

**Block VI: Cognition, Sensation and Movement
Final Report and Action Plan**

**Block VI Design Team: Drs. David Agle, Krishan Chandar, Kathleen Clegg, David Dean, Alan Lerner, Donald Mann, Jonathan Miller, and Shana Miskovsky
July 15, 2009**

This document provides our assessment of the second offering of Block VI, Cognition, Sensation and Movement. As a whole, we were pleased with the Block's content, delivery, and reception. It was our goal to integrate the three subject Concentrations (i.e., Neuroscience, Musculoskeletal System, and Psychiatry) contained in Block VI with each other and with the concomitant presentation of the Block 7 (i.e., Structure: head & neck gross anatomy, neuroanatomy, neurohistology, neurembryology, and neuropathology). This action plan is based on faculty experiences, student reviews, assessment results (SEQ, SSEQ and student responses). This report presents our Final Report on the Strengths and Concerns identified during the 2008-2009 offering of Block VI, as well as an Action Plan for the 2009-2010 offering of Block VI that responds to the Concerns cited in our Final Report.

Strengths

1. Large and Medium Size Groups: The contiguous presentation of neurophysiology with neuroanatomy, gross anatomy, and embryology was well-received and was facilitated by the addition of one foundational week, without IQ cases, for the Neuroscience Concentration. Cases that had been presented in a Medium Size Group format in 2007-2008, were shifted to review sessions and had a better reception by the students. The additional Neuroscience Concentration material presented due to the addition of 2 weeks to Block VI was well received. The sense of competition for time between Block VI and USMLE Step 1 exam preparation seemed to be reduced. The Medium sized groups in the Psychiatry portion of the Block were also well received; students particularly liked the videotaped interviews with patients/standardized patients that demonstrated different psychiatric diagnoses. The Musculoskeletal Medium-small group session on the "Mechanisms of Joint Destruction," as in previous years, went very well with respect to consolidating the concepts presented in the first week of the Musculoskeletal Medicine Section. However, this year there was an obvious difference in student performance: the students were able to participate with better answers to facilitator questions and were more inquisitive of the facilitators which provided more lively discussions.
2. Interactive Sessions: The addition of introductory, interactive session time to the schedule was imperative to the success of the Musculoskeletal Medicine Section of the block during the 08-09 academic year. This allowed for better presentation and flow of framing lecture material. The addition of shorter (25 min), interactive sessions allowed for better student attention and attendance and allowed for coverage of a variety of topics essential for the students to perform successfully in Musculoskeletal section. The end result was increased quality of student participation and interaction in medium small groups and IQ groups, and clinical vignette questions during interactive sessions. Team teaching session utilizing faculty from Orthopedic Oncology and Pathology again was a success and provided an interesting and informative session for students.

July 15, 2009

3. IQ Groups: The Neuroscience and Psychiatry Concentration IQ cases were well received. The addition of a Part I, emphasizing a broad differential diagnosis, enhanced the Monday morning IQ group sessions. Earlier distribution allowed facilitators more time to review the cases and case resources. As in previous years, the Musculoskeletal Medicine Section's IQ cases were challenging but enjoyed by students with respect to the detail of the cases and the depth of material covered.
4. Clinical Immersion: Neurology and Psychiatry experiences were well received. With respect to the Musculoskeletal Medicine Section, the students who came to the lower and upper extremity splinting Clinical Immersion week activity learned quite a bit and enjoyed the experience. Our cast technicians are first rate and the students were able to experience what it feels to have a splint in place; which will help students empathize with their future patients. Unfortunately, only 5 or 6 students came to each session: the others assigned did not go. In general with respect to the clinical immersion week, the students felt that the more open schedule of the week allowed them to study the material in more depth. The change of the case presentations (based on 4 clinical vignettes) to the morning session for 2 hours instead of 4 was a positive change according to some students.
5. Resources: There was a dramatic improvement in attendance and participation in the Neuroscience Concentration review sessions. As planned in the 2009 Action Plan, the Neuroscience Concentration review sessions included problematic MCQs and clinical cases. The students were pleased to have options regarding a textbook and/or on-line resources for the Psychiatry portion of the Block.
6. Self-testing and SSEQ Exam: Overall, the student performance on the SSEQs showed good mastery of the material. The SSEQ cases and questions were well integrated across the three Concentrations (i.e., Neuroscience, Musculoskeletal, and Psychiatry). The emphasis on the SEQs as subject matter for pre-SSEQ study and reviews and SSEQ material was well-received.
7. Review Sessions: The addition of a Musculoskeletal Medicine Section review session at the end of the block (during Integration and Reflection week) with clinical vignettes (board-type questions) and the "top ten topics to know" was well attended and received by students.
8. Administrative, Oversight, and Support Staff: The Block VI Design Team and Block Leaders received excellent guidance and assistance from faculty and staff throughout the school of Medicine, including other Leaders and participants of the other Blocks, the Curriculum Monitoring Council, the Committee on Medical Education, the Office of Curricular Affairs, the Health Sciences Library, and the Office of Administrative Computing.

Concerns

1. Large and Medium Size Groups: While the increase in contact hours over the 2007-2008 Block VI offering facilitated improvements in the Neuroscience Concentration, some students continued to find day to day, and week to week, curricular integration with the Musculoskeletal and Psychiatric Concentrations distracting. However, in clinical practice, most practitioners of musculoskeletal medicine, neurology and psychiatry have substantial overlap in the conditions treated and often the services refer patients to one another.
2. Research and Scholarship Sessions: There was poor attendance at the Neuroscience Concentration Research Day presentations. Additionally, poor attendance was noted for the Musculoskeletal Medicine Section's Research and Scholarship Session; despite world-renowned researchers being recruited and available to field student questions and review groundbreaking research emphasizing the basic science principles covered in the Musculoskeletal Medicine Section.
3. Interactive Sessions: With respect to the Musculoskeletal Medicine Section, a minority of students voiced displeasure with the shorter framing lectures (25 minute interactive sessions). This interactive session arrangement was based on research on student attention span to material: it has been shown that it is difficult for adults to maintain concentration on the material for more than 30 minutes at a time. Also, due to the large number of topics in Musculoskeletal Medicine and the limited curricular time available, these framing lectures were designed to be short reviews or a start point for students to use so that they would have the background material necessary for them to excel in IQ groups and MSG's. Musculoskeletal complaints are the #1 cause for patients to present to their physician; yet we have only one chance to teach students only in block 6 and not a clinical rotation. The multitude of topics that need to be covered to give the students a basic science musculoskeletal medicine experience necessitates the shorter lectures by content experts in the field. As a result, the students' substantially improved performance this past year in IQ and MSG activities was evident,
4. IQ Groups: Students and facilitators noted that the many of the resources provided for the IQ cases were not easy to use (e.g., encyclopedic rather than focused) or were not easily accessible. With respect to the Musculoskeletal Medicine Section, students commented that they had a SEQ on osteogenesis imperfecta in an earlier block. The IQ case on osteogenesis imperfecta created for the Musculoskeletal Medicine Section is in more detail and focuses on the musculoskeletal system manifestations and basic science of bone metabolism, bone development and fracture healing. After Musculoskeletal Section Director's review, the IQ on the "Child with elbow pain" (pathologic fracture in osteogenesis imperfecta) is well written and presents new material that does not repeat the previous SEQ material. Next year, we will continue with the same IQ cases.
5. Clinical Immersion: As in 2008, the EEG experiences continued to be lacking in didactic content and/or resources. As in 2008, the Neurosurgical experiences during the Clinical Immersion were uneven. The interdisciplinary IQ Cases presented on the last day, Friday, of the Clinical Immersion week had an uneven reception. Clinical immersion week

July 15, 2009

Musculoskeletal Medicine Section activities will be under further development. Unfortunately, the request for more medical school administrative/logistical support last year did not come to fruition. Last year, the timing of the clinical immersion week corresponded with the American Academy of Orthopedic Surgeons Annual Meeting; a meeting where most orthopedic surgeons attend so our pool of facilitators was very small. Timing of the week this coming academic year will not conflict with this meeting. If we are to put a large amount of faculty resources and time into clinical immersion week, then activities for which the students are assigned should be mandatory and negative consequences should be given to the student for not being professional enough to come to his or her assigned activity.

6. Resources: There were some concerns regarding the sufficiency of the neuroanatomy textbook. There were concerns that Access Medicine resources are often encyclopedic and not sufficiently didactic or focused.
7. Self-testing and SSEQ Exam: There were concerns about the weighting of material on the SSEQ versus the amount of time that students spend with the subject matter covered.
8. Administrative, Oversight, and Support Staff: Content searches of the e-curriculum continue to be an issue.

Proposed Changes for 2009-2010

1. Large and Medium Size Group: We recommend a contiguous 7 week segment at the start of Block 6 that would allow completion of the Neuroscience Concentration and all Block VII (Structure) material (i.e., head and neck gross anatomy, head and neck embryology, neuroanatomy, neuroembryology, neurohistology, and neuropathology). The early finish for Block VII would allow an early Structure exam as has been requested by the Office of Curricular Affairs. We recommend that this 7 week period include all the Neuroscience Concentration material that was presented in Block 5 during 2008. The contiguous 7 week period would facilitate involvement of 6-10 Neurology Resident Doctors. We recommend that this 7 week segment with two weeks that have no IQ cases.
2. IQ Groups: We recommend careful review of the quality and accessibility of the reference material for each IQ case. One Psychiatry IQ case will be replaced with a lecture and Medium sized Group as the revised schedule allows for one less IQ group.
3. Clinical Immersion: The Neuroscience Concentration recommends the recruitment of a new Section Leader for Block VI Clinical Content. This Section Leader could work with the Clinical Immersion Week faculty to draft syllabi that include: Learning Objectives, faculty and clinical immersion activity site selection, and supporting literature. This Section Leader could also develop a website presenting cases (e.g., many are already written) and case materials. The use of case materials is likely to require IRB Approval to include text records, radiographs, video, and histology. As per the suggestion at the recent Clinical Immersion Retreat, we recommend that students pick one of the cases that they observe during the Clinical Immersion week and prepare it for a faculty-evaluated presentation on Friday of the Clinical Immersion week. We recommend that that presentation be used to document completion of that week's activities. Proposed changes

July 15, 2009

to the overall organization of the clinical immersion week for next year pending the addition of needed medical school administrative/logistical support and faculty availability include the following. To develop student leadership and communication skills, students will contact their assigned preceptor prior to their experience. This way the student can learn what cases or patients will be seen during the activity and be able to prepare accordingly. This also will help improve communication between student and physician so that the physician is aware that the student is coming. Faculty involved in clinical immersion activities will be briefed on the goals and objectives of the experiences. There will be a brief orientation meeting the first day of clinical immersion to go over with the students the organization and expectations for the week. Learning objectives will be known to the students for each activity. Each student must prepare to present at the end of the week (Friday) a complete 10 minute patient case presentation to one of the Block faculty to culminate the clinical immersion experience and prepare them for the wards. Each student observing surgery will be required to write a reflection paper (limit to one page) describing the anatomy seen or interesting basic science principles used in the treatment of the patient. These reflection papers will become part of their portfolio.

4. Resources: We are considering live patient demonstrations as a noon hour option. This may better prepare students for the Clinical Immersion week. We recommend review of the neuroanatomy textbook and possibly selecting a different required text for the 2009-2010 Block VI offering. We recommend, where possible, the use of appropriate and accessible "required" textbook readings and that more encyclopedic sources be assigned as "supplementary" readings.
5. Self-testing and SSEQ Exam: We will track changes in the scope and content of the curriculum, and will revise or rewrite the relevant SEQs and the weighting of content in the SSEQs.
6. Administrative, Oversight, and Support Staff: We recommend the development of intra- and cross-Block cross-indexing and searching tools for the e-curriculum.

Block VI Student Feedback

Block VI Student Feedback: Overall Ratings

Responses: [P] Poor=1 [F] Fair=2 [A] Average=3 [G] Good=4 [VG] Very Good=5 [E] Excellent=6

Overall Block VI Questions	2008 Rating	2009 Rating
Approachability of faculty	4.6	4.9
Effectiveness of large group leader (lecturers)	3.9	4.4
Effectiveness of your IQ Group Facilitator(s)	4.3	4.7
Communicating how you would be assessed	3.9	4.4
Overall quality of this Block	3.7	4.7

Block VI Student Feedback: Integration of Concepts

Responses: [P] Poor=1 [F] Fair=2 [A] Average=3 [G] Good=4 [VG] Very Good=5 [E] Excellent=6

July 15, 2009

Subject Area	2008 Rating	2009 Rating
Neuroscience	4.1	4.8
Mind	4.0	4.5
Musculoskeletal	3.2	4.1
Anatomy	3.7	4.1
Histopathology	3.7	2.8