

Case Western Reserve University – University Program Medical School

Block 3: Action Plan 2021-2022

Year 1 (July – May)

<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>Integrative Week 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>Clinical Immersion Week 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.

3. Design Team:

Anthony Post, MD
Katarina Greer, MD
Ashley Faulx, MD
Perica Davitkov, MD
Mark Aulisio, PhD
Eva Orszag-course manager
Deidre Gunning-course manager
Nivo Hanson- 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.</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 2021-2022?	How did the changes work?	What would you like to change next year 2022-2023?
<p>Developed curriculum on the complex disease of obesity, its biological basis, and its pathophysiology and treatment of obesity.</p> <ul style="list-style-type: none"> • 2TBLs <p>New lectures</p> <ul style="list-style-type: none"> • Assessment of obesity • Obesity treatments, surgery and pharmacokinetics • Nutrition concepts and types of diet trends 	<p>Overall the curriculum changes were well received.</p> <p>Student feedback suggested combining the 2 TBLs into 1</p> <p>Student feedback suggested addressing how stressful weight loss is for some people who struggle with eating disorders or disordered eating.</p>	<p>We will combine the 2 TBLs on obesity into 1TBL and create a TBL on Nutrition concepts (this is what is covered in STEP 1)</p> <p>We will address eating disorders and restrictive weight loss in the obesity curriculum during the lectures of obesity.</p>
<p>The students felt that there was too much material and too many required sessions for the last week didactic of Block 3. We reduced the required clinical correlations with patients from 6 presentations to 3.</p>	<p>This helped, but the students would prefer to have no clinical correlations in the last week of classes. They would prefer to have them throughout the block.</p>	<p>We will review the schedule to see if we can accommodate the changes. We will also think about how we might use the this time in this week.</p>
<p>Add learning objectives for Health System Science (HSS), Social Determinants of Health (SDH) to IQ case about health care in rural areas</p>	<p>Well received</p>	<p>Continue this effort</p>

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

The principal changes are:

- Add learning objectives for Health System Science (HSS), Social Determinants of Health (SDH) to IQ cases, lectures and TBLs.
- Add appropriate learning objectives for LGBTQ+ healthcare to IQ cases
- Work on creating interactive review sessions

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.

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)
Combine the 2 obesity TBLs into 1. Create a TBL for Nutrition Concepts	The students commented that the 2 TBLs could be combined into 1. This would allow for the creation of a TBL on nutrition concepts which covers topics in STEP 1 exam
Work on the next steps for incorporating the patient ID cards by adding appropriate learning objectives.	Feedback on the patient demographics not being incorporated into the IQ cases.

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 PEAC Report

The Block 3 design team appreciates the review and comments from the Program Evaluation and Assessment Committee on the curriculum in Block 3 of the WR2 curriculum. The design team reviews these reports as well as student feedback to implement necessary changes. Below is the response to the PEAC 2015 report that was discussed with PEAC members in January 2019.

Review of PEAC Recommendations for Block 3

January, 2019

1. What changes or improvements were made in your program in response to specific PEAC recommendations?

The Block Goals were updated. The MSGs were replaced by other activities, in preparation for the move to the HEC that cannot accommodate MSGs. Many other smaller changes were also made. These are detailed in our responses to individual points in the PEAC report (vide infra).

2. What PEAC recommendations were unable to be addressed? Explain the reasons.

We believe that the major recommendations in the report have been addressed.

3. What other changes and improvements were made in your program that was not specifically outlined in the PEAC report.

As discussed below, there are ongoing efforts to improve the block in the following areas:

- Integration of nutrition into all parts of the block
- Improving the nutrition sessions
- Adding bioethics content to Block 3 cases and participating in the implementation of an integrated bioethics curriculum.
- Coordination of Block 3 session with the FCM sessions during Block 3.
- Coordination of Block 8 sessions with Block 3 content.

4. What were the difficulties and impediments that prevented making desired changes and improvements?

None. We are pleased with the cooperation and effort of the Block 3 faculty.

5. Is the quality of your program better, the same or worse now as compared to two years ago? Explain the reasons.

The report has helped us with ongoing refinements and improvements in Block 3.

6. As a leader of the educational enterprise at the medical school, your assessment of the WR2 curriculum, its goals, instructional methods, and assessment will provide important direction to further overall systematic improvement. Please detail your assessment of the a) strengths, and b) weaknesses of the WR2 curriculum. How would you compare the WR2 curriculum with the curriculum of the medical school you attended (or may be familiar with)?

We have been teaching medical school since before WR2 curriculum was implemented. As all of us are fully aware, the way students learn today is very different than when we

went to school. The strength of the WR2 curriculum is that we acknowledge this and have developed a curriculum that allows the student to learn in a more interactive way. We offer Team-Based Learning sessions, interactive framing lectures and most importantly the self-directed learning in IQ cases. The IQ cases have been fine-tuned over the last decade to become not only the way students can learn basic medical knowledge but also learn team work, professionalism, how to apply evidence based medicine in EBIQ and learn case presentation skills in oral case presentations exercise for each case. Our students excel in their residencies and the more we raise the bar, the more the students amaze us. Professionalism is taught throughout the WR2 curriculum and has really allowed for our students to stand out amongst their peers. Another strength of WR2 is the faculty development that is offered to train IQ facilitators, IQ+ facilitators and workshops for faculty to improve their lectures.

WR2 curriculum has some weaknesses. It is dependent on many facilitators for IQ, FCM sessions and IQ+. Fortunately, we have been able to have enough faculty to accomplish quality sessions. Another weakness is that for Block 3 immunology is not taught until Block 5 yet many of the GI cases have some concepts of immunology in them. We have addressed this by providing basic immunology framing lectures and videos as resources for IQ learning.

We have not been to other medical schools but when I discuss our EBIQ and our professionalism curriculum to others at national meetings, Case Western Reserve University is definitely ahead of many schools.

13. Acknowledgements:

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