

Case Western Reserve University – University Program Medical School

Block 1: Action Plan 2018-2019

Year 1 (July - May)

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

1. Course Description:

Block 1, also known as Becoming A Doctor, serves as the health systems science foundational course in the University Program. Content for each week builds upon content earlier in the block through the following themes.

- Week 1: Population Health
- Week 2: Determinants of Health
- Week 3: Health Systems
- Week 4: Patient-Centered care
- Week 5: Bringing It All Together

Students are also introduced to concepts that build a foundation for learning in various disciplines throughout the course of medical school and residency, such as equity, bioethics, epidemiology, biostatistics, and health policy.

Block 1 also serves as an introduction to medical school as students learn the processes of IQ, team-based learning, and simulation experiential sessions. Students also each participate in 3 separate field experiences related to the theme of the week: social determinants of health, health systems, and chronic conditions. These experiences reinforce the content in the respective week and provide opportunities for students to reflect upon their first patient-based experiences of medical school.

Finally, students also begin to explore content from both Blocks 7 and 8 which are longitudinal blocks during the first 5 weeks of medical school. These sessions are addressed in separate block action reports.

Block 1 Goals:

1. Provide a strong epidemiology and biostatistics foundation to support effective application in clinical practice and interpretation of the scientific literature.
2. Illustrate effective means to measure, understand, and affect the health of populations.
3. Provide a basis for understanding social, behavioral, structural, and environmental determinants of health.
4. Provide a broad understanding of health systems.
5. Emphasize continuous process and system improvement as a mechanism for limiting medical error and improving both individual and population outcomes.

2. Block Co-Leaders:

Block Leader: Heidi Gullett, MD, MPH

Block Co-Leader: Karen Mulloy, DO, MSCH

Course Manager: Celena Howard

3. Design Team:

Aaron Goldenberg, PhD, MPH (Bioethics)

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 Joseph Williams, MPA
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 Anastasia Rowland-Seymour, MD
 Maryann Salib, DO, MPH
 Bart Rog, MD, MPH
 Ted Parran, MD
 Britt Conroy, MD, PhD, JD, MS
 Todd Fennimore, MA

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

Competency and Definition	EPO	Block Objective	Recommended Changes
<p>Research & Scholarship Demonstrates knowledge and skills required to interpret, critically evaluate, and conduct research</p>	<p>Analyzes and effectively critiques a broad range of research papers (Objective 1-3)</p>	<ol style="list-style-type: none"> 1. Define the epidemiologic concepts of incidence and prevalence. 2. Identify and characterize strengths and weaknesses of epidemiologic research study design, including descriptive, case series, cohort, case control, and randomized controlled clinical trials, including potential biases and confounding factors. 3. Apply epidemiological and biostatistical concepts (including probability, variation, significance testing, confidence intervals, and statistical power) to medical and population health scenarios, including critical 	<p>Continued integration of additional epi/biostats content into IQ cases and continued updates of critical appraisal papers during IQ where needed</p>

		analysis of scientific literature.	
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 questions (Objective 1-4) Demonstrates appropriate level of clinical and basic science knowledge to be an effective starting resident physician (Objective 1-4)	<ol style="list-style-type: none"> 1. Describe two examples where examination of population level surveillance and intervention can be applied in medical care settings to improve individual outcomes. 2. Provide two examples each of primary, secondary, tertiary, and quaternary prevention. 3. Describe the impact of access to primary health care on population health outcomes. 4. Identify five essential public health services and provide corresponding examples in the local community. 	none
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 (Objectives 1-2) Demonstrates effective communication with patients using a patient-centered approach (Objective 3-4) Effectively communicates knowledge as well as uncertainties (Objectives 2-4)	<ol style="list-style-type: none"> 1. Examine the etiology of two common medical errors and how they have been addressed. 2. Identify how health informatics, including the electronic health record, can be used to manage population health, reduce error, and improve health care quality. 3. Apply process improvement principles to your own personal and professional activities in order to become reflective practitioners dedicated to continuous improvement. 4. Describe two bioethical considerations when addressing health priorities for populations and individuals. 	none
Professionalism		1. Describe two bioethical considerations	none

<p>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 (Objective 1)</p>	<p>when addressing health priorities for populations and individuals.</p>	
<p>Personal and Professional Development Demonstrates the qualities required to sustain lifelong personal and professional growth.</p>	<p>Critically reflects on personal values, priorities, and limitations to develop strategies that promote personal and professional growth (Objective 1,3)</p> <p>Recognizes when personal views and values differ from those of patients, colleagues, and other care givers and reflects on how these can affect patient care and research (Objectives 1-3)</p> <p>Identifies challenges between personal and professional responsibilities and develops strategies to address them (Objective 1, 3)</p>	<ol style="list-style-type: none"> 1. Describe two bioethical considerations when addressing health priorities for populations and individuals. 2. Describe the concept of health equity and identify two key examples of its application in Cuyahoga County 3. Apply process improvement principles to your own personal and professional activities in order to become reflective practitioners dedicated to continuous improvement. 	<p>none</p>
<p>Patient Care Demonstrates proficiency in clinical skills and clinical reasoning; engages in patient-centered care that is</p>	<p>Incorporates patient perspective, values, and goals into all aspects of the clinical encounter (Objectives 1-4, 6)</p>	<ol style="list-style-type: none"> 1. Examine the relative contribution of social, structural, behavioral and environmental factors on population health measures in the U.S. 2. Describe biological mechanisms by 	<p>none</p>

<p>appropriate, compassionate and collaborative in promoting health and treating disease.</p>	<p>Identifies and critically analyses relevant literature and practice-based guidelines to apply best evidence of patient care and management (Objective 5)</p>	<p>which social, environmental, and behavioral factors impact health, including allostatic load and epigenetics.</p> <ol style="list-style-type: none"> 3. Describe two public health or population health interventions that reduce the impact of social and behavioral factors on health. 4. Provide two examples each of primary, secondary, tertiary, and quaternary prevention. 5. Identify and characterize strengths and weaknesses of epidemiologic research study design, including descriptive, case series, cohort, case control, and randomized controlled clinical trials, including potential biases and confounding factors. 6. Describe two bioethical considerations when addressing health priorities for populations and individuals. 	
<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>Respects and supports the contributions of individuals on an interprofessional health care team (Objectives 1-3)</p>	<ol style="list-style-type: none"> 1. Describe three opportunities for improvement of population health through collaboration between primary care and public health. 2. Compare and contrast key characteristics of public health, population health, and clinical medicine. 3. Describe how coordinated team and interprofessional collaboration can be systematically utilized to improve 	<p>none</p>

		patient care outcomes.	
<p>Systems-Based Practice Demonstrates an understanding of and responsiveness to health care systems, as well as the ability to call effectively on resources to provide high value care.</p>	<p>Applies knowledge of the basic structure of health care systems to patient care discussions (Objectives 1-7)</p> <p>Considers economic and cultural factors, individual and family contributions and the availability of health care system resources in clinical decision making to provide high value care (Objectives 1-2, 4-6)</p> <p>Promotes patient safety by analyzing errors within the health system and propose changes to prevent similar errors (Objectives 7-9)</p>	<ol style="list-style-type: none"> 1. Assess health systems by examining the scope of services, infrastructure, access, quality, coverage, and cost. 2. Describe the major coverage systems for healthcare in the US (government, private, HMO), how they are financed, and how they may be influenced by the Patient Protection and Affordable Care Act (PPACA). 3. Contrast and compare the United States and the health systems of other developed countries using a standard health systems framework and population health measure. 4. Describe three major themes in the history of the American healthcare system that have contributed to transformations in care delivery and infrastructure. 5. Describe three provisions of the PPACA and describe two potential impacts on the health of the US population. 6. List three aspects of the US health system that contribute to the high level of health inequity in the U.S. 7. List the six Institute of Medicine aims for improving health systems and provide one example of each aim in clinical practice. 8. Explain effective techniques for process improvement, including Plan, Do, Study, Act (PDSA) cycles and root cause 	none

		analysis. 9. Identify the difference in process and outcome measures and provide two examples of how these are both utilized in process improvement.	
Reflective Practice Demonstrates habits of ongoing reflection and analysis to both identify learning needs and continuously improve performance.	Demonstrates habits of ongoing reflection using feedback from others as well as self-assessments to both identify learning needs and practice continuous quality improvement (Objective 1)	1. Apply process improvement principles to your own personal and professional activities in order to become reflective practitioners dedicated to continuous improvement.	none

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 2017-2018?	How did the changes work?	How will you follow-up on these changes next year 2018-2019?
EBIQ was again modified, this year with an emphasis on introducing critical appraisal during Block 1 with updated articles and worksheets. The framing lecture was also updated to reflect the continued honing of the EBIQ curriculum across Blocks 1-6.	While the EOB longitudinal data only slightly improved, qualitative feedback from both students and IQ facilitators indicated that the improvements were helpful in introducing critical appraisal and EBIQ from week 2 of the block (even before students receive the core epi/biostats lectures).	The block 1 design team will continue to work closely with Dr. Croniger to ensure that updates to critical appraisal and EBIQ, including the foundational framing via lecture and initial articles are worksheets are developmentally appropriate and fit into a larger strategic vision for this element of the curriculum.
The lecture on the PPACA was significantly changed this year to reflect prior student feedback. Dr. Rose provide the lecture and focused more on large scale elements of the law rather than a previously more detailed health economics approach.	The changes were well-received by students as indicated both by direct qualitative feedback in real time and at the EOB, as well as in analysis following assessments.	The design team will again discuss the approach and continue to improve the sequencing and content of the health systems and PPACA lectures, particularly as the federal health policy landscape continues to rapidly change. The goal is to provide students with both a historical

The sequence of the session was also reorganized in conjunction with 2 other health systems and insurance lectures.		context and adequate facts about the current impact of health policy on both the delivery and finance elements of the health system (health care and public health).
Introduction of more community members sharing their work with students through large group sessions.	These sessions were well-received and resulted in students reporting a deeper understanding of concepts such as equity and structural racism. They have also led to a group of students working in the community alongside one of the presenters to address tangible needs in one neighborhood that was highlighted by a community resident during the block.	We will continue to engage these community members in sharing with students during the block. Students also recommended that these sessions be required rather than optional large group sessions. Dr. Gullett has also already recruited several new community members as well to present for 2019.

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

We do not anticipate making any significant changes to the block in 2019. The block will move to the HEC which we anticipate will require adjustment to the new building, TBL rooms, continued coordination with student affairs for orientation activities, etc.

We also plan to introduce another team-based learning exercise focused on climate change and its impact on population health. This will be in addition to TBLs on population health and health systems.

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

Our use of TBLs has proven effective in teaching and reinforcing the complex concepts of population health and health systems. This approach has been employed for 7 years in Block 1 and we have expanded the use of this technique over time. We also run a TBL faculty training workshop each June/July that is open to faculty from other blocks who would like to learn the technique. This year we also included a faculty member from the College track who also co-facilitated one TBL.

We have also had tremendous success with using field experiences as the first patient-based experiences. Each student participates in 3 separate field experiences in the community, followed by a formal required reflection on Canvas which is shared with each students' IQ group. Time is also protected on Friday IQ during these 3 weeks to briefly discuss the correlation of the field experiences with the IQ case and weekly content. This has proven helpful in reinforcing content throughout the block and has served as an introduction to the community.

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)
Yearly IQ case updates	Routine case improvements from student and IQ facilitator feedback
Annual TBL content reviews	Routine faculty training/QI
Addition of climate change TBL	Important determinant of population health
Poverty simulation will move to IPE experience later in AY	Planned change related to increasing more IPE opportunities
Interprofessional inclusion in pandemic influenza simulation	PA students have participated in the past and the goal is to again ensure this is an interprofessional experience. Scheduling logistics prevented combined participation in 2018.

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

Deletions	Additions
none	none

The design

team will consider whether Block 1 objectives should reflect EPOs that introduce students to lifelong learning techniques, such as self and group-derived learning objectives as demonstrated in the IQ process. An unstated goal of the block has been to introduce students to IQ, TBL, and medical school in general, but no specific goal or related learning objectives articulate this concept.

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 review all faculty evaluations for block activities, including lectures, TBLs, and other simulation activities to ensure consistency in the quality of faculty participation. Individual IQ facilitator feedback is handled by the IQ team rather than the block leaders. In 2018, a different faculty member provided a key health systems lecture in response to prior student feedback. Additionally, a new faculty member gave an introductory talk on determinants of health which also addressed prior

student feedback. All block faculty are provided the opportunity for participation in CAML professional development workshops. The block leaders directly address specific issues with individual faculty members when necessary.

11. Response to PEAC Report

Both Drs. Gullett and Mulloy presented follow-up data in response to the original PEAC report from August 25, 2015, on December 10, 2018. They presented a detailed response to the prior PEAC report in the form of a 7-page document and question/answer session with the PEAC committee. This is a routine review of each block as part of the program evaluation and assessment committee's charge. Drs. Gullett and Mulloy are grateful for the opportunity to interact with the PEAC team and to receive continued feedback on improving the block.

12. Acknowledgements:

Dr. Gullett and Mulloy are incredibly grateful for the phenomenal individuals and teams that continually serve our students through Block 1. We wish to formally thank Celena Howard for two years of outstanding work as the course manager. We will be transitioning to a new course manager in 2019, Julie Schneider. We want to thank Julie for her tremendous work in coordinating the field experiences for each student this year. We also want to thank Molly Gillahan for her untiring commitment to ensuring coordination with the student affairs and orientation activities. This collaboration has improved coordination year after year and is a complex endeavor given all that must occur in the first few weeks of school. We thank Celinda Miller for her tremendous work in coordinating the IQ elements of the block and Paul Salzgeber and Megan Slabach for the outstanding IT support in E301. We would also like to thank Katie Battistone for her amazing help with the MCQs, SEQs. We remain so grateful for the tremendous teamwork that is necessary for the students to have an optimized learning experience in Block 1.

Percentage of Students who rated "Good" or "Excellent"

Block 1: Becoming a Doctor				
General Block Aspects				
Block Components	2015-16 %	2016-17 %	2017-18 %	2018-19**
Effectiveness of IQ cases	85	91	85	76
Effectiveness of sessions with live patients	92	87	78	83
Organization of this block (cohesiveness and integration of themes and activities)	72	65	78	67
Effectiveness of Lectures	--	--	61	61
Effectiveness of Team-based learning (TBL)	--	--	63	57
Overall quality of this Block	76	74	78	72
Block Concepts/Integration of Block Concepts and Longitudinal Themes				
Epidemiology and Biostatistics*	59	64	63	74
Population Health*	83	96	78	87
Social Determinants of Health & Health Disparities	96	100	93	96
Health Systems Sciences	72	68	80	78
Gross Anatomy	78	63	65	67
Histopathology	84	70	85	70
Bioethics	76	85	83	76
EBIQ				
Rate the extent to which EBIQ contributed to your development of critical appraisal skills	60	65	48	52

(n=46)

*The rating scale was changed from "Well" or "Very Well" to "Good" or "Excellent" in AY 17-18

+The wording of the question was slightly changed in AY 17-18

** The rating scale was changed from "Good" or "Excellent" to "Very Good" or "Excellent" in AY 18-19