

## **COMMITTEE ON MEDICAL EDUCATION BLOCK 2 SUMMARY AND ACTION PLAN**

### **The Human Blueprint (Block 2) ~ August 21<sup>st</sup> through November 10<sup>th</sup>, 2007** *With Structure and Foundations of Clinical Medicine (Longitudinal Blocks)*

Block Leader Georgia Wiesner, M.D. and the Center for the Advancement of Medical Learning evaluation team reported to the curriculum Monitoring Council regarding Block 2 on April 12, 2007. The goal of this block is to develop a framework of the human system from conception to adulthood, and to integrate the basic concepts of cancer biology, development, endocrinology genetics, molecular biology and reproduction. Over a period of twelve weeks, students covered general principles of genome structure and function, early embryology, fetal growth and development, reproductive anatomy, cell signaling and hormone action, and cellular defects in cancer development. During week 11, students had their first Clinical Immersion experience, where they were split into four groups, each designed to develop clinical familiarity with the themes taught in Block 2.

#### **Strengths of Block**

- First basic science block of curriculum, with highly integrated disciplines for most IQ groups
- Supportive interactive sessions for weekly IQ groups
- Study guides, videos for in depth study
- Immersion week linked the student with clinically relevant activities that supported the block 2 basic science concepts
- Reflection week presented 3 cases that assisted the students in preparing for assessment

#### **Weakness of Block**

- Two major weaknesses: Organization of content, and technical difficulties
- Students were often unsure of overall plan of the block.
- Material for students and facilitators was often not available prior to presentation. This was primarily due to the substantial effort required by the design team to write the curriculum in the time allotted.
- Presentation of endocrine content required basic cellular biology content scheduled later in curriculum
- eCurriculum was the largest, most time consuming non- teaching activity for the block. Lack of access, connectivity, breakdown during testing process was difficult for the students and faculty.
- The block leaders and Course Managers are the primary source of information for the students. However, there are many activities, such as Foundations of Clinical Medicine or Block 7 lectures, that the block leader has no knowledge or authority, leading to confusion for the students.

#### **Assessment**

- 5 clinical scenarios with 14 subquestions
- 2 subquestions per discipline (2 x 7 = 14)
- Passing score: 60%
  - 2 students did not pass
  - ~13 students were under 70%
- Students are talking with Society Dean to develop remediation plan
- Faculty read and scored exam on-line
  - Range of 4 hrs to 12 hrs of reading
  - eCurriculum did not allow revising and resaving exam scores

## **Student Assessment of Block**

Dr. Klara Papp surveyed the students on various aspects of Block 2. (135 out of 140 students provided ratings). Items related to “IQ facilitator” and “Approachability of faculty” received the highest mean ratings (5.3 and 5.2 on a 6-point scale) with 93% and 94% respectively providing ratings reflecting ‘good’, ‘very good’ or ‘excellent’. The lowest mean rating was for “Organization and Coherency” (3.6) with only 26% providing a rating of ‘very good or excellent’. The majority of the aspects received mean ratings between ‘very good and good’ range (4.6 to 4.0) (“Large group leaders”, “learning concepts of the sciences basic to medicine”, “understanding assessment”, “how well goals were met”, “clarity of goals, objectives, expectations” and “overall quality”).

Students were also asked to indicate how important or useful various learning activities were to mastering the skills and competencies of the block. On a scale from ‘1’ (little importance) to ‘7’ (major importance), “Working/studying independently” and the “IQ groups” had the highest mean importance ratings (6.3 and 5.3, respectively) with 84% and 53% respectively giving them a rating of 6 and 7. “Research & scholarship seminars” was perhaps misclassified on the survey as it was identified as a study strategy.

Clinical Immersion week, which occurred between October 30 and November 3, 2007, was overall highly rated by students. Students evaluated their Group/Focus experiences on a scale from ‘1’ (poor) to ‘9’ (excellent). Overall mean ratings were between 8.4 and 7.2 for the four group experiences in respective order: gynecologic oncology, oncology, birth defects and infertility. Mean overall ratings were aggregated for “overall quality of the session”, “content of the material presented/opportunities for participating and interacting”, and “ease of locating the site”.

Strengths of the block based on responses to open-ended questions were identified. In general, students found it satisfying to bring together the concepts of the block at the end to see the larger picture. IQ groups were highly rated for providing students opportunities to become engaged and work with the material to integrate and apply it to medical problems.

Students also commented on areas to improve. There was a distinct impression among the students that the order in which the material was presented could be improved. Endocrine in Week 7 was difficult to integrate. Structure seemed not well integrated and students sensed that they were not receiving enough instruction. At times, the logic of the organization was not apparent and the uneven amount of information given week-to-week was also a problem. Technical issues with the eCurriculum (lectures not being posted online) and eAssessment (major technical failures with histopathology and even the SSEQ exams) were a problem.

## **Future Directions: Block 2 Specific Action Items**

In response to feedback from students and direct faculty interaction and observations, the following action plan is suggested for Block 2:

### **1. Content Review & Transition**

Faculty will review the content of all IQ cases and work on transition and integration with the material of the week. Smoother transitions between IQ group material and large- and medium-sized group interactions are top priority. In addition we will review the material that is taught in the curriculum prior to and following Block 2 and reconsider including important topics that need to be included in Block 2 (such as):

- a. Move diabetic ketoacidosis (DKA) to block 3
- b. Move endocrine content earlier in the block
- c. Integrate endocrine content with other disciplines, particularly reproductive biology

### **2. Improve Resources for IQ facilitators**

Once the content is rearranged to better suit the organizational and logical sequence for Block 2, we will review the study guides for IQ facilitators and strengthen these resources to make them more concise and user friendly.

**3. Urge faculty who are medium and large group facilitators & lecturers to participate in faculty workshops through the Center for the Advancement of Medical Learning (CAML).**

CAML Director of Faculty Development, Mark Gelula, PhD, will be invited to work individually and as a group with faculty in Block 2 to support and develop active teaching skills. The Block 2 faculty will develop a training session with Dr. Gelula for the medium group leaders in early summer 2007. These sessions will review the learning curricular content as well as focus on teaching methods to increase student participation and learning.

**WR2 Curriculum Action Items**

1. We recommend a simple communication method with the students using the eCurriculum. In this way, the block leader will not be responsible for disseminating information about other curricular activities.
2. We recommend that the eCurriculum be improved.  
The learning objectives and resources could be tracked by the students if a searchable database of all learning objectives be added to the eCurriculum.  
Add a “study guide” for each block to guide students on the weekly activities and required reading.
3. We recommend that basic scientific concepts, such as signal transduction, be moved to early in the curriculum. Subsequent blocks can “spiral” back to these concepts to reinforce and extend block specific knowledge.
4. We recommend that block 2 design team work with other design teams to identify specific areas of integration. For example, embryology of specific organ systems should be developed in concert with block 2 development content experts for subsequent blocks.

Respectfully submitted,

Georgia L. Wiesner, M.D.  
Block 2 Leader

Klara Papp, Ph.D.  
Director, Center for the Advancement of Medical Learning

Committee on Medical Education 4/12/2007