



### ***Medicine: Problem-Based Learning in Medical School***

An alternative track, called The Problem-Based Learning Curriculum (PBLC), at Southern Illinois University School of Medicine (1998)

#### **Course Design:**

PBLC is a two-year alternate curricular track available to a select number of students; in the third year, PBLC students rejoin their classmates. PBLC is based on the tutorial group process in which students meet two to three times per week in groups of five to seven with a trained faculty tutor. The role of the tutor is to facilitate the group's accessing individual prior knowledge, articulating the reasoning process, and formulating the questions to be answered with out-of-class research. There are no lectures or other courses offered for the duration of PBLC.

Students receive carefully-designed patient problems either in printed or computer formats or by examining "standardized patients", people trained to simulate an actual patient problem. All problems require free inquiry on the part of the group. Students determine the patient's current condition, take a medical history, perform a physical exam, order diagnostic tests, and interpret test results. Students then determine whether these results confirm or refute their initial hypotheses regarding the patient's symptoms. They apply their prior knowledge, and experience in previous patient problems, to determine the limits of their knowledge as it relates to the present problem and to identify the new learning issues that they must address in order to solve the problem. The group then determines which available outside resources need to be examined, and individual group members study separate resources and report their findings to the group at the next meeting.

Once this new knowledge has been gathered and understood by the group as a whole, with the guidance of the tutor, the group then reexamines its previous hypotheses and/or formulates new ones which may require additional research and testing. The process continues until the problem has been successfully resolved. At the end of a problem the group, including the tutor, informally evaluates each member on the curricular goals in order to provide both positive and constructive feedback.

**Higher Level Learning:**

Students gain valuable clinical experience by applying clinical reasoning to realistic patient problems, determining what they know and do not know, formulating hypotheses, gathering necessary information through testing, reexamining their hypotheses, and pursuing additional information to fill knowledge gaps (**Acting**). The experience of actively determining how much they know, what they need to know, and how to go about gaining that knowledge prepares students for the kind of self-directed learning that they will need to pursue throughout their entire professional careers (**Learning**). Students not only connect previous knowledge and new knowledge to the present circumstances, but they also learn to identify the link between the clinical and interpersonal skills required of skilled physicians (**Connecting**).

**Active Learning:**

Students develop their critical thinking skills by working through a complex medical problem (**Doing**). Since students must formulate the exact nature of the problem on their own, based on the symptoms of the patient, they must discuss each and every possible hypothesis with their group and determine together what learning issues must be addressed in order to complete the problem (**Dialogue with Others**). Each student conducts outside research and has numerous opportunities to practice the necessary clinical reasoning skills (**Doing**); in response, fellow group members adopt and/or critique the individual's reasoning and analyses (**Observing**).

Merideth, S. & Robbs, J. (1998). The Problem-Based Learning Curriculum at Southern Illinois University School of Medicine. [Online] Available: <http://edaff.siumed.edu/DEPT/Pblcur.htm> (4/19/98)