FACULTY DEVELOPMENT WORKSHOP

SURPRISES IN CLINICAL TEACHING

I. INTRODUCTION: CONTENT AND PROCESS

A . Tom has been discussing ways of honing skills that transmit the content, the science of medicine

B. These approaches to clinical teaching generally are

1. Principle-based (enthusiasm, knowledge etc.)
2. Skill-based (behavioral techniques, communicate goals; increase retention); don't criticize; reinforce

C. Approaches that focus on the individual (teacher)

relationship of inquiry gut stuff

II. PROCESS IN MEDICAL PRACTICE AND PRECEPTING

A. As non-physician, I'd like to talk about how we teach the process of medical practice

B. Equally important but much more ineffable task

C. This complementary approaches emphasizes the dyad (of teacher/learner)

1. Need to pay attention to process between teacher and learner
2. Focus is on development of
   a. problem-solving strategies
   b. ability to cope with change

III. PARALLELS BETWEEN CLINICAL PRACTICE AND CLINICAL PRECEPTING

A. Assumptions of clinical practice

1. Change (in doctor-patient interactions) is ubiquitous
2. There are no routine cases
3. Good clinicians are good problem framers and experimenters

B. Assumptions of clinical precepting

1. Change (in interactions between teacher and learner) is ubiquitous
2. There is no routine precepting
3. Good preceptors are good problem framers and experimenters

IV. HOW TO FRAME PROBLEMS (AS PHYSICIANS/AS PRECEPTORS)

A. Two zones of professional practice exist as physician and as teacher

1. Zone of Mastery - bioscience of medicine/teaching
2. Indeterminate Zone - process of medicine/teaching
   a. Cases are unique
   b. Cases occur in social, cultural, even political contexts
   c. Conflict (in values, in interpretation of information, in understanding roles of patient/physician, learner/teacher) and negotiation exist
   d. There is ambiguity and multiple understandings

(SLIDE ONE)

VI. THE REFLECTIVE PRACTITIONER/PRECEPTOR

A. ~~Knowing-in-action~~ - biomedicine agreed upon by physician and patient, teacher and learner

B. Surprise - can come from patient or learner; goal must be to recognize and respond

C. Reflection-in-action

1. On-the-spot hypothesis formulation

2. Can only be taught through an initial awareness and subsequent sharing of one's own reflection-in-action

D. Experimentation

E. Feedback and more surprises

F. Reflection on the action taken

VII. MODEL I AND MODEL II TEACHING APPROACHES (SLIDES 2 & 3)

A. Irony is that we want students to develop an ability to deal with the process of practice, but we tend to adopt teaching methodologies from the biosciences to teach this understanding

B. Premises of Model I/Model II

C. Descriptions of Model I/Model II

VIII. RECOGNIZING SURPRISE/INTRODUCING SURPRISE

A. A good physician (teacher) not only learns to recognize surprising twists and turns in the clinical or teaching encounter

B. Also is willing to introduce surprises for the therapeutic benefit of the patient, or the educational advancement of the learner

C. When this occurs, must be done in a compassionate and empathic manner, so as not to frighten or make defensive patient or learner (SLIDE 4)

IX. VIDEOTAPE PRESENTATION: SURPRISE!

A. Note Model I and Model II behaviors (video 1)

B. Identification of surprise from learner

C. What is this interaction really about? (video 2)

1. Underlying theme of interview

a. student is opinionated

b. treat 'em and street 'em

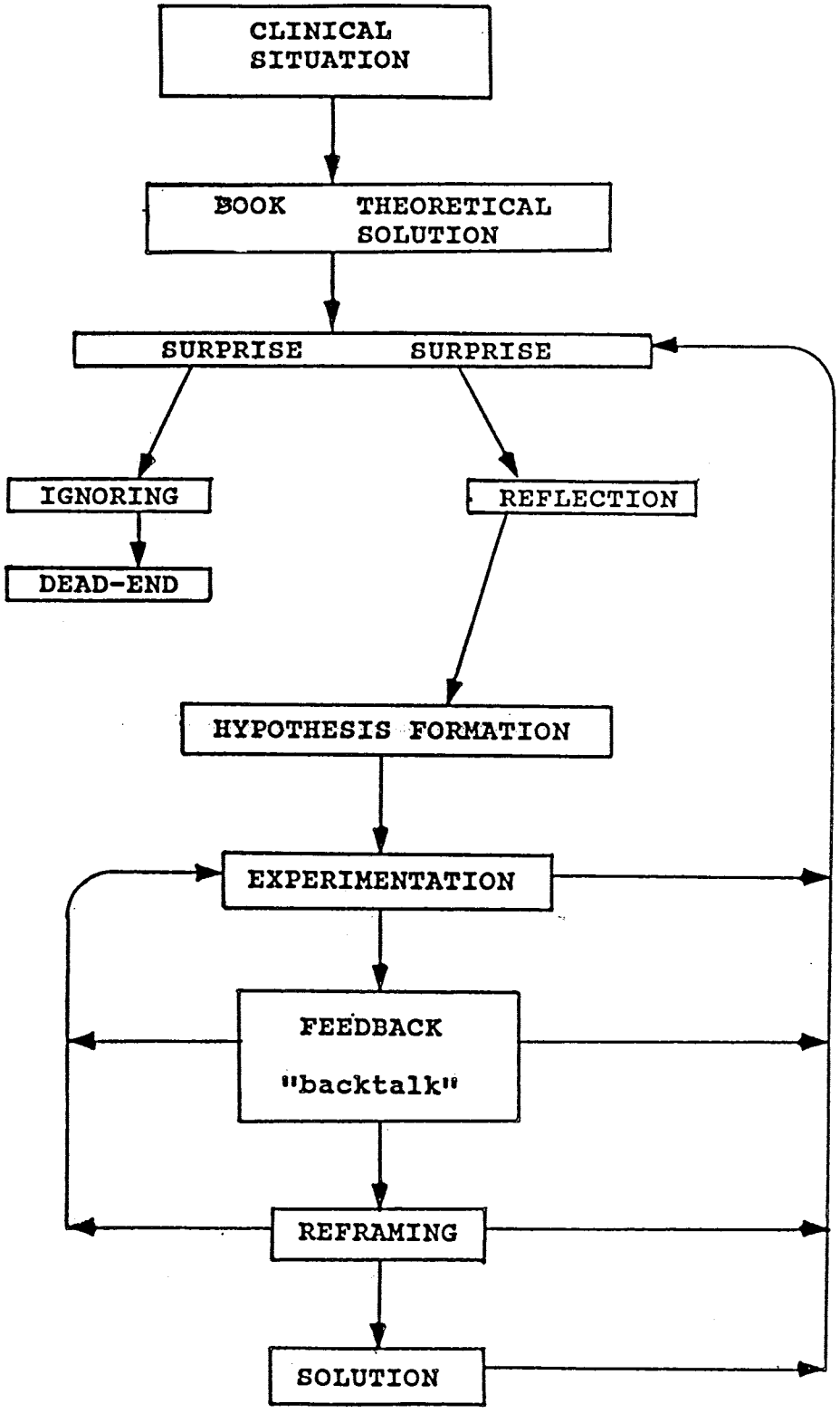
c. no case is routine

2. Goals of teacher

a. Assessment of cardiac distress

b. Avoid arrogance and laziness

REFLECTION IN ACTION



Model I and Model II Teaching/Learning Premises

Model I	Model II
1. The teaching problem is seen as something in itself	1. The teaching problem is seen as part of and related to a shifting context
2. Teacher focuses on the problem	2. Teacher works with learner's understanding of the problem
3. Goal is to discover the problem. The problem only has one version	3. Both teacher and learner create an understanding of what the problem is. Many versions of the problem exist
4. Change in the learner can be directed from outside, by the teacher; therefore it is predictable	4. Change in learner evolves spontaneously from inside so never know completely what it will be or how or when it will happen

Model I and Model II Teaching/Learning Behaviors

Model I	Model II
1. Win and avoid losing (Always be right and avoid being wrong)	1. Find win-win solutions
2. Achieve your objective	2. Exchange perspectives and contexts: explore possibilities
3. Be rational, logical	3. Include the intuitive risk-taking
4. Ignore negative feelings in self and others	4. Acknowledge emotional responses of self and others
5. Maintain unilateral control	5. Mutual control
6. Closed, defensive	6. Open, risk-taking, interactive
7. Task-oriented	7. Process-oriented

THOUGHTS FOR FACULTY DEVELOPMENT WORKSHOP

most approaches to clinical teaching have been either principle-based (enthusiasm, knowledge etc.) or behavioral, skill-based (examine content, length of communication).

defense of model: why this approach? how does it facilitate mastery?

is time the problem? why do we structure teaching so as to prevent a reflective inquiry process?

development of the following teaching skills:
attention to cues which identify situations as non-routine and ambiguous
recognition of feedback loops in the interaction system of doctor and patient
on-the-spot experiment and risk-taking
restructuring and reformulating strategies of action
generation of multiple solutions

we don't want jr. faculty simply to produce behaviors (teaching) or products (research); we want them to start to <u>be</u> a teacher or a researcher; we want them to be driven not only by external criteria (these are the qualities of an effective teacher; these are the CAP requirements for academic promotion), but also to begin to develop an inner experience of what being a teacher/researcher/clinician is like

what are the positive hooks for them - not just in the abstract, but in the process? where do they go wrong? what underlies talking too much, not listening, avoiding writing

when teaching is effective, what happens? what do they observe in the learner, in themselves? what about for research?

APPLYING THE CONCEPT OF REFLECTIVE PRACTITIONER TO CLINICAL FAMILY MEDICINE

adopted from Schon, D. A.,
Educating the Reflective Practitioner
Jossey-Bass; San Francisco, 1987

I. WHAT IS THE REFLECTIVE PRACTITIONER?

A. Technical rationality basis for science and medicine

1. Teaches that practitioners are instrumental problem solvers who select technical means best suited to their particular purpose

2. Practitioners systematically apply theory and technique derived from rigorous professional, scientific knowledge, preferably research-based

   a. in familiar situations, practitioner can solve problem by routine application of facts and rules
   b. unfamiliar situations can be approached by rule-governed inquiry

      1. practitioners follow rules for data gathering, inference, hypothesis testing
      2. able to make precise, logical connections between presenting situation and body of professional knowledge

3. Objective view

   a. all disagreement, confusion resolvable by reference to the fact
   b. professional competence technical expertise

B. Other ways of experiencing practice

1. Indeterminate, ambiguous, ill-defined, swampy
2. Uncertain, unique, open to value conflict

C. Professional artistry

1. Situations of problematic diagnosis or analysis in which practitioners not only follow rules of inquiry, but sometimes invent new rules, on the spot

D. Constructionist viewpoint

1. What we perceive and believe rooted in worlds of our own making what we come to accept as reality
2. Practitioners as worldmakers
3. Solutions not applied, they are constructed
4. When a practitioner "sets" a problem, he chooses and names the things he will notice

5. Problem-solving an ontological process-worldmaking
6. In interviewing pt., physician uses active listening to construct the meaning of the pt.'s material

7. Constructing frames

   a. must solve not only technical problem, but also reconcile, integrate, or choose among conflicting frames of a situation so as to construct a coherent problem worth solving
   b. defining a problem through techniques of naming, framing
   c. constantly shaping and reshaping practice siutations to fit frames

E. Professional artistry

1. Definition - competence by which practitioners actually handle interdeterminate zones of practice
2. Several components - problem-framing, implementation, improvisation
3. Attitude that artistry is no more than style grafted onto substance of professional knowledge

   a. in fact, improvisation, reframing essential for professional competence
   b. not stylistic, but fundamental

4. Hard to apply to practitioner

   a. Think of artist as creating things, practitioners as dealing with things as they are
   b. patient-physician realities are mutually negotiated
   c. truth not unilateral, but artistic

II. ANALYSIS OF PROFESSIONAL ARTISTRY

A. Knowing-in-action - characteristic of artistry

1. Tacit knowledge - what we know but have difficulty articulating
2. Our knowing is in the action, part of it
3. Spontaneous, skillful execution of the performance
4. Possible to make a description of the tacit knowledge implicit in behavior by observing and reflecting on actions

   a. this process distorts the actual knowing-in-action
   b. static, whereas knowing-in-action is dynamic

B. Unique problems, outside categories of existing theory and technique

1. Surprise - unexpected

a. respond by ignoring, trying to continue to follow rules
b. respond by reflection, often in the presence of action (reflection-in-action)
c. this process serves to reshape what we are doing while we are doing it
d. must rething current knowing-in-action in ways that go beyond available rules, facts, theories, operations
e. generates restructuring strategies of action, understandings of phenomena, ways of framing the problem
f. produces on-the-spot experimentation: thinking up and trying out new actions

2. Frame experiments

a. imposes a kind of coherence on messy situations
b. each frame experiment contains the consequences and implications of the chosen frame

3. "Back talk" - framing efforts may provoke unexpected outcomes

a. situation endowed with new meaning
b. must listen and reframe problem again

4. Designing

a. problem framing
b. on-the-spot experimentation
c. detection of consequences and implications
d. evaluation of those consequences and implications (and limitations)
e. back talk and response to back talk

5. Not trial-and-error experimentation

a. not random, haphazard
b. implies absence of reasoned connection between prior errors and subsequent trials
c. thoughtful invention of new trials based on appreciation of results of earlier moves

C. New piece of music played impeccably

a. don't know in advance where it is heading

b. sense at each moment the direction of its development
c. player has own performance direction, but sensitive to lines of development laid down by rest of orchestra, music
d. Eskimo carving: Ah, seal
e. Michelangelo: Looking for shape trapped in stone

III. HOW TO UNDERSTAND AND TEACH THIS PROCESS

A. Must consider that knowledge of researchers is not the only useful knowledge; that sometimes it is not useful at all

B. We distance ourselves from the kinds of performance or practice we need most to understand by saying such excellence is not understandable, not teachable

C. Coaching model

1. Emphasis on learning by doing
2. Students learn by practicing the performing of that at which they seek to become adept
3. Helped to do so by senior practitioners
4. Assumption that talented students can learn by exposure to master practitioners

D. Learning environment

1. Setting relatively low in risk
2. Freedom to learn by doing

a. importance of employing both inner and outer views of action
b. action as observed and action as felt

3. Access to coaches who can initiate students into traditions of the profession
4. Coaches who can help by the "right kind of telling"

E. Models of coaching

1. Techniques - demonstration (and imitation; specific instructions; advising, suggesting; questioning, criticising; prioritizing, proposing experiments
2. Joint experimentation - process of collaborative inquiry

a. coach helps student formulate goals student wants to achieve
b. then by demonstration or description, explores different ways of producing them

c. student needs to be able to say what he wants to produce
d. then coach, with superior knowledge, may generate variety of solutions to problem

3. Follow me!

a. coach improvises whole designlike performance
b. within this, executes local units of reflection-in-action
c. student must observe coach and try to follow
d. student must put own goals, ideas into abeyance

4. Hall of mirrors

a. interaction of student and coach reenacts some aspects of student's practice
b. opportunity for modeling redesign of this practice
c. important for coach to be able to make explicit his own confusions in authentic way
d. coach models for student way for seeing error and failure as opportunities for learning
e. let's learn from our own interactive process what you need to do with your patient

IV. THE TEACHING PROCESS IN DEPTH

A. Coach and student initially in state of frame conflict

1. Confusion and mystery reign
2. Meanings held by coach and student incongruent
3. Resolution depends on skill of coach to engage in reflection-in-action

B. Reflection-in-action (learning and doing) depends on cultivating certain modes of interpersonal behavior

C. Models I & II

1. Model I -

a. win/avoid losing
b. achieve your objectives
c. avoid negative feelings
d. be rational
e. maintain unilateral control
f. unilateral protection of self and/or others
g. closed, defensive

2. Model II -

a. people can exchange information, even about sensitive matters

b. mutual control
c. bilateral protection of self/others
d. open, high risk-taking

D. Barriers to learning professional artistry

1. Students tend to espouse Model II type behavior, but demonstrate Model I
2. When students feel vulnerable to threat, produce "automatic intercepts

a. automatic, Model I responses which block efforts at Model II
b. this cycle provoked primarily by fear of being or appearing incompetent

3. Incompleteness theorem:

a. do not try to be complete or perfect
b. do not be afraid to be corrective on-line
c. advocate your position clearly and combine with invitation to challenge and correction

4. Value of slowing down interaction process to analyze
5. Protectionism - another block to learning

a. risk aversion and passivity
b. avoidance of confrontation
c. fear of hurting others or self

6. Students threatened by master's expertise

a. plunging into doing without knowing what one needs to do provokes feelings of loss; easy to be defensive
b. protect themselves from learning anything new

7. Master feels need to protect his artistry

a. fear of student misunderstanding or misusing
b. may withhold what they know

8. Adversarial relationship

a. coach and student tend to keep thoughts and feeligs private
b. student sometimes exchanges doubt for true belief-stifles inquiry, becomes ideology
c. mystery and mastery approach - no reflection on process of how you get from one point to another
d. undisccussability and indescribability reinforced

E. Coach's role

1. Must be constantly asking himself what students are learning
2. Where students are stuck, where they are stuck
3. How students are interpreting the "help" they're receiving
4. Must deal with student's defensiveness, confusion
5. Both coach and student depend on other's awareness of his own expeience, ability to describe it, and willingness to make it usable
6. Affective dimensions of relationship important
7. Escaping learning binds - depends on coach's ability to reflect on what has gone wrong
8. Must employ both designing and reflection-on-designing; description of designing and reflection-on-description

F. Learning outcomes

1. Closed-system vocabulary/ substantive understanding
2. Unitary procedures/ holistic grasp
3. Narrow and superficial/ broad and deep
4. Overlearning (true believer, rigid) / multiple representations

TEACHING THE TEACHERS: APPLYING A REFLECTIVE METHOD TO FACULTY DEVELOPMENT ISSUES

RATIONALE:A key issue currently facing academic family medicine is the acquisition, retention, and promotion of junior faculty. In many institutions, there is a disturbingly high attrition rate among junior faculty (Yves, can we provide any documentation to substantiate this?). Junior faculty frequently find themselves overwhelmed and mystified by the world of academia. These realities suggest an imperative to improve the socialization by which these individuals make the transition from residency to academic family medicine. As a discipline, we have consistently addressed many of the important content areas of faculty development. We now need a more thoughtful and attentive approach to the process of faculty development.

Reflective methodology, an approach grounded in constructivist, relativist theoretical perspectives, maintains that individuals engaged in practice professions need to learn to interpret, rather than identify, problems; and construct, rather than apply, solutions. It argues that learning how to restructure ways of framing problems and strategies of action are key concepts in successful real-world application of theoretical skills. Further, effective practitioners must be comfortable with on-the-spot experimentation, sensitivity to social and environmental feedback, and have the ability to continually reframe and modify the meaning of a given situation. Reflective methodology emphasizes both inner and outer views of action; ie., action as it is observed, and action as it is experienced.

Recently, there has been much interest in the concept of mentoring, and an urgency directed toward developing mentoring programs within the discipline of family medicine. This workshop will explore how reflective methodology can enhance and focus the process of mentoring. The workshop will begin with an examination of the question: "What is a good academic family physician; what can I do to develop these qualities in junior faculty; and what motivates me to dedicate time and effort to this process?" The second phase of the workshop involves two potentially problematic aspects of academia, teaching and research, and how reflective attitudes and skills can help clarify their development in junior faculty.

EDUCATIONAL GOALS AND OBJECTIVES:
Participants will achieve the following:
1) Understanding reflective methodology as it applies to the process of both teaching and research.

2) Developing reflective techniques to function as an effective mentor (or mentee).

3) Learning reflective skills to address barriers and resistances to successful socialization into academic family medicine.

1992 STFM NATIONAL CONFERENCE PROPOSAL

HELPING RESIDENTS LEARN FROM EXPERIENCE: THE REFLECTIVE TEACHER-IN-ACTION

Teaching in Family Medicine often occurs in a clinical setting. Clinical teaching is the process of transferring expert knowledge (the artistry of medicine) to learners by helping them to develop problem-solving strategies that reconstruct their knowledge around patient problems. True clinical teaching is "live" consequently, "what the patient walks into the clinic with is what you teach." This seminar presents Schön's model of Reflection-in-action as a guide to facilitate better clinical teaching. Participants will be introduced to the model, will see the model applied to teaching residents in a clinical setting and will role-play using the model as time allows.

Educational Goal:

The goal of this seminar is to assist family medicine educators in contributing to their residents' ability to learn from experience.

Seminar Objectives:

After this seminar, participants will be able to:

1. Describe Schön's (1987) Model of Reflective Practice and how it applies to clinical teaching in Family Medicine Residency education.
2. Apply the model using simulated patient cases.
3. Chart a resident's progress using the Educational Charting System developed by Fox.

Rationale:

Much of the teaching that occurs in Family Medicine occurs in a clinical setting. Clinical teaching is the process of transferring expert knowledge (the artistry of medicine) to learners by helping them to develop problem-solving strategies that reconstruct their knowledge around patient problems. True clinical teaching is "live" consequently, "what the patient walks into the clinic with is what you teach."

The model of reflective practice mixes the science of medicine (the zone of mastery) with the art of medicine, a zone characterized by uniqueness, conflict, and ambiguity! By using this model, clinical teachers will assist learners by helping them to (1) organize their knowledge and skill around practice, (2) recognize and address the conflict, ambiguity and uniqueness characteristic to each case, (3) construct and reconstruct knowledge and skill around the surprises that they encounter in patient care and other aspects of the health care role, (4) experiment carefully, wisely, and effectively to address conflict, ambiguity and uniqueness, and (5) reflect on their professional performance and alter practices appropriately (Fox & Mold, 1990).

Two assumptions underlying Schön's Model of Reflective Practice are:

1. There are no routine cases.
2. Good clinicians are good problem framers--they have a better sense of the problem.

There are five components to the Reflective Practice Model:

1. **Knowing-in-action:** This is knowledge embedded in action, i.e., we construct our knowledge around action.
2. **Surprise**: Something unexpected or "different" happens with each patient.
3. **Reflection-in-action:** This is thinking while you act, i.e., reconstructing what you know and adding new information to your preexisting knowledge base. You go through a self-critical judgment about what's going on, then you do something about it.
4. **Experimentation:** You try something that wasn't part of the original plan. You may change the dose of a drug or order a test that you routinely don't order.
5. **Reflection-on-action:** This is reliving your day. You reflect on your professional performance and the "experiments" you tried and alter practices appropriately.

Professionals try to frame problems in ways that they can solve them. Three different specialists will have three approaches to patient care for the same clinical problem (eg. an allergist, an ENT specialist, and a family physician). Most clinical teachers are good at describing their "reflecting-on-action" to residents (step 5), but they are not as comfortable with the other four components of the process. Schön's Model provides a guide for us to become better clinical teachers.

Why is Schön's Model of Reflective Practice applicable to what we do as clinical teachers in Family Medicine? Family Medicine by its very nature as a multifarious specialty has clinical educators who have the repertoire of experience to deal with ambiguity, uniqueness, and conflict (e.g., in values) in patient care and can organize residents' experiences around patient practice.

Seminar Activities:

1. To illustrate the model's applicability to clinical teaching, seminar presenters will describe Schön's Model of Reflective Practice using taped clinical vignettes of simulated patient cases that have been specifically designed to be ambiguous.
2. Participants will view taped clinical vignettes and chart a resident's developmental progress using an educational charting system designed specifically to fit the model (Fox, 1991).
3. Volunteer participants will role-play using the model with the presenters.
4. Seminar presenters will facilitate discussion with participants regarding the applicability of the model to their medical practice and clinical teaching.

References:

Fox RD, Mold JW. Clinical Teaching—Learning to Learn from Experience. Presented at the Oklahoma Geriatrics Education Center Conference, December, 1990.

Schön DA. Educating the Reflective Practitioner. San Francisco: Jossey-Bass Publishers, 1987.

1992 STFM PRESENTATION

Helping the Resident Learn From Experience

GOAL FOR MEDICAL EDUCATION:

We should contribute to future health professionals' ability to learn from experience by (Fox, 1990):

1. Organizing knowledge and skill around practice,

2. Teaching students to recognize and address the conflict, ambiguity and uniqueness characteristic to each case (reveal ourselves),

3. Teaching students to construct and reconstruct knowledge and skill around the surprises that they encounter in patient care and other aspects of the health care role,

4. Teaching students to experiment carefully, wisely, and effectively to address conflict, ambiguity and uniqueness, and

5. Teaching students to reflect on their professional performance and alter practices appropriately.

What is clinical teaching?

What is performance?

ASSUMPTIONS FOR CLINICAL PRACTICE:

Change is ubiquitous.

There are no routine cases.

Good clinicians are good problem framers.

How do professionals frame problems?

Two Zones of Professional Practice:

Zone of <u>Mastery</u>	**Zone of <u>Indeterminateness</u>**
Science of Medicine	**Art of Medicine**
	Cases are unique.
	There is conflict (in values, information, in what the patient sees is your role as physician).
	There is ambiguity--something is missing. The physician must act with incomplete information. BUT, medicine has set up a culture that does not allow us to be wrong.

Learning from experience?

Schön's Model: Educating the Reflective Practitioner, 1987

1. Knowing-in-action:

2. Surprise:

3. Reflection- in-action:

4. Experiment:

5. Reflection-on-action:

What should an intern be able to do? What should a 3rd year resident be able to do?

REFLECTIVE QUESTIONS

AFFECTIVE REFLECTION

How did that make you feel?
Do you remember what you were feeling?
Did you want to express any feeling at that time?
Does that feeling have any special meaning for you? Is it a "familiar" feeling?

COGNITIVE REFLECTION

What were you thinking at that time?
Did you have any ideas about what you wanted to do with that?
Were you able to say it the way you wanted to?
Did you want to say anything else then?
Did you have any plan of where you wanted the interview to go next?
What prevented you from saying what you wanted to then?
How might you have expressed that differently?

BODILY REFLECTION

Do you remember what your body felt like?
Were there any physical sensations then?

REFLECTION ON EXPECTATIONS

What did you want your student to tell you?
What would you have liked from your student?
Were you expecting anything from your student at that point?
What did you want to convey to the student?
What did you really want to tell the student at this moment? what prevented you?
What image did you want to convey to the student?
What information did you want to convey to the student?

REFLECTIONS ON MUTUAL PERCEPTIONS

What do you think the student was feeling about you?
Do you think the student was aware of how you were feeling toward him/her at this point?
What do you think the student wanted from you?
Do you think your description of the interaction would coincide with his/hers?
Was the student giving you any cues about how he/she was feeling?

ASSOCIATIVE REFLECTION

Did the student remind you of anyone else in your life? What effect did that have on you?
Did your feelings about the student (attractive/unattractive; intelligent/dull etc.) have any special meaning for you?
Did the situation feel familiar, as though you had "been there before"?

ASSOCIATIVE REFLECTION (continued)

Did you have any images or fantasies connected with the interview?

GENERAL REFLECTIONS

How did you feel about the teaching encounter?
What did you learn from the encounter?
What might you have done differently?
What were some choice points in the encounter?
What were some other possibilities, other directions for the session?
what surprised you?
What aroused your curiosity?
What seemed different?
Were there times when you "tripped your own feet?"
Did you hear certain messages and pretend you hadn't, or did you not quite trust what you thought you were hearing?
Were you able to do anything with the student you usually can't?
What allowed this to happen?
Did you find yourself wanting very much to be liked, to be seen as a "nice person?"
Did you find yourself wanting to be respected, to be seen as the "expert?" Did these feelings interfere with or facilitate the interaction?
Did you ever avoid intensity during the teaching session by shifting themes?
Were you aware of learner feelings at any points during the encounter? What were they? How did you deal with them?
What did you like about what you did?
Where did you perceive the student to be stuck? Do you think your perception agreed or disagreed with that of the student's?
Did you find yourself open to the student's understanding of the patient?
Did you notice moments of holding tightly to your own meanings and interpretations?
Were there any moments in the encounter where you noticed the student withdrawing?
What are your thoughts about why this happened?
Did you notice yourself ever being in a state of pushing the learner to accept your information or point of view?