

**Case Western Reserve University – University Program Medical School**

**Block 6: Action Plan 2021-2022**

Year 2 (August- March) 2021-2022

<b>Summer Break (10 weeks)</b>	<b>Host Defense &amp; Host Response</b>  Block 5 (13 Weeks)  Immunology, Microbiology, Hematology, Oncology, Infectious Diseases, Rheumatology, Dermatology Musculoskeletal  Assessment Week	<b>Cognition, Sensation &amp; Movement</b>  Block 6 (14 Weeks)  Neurology, Mind,  Integrative Week Assessment Week	<b>Step 1 Study (6-8 weeks)</b>
	<b>Structure</b> (GARLA and “Systems and Scholarship”)  <a href="#">Foundations of Clinical Medicine</a> (Tuesday Seminars, Communications, Physical Diagnosis, Patient Based Experiences)		

## 1. Course Description:

Block VI (2021-2022) covered Ophthalmology, ENT, Neurology, Neuroscience, Mind, Addiction Medicine, and Bioethics. Block VI is the final 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,  
Darin Croft, PhD

Psychiatry:

Rajeet Shrestha, MD  
Jennifer Brandstetter, MD  
Nina Ross, 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
<b>Knowledge for Practice</b> Demonstrates knowledge of established and evolving biomedical, clinical, epidemiological and social-behavioral sciences as well as the application of this knowledge to patient care	Demonstrates ability to apply knowledge base to clinical and research questions  Demonstrates appropriate level of clinical and basic science knowledge to be an effective starting resident physician	<b>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.</b>	None

Competency and Definition	Educational Program Objective (EPO)	Block Goals Block #6	Recommended Changes
<p><b>Knowledge for Practice</b> 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><b>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.</b></p>	<p>None</p>
<p><b>Knowledge for Practice</b> 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><b>Learn the basic cellular, molecular, biochemical and pharmacological processes that contribute to normal and abnormal neuronal function throughout the life-span of the individual.</b></p>	<p>None</p>
<p><b>Knowledge for Practice</b> 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><b>Learn the clinical presentation, diagnosis, and multimodal treatment of psychiatric disorders, as well as underlying pathophysiology and theories regarding complex etiology.</b></p>	<p>None</p>

<b>Competency and Definition</b>	<b>Educational Program Objective (EPO)</b>	<b>Block Goals Block #6</b>	<b>Recommended Changes</b>
<p><b>Knowledge for Practice</b> 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><b>Learn the integrated biopsychosocial elements of human mental function and their application in clinical psychiatric practice, and the general practice of medicine.</b></p>	<p>None</p>
<p><b>Knowledge for Practice</b> 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><b>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.</b></p>	<p>None</p>
<p><b>Common to all Blocks:</b></p>			
<p><b>Knowledge for Practice</b> 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><b>Recognize and analyze ethical problems in clinical medicine and biomedical research using the principles of autonomy, beneficence, nonmaleficence and justice.</b></p>	<p>None</p>

Competency and Definition	Educational Program Objective (EPO)	Block Goals Block #6	Recommended Changes
<p><b>Teamwork &amp; Interprofessional Collaboration</b> 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><b>Develop and practice the knowledge and skills that promote effective teamwork across a variety of settings.</b></p>	<p>None</p>
<p><b>Professionalism</b> 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><b>Understand and practice the behaviors of an ethical, respectful, compassionate, reliable, culturally competent, and responsible physician.</b></p>	<p>None</p>
<p><b>Interpersonal &amp; Communication Skills</b> 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><b>Understand and demonstrate effective communication skills for learning and clinical practice environments.</b></p>	<p>None</p>

Competency and Definition	Educational Program Objective (EPO)	Block Goals Block #6	Recommended Changes
<p><b>Research &amp; Scholarship</b> 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><b>Analyze, critique and present research studies from the primary literature.</b></p>	<p>None</p>

What changes were made 2021-2022?	How did the changes work?	What would you like to change next year 2022-2023?
Bioethics content added to IQ case 21 re: surrogate decision-making	This change seemed to be received well.	No further editions are planned for the following year.
Psychiatry Pharm Lecture	This change was well-received by those who attended the lecture, but not seen widely by attendance.	'High Yield' references Clinical Cases Highlighted
Psychiatry Somatization Disorder Lecture	This change was well-received by those who attended the lecture, but not seen widely by attendance.	'High Yield' references Clinical Cases Highlighted
Psychiatry IQ case on Personality Disorders/ Substance Use Disorder	This change was well-received.	Minor revisions for clarity
New Bioethics Lecture on brain death and disorders of consciousness	This lecture was poorly attended; difficult to assess the impact of this change.	A new lecture will be written, centered on a clinical case regarding a family meeting and best practices for clinicians

## 5. What changes do you anticipate making to the Block next year (AY 2022-2023)

(outside-the-grid comments, what we wrote in the Action Plan 2020-21) “With the unprecedented changes in the curriculum and its delivery due to Covid-19 pandemic, Block VI anticipated and was very attentive to 1) the need to keep students actively engaged, 2) the opportunity to include new content, 3) the challenge to coordinate and integrate existing content, 4) learning/evaluating best practices from the Blocks that preceded us

### **General:**

**The areas for attention that we articulated for past years (see above) will be refined for 2022-23.**

We will be asking all of the lecturers to introduce their lecture using a clinical case that exemplifies the key clinical pearls for that particular content area.

We will be asking the lectures to 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 Pathoma, Uworld, etc. We will highlight this content with a recurrent notable visual identifier.

We are creating a new introductory lecture. It will feature a clinical case that integrates the major components of Block 6.

We will return to the idea of incorporating “live patients” into the curriculum during review sessions. For example, a presentation of a patient with Wilson’s Disease (Krishan has a video history on this), a patient with dysfunction in the lobes of the cerebellum, a patient that exemplifies defects in eye movements. This will be supplemental material.

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

### **Neurology:**

Given the highly valued nature of the neurology residents, particularly in IQ groups, and several complaints from students that did not have a neurology resident in their own group, we plan on moving to a rotation structure next year that will allow every IQ group to have a neurology resident at least for part of each week’s IQ sessions. We believe this approach to be the most fair way of distributing the residents, even if it means no groups will always have a resident available. There are 13-14 residents per year and 22 IQ groups. About a third of groups for any given IQ session will not have a resident.

We are in the process of reviewing neurology lectures with the goal of providing peer feedback to lecturers to help ensure that key topics are covered in a way that is accessible to the students, and that lecturers highlight connections with material that is presented in previous lectures. (see section 11 below).

We will have some substitutions in terms of who our lecturers will be: Dr. Chris Geiger will be replacing Dr. Katirji, with TBD replacements for Dr. Steve Jones, Dr. Chris Delos Reyes, and new lecturers for human sexuality and pain pathways.

We will retitle 4 of the central lectures on neuroanatomy to make them more attractive to students. These lectures occur on January 27 and Jan 30.

### **Neuroanatomy:**

We are in the 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 (Moxham et al 2015, Gelb et al. 2021). We have found that the Block does indeed cover virtually all of the core and recommended topics identified by those authors. However, we identified areas that could be more concisely articulated (such as acute and chronic pain).

Moxham B. et al. (2015) A core syllabus for the teaching of neuroanatomy to medical students. *Clinical Anatomy* 28:706–716.

Gelb D et al. (2021) Contemporary Neuroscience Core Curriculum for Medical Schools. *Neurology* 97:675-684.

**Psychiatry:** We were generally pleased with the feedback on the psychiatry part of the curriculum. Nevertheless, we identified relative weakness in lectures compared to IQ cases, and will be working to create more active learning in lecture formats, using clinical cases, and linking content more explicitly to 'High Yield' USMLE review course materials. Similarly, we will be redesigning the review lectures to include interactive elements, Q and A, and Panel discussions. We would also like to explore ways to use interactive opportunities to make faculty more accessible for continuity and career modeling. We will be replacing the Suicide Risk Assessment TBL with 2 Lectures addressing human sexuality.

Several IQ cases will be reviewed for clarity, a new IQ case on Adolescent-onset Eating Disorders will be written. Students will 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. In order to incorporate this, we will combine 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.

Finally, we are working with Tawna Mangosh to create pharmacology videos to be paired with IQ cases. We would also like to leverage faculty preview videos to enhance lecture content and introduce faculty to students where possible.

**Bioethics:** In response to low student attendance at the lecture, I intend to rewrite the lecture, presenting the material in a narrative form. Specifically, the lecture will be 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.

## 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 VI 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 VI and Block VII 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 increased significantly. However, this might reflect the manner in which feedback was received with the Likert score shifting from 5 categories to 4 categories. Block 6 is pleased to go with the interpretation that our quality did, in fact, increase.

Block 6, Cognition, Sensation and Movement  
AY 21-22

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Class of 2024 was asked questions of Block 6 components. Results are reported below as compared to results of previous three years. Responses/Expected: 175/178 (98%)

Percentage of Students who rated “Good” or “Excellent”

<b>Block 6: Cognition, Sensation and Movement</b>				
<b>General Block Aspects</b>				
Block Components	2018-19 %	2019-20 %	2020-21 %	<b>2021-22 %</b>
Effectiveness of IQ cases	71*	63*	70*	<b>84</b>
Effectiveness of lectures	62*	61*	71*	<b>67</b>
Effectiveness of TBL**	47*	64*	60*	<b>63</b>
Effectiveness of neurology PGY3 residents as co-facilitators of IQ groups	--	--	--	<b>85</b>
Effectiveness of small group learning activities (Zoom supported TBLs)	--	--	--	<b>65</b>
<b>Overall quality of this Block**</b>	<b>76</b>	<b>71</b>	<b>76</b>	<b>93</b>
<b>Block Concepts/Integration of Block Concepts and Longitudinal Themes</b>				
Psychiatry	69	60	73	<b>86</b>
Neurology	73	79	76	<b>94</b>
Neuroanatomy	--	--	--	<b>81</b>
Neuroscience	--	--	--	<b>83</b>
Addiction Medicine	76	76	85	<b>78</b>
Pharmacology	--	--	--	<b>57</b>
GARLA**	--	52	61	<b>71</b>
Histopathology**	71	74	57	<b>86</b>
Bioethics	67	62	66	<b>70</b>

\*The percentage is based on the average ratings of Neurology, Psychiatry, ENT, Ophthalmology and Addiction Medicine in this Block.

\*\*The wording of the questions was changed to:

Rate the quality of your overall educational experience in this Block

Effectiveness of in-person TBL

Rate the quality of your overall educational experience in GARLA

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

Changes anticipated for next year	Reason for changes (evidence)
New neuroanatomy review session utilizing a riddle book and gamification.	Review sessions are currently poorly attended. Making this more interactive and fun would hopefully increase participation.
<p>The content that was previously covered in the lecture on the Reticular Activating System integrated into the lecture on Coma.</p> <p>The lecture titles were unchanged with the exception of the first lecture:</p> <p>Autonomic -&gt; Central control of autonomic function Hypothalamus Thalamus I Thalamus II Limbic System</p> <p>Next year the lectures will be entitled:</p> <p>Central control of autonomic function The master controller – Hypothalamus The master integrator – Thalamus Thalamus and the sleep wake cycle Limbic System</p>	With the retirement of David Katz, lectures that he had been previously given in Block 6, with the exception of the lecture on the Reticular Activating System, were taken over by David Friel.
Create Adolescent IQ Case with Eating Disorder, and transition to young adulthood	Students have requested an Eating Disorder case to demonstrate the complex psychiatric and medical management for this condition. We also feel that adolescent mental health needs to be addressed more specifically in the curriculum.
Combine Child Autism and ADHD case into a single IQ case	We will consolidate these commonly comorbid conditions to create a more

	nuanced case, and make space for a new child psychiatry case.
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, ie. identify regions on a diagram.	Enhance student participation and engagement.
Employ Canvas functionality to collect questions from the students re lecture materials	Enhance student participation and engagement; leverage Canvas for just in time feedback.
Live patient interviews during the block. Clinical summary of these patients presented before hand. then the interview with the live question to answer patient questions. This would be optional afternoon sessions of a limited number. Topics: Deep brain stimulation and Wilson’s Disease.	We will be focusing on the clinical relevance of the content and the sessions on “live” patients (or video taped patients) will reinforce the importance of active learning and “bedside medicine”.
On February 17 we are replacing one TBL for a series of lectures on human sexuality.	<p>Extending beyond week 7, Block VI lost 5.5 hrs of contact time with the distribution of hours from Block VI to FCM. The consequence of this was the removal of the two lectures in human sexuality from the Block VI curriculum, the lecture on sleep, a lecture on spinal cord. Other content was condensed.</p> <p>The removal of this content last year will be corrected this year by the new lecture series on human sexuality.</p>
Ted Parran will be moving his substance use disorder talk to Monday, February 20.	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>Rob Guerin will be introducing a new lecture entitled best practices in family meetings.</p> <p>He also will be presenting his lecture on the history of brain death.</p>	<p>Student feedback.</p>
<p>The substances of abuse lecture will be trimmed from two 50 minute sessions to one 50 minute session.</p>	<p>The lecturer left the University and this lecture includes content that can be condensed.</p>
<p>On February 22 we're going to once again try to place in the curriculum a lecture on chronic and acute pain.</p>	<p>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</p>
<p>A mandatory student debriefing on Feb 24 will be re-introduced to the curriculum.</p>	<p>In the absence of the mandatory session which, in my mind, helped them consolidate everything they had learned in the medical curriculum, the students rapidly left campus. I feel that we could do better to help them reflect upon the enormity of what they vicariously experienced with the loss of Noah Scott to the long term effects of a non-fatal drug overdose.</p> <p>Perhaps it was better to have Kate Gill interviewed AFTER the iQ session (rather than before it?) and then have the interview segway into the debrief.</p> <p>(note: This has not been discussed with FCM faculty yet.</p>

## **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 2022-2023, we will be 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.

## **11. Response to PEAC Report**

We did not explicitly respond to the PEAC report this year.

## **12. Acknowledgements**

Ms. Nivo Hanson is gratefully acknowledged for all of her work, her initiatives, and the significant effort taken on behalf of Block VI. 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.

Michele Mumaw, 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 Block VI IQ facilitators. The sense of maintaining normalcy under these trying times kept this ship on course.

We want to acknowledge the consistent and high-quality input from Kevin Zhu.

We acknowledge our colleagues who have retired, Steve Jones and Chris Delos Reyes. 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 Katurji.

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