Integrative Clinical Correlations (ICC) as Core for a New Curriculum

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Rationale

- Students benefit from early experience with patients, yet they also need the foundations of the basic sciences to understand the rationales behind diagnosis and treatment of disease.
- Seeing the “big picture” of the various components of patient care in the diagnosis and treatment of disease can provide a starting point for independent learning of the basic and clinical sciences.
- A case-based format allows the student to observe and then engage in the problem-solving process.
- Integration of basic and clinical science in a format that allows students to move along Miller’s Triangle from “Knows” towards “Does” would be ideal.

Curriculum Objectives

- To keep the patient at the core of medicine and medical education.
- To demonstrate the connection between basic and clinical sciences.
- To demonstrate the necessary communications and teamwork between physicians, nurses, pharmacists, and others in the care of a patient; in a way that values the different contributions of the disciplines.
- To expose the students to the patient experience of illness.
- To inspire students in their study of basic science.
- To allow students to apply their basic science knowledge in a safe way using simulated patient encounters to reinforce their basic and clinical science knowledge.
- To develop team-based learning and problem-solving skills.

Description of Curriculum

- A series of cases are presented with a patient (usually real, occasionally simulated) and a clinician. Other health care professionals (nurses, pharmacists, physician assistants, technicians, psychologists, social workers, etc) are brought in to share their expertise. Basic scientists are brought in to discuss the basic science aspects of the disease, tests, symptoms, treatments, etc.
- Students then generate further learning issues after the session.
- Small groups meet, to further explore basic or clinical science issues generated from the ICC session.
  - Small group meetings could be divided into specific, topic-specific discussions which could encourage deeper learning of the topic.
  - Additional small group meetings could focus on non-science topics such as ethics, health policy, management, and patient safety.
  - Background information necessary to the understanding of a given case can be made available as pre-recorded modules (e.g., basic modes of inheritance in the case of an individual with a hereditary disease) that a student could view prior to the small group.
- Clinical skills laboratory will focus on skills relating to the ICC or the diagnosis covered. For example, physical findings and exam related to low back pain, the process of giving bad news (such as when metastatic cancer has been found with imaging), or teamwork interactions during emergency interventions.

Discussion

- Final assessment for the module focuses on the assessment of a patient case presented with a standardized patient with presenting concern relating to the module.
  - Students are expected to interview and examine the patient, consider the information, order tests/studies, and draw conclusions from their results.
  - Written work will include assessment of the case and an explanation of the basic science/pathophysiology involved, utilizing their basic science knowledge.

Resources and Faculty Development

- A matrix of cases and learning objectives would need to be developed and grouped by modules.
- Clinicians, basic scientists, and other health professionals for the large group sessions would have to be identified.
  - This would be a specialized group, with training for a core group and occasional additional presenters.
- The patients and/or simulated patients for sessions will be key. In ICC, we have found some patients are so memorable students recall the patient’s story immediately when a certain diagnosis is mentioned.
- Our experience from ICC suggests the curriculum will need to be planned well in advance and yet flexible and with back-up plans, due to utilizing real patients.
- Small group preceptors would need to be identified and trained. These may not need to be specialists, but should have some working knowledge of the area of discussion.

In the current ICC course (taught in the first year), students widely appreciate the presence of the patient (and family members) to discuss the first-hand experience with the particular disease and with the health care system.

This format could be part of or the basis for at least the early part of a curriculum.

Cases could be the starting point of a module in the merit badge model.

A challenge is determining how much they do need to know to be ready to graduate.

What is it that is essential for all students to know?
What would be good for all students to know, but not essential?
What would be useful for most students, but not necessary to know?
What would be important only for a particular career choice?
Which cases then would be core and most worthwhile to focus on for modules/ICC sessions?