

Block 6 Leader Report and Action Plan 2016-2017

Cognition, Sensation and Movement

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MSK:

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Neuroscience:

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MIND:

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Bioethics:

Patricia Marshall, Ph.D. (team leader)

Anatomy:

Darin Croft, Ph.D. (team leader)

1. Please address last year's Action Plan. Did you accomplish the goals that you listed? Why or why not?

Goals from last year (MSK):

- The major goal in 2016 was to change the order of the sections in Block 6. This was accomplished by placing MSK at the beginning of Block 6 to directly follow the MSK section of Block 5. We started on the path to meet this goal by surveying all of the faculty who participate in Block 6 to determine if they would be available in the re-ordered schedule. After almost unanimous support, we moved forward during the summer of 2016 to design and implemented it in 2017.

Goals from last year (Neuro):

- Massive reorganization of the Neurology block will help the students learn neuroscience in a progressive, logical format. We will start with the spinal cord and peripheral nervous system, describe how it connects to the brain, how senses input information, and then how different systems within the brain interact and function. We will then end with higher-order brain functions and cognition. This organization will help the students integrate all three Block 6 subsections by acting as a “bridge” in the middle of the block.
- We accomplished this goal of extensive reorganization and plan on continuing this structure for the future.
- Inclusions of new introductory lectures will give students a broad overview of the

macroscopic and microscopic form and functions of the nervous system.

- One new introductory lecture were created and presented as the first hour of the Neuroscience portion of the block: “Introduction to Neurosciences, a Macroscopic View” by Wei Xiong. This was followed by a modified version of “Introduction to Block 6: Part II, Cellular and Molecular Neuroscience” by Richard Zigmond. To cover important content that had previously been missing from the Block, Ron Conlon presented a lecture on neuroembryology.

- MSGs will be phased out and replaced with TBLs.

- Where appropriate, several MSGs were converted into lectures. We will continue the process of phasing out MSGs.

- We will introduce small group sessions that will help reinforce lecture materials in a case-vignette discussions format that will require some preparation by students and be led by neurology/neuroscience content experts (faculty and residents). This will provide an intimate and very interactive environment where students can probe and question content experts

- One MSG was converted into a new interactive small group session led by Neurology Residents on the clinical management of stroke. We believe these residents were uniquely qualified to lead the discussion due to their extensive real-world experience managing such patients.

- David Katz’ lecture from the Neuro section of the block will be moved to the MIND section to support integration of content areas.

- One of David Katz’s lectures (Neurodevelopmental Origins of Disease) was moved to the Mind section. Many of his other lectures were moved to the end of the Neuro section so that they were in close proximity to the Mind section. This was part of the overall plan in providing a segue from neuroscience to mind.

Goals from last year (MIND):

The Mind (MIND) component, Psychiatry, accomplished the following goals stated in the last Action Plan:

- We successfully implemented a new TBL focusing on PTSD which seemed to have been quite successful. (Note that our original plan was to develop a TBL on Personality Disorders; we chose PTSD instead as personality disorders are more complex and may be better taught in a different format.) We received good feedback from students overall, but some improvements can be made (as always).
- In addition we incorporated a new Child Psychiatry case on Autism Spectrum Disorder. This is a very important and timely topic as this is a condition receiving increasing attention both in child and general psychiatry.
- In addition, we added two new lecture topics – one by Dr. David Katz related to experience-dependent brain plasticity, critical periods, and how early life stress alters brain development and contributes to adult psychopathology; and another on the effect of adverse childhood experiences (ACEs) on both psychiatric and medical issues experienced by individuals with high levels of ACEs.
- We updated our resources and continued use of texts that are available electronically.
- We continued with clinical interviewing experience (previously known as “clinical immersion”) because psychiatric interviewing is somewhat different and more “nuanced” than the typical medical interview format. The scheduling of this continues to be a challenge.

- Although we discussed the incorporation of psychosocial elements into the neurology cases, no changes were made in the IQ cases to include this element for this year.
- The end-of-block review was approached in a bit different way this year; Dr. Stagno did the review and used the time with the students to field their questions about what was not clear, what they needed more information about.

Goals from last year (Bioethics):

Goals for the bioethics component were accomplished.

- Bioethics issues for every case were reviewed and revised when appropriate.
- Resources and references were reviewed and updated as needed.

2. Please comment on 2-4 aspects of the Block that went particularly well. Do you have plans to expand/increase/improve these aspects of the Block? Please comment on any new curricular innovation(s) that you introduced into the Block this year. Did they work well? Will you continue them?

MSK: There were positive reviews stating that the block was well ordered, cohesive, comprehensive and straightforward, calling out MSK on numerous comments.

Neuro: We believe that the overall sequencing of the topics taught during the Neuro portion of the block was particularly effective. Compared to previous years, we received much less complaint regarding confusion during the first half of the Neuro portion. We plan on keeping our current structure and making tweaks as needed to best present a very complex field to the students.

MIND: We were quite pleased with the TBL exercise. The educational effectiveness of medium size-group activities was rated much higher (4.0) than in the previous year (3.4). This was our “maiden voyage” with TBL, so there was a steep learning curve for us, but we feel that the cases we developed were sufficiently complex to allow students to think critically about the diagnoses, treatments, and factors contributing to the development of the “patient’s” symptoms. We also feel that the 2 new lectures provided important information for students to put things in better overall context – one of which was focused on neuroscience and brain development and the other on how things we regard as leading to “psychopathology” (adverse childhood experiences) affect not only psychological health but physical health – making this subject relevant to ALL learners no matter what field of medicine they choose.

Bioethics:

The integration of bioethics into the Block was rated higher (54%, or on a 5 pt scale 3.3) than in the previous year (32%, or on a 5 pt scale 2.9). Ethical issues surrounding end-of-life care, specifically the preparation of living wills and advanced directives, were well prepared and could be easily addressed by the students. Informed consent issues were also well articulated. When these ethical issues arise in cases, they will be reviewed and revised to make sure that the information is up-to-date.

3. Please comment on aspects of the Block that received decreased ratings when compared to previous years. What are possible explanations? How will you address

these?

There were multiple comments in the student feedback suggesting that as a Block, we can still do a better job distinguishing between big concepts and more detailed information when presenting basic information and its clinical correlations. We plan to use several approaches to address this important issue, which, in essence, draw from the PEAC recommendations to “Foundations of Medicine and Health Overarching Themes”. The Block 6 Design team will identify a smaller number of higher order learning objectives (LOs) in lieu of long lists of ‘nuts and bolts’ details. This refocus on “higher order learning objectives” will be applied to all types of activities (including IQ cases) in Block 6. Block 6 Leaders will identify important key concepts and arrange LOs of individual activities into hierarchies that support the overall LOs of the block.

MSK: a decrease occurred in Block Concepts/Integration and Longitudinal Themes from 75 to 67 percent good and excellent (on a 5 point scale: 3.7 this year compared to 3.9 last year). The structure of the lecture sequence and content has not changed significantly from last year. It is not clear if this change is statistically significant. To be reviewed and opportunities for improvement will be evaluated for next year.

Neuro: In the areas of “Block Concepts/Integration of Block Concepts and Longitudinal Themes” ratings of the Neurology component of the Block were essentially unchanged over the last three years (there was a slight improvement last year but this was probably not significant).

Over the last few years the leaders of the Neurology portion of Block 6 have introduced new basic science material into the IQ facilitator guides. This was to complement the material that was already included in the guides. We are still struggling to find the optimum balance. Although many of these passages were seamlessly incorporated, this year, in response to a specific addition on the underlying electrophysiology that gives rise to EEG signals, we received a comment from one resident to the effect that this was too much information in the facilitator guide. It was a helpful comment, and identified the origin of the confusion which can ensue when information in the guide is not matched to either student or facilitator expectations. Over this summer, the IQ cases will be reviewed with this in mind.

MIND: In the areas of “Block Concepts/Integration of Block Concepts and Longitudinal Themes” ratings of the MIND component of the Block were essentially unchanged over the last three years (there was a slight improvement last year but this was probably not significant). The students requested that the end-of-block review not be a review of SEQs for which students already have the ideal answers; we tried something different this year (an “open” session asking for what they needed more information or clarity about). Feedback about that was to take the “frequently asked questions” and use that as a starting point; also to let the students know if it is going to be a “bring your own questions” format.

The issue of scheduling to provide opportunity for students to learn about the psychiatric interview continues to be challenging, but we think it is worthwhile. We will continue to try to make this a meaningful experience.

By and large, the comments re: MSGs for psychiatry were fairly positive, and we like the format of the MSG for some of the content; however, it seems that these will need to be phased out going forward. (There was some criticism about MSGs for other topics.) There seemed to be “mixed reviews” on the suicide MSG. I expect that, to some degree, it depended on who was facilitating the session. I was quite surprised to see feedback from a student who suggested that this was not useful because this is “very straight-forward”. This is alarming as suicide assessment is anything BUT straight-forward.

One student commented that the DSM5 lecture was “regurgitating” the diagnostic criteria. This feedback will be shared with the individual who gave the lecture about trying to make this more interactive and ‘case-based’

Bioethics:

Feedback from students continues to indicate a frustration that the ethics issues in the cases were redundant. In addition, feedback from facilitators called attention to the limited time spent discussing ethical challenges associated with the cases being discussed. We will continue to revise cases to reduce redundancy and we will continue to reassess the cases and strategies for addressing ethical issues. In addition, we will stress to IQ facilitators the importance of making sure that time is spent Qs on addressing ethical issues. We will work on a better integration of ethics as a theme in the cases. We will review the ethics learning objectives to ensure consistency among them and to ensure overall alignment with the LOs of Block 6.

4. Please comment on any new curricular innovation(s) that you introduced into the Block this year. Did they work well? Will you continue them? (Note: this may overlap with #2 above).

BLOCK In 2016-17, we collaboratively created a modified Course Guide in response to student feedback suggesting that at least some students found it difficult to ‘see the forest for the trees’. In addition to expanding on the description of the material presented in each week of the block, the block organizers made an effort to explain how the material presented in each week was related to material in the preceding and subsequent weeks, and more generally how the material fit into the big picture. It is difficult to know how well this worked, but we believe it is a positive step toward clarifying for the students the conceptual structure/organization of the material covered in Block 6. We will continue working towards this goal by (a) making further refinements of the Course Guide, (b) making it more clear to the students its availability as a resource, and (c) by attempting to coordinate more effectively the organizational scheme it lays out with the instructional sessions in the block. For example, we may solicit comments and suggestions from instructors on the current description of weekly topics in the Course Guide, and ask these instructors to describe in their sessions, as appropriate, how the material they discuss is related to the material the students have learned in previous weeks, and how it fits in with material to be covered in subsequent weeks.

MSK: A few comments from students centered on the disproportionate number of MSK questions relative to the number of weeks dedicated to MSK in Block 6. Two years ago MSK was decreased from 6 questions to 5. In the upcoming year, we will reduce MSK to 4

questions to be proportional.

There were also comments that referred to it being hard for students to differentiate between what they need to know for Block 5 MSK and Block 6 MSK. Plan: inform students: Block 5 MSK acts as a foundation for Block 6 MSK and think integrate, not differentiate.

Neuro: As noted earlier in this report, one MSG was converted into a new interactive small group session led by Neurology Residents on the clinical management of stroke.

MIND: See #2 above.

Bioethics: Review week included a presentation for students on bioethics focusing on informed consent in clinical settings. The lecture was well attended by students and this lecture will be scheduled again next year.

7. Are you planning any changes to your required resources?

BLOCK: We continue to review the resources required for up-to-date content that is appropriate in depth and length. We will continue to recommend resources available electronically as much as possible.

8. Please comment on observations of student attendance and student participation. Was it similar to the preceding year?

BLOCK: We do not have the data about attendance at this time; in general, attendance was similar to the preceding years but both were lower than two years ago. We continue to be concerned that lectures are not particularly well attended when faculty are putting forth significant effort to make these sessions useful and interesting.

Regarding student participation in IQ regarding **Bioethics content and LOs:** Based on feedback from IQ facilitators, there were differences between the groups in the amount of time devoted to discussion of ethical issues associated with the cases.

Regarding the impact of the discussion leaders themselves, the MSG in MSK on joint destruction is an extremely important learning activity for the students. However, the content that is shared with the students appears to be at the discretion of the discussion leader, and this leads to different information being shared among the groups.

The lack of conformity among small groups leading to different learning outcomes remains an ongoing challenge. This has been successfully addressed by having a training session for the small group facilitators well in advance of the session with the students and by normalizing the content that is used in the learning activity.

9. Please comment on the alignment between the weekly Block content and the MCQs/SEQs.

BLOCK: MCQs are no longer part of the curriculum. This coming year we plan to revise the SEQs to include more higher-order basic science and clinical science questions.

**10. What additional information or comments do you want to share about the Block?
Plans for next year (2016-2017)**

Block 6 benefits from the excellent work of Nivo Hanson, Katie Battistone and many other people. We want to extend to them our sincerely thanks and appreciation.

MSK plans for next year: Will reexamine the lecturers, sequence as well as lecture content and look for opportunities for improvement. The single MSG on "Joint Destruction" will be considered for a TBL format.

Neurology/neuroscience plans for next year: The comments from the students suggested a certain redundancy between the IQ case on movement disorders and the neurotransmitter MSG. We will use this overlap in content to create a TBL on the dopaminergic neurotransmission extracting this information from the Parkinson Disease IQ case. This will fulfill multiple goals: to remove redundancy in the curriculum, highlight neurotransmission as its own activity, and offer the opportunity to elaborate in the IQ case upon the non-neurological manifestations of PD, which we have not included in the past.

MIND plans for next year: The rating of psychiatry on the issue of integration of block concepts was 85% (slightly better than last year, and higher than the other content of this block). Therefore we feel that we are doing a fairly good job in presenting this content.

We plan to develop another TBL session (topic still to be decided), consistent with the School's effort to move toward this pedagogical format. We will continue to make improvements in the PTSD TBL and also continue to work on training our faculty about the pedagogy of TBL. We will incorporate the feedback received about the end-of-block review and make it a mix of "FAQs" and an open format, and let the students know to come with their questions.

Bioethics: We saw what appears to be significant improvement this year, compared to last year's student feedback. We will continue to review each case to make sure that the content of the ethical issues are relevant. The issue of redundancy continues to be raised by students; however, the particular Block 6 UQ cases address the ethical issues from different perspectives, in the context of the cases presented. We hope in the future that we can find a good way to encourage all IQ facilitators to address the ethical issues when they are raised in a case. We may return to a presentation on bioethics at the beginning of the Block to orient the facilitators.

Class of 2019 was asked questions of Block 6 components. Results are reported below as compared to results of previous three years. Responses/Expected: 46/46 (100%)

Percentage of Students who rated "Good" or "Excellent"

Block 6: Cognition, Sensation and Movement				
General Block Aspects				
Block Components	2013-14 %	2014-15 %	2015-16 %	2016-17 %
Effectiveness of IQ cases	83	72	78*	81*
Effectiveness of large group lectures	74	62	71*	76*
Effectiveness of medium-sized group activities	52	49	55*	64*
Overall quality of this Block	78	72	78*	80
Block Concepts/Integration of Block Concepts and Longitudinal Themes				
Psychiatry	83	71	83	85
Musculoskeletal	56	67	75	67
Neurology	90	78	75	78
Gross Anatomy	83	78	81	83
Histopathology	60	64	61	57
Bioethics	56	38	32	54

*The overall quality of the Block is based on the average ratings of Neurology, Psychiatry and Musculoskeletal in this Block.

Integration of Block Concepts and Longitudinal Themes

Rate the overall quality of this Block

	<u>Mean 2016-17</u>	<u>Mean 2015-2016</u>
	4.0	3.9

Q1 What was the educational effectiveness of lectures/integration^?

	<u>Mean 2016-17</u>	<u>Mean 2015-2016</u>
Neuro/neuroscience	3.7	3.9
Mind	4.3*	4.0
MSK	3.7	3.9
Bioethics^	3.3*	2.9
Histopathology^	3.7	3.6
Gross anatomy^	4.2	4.1

Q2 Rate the overall quality of specific section of the Block.

	<u>Mean 2016-17</u>	<u>Mean 2015-2016</u>
Neuro/neuroscience	4.1	4.0
Mind	4.2	4.1
MSK	3.7	3.9
Bioethics		

Q3 What was the educational effectiveness of IQ cases?

	<u>Mean 2016-17</u>	<u>Mean 2015-2016</u>
Neuro/neuroscience	4.4	4.3
Mind	4.1	4.1
MSK	4.0	3.9

Q4 What was the educational effectiveness of the Physical Diagnosis/Neurological Exam Workshop?

	<u>Mean 2016-17</u>	<u>Mean 2015-2016</u>
Neuro/neuroscience	3.9	?

What was the educational effectiveness of mediums-sized group activities?

	<u>Mean 2016-17</u>	<u>Mean 2015-2016</u>
Neuro	?	3.2
Mind	4.0*	3.4
MSK	3.5	3.6