

Supplemental Materials 2. Vagelos College of Physicians and Surgeons (VP&S) Four-Year Equity and Justice Curriculum Activities Mapped by Learning Objective

Phase of Curriculum		Anti-Racism Learning Objectives									
		1. Demonstrate evidence of self-reflection and how one's personal identities, biases, and lived experiences may influence one's perspectives, clinical decision-making, and practice in interactions with patients, families, communities, and all members of the health care team	2. Recognize historical and present systemic biases that can impact care of diverse patients and identify strategies to mitigate them.	3. Identify value of diversity in patient care, healthcare systems and scientific research and practice (IPE, teamwork)	4. Interpret historical and present impacts of systemic racism, colonization, white supremacy, acculturation, assimilation, and immigration on clinical care, population health and health care organization	5. Analyze the intersection of race, class, socioeconomic status, and other social determinants of health on patient and population health	6. Articulate the distinction between race as a social construct (as opposed to a risk factor for disease), and racism as a cause of health care inequities; and the difference between race and genetic ancestry.	7. Appraise the role of health system policies, procedures, and practices in promoting or suppressing equity	8. Critique public policy approaches to promote social justice and address social determinants of health	9. Employs strategies to advocate for oneself and serve as an ally to others when there is injustice (e.g., microaggression, discrimination, racism) and increase belongingness within diverse healthcare teams and patient populations.	10. Recognize the importance of fostering partnerships with communities to engender solutions that are both effective and trusted
Ready for VP&S											
	Orientation	X		X	X	X	X	X			X
Fundamentals											
	Molecular Mechanisms		X			X			X		
	Pharmacology			X			X			X	
	Genetics		X			X		X			
	Anatomy			X	X						
	Histology and Pathology										
	FCM I	X	X	X	X	X	X	X		X	
	Data Science		X	X	X	X		X	X		
	Evidence-Based Medicine		X	X	X						


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	BHD	X	X	X	X	X	X	X	X	X	X
	Psychiatry	X	X			X	X	X			
	Narrative Medicine	X									
	FCM II	X		X	X			X			
	FCM III				X		X	X			X
Major Clinical Year (MCY)											
Core Rotations	OB/GYN		X	X	X		X				
	Surgery									X	
	Neurology										
	Psychiatry				X	X		X			
	Pediatrics		X			X		X			






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Differentiation and Integration (D&I)											
	R4R									X	
Electives	Advanced Topics in Global Health*		X		X		X	X	X		
	Human Nature: DNA, Race, and Identity*		X		X		X	X	X		
	Interdisciplinary Correlation: Using the Humanities to Explore Healthcare Inequities*		X		X		X	X	X		
	Scholarly Project										


MCY: Major Clinical Year (required clinical rotations), IPE: Interprofessional Education, FCM: Foundations of Clinical Medicine, BHD: Body in Health and Disease, OB/GYN: Obstetrics and Gynecology, M&P Week: Mechanisms and Practice Week, R4MCY: Ready for Major Clinical Year, R4R: Ready for Residency



*Optional electives are denoted by an asterisk. All other activities are required.

Appendix 2. [Insert Title]

	Phase
	Ready 4 VP&S
	Fundamentals
	Major Clinical Year
	Differentiation and Integration

Phase	Course	Description of Curricular Activity	Modes of Assessment
	Pre-Orientation Summer Reading Curriculum	<u>Just Medicine</u> chapters 2&5 by Matthew[i], <u>Fatal Invention</u> , chapters 1,2 &6, by Roberts [ii]; <u>Medical Apartheid</u> , chapter 7 by Washington[iii]; and “The Fire Next Time” by Baldwin.[iv]	Discussion participation in the sociobehavioral medicine course: Foundations of Clinical Medicine (FCM)
	Orientation	Four community orientation sessions: service learning lecture, community history lecture, community leader panel, and asset mapping walking tour	Walking tour teams of 4 students present a 5 minute powerpoint presentation within FCM seminars
Lecture: History of racism in medicine: includes local VP&S history (e.g., slaveholder faculty leaders)		None	
	Biomolecular and Cellular Mechanisms	Students explore the health implications of lack of housing and food access through a self-directed learning report. Each student will identify a question, create learning objectives, investigate, and write a report with appropriate references.	Student submissions are assessed against a rubric.
	Pharmacology	None	N/A
	Genetics	Format: 2 Lectures, 1 small group discussion Content: Definitions of race, ancestry, ethnicity; bias in population screening and ancestry search tools, ethics; health disparities	Multiple Choice questions (MCQ)
	Anatomy	2 Lectures Content: intersex variation, melanin-related gingival mucosa appearance, historical Black pioneer: Viven Thomas (Tetralogy of Fallot)	None
			N/A

	Histology and Pathology	None	
	Foundations of Clinical Medicine (FCM): 3 semester social behavioral medicine	Lectures, small group seminars, self-reflection (implicit association test) Content: Structural racism; health equity; bias in research; implicit bias, health disparities, SDOH, interpreter use, cross-cultural communication, structural competency, advocacy	Written assignments: SDOH; advocacy op-ed; multiple perspectives Seminar discussion participation Simulated communication skills practice Written narrative medicine-based reflection (required but not graded) (cite 2 papers)
	Data Science	Discussion, exercises, readings explores patterns of health disparities by race/ethnicity, social determinants of health, systematic causality, health equity, and policy solutions	exam questions test students on ability to identify interaction of health, race, and other factors, understanding historical impact of systematic exclusion based on data-driven analyses
	Evidence Based Medicine	Population health lecture that focuses on ____ Tuskegee, Nuremberg laws	
	Immunology		Multiple choice question assessment
	Neurology		
	Cardiology	Lecture, Content: on social determinants of health (SDoH) in cardiovascular disease expects students to define SDoH, identify places of interventions, and exposure to examples of SDoH in HTN, cardiac catheterization, STEMI/N Stemi management	Final Exam
	Cardiology	Lecture: Allostatic load; SDOH, health disparities in cardiac catheterization, STEMI/N management,	Multiple choice questions (MCQ)
	Pulmonology	Lecture: Race-based pulmonary function testing	
	Nephrology	Lecture and self directed learning sessions examining the use of estimated glomerular filtration rate, a race based algorithm. The series examines the use of the algorithm, harmful implications in access to transplant and other treatment modalities, and alternatives to race-based calculations. The course also offers opportunities for summer internships to engage in health care disparities research in Nephrology.	

		Intro to Kidney Transplant Lecture discusses disparities in who receives kidneys	Final Exam
		Lectures on ESKD and Transplant Disparities	Final Exam
	Hematology	Lecture: sickle cell disparities	none
	Microbiology & Infectious Disease		
	Microbiology & Infectious Disease	3 Lectures: Intersection of infectious disease and carceral care; Tuskegee Study; systemic racism in HIV care;	
	Gastroenterology	Public Health Commute Asynchronous multi-media module: GI and Liver Diseases: MELD score-related health disparities	assessed for completion only, 5% towards final grade
	Endocrinology	PHC Module: Endocrinology: obesity bias	assessed for completion only, 5% towards final grade
		Patient as professor presentation: obesity bias	?
		Lecture on gender transition medicine	?
		OSCE relates to disparities in diabetes care	OSCE
	Rheumatology	PHC Module: Rheumatology: "Rheum" for Change	assessed for completion only, 5% towards final grade
	Oncology	PHC Module: Oncology: Cancer Prevention and Screening	assessed for completion only, 5% towards final grade
	Psychiatry	Starting in 2023 SMALL GROUP DISCUSSION ON RACE BY PATRICE MALONE (previously done by Sidney Hankerson and Nicole Pacheco) Themes that recur through the small group sessions emphasize empathy, reflection on personal bias in decision making, recognition of the impact of social determinants of health and identification of key areas of health care disparity in Psychiatry and more broadly.	
		A specific small group session devoted to "Access and Advocacy" addresses learning objectives that include understanding the root causes of mental health inequities, learning different models for increasing clinical engagement, and developing strategies to advocate for mental health services.. This session is reprised during the psych MCY rotation.	
	Narrative Medicine Elective	Race Sounds: Nicole Furlonge African American Literature	Race Sounds: Nicole Furlonge African American Literature
	FCM II		
	FCM III		

	R4MCY	R4MCY is a semester-long course held during the semester before MCY where students learn basic clinical and interpersonal skills to prepare for learning on the wards. Assigned readings include <i>The Microaggressions Triangle Model: A Humanistic Approach to Navigating Microaggressions in Health Professions Schools</i> , and lectures on responding to bias on the wards and how to report instances of bias	none
MCY	OB/GYN	2-hour multi-media asynchronous education module: carceral care for people with uteruses, adverse childhood experiences, SDOH, trauma informed care Two modules on providing trauma-informed care for transgender, gender-diverse, and intersex patients Lecture begun in July 2022 about DEI and using racism instead of race	2% of final grade if complete the Articulate Rise module
MCY	Surgery	Upstander/Teamwork lecture and discussion	Discussion participation and reflective "exit ticket"
MCY	Neurology		
MCY	Psychiatry	Diversity & Disparity – is no longer being done, faculty is in the process of finding a new resident to lead session. There were no slides. Emphasis on 1) impact of race on psych diagnosis; 2) police involvement; 3) aggressive treatment and more treatment over objection; and 4) delay in treatment due to appropriate mistrust and decreased access = potentially objectives 1, 2, 3, 4, 5?	
MCY	Pediatrics		
MCY	Internal Medicine		

MCY	Primary Care	<p>Confirmed MCY-F assignment on Structural Determinants of Health likely covers anti-racist objectives 2, 4, 5, and 7 for all students WITH assessment for grade</p> <p>The specifics depend on which patient case and structure students choose to identify (i.e. racism vs immigration vs economics, etc.)</p> <p>Students also have discussion along with MCY-F so students likely able to learn from each other, but Drs. Chang and Leeds aren't present to confirm the content of these sessions</p> <p>Potentially also cover learning objectives 6 and 8 integrated into the didactics on diabetes and opioid use disorder</p> <p>Other options: Considering non MCY-F discussion that excludes directors but would have to meet certain learning objectives Create an additional OSCE case to think about patients impacted by a history of incarceration and/or OUD; would likely be a yearly screening visit without complaint Next Steps: EJ fellow to review didactic slides and confirm which learning objectives are included or if some could be more explicitly emphasized? Aquifer case on interpreters but need to review if they already have materials related to carceral care or opioid use 2,4,5,7 -> potentially 8?</p>	Working on Assessment and Feedback mechanism for MCY-F Structural Analysis Assignment
MCY	Emergency Medicine	None	
MCY	Anesthesiology	Simulated IV practice includes skills for placing IV with skin of varying complexions	
MCY	Urology	<p>Lecture: PSA and racial disparities, complex interaction between genetics, racism, and SDoH in presentations and prognosis of prostate cancer</p> <p>Optional articles: gender affirming care in urology, prostate cancer screening disparities</p> <p>Optional podcast: "Fans for the Cure" podcast on PSA and prostate cancer, which touches on racial disparities</p>	
MCY	Neurosurgery	None	None
MCY	Orthopedic Surgery	None	None

MCY	Mechanisms & Practice: week intersession for clinical students	Required workshops: Ethics, Upstander Skills Elective workshops: From Clinical Practice to Community Empowerment, Mad Pride + Disability Justice for Medical School Students, Project LETS, Interrupting Microaggressions in Clinical Practice, and Medical Decision Making, which touches on race bias, Case Studies in Climate and Health, Curriculum: LGBTQ+ 101, Physician Advocacy	Self-assessment survey: upstander skills
D&I	Ready for Residency (1 month pre-graduation course)	LGBTQIA Health Upstander Training	
D&I	Electives	<p>Advanced Topics in Global Health - This course provides an understanding of the intersections between health care delivery, policy and equity on a global scale.</p> <p>Human Nature: DNA, Race, and Identity - This seminar is taught from the perspective of four different disciplines; Law, Religion, Science, and Medicine. The course focuses on human identity, beginning with the individual over the lifespan and progressing to communal and global viewpoints using a framework of perspectives from biology, genetics, medicine, public health, psychiatry, religion and the law.</p> <p>Interdisciplinary Correlation: Using the Humanities to Explore Healthcare Inequities - Students reflect on selected works of art and literature as a basis to explore issues of bias and discrimination in medicine at the individual (patient, practitioner) and systematic levels, including a focus on racial disparities in healthcare. Included is an in-depth exploration of the bioethical principles of informed consent and distributive justice. Interdisciplinary guest speakers cover topics on bias in medicine from the fields of health services research, medicine, pediatrics, psychiatry, infectious diseases and Ob/Gyn, including one workshop on implicit bias and another workshop on microaggressions. Other topics covered include the historical context of race and medicine, community health research partnerships, promoting health literacy by integrating art into pediatric practice, and racial disparities in maternal and fetal outcomes.</p> <p>Racism and Health Elective - Seminar-based four-week course. Students explore how the concepts of race and racism have and continue to impact health in the US. The relationship between racism and health is critiqued at structural, institutional, and individual levels in order to effectively evaluate and craft policies and interventions to address health disparities. Week 1: introductory history of race and racism in the US, with a focus on the biological and social constructs of race, key moments perpetuating racism in the US, and critical race theory and intersectionality. Week 2: health disparities by race across the medical specialties. Week 3: strategies being used to address health inequities, with an emphasis on health policy and specialty-specific interventions. Week 4: students are asked to draft an op-ed addressing a specific anti-racism initiative that they may implement in their specialty of choice.</p>	varies by course
D&I	Scholarly Project	No standard content	none

Abbreviations
References

[i] Matthew, DB. Just Medicine : A Cure for Racial Inequality in American Health Care, New York University Press, 2015.

[ii] Roberts DE. Fatal Invention : How Science, Politics, and Big Business Re-Create Race in the Twenty-First Century. New York: The New Press; 2011.

[iii] Washington HA. Medical Apartheid : The Dark History of Medical Experimentation on Black Americans From Colonial Times to the Present. New York: Anchor; 2006.

[iv] Baldwin, J. The Fire Next Time, New York: Vintage International, 1993. This essay was first published in *The Progressive* as “A Letter to My Nephew.” Baldwin later included his revised version as “My Dungeon Shook” in The Fire Next Time. We will be using the version from *The Progressive* (available on Courseworks and online) for our discussion.