Case Western Reserve University – University Program Medical School

Block 3: Action Plan 2019-2020

Year 1 (July – May) 2019-2020

Becoming A Doctor	2 Weeks Anatomy Bootcamp	The Human Blueprint	Food to Fuel	Homeostasis
Block 1 (5 Weeks)		Block 2 (11 Weeks)	Block 3 (9 Weeks)	Block 4 (14 Weeks)
Population Health, Epidemiology, Biostatistics, Health Disparities		Endocrinology, Reproduction, Development, Genetics, Molecular Biology, Cancer Biology	Gastroenterology, Nutrition, Biochemistry	Cardiovascular, Pulmonary, Renal, Cell Physiology and Pharmacology
Field Experiences Assessment Week		Integrative Week Assessment Week	Assessment Week	Clinical Immersion Week Assessment Week

Structure (GARLA and "Systems and Scholarship")

Foundations of Clinical Medicine (Tuesday Seminars, Communications, Physical Diagnosis, Patient Based Experiences)

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
   Edith Ho, MD
   Perica Davitkov, MD
   Monica Gerrek, PhD
   Michelle Mumaw- course manager
   Eva Orzag-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
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	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	**Understand the biochemical basis for digestion of food, and the absorption, transport, storage, and utilization of fuels in health and disease**	NC

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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	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	**Understand the importance of nutrition and its impact on metabolism.**	**NC**
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	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	**Understand normal GI physiology and major diseases of the GI organs and the liver.**	**NC**
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	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	**Understand the anatomy of the GI tract.**	**NC**
Common to all Blocks:			

Competency and Definition	Educational Program Objective (EPO)	Block Goals Block 3	Recommended Changes
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	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	**Recognize and analyze ethical problems in clinical medicine and biomedical research using the principles of autonomy, beneficence, nonmaleficence and justice.**	**NC**
Teamwork & Interprofessional Collaboration Demonstrates knowledge and skills to promote effective teamwork and collaboration with health care professionals across a variety of settings	Performs effectively as a member of a team	**Develop and practice the knowledge and skills that promote effective teamwork across a variety of settings.**	**NC**
Professionalism Demonstrates commitment to high standards of ethical, respectful, compassionate, reliable and responsible behaviors in all settings, and recognizes and addresses lapses in behavior	Commonly demonstrates compassion, respect, honesty and ethical practices Meets obligations in a reliable and timely manner Recognizes and addresses lapses in behavior	**Understand and practice the behaviors of an ethical, respectful, compassionate, reliable, and responsible physician.**	**NC**

Competency and Definition	Educational Program Objective (EPO)	Block Goals Block 3	Recommended Changes
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	Uses effective written and oral communication in clinical, research, and classroom settings Demonstrates effective communication with patients using a patient-centered approach Effectively communicates knowledge as well as uncertainties	**Understand and demonstrate effective communication skills for learning and clinical practice environments.**	**NC**
Research & Scholarship Demonstrates knowledge and skills required to interpret, critically evaluate, and conduct research	Analyses and effectively critiques a broad range of research papers Demonstrates ability to generate a research hypothesis and formulate questions to test the hypothesis Demonstrates ability to initiate, complete and explain his/her research	**Analyze, critique and present research studies from the primary literature.**	**NC**

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 2019-2020?	How did the changes work?	What would you like to change next year 2020-2021?
Nutrition Focused Physical Exam (NFPE) in HEC started with lecture in TBL room	TBL room did not work well for the lecture portion and all students were in one TBL room	Start the lecture in lecture hall and then split the class in half and move to TBL rooms

What changes were made 2019-2020?	How did the changes work?	What would you like to change next year 2020-2021?
Clinical Correlation in Week 9 on lysosomal storage diseases. with new presenter (Dr. Laura Konczal) and new family with two individuals with Hunter's Syndrome.	This was a new mode of deliver for us: • A short online introductory lecture from Dr. Snider • Presentation by Dr. Konczal • Presentation by family.	We are pleased with the clinical correlations in week 9. These may change due to the availability of physicians, patients, and families.
GARLA presented new material on aorta and its abdominal branches in week 8 and peritoneum; venous system in week 9.	The introduction of complicated new material in GARLA right at the end of Block 3 had a very unfortunate spillover into Block 3. The result was a great deal of extra stress for students, which made it difficult for the students to focus on the last IQ cases in Block 3, review the Block 3 material, and prepare for the Block 3 exams.	We have talked with Dr. Sue Wish-Boratz and Dr. Nick Ziats requesting that GARLA material be earlier in the block and that histopathology be in the last weeks of Block 3.

The NFPE is a system-based physical exam that identified adult malnutrition characteristics. In a 2012 consensus statement, the Academy of Nutrition and Dietetics (the Academy) and the American Society for Parenteral and Enteral Nutrition (ASPEN) defined malnutrition as the presence of two or more of the following characteristics:

6. **What changes do you anticipate making to the Block next year (AY 2020-2021)**

   The principal changes are:

   - Rearranging cases in weeks 7-9 as discussed below.
   - Revamping our presentation of hepatitis, involving changes in both one IQ case and the supporting lectures.

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)
Rewrite Case 14 (Acute & Chronic Liver Disease)	We currently have a complicated case about hepatitis B autoimmune hepatitis. We don't have a case on hepatitis C. We plan to work with Drs. Post and Cohen to create a new case and revamp the lectures so we have a single integrated presentation of infectious hepatitis.
This year, the week with MLK Day (Week 7) had 2 IQ cases on Wed, Thurs and Fri. Next year, we will only have one case that week. The changes will: • Move IQ Case #12 (Alcoholic Hepatitis) from week 7 to week 8 • Move IQ Case #14 (Acute Chronic Liver) from week 8 to week 9	1. The students find it very difficult to research 2 cases in depth in 3 consecutive days 2. This year, we had one case (#15) in our final week (week 9) to facilitate final checkout. However, many groups finished the case and final checkout on Wed. Some groups did not attend Friday IQ The planned changes to the schedule will correct both of these problems.
Students requested to not have Clinical Correlations with required attendance in the last week of Block 3	We've used this schedule for many years without significant complaint. 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 material and we will keep them in the last week. We'll reconsider if we continue to have significant student dissatisfaction.

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?

Last year we added new GI faculty members , Dr Perica Davitkov (taught Introduction to the liver) to our design team to our Block 3 teaching faculty. Martin Snider and Colleen Croniger worked with the him to improve the lectures.

This year we added new GI faculty members, Dr Shaffer Mok (taught pancreatitis)

We added a Clinical Correlation on lysosomal storage disease with patient taught by Dr. Laura Konczal.

This year we had a new lecturer from MetroHealth. Dr. Stephanie Merlino Barr who is a PhD and RD gave the lecture on enteral and parenteral nutrition.

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.

12. Acknowledgements:

We would like to thank Michelle Mumaw, Celinda Miller, Katie Battistone, Yifei Zhu, Eva Orzag, and the entire Curricular Affairs staff for their excellent work.