

Case Western Reserve University – University Program Medical School

July 31, 2023

Block 6: Action Plan 2022-2023

Year 2 (August- March)		2022-2023	
Summer Break (10 weeks)	Host Defense & Host Response	Cognition, Sensation & Movement	Step 1 Study (6-8 weeks)
	Block 5 (13 Weeks)	Block 6 (14 Weeks)	
	Immunology, Microbiology, Hematology, Oncology, Infectious Diseases, Rheumatology, Dermatology Musculoskeletal	Neurology, Mind,	
	Assessment Week	Integrative Week Assessment Week	
Structure (GARLA and “Systems and Scholarship”)			
Foundations of Clinical Medicine (Tuesday Seminars, Communications, Physical Diagnosis, Patient Based Experiences)			

1. Course Description:

Block6 (2022-2023) covered Ophthalmology, ENT, Neurology, Neuroscience, Mind, Addiction Medicine, and Bioethics. Block6 is the final preclinical course that M2 students take before starting their clerkships.

2. Block Co-Leaders:

- Block Leader: Maureen McEnery, PhD, MAT
- ENT leader: Todd Otteson, MD
- Ophthalmology leader: Yasemin Sozeri, MD
- Neurology leader: Wei Xiong, MD
- Neuroanatomy leader: Andrew Crofton, PhD
- Neuroscience leader: David Friel, PhD
- Psychiatry leader: Andrew Hunt, MD, MHA
- Addiction Medicine leader: Ted Parran, MD
- Bioethics: Robert Guerin, PhD

3. Design Team:

Neurology and Neuroanatomy:

Krishan Chandar, MBBS, MRCP (London)

Darin Croft, PhD

Psychiatry:

Rajeet Shrestha, MD

Jennifer Brandstetter, MD

Matthew Newton, MD

Neil Bruce, MD

Samantha Imfeld, MD

4. Block Goals: Please fill in the table below for your Block Goals.

Competency and Definition	Educational Program Objective (EPO)	Block Goals Block #6	Recommended Changes
<p>Knowledge for Practice Demonstrates knowledge of established and evolving biomedical, clinical, epidemiological and social-behavioral sciences as well as the application of this knowledge to patient care</p>	<p>Demonstrates ability to apply knowledge base to clinical and research questions.</p> <p>Demonstrates appropriate level of clinical and basic science knowledge to be an effective starting resident physician</p>	<p>Achieve an understanding of the normal structure and physiology of eyes, ears, nose, and throat and conclude with an understanding of the pathological, congenital and acquired processes which negatively impact ophthalmologic and ENT function.</p>	None
<p>Knowledge for Practice Demonstrates knowledge of established and evolving biomedical, clinical, epidemiological and social-behavioral sciences as well as the application of this knowledge to patient care</p>	<p>Demonstrates ability to apply knowledge base to clinical and research questions</p> <p>Demonstrates appropriate level of clinical and basic science knowledge to be an effective starting resident physician</p>	<p>Review the common clinical disorders of the human nervous system and their pathophysiology while using normal anatomic-functional relationships to pinpoint the site of disease involvement in the nervous system.</p>	None

Competency and Definition	Educational Program Objective (EPO)	Block Goals Block #6	Recommended Changes
<p>Knowledge for Practice Demonstrates knowledge of established and evolving biomedical, clinical, epidemiological and social-behavioral sciences as well as the application of this knowledge to patient care</p>	<p>Demonstrates ability to apply knowledge base to clinical and research questions</p> <p>Demonstrates appropriate level of clinical and basic science knowledge to be an effective starting resident physician</p>	<p>Learn the basic cellular, molecular, biochemical and pharmacological processes that contribute to normal and abnormal neuronal function throughout the life-span of the individual.</p>	<p>None</p>
<p>Knowledge for Practice Demonstrates knowledge of established and evolving biomedical, clinical, epidemiological and social-behavioral sciences as well as the application of this knowledge to patient care</p>	<p>Demonstrates ability to apply knowledge base to clinical and research questions</p> <p>Demonstrates appropriate level of clinical and basic science knowledge to be an effective starting resident physician</p>	<p>Learn the clinical presentation, diagnosis, and multimodal treatment of psychiatric disorders, as well as underlying pathophysiology and theories regarding complex etiology.</p>	<p>None</p>
<p>Knowledge for Practice Demonstrates knowledge of established and evolving biomedical, clinical, epidemiological and social-behavioral sciences as well as the application of this knowledge to patient care</p>	<p>Demonstrates ability to apply knowledge base to clinical and research questions</p> <p>Demonstrates appropriate level of clinical and basic science knowledge to be an effective starting resident physician</p>	<p>Learn the integrated biopsychosocial elements of human mental function and their application in clinical psychiatric practice, and the general practice of medicine.</p>	<p>None</p>

Competency and Definition	Educational Program Objective (EPO)	Block Goals Block #6	Recommended Changes
<p>Knowledge for Practice Demonstrates knowledge of established and evolving biomedical, clinical, epidemiological and social-behavioral sciences as well as the application of this knowledge to patient care</p>	<p>Demonstrates ability to apply knowledge base to clinical and research questions</p> <p>Demonstrates appropriate level of clinical and basic science knowledge to be an effective starting resident physician</p>	<p>Recognize the signs and symptoms of substance use disorder using a biopsychosocial model in order to make an accurate diagnosis, referral and plan; Demonstrate respectful language and communication.</p>	<p>None</p>
<p>Common to all Blocks:</p>			
<p>Knowledge for Practice Demonstrates knowledge of established and evolving biomedical, clinical, epidemiological and social-behavioral sciences as well as the application of this knowledge to patient care</p>	<p>Demonstrates ability to apply knowledge base to clinical and research questions</p> <p>Demonstrates appropriate level of clinical and basic science knowledge to be an effective starting resident physician</p>	<p>Recognize and analyze ethical problems in clinical medicine and biomedical research using the principles of autonomy, beneficence, nonmaleficence and justice.</p>	<p>None</p>
<p>Teamwork & Interprofessional Collaboration Demonstrates knowledge and skills to promote effective teamwork and collaboration with health care professionals across a variety of settings</p>	<p>Performs effectively as a member of a team</p>	<p>Develop and practice the knowledge and skills that promote effective teamwork across a variety of settings.</p>	<p>None</p>

Competency and Definition	Educational Program Objective (EPO)	Block Goals Block #6	Recommended Changes
<p>Professionalism Demonstrates commitment to high standards of ethical, respectful, compassionate, reliable and responsible behaviors in all settings, and recognizes and addresses lapses in behavior</p>	<p>Commonly demonstrates compassion, respect, honesty and ethical practices</p> <p>Meets obligations in a reliable and timely manner</p> <p>Recognizes and addresses lapses in behavior</p>	<p>Understand and practice the behaviors of an ethical, respectful, compassionate, reliable, culturally competent, and responsible physician.</p>	<p>None</p>
<p>Interpersonal & Communication Skills Demonstrates effective listening, written and oral communication skills with patients, peers, faculty and other health care professionals in the classroom, research and patient care settings</p>	<p>Uses effective written and oral communication in clinical, research, and classroom settings</p> <p>Demonstrates effective communication with patients using a patient-centered approach</p> <p>Effectively communicates knowledge as well as uncertainties</p>	<p>Understand and demonstrate effective communication skills for learning and clinical practice environments.</p>	<p>None</p>
<p>Research & Scholarship Demonstrates knowledge and skills required to interpret, critically evaluate, and conduct research</p>	<p>Analyses and effectively critiques a broad range of research papers</p> <p>Demonstrates ability to generate a research hypothesis and formulate questions to test the hypothesis</p> <p>Demonstrates ability to initiate, complete and explain his/her research</p>	<p>Analyze, critique and present research studies from the primary literature.</p>	<p>None</p>

What changes were made 2022-2023?	How did the changes work?	What would you like to change next year 2023-2024?
We asked all of the lecturers to introduce their lecture using a clinical case that exemplifies the key clinical pearls for that particular content area.	The informal feedback we received suggested this was positive addition to the lectures. Lectures were rated overall to be significantly better this year.	We plan on continuing this practice. We will also build upon this by asking lecturers to: 1) include board style questions to students as a resource 2) include a single-slide summary of the key points of their lecture
We created a new integrated lecture on Huntington's Disease.	This change was well-received by those who attended the lecture, but not seen widely because of low attendance.	This content will be included at the interface of neurology and psychiatry and will be co-presented by Drs. Xiong and Hunt
We moved to a rotation structure this year that will allowed every IQ group to have a neurology resident at least for part of each week's IQ sessions. We believed this approach to be the fair way of distributing the residents, even if it meant lack of continuity with residents. The goal was to maximize the availability always of residents,	This change was well-received. The neurology resident participation was rated significantly higher this year compared to last.	We will do this again in 2023-24.
We substituted: Dr. Chris Geiger for Dr. Bash Katerji, Dr. Ted Parran, for Dr. Chris Delos Reyes.	This change was well-received.	We will repeat this in 2023-24

What changes were made 2022-2023?	How did the changes work?	What would you like to change next year 2023-2024?
<p>The substances of abuse lecture was trimmed from two 50 minute sessions to one 50 minute session.</p> <p>The week of Feb 20 is the transition week from Psychiatry content to Addiction Medicine content. Starting the week with a lecture on SUD establishes expectations.</p>	<p>It worked well and was an appropriate use of time.</p>	<p>We will do this again in 2023-24.</p>
<p>The content that was previously covered in the lecture on the Reticular Activating System was integrated into the lecture on Coma.</p> <p>With the retirement of David Katz, lectures that he had previously given in Block 6, with the exception of the lecture on the Reticular Activating System, were taken over by David Friel.</p>	<p>Well</p>	<p>No changes.</p>

What changes were made 2022-2023?	How did the changes work?	What would you like to change next year 2023-2024?
<p>We retitled 3 of the central lectures on neuroanatomy to make them more attractive to students.</p> <p>Original Titles: Autonomic -> Central control of autonomic function Hypothalamus Thalamus I Thalamus II</p> <p>Lecture titles this year:</p> <p>Central control of autonomic function The master controller – Hypothalamus The master integrator – Thalamus Thalamus and the sleep wake cycle</p>	<p>Well</p>	<p>The title of first lecture on the thalamus will be changed to Thalamus – Gateway to the Cortex to emphasize a basic function of this structure that is important for medical students to understand.</p>
<p>We worked with Tawna Mangosh to create pharmacology videos to be paired with IQ cases.</p>	<p>Well</p>	<p>None</p>
<p>We combined the two current child psychiatry IQ cases into one that will compare and contrast the presentation of young children with ADHD and features of Autism Spectrum Disorder, two highly comorbid conditions. This case may also address some of the common myths in psychiatric diagnosis and care of these conditions.</p>	<p>Well</p>	<p>None</p>

<p>We reviewed the curriculum for comparison with published descriptions of core and recommended material to determine if Block 6 covers what has been highlighted by medical educators at large (Moxham et al 2015, Gelb et al. 2021). We found that the Block does indeed cover virtually all of the core and recommended topics identified by those authors.</p>	<p>Interestingly, students reported in End of Block feedback that neuroanatomy went into “too much” detail versus what they believe to be the level of neuroanatomy knowledge needed for a general practitioner. It appears that some Neurology residents made comments to the effect that the neuroanatomy we cover in Block 6 is beyond what even a Neurologist needs to know for practice. Students also felt overwhelmed by the amount of neuroanatomy content in Block 6, especially students who lacked any background in neuroscience.</p>	<p>For next year, we plan to integrate MedOne board-style questions into neuroanatomy lectures and reviews to emphasize that the neuroanatomy content covered in Block 6 is consistent with what is found on boards and necessary for clinical practice, including for non-neurologists. During our early meetings with the UH Neurology Residents, we will emphasize the importance of not making negative comments regarding Block 6 content when participating as teachers in Block 6. Since many students felt overwhelmed with neuroanatomy, we plan to make MedMinute videos for key neuroanatomic pathways/structures/content and provide links to these videos in IQ case materials to maximize exposure to these videos. We are also planning to add a 2-hour, mandatory neuroanatomy “boot camp” in the cadaver lab at Robbins (pending approval by the Committee on Medical Education) that will expose students to brain dissection during the first week of Block 6. Moreover, there will be 4 hours of neuroanatomy lecture during the first week of Block 6 and the first GARLA session of Block 7.6 will be the neuroanatomy I lab. These changes should provide students with early, extensive exposure to neuroanatomy that is foundational to Block 6. Additionally, the first IQ case of Block 6, which will be covered during week 1, is a case that demonstrates the</p>
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What changes were made 2022-2023?	How did the changes work?	What would you like to change next year 2023-2024?
		<p>clinical importance of neuroanatomy in clinical practice.</p> <p>We are going to pilot integrating the neuroanatomy lectures on the basal ganglia and cerebellum with the clinical lectures on pathologies of these structures. These lectures will be delivered together by Drs. Crofton and Kilbane.</p> <p>We also identified areas that could be more concisely articulated in Block 6 such as acute and chronic pain, which will be its own lecture on 2/20/23.</p>
<p>We introduced a new IQ case on Adolescent-onset Eating Disorders and a panel group discussion. The goal was for students to benefit from the opportunity to work with an Adolescent to Young Adult time course, de-stigmatization of a misunderstood disorder, and understand medical complications of the highest mortality psychiatric condition in the DSM.</p>	<p>Well-Received</p>	<p>We will repeat this in 2023-24.</p>

What changes were made 2022-2023?	How did the changes work?	What would you like to change next year 2023-2024?
<p>On February 17, 2023 we replaced one TBL on Suicide Risk Assessment for a series of lectures on human sexuality.</p> <p>The rationale is as follows: extending beyond week 7, Block6 lost 5.5 hrs of contact time with the distribution of hours from Block6 to FCM. The consequence of this was the removal of the two lectures in human sexuality from the Block6 curriculum.</p> <p>The removal of this content is corrected by the new lecture series on human sexuality.</p>	<p>Well-Received</p>	<p>We will repeat this in 2023-24.</p>
<p>We introduced a lecture that was a close reading of a case of a patient who progressed from a vegetative to a brain death state. Students will be introduced to a cast of characters, i.e., we will come to know the patient's social history, family dynamics, and values for healthcare. We will also find ourselves in a family meeting, where the attending physician will describe to the family brain-death testing and the diagnosis of brain death. With intentional blunders embedded in the case, students will be able to assess poorly delivered brain-death diagnoses to families and speak about ways to improve communication. This case might also lead naturally to a general discussion of best practices in family meetings.</p>	<p>The impression from those present for the lectures (this lecture was delivered in two parts, once early in the block and again at the end of the block) was that this new lecture was well received. I think students appreciated the emphasis on the emotional experience of family meetings and delivering bad news to families.</p>	<p>These lectures will be delivered again in 2023-24.</p>

5. What changes do you anticipate making to the Block next year (AY 2023-2024)

General:

The areas for attention that we articulated for last years (see above) will be refined for 2023-24.

We will be asking the lectures to 1) focus on ONE “high-yield” topic per lecture in order to knit together block curriculum with major board preparation services that students typically use such as MED ONE. We will highlight this content with a recurrent notable visual identifier.

We will identify opportunities for lecturers to refer to prior and upcoming lectures in order to effectively create continuity between lectures.

6. What successful, innovative components of your block that are best practices that you would like to share with the other Blocks?

Use of residents as IQ facilitators in the IQ program.

Block 6 section leaders meet weekly throughout the year to review the curriculum, student feedback, and the IQ cases. Guests are invited as needed. This practice establishes rapport and helps to define common goals. Including Dr. Croft and Dr. Crofton in our design team has helped establish continuity and reduce redundancy in the Block 6 and Block 7 curricula.

The TBLs in the neuro section complemented the weekly IQ cases. The PGY3 Neurology residents, as facilitators in IQ groups, contribute content expertise particularly in the clinical realm. A pre-session training opportunity for residents is critically important in this model, i.e. incorporating residents into IQ and small group learning activities, could be applied to other Blocks.

We utilize a multidisciplinary approach for psychiatry and addiction medicine and instruct based on a biopsychosocial model of illness. Excellent clinical care in any field of medicine must take into account psychological and social factors if disparities are to be eliminated, and excellent care is to be delivered universally. This integrative approach could be expanded to other blocks.

Data from Longitudinal feedback:

Trends: Overall quality of the Block remained the same compared to last year, which was significantly improved from the previous academic year (20-21). We also saw significant improvements in ratings for the lectures and TBL content compared to last year.

(See Appendix)

7. What specific changes (lectures, TBL, IQ cases, other) do you plan to make to the course next year?

Changes anticipated for next year (2023-2024)	Reason for changes (evidence)
<p>In week 1, on Dec 16, there will be one IQ case (spinal cord lesions) that will help students recognize the importance of foundational neuroanatomy knowledge for clinical practice. Neuroanatomy Boot Camp from 8 am to 9:50 in the Robbins Bldg on the first Weds of Block 6. MedOne Board-style questions integrated into Neuroanatomy Lectures. New MedMinute videos on key neuroanatomical structures/pathways/etc.</p>	<p>We reduced the number of IQ cases in week 1 to just 1 since students reported feeling overwhelmed with the ENT and Ophthalmology cases both taking place in Week 1. We also elected to eliminate the ENT IQ case from the Block to create additional room in the curriculum. However, the ENT lecture (delivered by Dr. Otteson) in which similar content is covered, will remain. We chose the Brown-Sequard IQ case for Week 1 since it will complement the neuroanatomy lectures, GARLA and Boot Camp during Week 1 of the Block.</p> <p>MedMinute videos will provide a simplified resource for students to use when learning neuroanatomy. Integrating links to the MedMinute videos into relevant IQ cases will maximize student exposure to these videos.</p>
<p>The development of the nervous system lecture will be given by Dr. Scott Simpson</p>	<p>Dr. Ron Conlon stepped down, Dr. Simpson is an expert and teaches the graduate Embryology course at CWRU.</p>
<p>A new lecture molecular therapeutics in neurology will be presented on Jan 12, 2024</p>	<p>Molecular therapeutics need to be introduced into the curriculum.</p>
<p>In week 8, the week of the structure exam, there will be two IQ cases (ALS and seizures). Epilepsy Fellows will present cases in Grand Rounds format as a review on Thurs.</p>	<p>Opportunity to add the ALS case that is rescheduled from an earlier place in the curriculum and students will have wider exposure to seizure disorders.</p>
<p>In week 3, there will be one IQ case (ophthalmology). The ENT IQ case will be</p>	<p>No room in the Block 6 calendar, the Dec 22 holiday removed a typical day for IQ.</p>

eliminated this year; content will be covered in Dr. Otteson's lecture.	
In week 2, there will be one IQ case (Peripheral neuropathy). The brachial plexopathy IQ case will be eliminated this year; similar content is covered in Block 5.	No room in the Block 6 calendar
In week 5, there will be one IQ case (Ischemic stroke). This is the MLK, Jr holiday week. The amyotrophic lateral sclerosis (ALS) IQ case will be eliminated this year and replaced with three lectures on neuroanatomy.	No room in the Block 6 calendar
Pharmacology Videos for IQ Cases in Notability	Students have called for more explicit pharmacology tools, such as whiteboard videos with interactive elements. This has been piloted in other blocks, with success.
Increase use of PollEverywhere to enhance student interaction, i.e. identify regions on a diagram.	Enhance student participation and engagement.
**On February 20 we're going to place in the curriculum a lecture on chronic and acute pain.	This was an area that we identified as being under-represented in our curriculum based upon formal our process of reviewing the curriculum for comparison with published descriptions of core and recommended material to determine if Block 6 covers what has been highlighted by medical educators at large

8. Please review your Block objectives. Have you added or deleted major concept areas to your Block?

No major changes to our Block Objectives or concept areas.

9. Describe how faculty teaching quality was reviewed for your block. What faculty development opportunity was offered in response to student feedback?

Each faculty received individual feedback, and our section was reviewed by students as a whole.

We will continue to do TBL training for our faculty going forward in order to train new faculty and to refresh this pedagogical method for those who have already used it. When we do this, we carefully review the content of the TBL to see if any improvements can be made.

In 2023-24, we will be again instituting a blanket policy for lecturers that they begin each lecture with a short clinical scenario and then return to this case to anchor their key learning points. We hope this will lead to increased faculty involvement and increased student engagement.

10. Response to PEAC Report

Summary of Block/Clerkship Areas for Improvement and our response

- Neuroanatomy content felt too in depth and intimidating – students wanted more time spent on foundational information. Some lectures are provided on the fundamentals.

We are addressing this by reorganizing the first week of the block to include a neuroanatomy boot camp and focusing the first week of lectures on foundational information.

- Psychiatry transition felt abrupt and IQ cases seemed too long and repetitive. In particular, the DSM5 appears as a key component of several cases and some learning objectives across psychiatry cases are redundant or overly general.

The DSM5 IS a key component of several cases and is central to the practice of psychiatry. Several IQ cases will be reviewed for clarity and to remove redundancies.

11. Acknowledgements

Ms. Nivo Hanson is gratefully acknowledged for all of her work, her initiatives, and the significant effort taken on behalf of Block 6. Nivo was a kind and competent guide for the students and the faculty during this trying year and everyone is grateful for her patience and direction.

Ms. Yifei Zhu is gratefully acknowledged for her timely attention to our requests for feedback and Just in Time data and her expert preparation of the reports.

Kelli Qua, PhD, *Interim Director of Student Assessment*, and Ms. Kathy Dilliplane, Assessment Administration Specialist, are gratefully acknowledged for their expertise and support.

A special acknowledgement to Ms. Celinda Miller and the numerous colleagues who participated as Block6 IQ facilitators. The sense of maintaining normalcy under these trying times kept this ship on course.

We acknowledge our colleagues who have retired, Drs. Chris Delos Reyes, Michael Devereaux, and Alan Lerner. We also acknowledge those senior colleagues who have stepped aside to offer their younger colleagues the opportunity to contribute to medical education Michael Devereaux and Bash Katerji.

Finally, Block 6 wants to thank the community of medical educators for your suggestions and advice.

Appendix

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

Block 6: Cognition, Sensation and Movement				
General Block Aspects				
Block Components	2019-20 %	2020-21 %	2021-22 %	2022-23 %
Case-based small group discussions (IQ)	63*	70*	84	87
Lectures	61*	71*	67	79
Team-based learning (TBL)	64*	60*	63	75
Neurology PGY3 residents as co-facilitators of IQ groups	--	--	85	97
Rate the quality of your overall educational experience in this Block	71	76	93	92
Block Concepts/Integration of Block Concepts and Longitudinal Themes				
Psychiatry	60	73	86	86
Neurology	79	76	94	95
Neuroanatomy	--	--	81	70
Neuroscience	--	--	83	83
Addiction Medicine	76	85	78	91
Pharmacology	--	--	57	76
GARLA*	52	61	71	72
Histopathology*	74	57	86	87
Bioethics	62	66	70	76

*The wording of the questions was changed to:

Rate the quality of your overall educational experience in GARLA

The Histopathology lectures were an effective tool for my learning. (Agree/strongly agree)

Scale changed to 4-point scale "Poor-Fair-Good-Excellent" from AY2021-22