

- **STEP 1:** Patient describes or reads each step; then trainer performs them
- **STEP 2:** Patient does NOT practice procedure until able to describe each step
- **STEP 3:** Patient practices the procedure using the mannequin with PD catheter, describing each step as performed
- **STEP 4:** When able to perform Step 3 successfully, patient performs procedure using own catheter

Teaching about peritonitis:

- Teacher describes a symptom: ask patient to guess if it might be peritonitis
- Use of pairs
 - One very likely, one very unlikely
 - Move on to another pair not so easily differentiated



Clear



very cloudy



clear



slightly cloudy

Learning Procedures

- A series of motor skills
- If demonstrated from start to finish, the mind sees them together and stores them that way.
- Each part of a procedure may be taught separately but must then be reassembled in order

Rules of Practice

- Never unsupervised until patient is able to do successfully
- No practice until steps accurately described
- Always practice on mannequin until skill mastered
- Immediate feedback from the trainer
 - Tell what doing right
 - Stop when mistake made (NOT LATER)
 - Redirect learner to place where no mistakes made
 - Guide learner through problem areas
 - Avoid “don’t do this”
 - Do not teach **why** during motor skill learning

Tips from the pros...

- Most people learn **1/3** of what is taught
- Combining visual and audio messages increases learning
- No more than 3-4 key messages / hour ---sessions ≤30 minutes---breaks every 2 hours.
- Try not to get ahead of the learner by telling them what to do.
- Most personal learning experiences are NOT helpful as teachers
- Education is not just repeating directions
- *Patient motivation* does not directly increase learning

Problem Solving

- Define problem
- List solutions----have patient pick one
- Evaluate results
- Try another solution if needed
- Encourage to seek advise from others

Example of problem solving:

Nurse: “You notice that the fluid is not clear when you check it before going on the cyclor one night. What should you do?”

- Wait until morning to see if you feel sick?
- Check the next day to see if it is still not clear?
- Call the dialysis nurse right away?

Nurse: “What do you think might be the problem?”

- You have the flu
- You have peritonitis
- There is nothing wrong

Re-Training

Russo et al, KI 2006 70,S127-132

- Analysis of compliance to identify need for retraining
- 2 phase study:
 - Patient Questionnaire (353 patients)
 - Home visit / score card
- Re-training needs greater for patients
 - <55 years old
 - lower education
 - <18 months on PD
 - >36 months on PD

Evaluating your training program:

- Track patient outcomes
 - Infection rates
 - peritonitis, ESI, TI for PD
 - ESI and sepsis for HD
 - Hospitalization rates
 - Deaths
 - Transfers off home therapy
- Periodic reassessments of patient technique and problem solving

Summary

- Nurses can provide outstanding training for their patients if they apply the principles of learning.
- We need to establish standards for home training (PD and HD).
- We need to evaluate the outcomes of various training methods to determine the best approach for patients.
- Future research
 - Randomized trials of different training techniques, times, places, trainers.
 - compare outcomes of current practices

Question #1

- The principles of adult education indicate that the best way to teach PD to patients is to
 - A. Provide them with a video to practice on their own.
 - B. Always practice doing exchanges using their own PD catheter.
 - C. Explain the principles of sterile technique after they learn how to do a procedure .
 - D. Begin to practice procedures only after learning the steps while watching the trainer perform them.
 - E. Determine if a patient is highly motivated as they will learn at a much faster pace.

- Question #1: Correct answer = D

Question #2

- Which of the following statements about PD patient education is true?
 - A. A thorough knowledge of PD will adequately prepare the nurse to train patients.
 - B. Patients with the most experienced trainers will have the lowest rates of peritonitis according to a recently published study.
 - C. The number of hours and days needed to train a patient for PD is well established in the literature.
 - D. The patient must be able to recognize a contamination and know the appropriate responses before being sent home from training.
 - E. The role of the nephrologist is to assure that patients are carefully selected for PD.
 - F. A skilled trainer can assist with clinics and other duties while training a patient for PD.

- Question #2: Correct answer = D