Individualized Learning Plans: Wright State University
Annotated Bibliography 2007-2008

Eva KW, Regehr G. Self-Assessment in the Health Professions: A Reformulation and Research Agenda. *Academic Medicine*. 2005; 80:s46-s54.
This review paper is a clearly written, insightful discussion of many important factors in the way physicians self regulate and improve. Self-efficacy and self-concept, cognition and metacognitive theory, social cognition, models of expert performance and how expertise is developed, and the concept of reflective practice are all reviewed in a literature based manner. Future directions for research in this area are expanded upon at the end of the article.

Stuart E, Sectish T, Huffman L. Are residents ready for self directed learning? A pilot program of individualized learning plans in continuity clinic. *Ambulatory Pediatrics.* 2005;5:298-301.
The only article written regarding pediatric residents and individualized learning plans. Learning plans were done in written form (not computerized). Results reveal that the ILPs were “helpful” in providing a framework and focus for learning. Barriers were time constraints and difficulty in producing learning goals and strategies. The mean number of goals per learning plan reviewed (n = 16) was reported as 3.23 (range: 1-7). The authors provided a two-hour workshop. The faculty information focused on basic principles of teaching and adult learning with a focus on promoting reflection and awareness of learning. Some of the suggestions the faculty had were: “start with PL-1s”, “set time aside for doing this”, and “give a specific list of specific goals per year of residency”.

McDermott MM, Curry RH, Stille FC, Martin GJ. Use of learning contracts in an office-based primary care clerkship. Medical education. 1999;33:374-381.
This is a report on a nicely designed research project to look at implementation of a learner centered learning goal in a clerkship at Northwestern. Interestingly, the third year students rated it more favorably than the fourth year med students. The advantages of the learner-centered exercise were that there was more ability to explore topics at their own pace. They conclude that having learners develop their own learning goals is an “efficient and valuable adjunct to patient care activities in the clinical care setting”.

Bravata D, Huot S, Abernathy HS et.al. The Development and Implementation of a curriculum to improve clinicians’ self-directed learning skills: a pilot project. *Biomed Central Medical Education.* www.biomedcentral.com/1472-6920/3/7.
A pilot study at Stanford in the Internal Medicine Department. The purpose was to develop and implement a curriculum to teach physicians self-directed learning skills during inpatient wards rotations. A very good background section discusses self-directed learning. The curriculum utilized is interesting. It involves assessment, a learning resource exercise, a clinical question diary and a journal reading exercise. It is geared towards direct reflection in action type learning. No “learning plan” terminology was utilized.

Parsell G, Bligh J. Contract learning, clinical learning and clinicians. *Postgraduate Medical Journal.* 1996; 72:284-289.

Parsell G. Handbooks, learning contracts, and senior house officers: a collaborative enterprise. *Postgraduate Medical Journal.* 1997;73:395-398.
These are two papers written by a leader in the field of learning contracts/ ILPs. The first is an excellent examination of the theoretical basis of contract learning and how it is relevant to clinical settings. He is a physician in the UK and his perspective is from his locale, nonetheless it is a well-written summary and discussion of learner driven learning and learning plans.

The second title is an actual descriptive research paper on a process to introduce contract learning to senior house officers at a general hospital in the UK. Generally positive responses were made by the H.O. regarding the program.

Sectish T, Floriani V, Badat MC, Perelman R, Bernstein H. Continuous professional development: raising the bar for pediatricians. *Pediatrics*. 2002; 110:152-156.
An outstanding review and discussion of the reason for the shift to continuous professional development away from older versions of CME. It discusses Pedialink very nicely and the reasoning behind the set-up. It also discusses the proposed learning cycle of clinicians by Donald Schon. Easy to read.

Chan SW, Chien WT. Implementing contract learning in a clinical context: reporton a study. *Journal of Advanced Nursing*. 2000;3:7.
This paper reports on a project in a descriptive manner about the implementation and evaluation of learning contracts in clinical nursing. Specifically, a rotation in mental health nursing. The guidelines for creating a learning contract were to 1) identify learning objectives, 2) propose learning strategies and resources to accomplish the objectives, 3) identify evidence of accomplishment, and 4) describe the means for evaluating their performance. Some of the described benefits of the learning contacts were that their use increased learner autonomy, increased student motivation, strengthened the effectiveness of the rotation, and increased sharing among learner peers and the faculty. Some of the difficulties were that the faculty had limited time to facilitate the learner's objectives, and lack of experience with using learning contracts.

Spencer J, Jordan R. Learner centered approaches in medical education. *BMJ* 1999;318;1280-1283.
A nice summary of why self-directed learning is a good educational strategy most likely to produce physicians prepared for lifelong learning. It reviews some of the terminology of self-directed learning and gives a good overview.

Renner JJ, Stritter F, Wong H. Learning Contracts in Clinical Education. *Radiologic Technology*. 1993;64(6):358-365.

This reference provides a literature review of contract learning and an actual study involving students in the radiology science program at University of North Carolina. The depth of this contract learning is deeper than the more superficial one to two times per year individual learning plans we are required to do with our residents. It is interesting to see the barriers and benefits identified by the student users.

Additional Bibliography on self-reflection and adult learning:

Westberg J, Jason H. Fostering learners' reflection and self-assessment. Family Medicine. 1994; 26:278-282.
A good overview of reflective learning and how to help students foster their own self-assessment and reflection.

Mann K. Educating medical students: lessons from research in continuing education. ***Academic Medicine.*** **1994; 69(1):41-47.**
Reviews and explains concepts of continuing medical education along the continuum from student to practitioner.

Pratt D. Andragogy as a relational construct. ***Adult Education Quarterly.*** **1988;38:3; 160-181.**
Interesting summary and exploration of adult learning and the characteristics therein.

Background information on Individualized Learning Plans

1. Why do residents need to do learning plans? Most of us didn't do learning plans as residents and we turned out just fine. This is a common sentiment amongst faculty members nationwide.

a. It is a Pediatric RRC Requirement since January 2006.
b. The self-assessment section of the ILP assists those residents who may have no self-reflective skills. The ILP develops, theoretically, one's ability to self improve.
c. Setting goals is a powerful practice. Some people do this in their minds, but writing down a goal and reviewing it later is more tangible and clear. People comment that they feel more accountable if a plan is written and discussed.
d. The explicit goal of the ILP in residency training is to develop skills in individual improvement.
e. Prepares residents for the American Board of Pediatrics maintenance of certification (MOC)

2. What do individual learning plans consist of? What is the difference between learning contracts and learning plans?

An individual learning plan consists of 1) delineation of long term goal/career choice, 2) self-assessment to identify weaknesses 3) development of learning Goals with S.M.A.R.T. Strategies/Objectives and 4) feedback with a mentor or advisor. The overall point of ILPs in pediatric graduate medical education is to encourage serious self-reflection.

A learning contract is a term that could interchange with learning plan. In the literature the learning contract tends to be used with a specific rotation or preceptor. Learning plans could be considered more global. There is discussion in pediatrics about the concept of near-term and long-term (global) goals. For example, learning how to read EKGs on one's cardiology rotation is a near-term goal, while figuring out how to improve one's self-confidence may be a more global or long-term goal (can not be done in 1-2 weeks).

3. How am I supposed to help facilitate the residents' ILPs?

Try to emphasis the fact that their goals need to be SMART. That is:
S: Specific
M: Measurable
A: Achievable
R: Relevant
T: Time based

So for a resident to write down that they want to, for example, increase their knowledge base, they would need to a) get much more specific, b) give you and themselves a plan to measure their progress (PREP, articles read etc.) c) make sure it is achievable in one to

two year's time. d) and try to tell you and themselves when they will accomplish the goal by. PLEASE NOTE: if someone has a goal that may seem hard to achieve do not tell them to change it, just discuss your concern and let them think about it.

You are there to hold up the mirror to the resident. Give them your perspective on their performance (you can review their evaluations such that you have others input who see the resident in a different clinical setting)

Individualized Learning Plan

In this exercise, you will be asked to complete an Individualized Learning Plan. There is a "Learning Plan" option on your Pedialink Home Page. While not exactly like the resident ILP it is a learning Plan. I would ask that you work through the following written ILP.

Step 1: Career Goals:

Long-term

a.

b.

c.

Short-term

a.

b.

c.

Step 2: Ranking of Attributes:

Please rank the following with 1 (strongest) to 12 (weakest)

Initiative _____
Perserverance_____
Ability to recognize limitations_____
Ability to work with others_____
Attention to Detail_____
Time management_____
Confidence_____
Response to Feedback_____
Communication Skills_____
Strive for Excellence_____
Write in __________________________
Write in __________________________

The Dreyfus Model
Step Three: Self-Assessment of Skill Level.

1. Novice: Governed by Rules; unable to rely on previous experience for guidance

2. Advanced Beginner: Still rule focused; learning is tied to concrete situations; able to identify aspects of common situations.

3. Competent: Relies on past experience to plan an approach to each patient's situation; learns from the consequences resulting from the plan

4. Proficient: Modifies approach in response to given situations; begins to streamline the approach to each patient.

5. Expert: Recognizes patterns of clues; attuned to patterns that don't fit the routine; practice is guided by tacit knowledge.

Directions: please use the above descriptions to self assess. Mark (with the appropriate corresponding number 1-5) your perceived level based on the above "Dreyfus model". Feel free to add specific subject matter /tasks that apply to you.

Patient Care
Compassionate, appropriate, and effective for the treatment of health problems and the promotion of health:

_____Gathering essential and accurate information about patient.

_____Making informed diagnostic and therapeutic decisions.

_____Developing and carrying out management plans.

_____Performing medical procedures.

_____Counseling patients and families

_____Providing effective primary care and anticipatory guidance.

_____Using technology to optimize patient care.

Medical Knowledge
Established and evolving biomedical, clinical, and cognate (e.g. epidemiology and social-behavioral) sciences and the application of this knowledge to patient care:

_____Knowing the basic and clinical supportive services appropriate to pediatrics.

_____Critically evaluating and applying current medical information and scientific evidence to pediatrics.

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Practice-Based Learning and Improvement

Involves investigation and evaluation of their own patient care, appraisal and assimilation of scientific evidence, and improvements in patient care:

_____Using life-long learning skills to improve knowledge, skills and practice.

_____Analyzing practice to recognize strengths, deficiencies, and limits in knowledge and expertise.

_____Using feedback to improve performance.

_____Applying evidence to patient care.

_____Participating in the education of patients, families, students, residents, and other health professionals.

Interpersonal and Communication Skills

Result in effective information exchange and teaming with patients, their families, and other health professionals:

_____Communicating effectively with patients and families.

_____Communicating effectively with other health professionals.

_____Teamwork.

_____Acting in a consultative role to other health professionals.

_____Maintaining comprehensive, timely and legible medical records.

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Professionalism
Commitment to carrying out professional responsibilities, adherence to ethical principles, and sensitivity to a diverse patient population:

_____Demonstrating respect, compassion, integrity and honesty.

_____Demonstrating a responsiveness to the needs of patients and society that supersedes self-interest.

_____Demonstrating accountability to patients, society and the profession.

_____Adhering to ethical principles.

_____Sensitivity to a diverse patient population.

Systems-Based Practice
Demonstrate an awareness of and responsiveness to the larger context and system of health care and the ability to effectively call on system resources to provide care that is of optimal value:

_____Knowing types of medical practice and delivery systems.

_____Practicing cost-effective health care.

_____Advocating for quality patient care and assisting patients in dealing with system complexities.

_____Advocating for health promotion and disease prevention.

_____Acknowledging medical errors and examining systems to prevent them.

Step Four: Setting Objectives/Strategies
Try to come up with three objectives you will work to achieve over the next six months. Take into consideration the strengths and weaknesses you just identified earlier in the ILP process. Each Objective should try to follow the SMART criteria: Specific, Measurable, Achievable, Relevant, Time based.

Objective #1

Strategies:

Objective #2

Strategies:

Objective #3

Strategies:

Additional thoughts/objectives: