The CDC Model of Clinical Instruction

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The number and broad range of clinical encounters seen in an office-based practice are so rich with learning opportunities that students and their busy clinical preceptors may sometimes be overwhelmed trying to select the most important learning issues for students. Often, the result is that no formal learning goals are articulated, and the content that the learner does learn is often by luck or by chance. A model that assists the student and the preceptor in honing in on specific skills and important content can enhance learning during typical student rotations that last 4 to 6 weeks.

The CDC Model of Clinical Instruction was developed to help the busy clinical preceptor focus and maximize learning for a third- or fourth-year medical student on an outpatient rotation. This model is intended to serve as a complement to the traditional format of precepting used in most offices and does not require that the preceptor alter daily routines. In fact, the model maximizes the student’s independence as a learner while focusing the learning on important topics, encouraging further didactic discussion between preceptor and student, and providing a basis for the preceptor to formatively evaluate the student.

The CDC Model of Clinical Instruction consists of the following components:

1. Evidence-based Clinical Assignment
2. Doctor-Patient Relationship Reflective Write-up
3. Coding/Billing or Quality Assurance Assignment

During a typical 4- or 6-week office-based rotation, the preceptor can ask the student to complete any or all of the above assignments. The remainder of this article explains how the preceptor can incorporate this model into his/her teaching of students in the office. The references listed in Table 1 can be given to students as resources for completing the assignments.

Evidence-based Clinical Assignment

In completing the Evidence-based Clinical Assignment, the student identifies a learning need and generates a clinical question to research in the “P (Patient), I (Intervention), C (Control), and O (Outcome)” format (see reference #1 in Table 1). For example, if a student wishes to learn more about the different options for the treatment of strep throat, a question to research may be: “In otherwise healthy adult patients, are patients with culture-proven strep throat as likely to recover fully without sequelae with 3 days of Zithromax as they are with the gold standard penicillin treatment?” The student then searches...
the medical literature for an answer to the question and generates a recommendation based on the evidence and the patient’s values. Afterward, the student completes a write-up, which answers the question, explains the reasoning behind the answer, lists the references, and provides the level of evidence for each reference used. The student may refer to on-line and printed evidence-based sources to complete this assignment. In sharing their findings with the preceptor, students may actually help the preceptor learn new information as well as enable the preceptor to focus further clinical teaching in the office.

Doctor-Patient Relationship Reflective Write-up

In completing the doctor-patient relationship assignment, the student observes a clinical encounter conducted by his/her preceptor. The student reflects on the doctor-patient interaction and answers the following three questions:

(1) What style of interaction did the preceptor use or what role did the preceptor assume in the encounter (negotiator, educator, partner, paternalistic style, empowering style, or other)?

(2) Was the encounter effective? Why?

(3) How would you have approached this encounter?

Alternatively, the student may reflect on the style of interaction and effectiveness of an encounter that he/she personally conducted and consider how the encounter may have been improved. After completing the write-up, the student and preceptor can use the student’s findings as a foundation for further discussion on the doctor-patient relationship.

Coding/Billing or Quality Assurance Assignment

For the coding and billing assignment, the student codes the diagnosis or diagnoses and designates a level of service after writing the progress note for a clinical encounter. The student then writes a paragraph or two justifying the level of service. The student may seek online or printed references or even talk with a medical coder to complete this assignment. Reviewing the results with the preceptor will facilitate further instruction and learning on coding and billing issues of other patients.

Alternatively, the student may choose the quality assurance assignment, in which he/she selects a clinical problem of a specific patient and follows the patient from the time of initial appointment by the front desk staff until the time the clinical problem was resolved to the patient’s and the clinician’s satisfaction. The student assesses the management of the problem according to established indicators of quality and efficiency and also considers opportunities for improvement when a similar patient presents in the future. The student keeps a journal to document the management of the patient’s problem at different steps of the process. After completing the journal, the student and the preceptor may look at the journal entries and analyze the effectiveness of different management steps and consider how to improve office processes to ensure quality of care.

The CDC Model of Clinical Instruction gives office-based teachers the opportunity to teach important aspects of family medicine that are usually not explicitly taught in the office setting. This model may also be used by a clerkship or clinical rotation as part of its formal curriculum. Students may submit write-ups of each of these assignments to the course director for evaluation. To encourage further learning, students may also share the results of their write-ups with each other in small groups facilitated by faculty. In addition, residency programs may adapt this model to train residents in these skills.

Family medicine clerkship educators and students at SUNY Upstate Medical University have given a basic version of this model an overall positive evaluation. Further development of the model is in process and additional piloting in the family medicine clerkship and other specialty rotations is being implemented and considered. Individual office-based teachers can contact Lynn-Beth Satterly, MD, at satterll@upstate.edu for more information on the model or to report their experience in using it.

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| Table 1 |
| Resources for Students to Complete the Assignments |


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