

Case Western Reserve University – University Program Medical School

Block 3: Action Plan 2022-2023

Year 1 (July – May) 2020-2021

<p>Becoming A Doctor</p> <p>Block 1 (5 Weeks)</p> <p>Population Health, Epidemiology, Biostatistics, Health Disparities</p> <p>Field Experiences Assessment Week</p>	<p>2 Weeks Steps2Success</p>	<p>The Human Blueprint</p> <p>Block 2 (11 Weeks)</p> <p>Endocrinology, Reproduction, Development, Genetics, Molecular Biology, Cancer Biology</p> <p><u>Integrative Week</u> Assessment Week</p>	<p>Food to Fuel</p> <p>Block 3 (9 Weeks)</p> <p>Gastroenterology, Nutrition, Biochemistry</p> <p>Assessment Week</p>	<p>Homeostasis</p> <p>Block 4 (14 Weeks)</p> <p>Cardiovascular, Pulmonary, Renal, Cell Physiology and Pharmacology</p> <p><u>Clinical Immersion Week</u> Assessment Week</p>
<p>Structure (Anatomy, Radiology and Histopathology)</p> <p><u>Foundations of Clinical Medicine</u> (Tuesday Seminars, Communications, Physical Diagnosis, Patient Based Experiences)</p>				

1. Course Description:

There are three topics in our block: nutrition, the gastrointestinal system, and biochemistry. These three topics are related and we emphasize the connections between the topics. At the same time, they are independent subjects with their own principles and language; it is important that you learn them as both related and independent disciplines. In addition, biochemistry and nutrition are basic sciences; these disciplines provide a vocabulary for other parts of the curriculum.

The **nutrition** section discusses the micronutrients (vitamins and minerals) and macronutrients (carbohydrates, proteins and lipids) required for human health. The vitamins and minerals are cofactors for many of the biochemical processes that are discussed in the biochemistry section. We discuss the digestion and absorption of micronutrients. Students also learn how the overall energy balance of macronutrients is necessary for growth and the maintenance of weight. We discuss the diseases and the metabolic consequences of malnutrition and obesity. *Note that the important themes of the nutrition section appear throughout the block, not just in the core sessions.*

The **biochemistry** component has two major threads. The first of these is protein structure and function. Students learn about proteins, both as structural components of cells and tissues and as enzymes. This information is important for understanding proteins as the targets of most drugs. The second thread is metabolism--the transformations of small molecules. We discuss both catabolism (the breakdown of fuels for energy) and anabolism (the synthesis of the body's building blocks). Key features of our discussion of metabolism are: i) the roles of individual

organs, and ii) the regulation of these processes to permit the adaptation of metabolism to various physiological and metabolic states.

In the **gastroenterology** section students learn about the functions of the gastrointestinal tract in health and disease. We focus on the normal physiology of these organ systems, including esophagus, stomach, small and large intestine, liver, pancreas, and gall bladder. The principal functions of these organs are the digestion and absorption of nutrients. We discuss how these functions are accomplished by integrating motility, secretion of small molecules and proteins, digestion, and absorption. This material is integrated with the presentation of the important diseases of these organs.

2. Block Co-Leaders:

Colleen M Croniger, PhD.
 Martin Snider, PhD.
 Ashley Faulx, MD

3. Design Team:

Anthony Post, MD
 Katarina Greer, MD
 Perica Davitkov, MD
 Mark Aulisio, PhD
 Eileen Seeholzer, MD
 Beth Day-course manager

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

Competency and Definition	Educational Program Objective (EPO)	Block Goals Block 3	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>Understand the biochemical basis for digestion of food, and the absorption, transport, storage, and utilization of fuels in health and disease</p>	<p>NC</p>

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<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>Understand the importance of nutrition and its impact on metabolism for the maintenance of health and its effects on human disease.</p>	<p>NC</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>Understand normal GI physiology and major diseases of the GI organs and the liver.</p>	<p>NC</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>Understand the anatomy of the GI tract.</p>	<p>NC</p>
<p>Common to all Blocks:</p>			

Competency and Definition	Educational Program Objective (EPO)	Block Goals Block 3	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 and analyze ethical problems in clinical medicine and biomedical research using the principles of autonomy, beneficence, nonmaleficence and justice.</p>	<p>NC</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>NC</p>
<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, and responsible physician.</p>	<p>NC</p>

Competency and Definition	Educational Program Objective (EPO)	Block Goals Block 3	Recommended Changes
<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>NC</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>NC</p>

5. In the grid below, please list the specific course changes you made this year based on last year's report.

What changes were made 2022-2023?	How did the changes work?	What would you like to change next year 2023-2024?
<p>In Block 2 there is a study week before the assessment week at the end of the block. Students commented that having material in the week before the exam in Block 3 was stressful. Instead of having all of the Clinical Correlations in the last week, we spread them over two weeks in Weeks 8 and 9 as a review and capstone for the last week of Block 3</p>	<p>The students felt that there was too much material and too many required sessions for the last week of Block 3.</p>	<p>We will work on communicating that the schedule for Block 3 and subsequent blocks differs from Block 2. This will probably be done in IQ groups because we think this is the best way to get students' attention.</p>
<p>In 2021-2022 we developed a comprehensive obesity curriculum to address the lack of obesity medicine taught in medical schools (https://bmcmmededuc.biomedcentral.com/articles/10.1186/s12909-020-1925-z). This year we added an additional TBL on how to discuss diet and nutrition with patients.</p>	<p>The new TBL was in the last week of the block. Students did not receive this TBL well and some of the topics covered were redundant.</p>	<p>Move the TBL to an earlier time slot and revise the TBL to address the redundancies.</p>
<p>Learning objectives on diversity were added in 2 of the IQ cases. In one case with a transgender patient, the learning objectives (LOs) “Describe gender-affirming hormone therapy and potentially-associated risks.” was added. In another case the patient is a lesbian and has osteogenesis imperfecta. The LOs added were “Distinguish the signs and symptoms of physical abuse from a collagen disorder. Understand rates of domestic violence amongst various populations, including LGBTQ+”</p>	<p>The addition of LOs for the patient ID cards was well accepted. The LO on gender affirming therapy was a bit too broad for the case.</p>	<p>Refine the LO on gender affirming therapy. Continue to work with the Diversity design team to add LOs to the Block 3 IQ cases.</p>

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

The principal anticipated changes are:

- Continue to work on communicating that Block 3 and subsequent blocks do not have a study week.
- Update the timing and content of the new TBL on talking to your patients about obesity and nutrition in response to student feedback.
- Adding learning objectives about diversity using the demographics of the patient ID cards to IQ cases. .

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

We have changed some of our didactic lectures into large interactive sessions with student response (pair and share). We have encouraged our faculty to use the resources available in the HEC for interactive sessions once we are back in person.

The lectures were very poorly attended this year. However, student engagement, as judged by lecture attendance and use of videos, was similar to previous years. Having lectures in a largely empty room is demoralizing for both students and faculty. We will work to find ways to use lecture time productively and creatively.

8. 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)
Students requested to not have Clinical Correlations with required attendance in the last 2 week of Block 3	Because we believe that these clinical correlations have significant educational value, the leadership of Block 3 has placed these opportunities as a review of Block 3 and we will keep some of this material in the last week. We will work to move some of these sessions to earlier times in the block to reduce the workload in the last week of Block 3.
Work on the timing and content of the TBL on teaching patients about obesity and nutrition.	In response to feedback, we will work on moving this TBL to earlier in the block.
Move some of the EOB review sessions into weeks to earlier in the block	In response to feedback, students want the EOB reviews earlier so they can focus their studying for the exam.

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

No changes

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

The Block leaders reviewed the feedback for each lecturer to maintain the quality of teaching in the block.

11. Response to Student Feedback

You (student) asked for:	We did: (rationale if didn't adjust)
Move Clinical Correlations to earlier in the block	We will work on having some of the clinical correlations earlier in the block.
Have EOB reviews earlier in the block	We will have EOB reviews over weeks 7-9 to address this concern.

12. What changes have you have made, or you anticipate in making to better prepare students to care for diverse population.

This year	Next Year
	Review all IQ cases, TBLs and Lecture LOs to correct potential bias.
	Adjust the distribution of patients with domestic violence and substance abuse in IQ.

13. Acknowledgement

We would like to thank Beth Day, Nivo Hanson, Deidre Gunning, Celinda Miller, Yifei Zhu, Mino Darvish and the entire Curricular Affairs staff for their excellent work. We would also like to than the AV staff for their support to make our Block successful. Thank you Darrin, Paul and Megan.