**Case Western Reserve University – School of Medicine, University Program**

**Block 8: Foundations of Clinical Medicine (FCM)**

**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) | | | | |

Year 2 (August- March) 2019-2020

| **Summer Break (10 weeks)** | **Host Defense & Host Response** | **Cognition, Sensation & Movement** | **Step 1 Study (6-8 weeks)** |
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| | Block 5 (13 Weeks) | Block 6 (14 Weeks) | |
| | Immunology, Microbiology, Hematology, Oncology, Infectious Diseases, Rheumatology, Dermatology | Neurology, Mind, Musculoskeletal | |
| | Assessment Week | Integrative Week Assessment Week | |
| | **Structure** (GARLA and "Systems and Scholarship") | | |
| | Foundations of Clinical Medicine (Tuesday Seminars, Communications, Physical Diagnosis, Patient Based Experiences) | | |

1. **Course Description:**

Block 8 – Foundations of Clinical Medicine (FCM) runs longitudinally through the Foundations of Medicine and Health and seeks to develop a broad range of clinical and professional capabilities. The goal of Block 8 is to facilitate the lifelong transformation from student to doctor, focusing on the doctor/patient relationship, the roles of the physician in systems and in society, professionalism and leadership, and clinical skills.

Block 8 comprises multiple programs that are woven together and integrated within the Years 1 and 2 curriculum.

- Communication in Medicine (CM)
- Community Patient Care Preceptorship (CPCP)
- Interprofessional Education (IPE)
- Physical Diagnosis (PD)
- Procedures Curriculum (PC)
- Tuesday Seminars (TS)

**Communication in Medicine (CM)**

The Communication in Medicine workshops run through Year 1 and Year 2, and focus on the range of skills needed for effectively talking with patients including the basic medical interview, educating patients about a disease, counseling patients for health behavior change, and presenting difficult news and diagnosis.

**Community Patient Care Preceptorship (CPCP)**

The Community Patient Care Preceptorship is a program in which students typically spend one half day a week in a community physician's practice. The program is designed to give students the opportunity to develop and reinforce their medical interviewing, physical exam and presentation (written and oral) skills with ongoing mentorship from a preceptor and with the use of a supplemental curriculum online through the Institute of Healthcare Improvement and the core Health Systems Science text (AMA Education Consortium).

**Interprofessional Education (IPE)**

The SOM Interprofessional Education program that has been housed in FCM has been undergoing quite a transition with the arrival of the new Associate Vice Provost for Interprofessional Education. The previous course Introduction to Interprofessional Team Skills for Collaborative Care has historically brought together students from the different health professions at CWRU (Medical, Dental, Nursing, Social Work, Public Health, Nutrition and Physician Assistants) and provided the opportunity to engage in a dynamic and interactive team learning environment to better understand the goals and benefits of inter-professional collaboration, and learn the team skills necessary for collaborative care. This course has been reimagined to be an institutional effort now titled Collaborative Practice I which is much bigger than any Block 8 initiative, nonetheless Block 8 continues to act as a node in the schematic of connections that is IPE.

**Physical Diagnosis (PD)**

This program runs throughout Year 1 and Year 2 and includes:

Physical Diagnosis 1: An introduction to basic history taking and the basic adult physical exam, as well as introductory oral presentation skills to Year 1 students.
Physical Diagnosis 2: In depth regional exams in various formats during Year 1 and Year 2
Physical Diagnosis 3: An opportunity for students to further develop their clinical skills by practicing complete histories, physicals and write-ups on patients in an inpatient setting.

**Procedures Curriculum (PC)**
These workshops provide students with skills and improved confidence in hand on and communication procedures that they will need for patient care. Students are provided with an introduction to rapid assessment and basic management of crisis situations. 'Stop the Bleed' provides specific instruction on hemorrhage control and teaches tourniquet usage. 'First Five' training provides practical training for first-year medical students to address medical emergencies, including primary survey and scene safety, airway management, emergency interventions including Naloxone and EpiPen administration, revisiting hemorrhage control in an exsanguinating patient, and training in resuscitation team function and structure. Additionally, students get an introduction to standard precautions, Time-Out, Informed Consent, as well as basic medical procedures including sterile glove technique and sizing, male and female foley placement, donning and doffing technique, airway management, injections and IV placement. Students are also exposed to advanced techniques such as surgical scrub, surgical site preparation, maintenance of a sterile field, incision, suturing and knot tying.

**Tuesday Seminars (TS)**
This longitudinal program continues the theme of "doctoring" begun in Block 1 and spans the Year 1 and Year 2 curriculum. Topics examined include: the relationship between the physician and the patient, the family and the community; professionalism; healthcare disparities; cultural humility; quality improvement; law and medicine; medical error/patient safety; development of mindful practitioners and end of life issues.

**Block 8 Mission, Vision and Goals**

**Mission**
- To support each student's professional identity formation as an individual and as part of a team.
- To support the development of each student's foundational clinical skills and emotional intelligence to be effective in their professional role.
- To support the development of skills for collaboration with patients, colleagues and communities.
- To use an integrated longitudinal approach within the medical school curriculum to meet the program goals.

**Goals**
Facilitate the lifelong transformation from student to doctor, focusing on the doctor/patient relationship, on the roles of the physician in systems and in society, on professionalism and leadership, and on clinical skills.

**Vision**

Upon graduating CWRU medical students will be reflective and mindful in practice grounded in relationship centered care, demonstrating humanism and sensitivity to the needs of all patients, in particular the medically vulnerable, and informed by systems thinking. As change agents these future physicians will commit to life-long learning while maintaining clinical excellence

2. **Block Leader:**
   Anastasia Rowland-Seymour, MD

   **Program Leaders:**
   Administrative Director: Jennifer Lennon
   Communication in Medicine (CM): Ted Parran, Jr. MD
   Community Patient Care Preceptorship (CPCP): Lisa Navracruz, MD
   Interprofessional Education (IPE): Ellen Luebbers, MD
   Physical Diagnosis (PD): Lisa Navracruz, MD
   Procedures Curriculum (PC): Anastasia Rowland-Seymour, MD
   Tuesday Seminars (TS): Oliver Schirokauer, MD and Ted Parran, Jr., MD

3. **Design Team:**
   Dyna Bolar- Coordinator PD
   Kathy Cole-Kelly, MSW, MS- Emeritus CM Director and Emeritus TS Co-Director
   Andrea Bryner – Administrative Director, SIM Center
   Howard Gregory, MS – Standardized Patient Program Manager, SIM Center
   Celena Howard- Course Manager CM, PC and TS
   Kurtis Hoffman, MA- Program Manager CPCP
   Jennifer Lennon- Administrative Director
   Ellen Luebbers, MD- SOM IPE Director and Interim SIM Center Medical Director
   Lauren Miklos, MEd – Standardized Patient Trainer/Coordinator, SIM Center
   Lisa Navracruz, MD- CPCP and PD Director
   Ted Parran, Jr., MD- TS Co-Director, CM Director
   Mimi Singh, MD- HSS Assistant Dean
   Oliver Schirokauer, MD- TS Co-Director
   Amy Wilson-Delfosse, PhD- Associate Dean
   Student Representatives

4. **Block Objectives:**

| Competency and Definition | Educational Program Objective (EPO) | Block Goals Block 8 | Recommended Changes |
|---|---|---|---|
| **Knowledge for Practice**<br>Demonstrates knowledge of established and evolving biomedical, clinical, epidemiological and social-behavioral sciences as well as the | Demonstrates ability to apply knowledge base to clinical and research questions. | **Provide early clinical exposure and progressive opportunities to develop, integrate, and reinforce** | **None** |

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| application of this knowledge to patient care. | | **clinical skills and professionalism.** | |
| **<u>Interpersonal and Communication Skills</u>**<br>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.<br><br>Demonstrates effective communication with patients using a patient-centered approach.<br><br>Effectively communicates knowledge as well as uncertainties. | **Explain and demonstrate effective communication skills for learning and clinical practice environments.** | **Additional focus on oral presentation skills.**<br><br>**Additional practice with communicating uncertainty using Shared Decision Making skills.** |
| **<u>Professionalism</u>**<br>Demonstrates commitment to high standards of ethical, respectful, compassionate, reliable and responsible behaviors in all settings, and recognizes and addresses lapses in professional behavior. | Consistently demonstrates compassion, respect, honesty and ethical practices. | **Understand and practice the behaviors of an ethical, respectful, compassionate, reliable, and responsible physician.** | **None** |
| **<u>Personal & Professional Development</u>**<br>Demonstrates the qualities required to sustain lifelong personal and professional growth. | Recognizes when personal views and values differ from those of patients, colleagues, and other caregivers and reflects on how these can affect patient care and research. | **Recognize and analyze ethical problems in clinical medicine and biomedical research using the principles of autonomy, beneficence, non-maleficence and justice.** | **None** |
| **<u>Patient Care</u>**<br>Demonstrates proficiency in clinical skills and clinical reasoning; engages in patient-centered care that is appropriate, compassionate and collaborative in promoting health and treating disease. | Obtains thorough and accurate information through an H&P adapting to the clinical setting. | **Understand and demonstrate effective communication skills for learning and clinical practice environments.** | **Additional attention to Clinical Reasoning skills** |
| **<u>Patient Care</u>**<br>Demonstrates proficiency in clinical skills and clinical reasoning; engages in patient-centered care that is appropriate, compassionate and collaborative in promoting health and treating disease. | Uses evidence from the patient's history, physical exam, and other data sources to formulate and prioritize clinical decisions.<br><br>Incorporates diagnostic, therapeutic, and prognostic uncertainty in clinical decision-making and patient care discussions. | **Discuss and apply physical exam skills necessary for practice.** | **Additional attention to justification for physical exam maneuvers** |

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| **Interprofessional Collaboration**<br>Demonstrates the attitudes, knowledge and skills to promote effective teamwork and collaboration with health care professionals across a variety of settings. | Respects and supports the contributions of individuals on an interprofessional health care team to deliver quality care. | **Develop and practice the knowledge and skills that promote effective intra- and inter-professional teamwork across a variety of settings.** | **Collaborate with University wide IPE effort to incorporate clinical opportunities for IPE into CPCP requirement** |
| **Systems-based Practice**<br>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. | Applies knowledge of health care systems to patient care discussions.<br><br>Demonstrates awareness of context of care, patients' values and health care system resources in clinical decision-making. | **Explain health policy and health systems information needed for practice.** | **Collaborate with Health Systems Science** |
| **Reflective Practice**<br>Demonstrates habits of ongoing reflection and analysis to both identify learning needs and continuously improve performance and personal growth. | Demonstrates habits of ongoing reflection using feedback from others as well as self-assessments to both identify learning needs and practice continuous quality improvement. | **Explain and practice the behaviors of an ethical, respectful, compassionate, reliable, and responsible physician.** | **None** |
| **Common to all Blocks:** | | | |
| **Knowledge for Practice**<br>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<br><br>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. | |

**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? |
|---|---|---|
| In response to 1st and 2nd year feedback about the M4 preceptors and with help from 4th year preceptors we reworked the introductory lecture for the | It was well received by 4th year preceptors and feedback from both the 1st and 2nd year students indicated that they noted less inconsistency in the teaching | COVID and Social Distancing made the in-person orientation more difficult, so we needed to deliver this content over Zoom. Some of the content included |

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| fourth year preceptors with more explicit instructions on preceptor expectations and appropriate constructive feedback. | from one 4th year preceptor to another. | pre-recorded videos followed by discussion which is more difficult to deliver over zoom due to bandwidth issues, *so we have been experimenting with addressing these IT issues.* |
| For PD1, we instituted a head M4 preceptor who ensured that all M4 preceptors were properly prepared with the material beforehand and acted as a resource during the session. | It was well received by both 4th year preceptors and 1st year students, feedback indicated that they noted less inconsistency in the teaching from one 4th year preceptor to another. | COVID curricular changes for clinical students made it more difficult for us to obtain sufficient 4th year preceptors to achieve this reliably this year. Additionally social distancing requirements limit the number of people in each exam room, making it more difficult for the head preceptor to work with students and the assigned preceptor on skills.<br>*We are building an additional list of potential preceptors to fill the gaps when M4s are unobtainable*.<br>*We are unable to work around the social distancing restrictions at this time.* |
| For PD1, we required that M1 students and preceptors watch the PE maneuver demonstration videos together immediately prior to attempting the learn and practice sessions. | This change was well received by both 4th year preceptors and 1st year students, feedback indicated that they noted less inconsistency in the teaching from one 4th year preceptor to another. | COVID social distancing and space requirements made it impossible for preceptors and M1s to watch the videos together immediately prior to their PD1 sessions. |
| We improved the feedback system for first and second year | It did not actually produce any significant feedback for the M4s | *We will stop this effort as it is currently being done and* |

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| students to give written real time feedback to their PD preceptors. | and was a great deal of work for the SIM and Block 8 staff. | *consider other mechanisms to gather this information.* |
| The Clinical Reasoning exercise was reworked to more explicitly guide students in the formation of a framework for differential diagnoses and to more clearly prompt students to be widely inclusive in their creation of problem lists. | This was met with varying success from Block to Block. It is an ongoing CQI project.<br><br>Students demonstrated inclusion of HSS and SDH as potential problems on the problem list even in cases where it was not an explicit learning objective. | *We will continue to tweak the Clinical Reasoning exercise to build the scaffold for students to create broad differentials including HSS and SDH.*<br>*With the IQ Diversity Initiative we will need to review all CR exercises to adjust for the race/ethnicity and gender changes.* |
| With the help of Dr. Simon the oral case presentations and addenda information were reworked to remove any distracting information. | This resulted in fewer complaints from other Block leaders about distracting information that detracted from or contradicted the intention of the case. | *In the spirit of CQI we will continue to tweak the OCP materials.*<br>*With the IQ Diversity Initiative we will need to review all OCP exercises to adjust for the race/ethnicity and gender changes.* |
| COVID required us to create opportunities to practice communication skills remotely- we developed a Telemedicine Communication session. | This was piloted with a small group of students and was well received. | *We will require this of all M2s in anticipation of changing clinical opportunities due to social distancing. We will be including this as a part of M1 Communications seminars going forward.* |
| COVID required us to deliver the CSE1B via Zoom. | This had a number of technical difficulties, using Zoom, requiring students to use Exam Soft to secure their browsers, requiring students to record and upload their videos to box. It was a logistical challenge. | *We would sincerely hope that we do not have to replicate that experience in 2021. We anticipate being on ground again and being able to use CAE in the HEC SIM Center* |
| We instituted a required 'Stop the Bleed' training for all first year students | This was well received by first year students. | *We will continue to require this training and hope to create an IPE opportunity of it.* |

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

COVID brought unprecedented changes to a Block that historically has primarily delivered its content face to face. We have needed to be creative in:

- our delivery of communication sessions via Zoom using breakout rooms and recording the sessions,
- creating Telemedicine Communications Skills sessions,
- creating new Tuesday Seminar sessions about COVID Patient Care and COVID Self Care,

- reworking the delivery of CPCP and PD3 into a new offering called LCSP (see attached), to shorten in person clinical time and
- use SIM center skills development sessions to deliver teaching opportunities that attempt to replicate what students would experience in outpatient settings,
- creating new Patient Facing clinical opportunities that provide the setting for students to safely interface with patients on necessary health issues remotely (as well as provide opportunities for community IPE engagement), as well as
- reconfigure the delivery of PD1 sessions, and
- postpone the delivery of some of the PD2 sessions.
- In addition, we have had to readjust our Procedures curriculum to teach droplet precaution for all students, and
- restructure both our Medical and Surgical procedures curricula.
- We have developed a required curriculum to prepare first and second year students to practice their clinical skills in the time of COVID (see addenda) that we will likely continue to use in future years.

Unrelated to COVID:

We anticipate undertaking a reworking of MSK week PD content and will wrap this content into our PD2 offerings, spread out over the course of Oct, Nov and Dec rather than condensed into the prior one week long MSK sessions. Additionally we have needed to update our Block 2 Communication Skills Patient Education case that asks students to disclose increased risk of trisomy in a pregnancy.

Additionally, we expect to expand our Oral Presentation training to include a second year Tuesday Seminar by Cliff Packer on "Oral Case Presentation for the Ward Rotation" that will focus on preparing students in the different types of appropriate and effective oral presentations for clerkships.

We have also been devising ways to improve upon Tuesday Seminar sessions: we will be elevating the role of the student leader for each session- similar to that of the student learner in IQ, we will be working on more explicitly detailing learning objectives for the skills work sessions in TS, we will be including several other sessions that have been waiting in the wings for several years, once we are able to regain Tuesday morning curricular time in Blocks 5 and 6.

We have been seeking to expand our Clinical Reasoning and Physical Diagnosis sessions and have created a PD2 Cardiac Clinical Reasoning session, similar to the PD2 Abdominal Clinical Reasoning session, however due to COVID we have not been able to pilot it yet, prior to offering it to the entire class as part of their PD2 required sessions.

Additionally, similar to the IQ Case Diversity Inventory, Block 8 will be undertaking a Preclinical Case Inventory so that we can further broaden our representation of diversity in the clinical cases that students use to practice their communication, history taking and PD skills.

| Deletions | Additions |
|---|---|
| CPCP and PD3 | LCSP, SIM Center Skills Development Sessions and Patient Facing Sessions |
| | Telemedicine Communications Session |
| | TS 1 sessions on COVID |
| Previous Structure for PD1 (12 sessions) | New Structure for PD1 (6 sessions) and spiraling content |
| | Droplet Precaution Training for both M1s and M2s |
| | PD2 MSK Content under Block 8- taught by Ortho, Rheum and PM&R |
| | TS 2 Advanced "Oral Case Presentations" session |
| | TS 2 session on Suicide Prevention |
| | PD2 Cardiac Clinical Reasoning Session |
| PD2 sessions deferred due to COVID: Ophthalmology, ENT, GYN/GU | |
| | |

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

Block 8, particularly Tuesday Seminars, has used Zoom small groups particularly effectively.

**8. What specific changes do you plan to make to the course next year?**

| Changes anticipated for next year | Reason for changes (evidence) |
|---|---|
| Expansion and redevelopment of Tuesday Seminar session on Bias and Cultural Humility | Request from students to expand this topic. (Student Diversity Action Plan) |
| Additional training in Telemedicine Communication Skills- regarding chronic care/prevention (Colon cancer/Breast Cancer screening; more DM management, etc) | COVID highlighted the need for this type of training- it is likely that medicine will never with the same and this will need to be in student repertoire, additionally there have been hints that Step CS will include Telemedicine stations in the future. |
| Addition of PD2 Cardiac Clinical Reasoning Session for all M2s | Repeated student requests for additional clinical reasoning sessions has been a recurrent theme for the past two years (B6 EOB eval |
| Combine Surgical Skills training for M1 and M2 to a single longer surgical skills training session | This is in response to the request of the UH Animate Lab and Dr. Schomisch and Dr. Marks who generously provide this training for our students. |
| Addition of a requirement for all M2s to do the practice for the CSE2B which focuses on clinical reasoning | Repeated student requests for additional clinical reasoning sessions has been a recurrent theme for the past two years |
| Inventory and Diversification of Identities in the Clinical Cases that students use to practice skills in TS and the SIM center | Student request for increased racial/ethnic/gender/sexual orientation diversity of subjects of clinical cases |

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

   No changes to Block 8's major concept areas were undertaken.

10. **Did formative and summative assessments in the Block support achievement of block objectives? What specific changes do you plan to make to the course next year?**

| Changes anticipated for next year | Reason for changes (evidence) |
|---|---|
| CSE1B cannot be delivered again over Zoom, it needs to be delivered in person | The rate of effectiveness in providing an opportunity to demonstrate oral presentation skills was 35.9% (E + VE) - EOB4 |
| Practice for CSE2A clinical case will be standardized | Students reported there was variation in how SPs presented their clinical history which could potentially alter their hypothesis testing and subsequent physical exam manuevers |
| Practice for CSE2B will be required for all M2s | Repeated student requests for additional clinical reasoning sessions has been a recurrent theme for the past two years.<br>Over half of the class last year took advantage of this optional opportunity and reported it as very effective. We were unable to accommodate all who were interested due to time and space constraints. |

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

    Each program director reviews their faculty feedback and makes adjustments as to whether to continue to use certain preceptors in future years. In addition to faculty, we rely heavily of 4$^{th}$ year medical students. Conversations with students (individual feedback, ad hoc focus groups, student representatives) and in reviewing written student feedback over the last two years has made it clear that we need to increase uniformity in the clinical teaching that is being provided. We will once again make this one of our main focus points for the year.

12. **Longitudinal Data**

    With respect to effectiveness of the curriculum, using 80% of students who rated very good or excellent (or similar descriptors) as the benchmark, Block 8 was insufficient in a number of areas: specific skills of First Five and Stop the Bleed, Motivational Interviewing and Health Behavior change, CSE1B, Information Synthesis on the CSE2A, Transition to Clerkships, Shared Decision Making and Giving Bad News.

The ratings for First Five and Stop the Bleed skills may never get to the benchmark as these are skills that most students have never done before and they will not feel proficient after a single training session.
CSE2A was not rated well as an opportunity for information synthesis, and we think this is related to the variation in the case and the challenges of providing feedback to students when the clinical experiences are variable. In order to address this we will be more rigorously standardizing the cases for the Practice CSE2A and the CSE2A.
The ratings for the Communications Skills Motivational Interviewing and Health Behavior Change, Shared Decision Making and Giving Bad News will require re-examination of those cases. The Tuesday Seminar on Transition to the Clerkships received feedback regarding the lack of diversity among the M3 and M4 students, greater efforts will go into recruiting a wider variety of students for this coming year.

As compared to the prior year, we performed better with respect to Block 5 Physical Exam skills and understanding which exam maneuvers are appropriate for specialty areas (70% as compared to 42% the year prior). This is likely in response to improvements in the orientation for the specialty providers prior to the specialty sessions. Dr. Navracruz has been diligent about working with the PD2 preceptors to optimize the delivered curriculum. This same trend is evident in student assessment of the effectiveness of PD3 as well, 83% vs 51%, again due to clearer expectations of the PD3 preceptors. We additionally have had the good fortune to collaborate with the teaching residents at CCF, UH and now Metro which has improved the overall curricular delivery of PD3.

(See attached)

## 13. Response to PEAC Report

No new recommendations from PEAC were received since the report referenced in the 2019 Block 8 Action Plan (see attached).

## 14. Scholarly Accomplishments

We are delighted that our students have published a short communication in *Medical Science Educator* about the 'First Five' course [1]. They are in the process of writing up an additional manuscript about the "Stop the Bleed' training. We are indebted to our colleagues at MetroHealth Simulation Center who make this training possible and to Kelli Qua who has lent her research and writing expertise to make these scholarly accomplishments possible.

## 15. Acknowledgements:

It is clear that Block 8 would not function without the hard work and dedication of Jennifer Lennon who works tirelessly to bring shape and form to our curricular efforts. Jennifer's creative thinking and meticulous planning is the only reason why Block 8 has had whatever success we have garnered in the last 5 years.

Andrea Bryner, Ellen Luebbers and the HEC Simulation Center staff have been enormously supportive of our efforts to teach clinical skills. They have gone above and beyond accommodating our increasingly difficult to fulfill requests, creating over 8000 opportunities for students to work in the SIM center in the last 6 months. We are enormously grateful to also be collaborating with Jackie Csank, Tom Noeller and the MetroHealth Simulation Center staff. They have been invaluable in collaborating with the HEC center to deliver pre-clerkship training for M1 and M2 students. Chris Olson has expertly managed the HEC space, allowing for creative and safe deployment of the curriculum.

We are sad to lose one of our fantastic and talented members of Block 8- Mimi Singh stepped into a new role with Better Health Partnership. We would be remiss if we did not acknowledge and thank her for all the hard work she put into nurturing innovative thinking about Health Systems Science and Systems Based Practice.