Case Western Reserve University – University Program Medical School

Block 3: Action Plan 2018-2019

Year 1 (July – May) 2018-2019

Becoming A Doctor	2 Weeks Steps2Succes	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 (Anatomy, Radiology and Histopathology) 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 will 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 that you will need for other parts of the curriculum.

The **nutrition** section will discuss 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 will be discussed in the biochemistry section. We will discuss the digestion and absorption of micronutrients. You will also learn how the overall energy balance of macronutrients is necessary for growth and the maintenance of weight. We will 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. You will 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 will 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 will be: 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 you will learn about the functions of the gastrointestinal tract in health and disease. We will 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 will discuss how these functions are accomplished by integrating motility, secretion of small molecules and proteins, digestion, and absorption. This material will be 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
   Monica Gerrek, PhD
   Edith Ho, MD
   Perica Davitkov, MD
   Michele Mumaw- 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
Knowledge for Practice	Demonstrates ability to apply knowledge base	**Understand the importance of**	**NC**

Demonstrates knowledge of established and evolving biomedical, clinical, epidemiological and social-behavioral sciences as well as the application of this knowledge to patient care	to clinical and research questions Demonstrates appropriate level of clinical and basic science knowledge to be an effective starting resident physician	**nutrition and its impact on human health and disease.**	
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 the 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 and the hepatobiliary system.**	**NC**
Common to all Blocks:			
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**
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	**Analyze, critique and present research studies from the primary literature.**	**NC**

	formulate questions to test the hypothesis Demonstrates ability to initiate, complete and explain his/her research		

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 2018-2019?	**How did the changes work?**	**What would you like to change next year 2019-2020?**
Nutrition Focused Physical Exam (NFPE)- description below	Very well	Keep but modify for more time for students to perform NFPE
2 Cold days (Week 8 :Wed and Thurs) no class	Recorded Lectures and Reviews were given to students	Hopefully we will have warmer weather. Discuss whether we need a formal policy about this issue. (Or let the leadership team know if there is one already)
Clinical Correlation in Week 9 on lysosomal storage disease with patient was changed to an interactive lecture because Dr. Shawn McCandless left Cleveland	This is an important topic, but one that doesn't relate well to the rest of the block.	We may present this material in a video and use the time for a Clinical Correlation or TBL.

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:

• Insufficient energy intake;
• Weight loss;
• Loss of muscle mass;
• Loss of subcutaneous fat;
• Localized or generalized fluid accumulation; and
• Decreased functional status.

The focus of the NFPE is to determine whether the fat, muscle, fluid, and micronutrient status of a patient has diminished due to inflammation, illness, and/or low nutrient intake.

During the two hour workshop, first year medical students learn how to:

- Assess for muscle wasting and fat loss;
- Evaluate the presence of edema or fluid accumulation;
- Identify clinical signs of micronutrient deficiencies and toxicitie

6. What changes do you anticipate making to the Block next year (AY 2019-2020)?

Deletions	Additions
None	None

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 and medium-sized groups into large interactive sessions with student response (pair and share). This includes a session on hemoglobin function (Snider) that was presented for the second time in 2018-19. Dr. Croniger is working with a M2 student in iSCTL to develop strategies for increasing the number of interactive sessions in the lecture hall. This project will be a resource for faculty to learn new techniques and technologies to use in the large group format.

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)
New TBL or different clinical correlation for lysosomal storage diseases	Dr. Shawn McCandless left Cleveland

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?

This year we have added new GI faculty members , Dr Perica Davitkov (taught Introduction to the liver) to our design team and Dr. Preetika Sinh (taught Malabsorption) to our Block 3 teaching faculty.

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:

Michele Mumaw, Celinda Miller, Katie Battistone, Yifei Zhu, and the entire Curricular Affairs staff for the excellent work.