Project Name	Faculty Name	Department	Type of Project	What is the general research problem or project that the student will be completing under your mentorship? (e.g., how does transgenerational epigenetic inheritance affect metabolic disease risk? Which support systems provide better outcomes for people with traumatic brain injury? Creation of independent learning modules for a course).	What specific question will the student addressing during their rotation, and can it be completed during the rotation? (e.g. Does thermoneutrality enhance the effect of a high-fat diet on glycemia in mice? What is the population with TBI in Worcester? How can we advance students' self-directed learning using technology?)	What type of study (e.g., cross-sectional case-control study, longitudinal cohort study, clinical trial, model system (e.g., cells, mice, worms, flies, etc.) will the student be working on? What is the implementation plan for the curriculum?
Medical language curriculum development	Michael Chin	Family Medicine & Community Health		The goal of this project is to improve the structure, curriculum and course resources for the FC460 Medical Language course, which is a 1- month elective available to UMMS medical student in their Advance Studies year. Students may take this elective while focusing on any non-English language other than Spanish. Over the past 7 years, over 60 medical students have completed the course.	How can the curriculum and course materials for the one-month Medical Language elective be improved? How can the course's impact be expanded (e.g., via outreach to students to increase enrollment, publishing, or providing learning resources that are used after completion of the course)?	Curriculum improvements made during summer 2025 ideally will be used in the subsequent one to nine months. The course is typically offered during at least four blocks during the academic year, and curriculum improvements have been incorporated in each of the past 7 years that the course has been run.
Ophthalmic Data Science	Nazlee Zebardast	Ophthalmology	Research	Multiple projects are available for highly motivated student in the field of ophthalmic epidemiology and data science. Background in statistics and knowledge of statistical and computer programming is helpful. 1. Genomics and disease risk prediction. Using two large biobanks and results from a large ophthalmic clinical trial, these projects aim to understand the influence of polygenic risk on glaucoma disease risk, phenotype, and progression. 2. Machine learning. Using large existing datasets these projects aim to use machine learning for better disease prognostication. Unsupervised and semi supervised deep learning models will be used on large repositories of ophthalmic imaging to understand subtypes of disease and characterize progression. The goal is to define structural and longitudinal endophenotypes that are closely aligned with disease type, severity, and progression. 3. Outcomes and health equity research. Multiple datasets are available for use including a large ophthalmic registry, large EHR database and Medicare datasets. We have previously used these datasets to understand the effectiveness of new surgical procedures in the US and racial healthcare inequities among glaucoma patients. Student role: The primary goal of these projects is for the students to learn how to handle large amounts of healthcare data and perform appropriate statistical analysis. The student will formulate the research question and use existing data to answer these questions. The goal is that the student will take ownership of a project and bring it to fruition by planning and completing at least one manuscript. The student can decide on the question most interesting to them or work with the mentor to join an existing project. Student and mentor will meet at least weekly (and more often as needed) to ensure adequate progress.	NA	cross sectional and longitudinal
Translational research in autoimmune conditions and cancers	Jillian Richmond	Dermatology, Neurology	Research	How can we manipulate T cell migration and function to treat chronic diseases?	Project dependent, student interest dependent	Human bioinformatics/dataset analyses; model systems including mice and pet dogs
Robot Thoracic Surgery Videos	Mark Maxfield, MD	Surgery	Research	Creation of edited robot thoracic surgery videos	Can a robot thoracic surgery video be created and edited to augment learner education?	surgical shadowing; clinical exposure; video editing
Empower Study	Tiffany Moore Simas	Ob/Gyn	Research	Under Represented Community in Health Care - Via Remote Medical Monitoring Initiatives	Medical Record indicators, Patient facing with follow up proceedures	Clinical Trial - Hypertension Disorder of Pregnancy (HTN) postpartum mothers, medical extractions, patient recruitment
Evaluating the Use of Naloxone Prearrival Instructions in 911 Dispatch	Laurel O'Connor	Emergency Medicine	Research	Naloxone is increasingly being distributed into the community through public health initiatives, however it is unclear how effective 911 dispatchers are at providing accurate prearrival instructions to faciliate bystander naloxone administration.	What percentage of 911 calls for opiate intoxication recieve bystander naloxone instructions, and of the calls where naloxone is available, in what percentage of calls can bystanders follow dispatcher-supplied pre-arrival instructions to adminster the naloxone prior to EMS arrival?	This will be a retospective cross Sectional Study
Engaging Community-Based Organizations in Co-design of SDOH Curriculum	Susan Hogan	Family Medicine and Community Health	Research	Understanding and addressing the social determinants of health is crucial for reducing health disparities and ensuring equitable healthcare delivery. The student will work on revising the Medicine and the Human Experience (MHE) curriculum to better address the gap between knowledge of social determinants of health and its practical application in patient care. This involves engaging in co-design sessions, qualitative data analysis, and creating surveys to evaluate and improve the curriculum	The specific question the student will address during their rotation is: "How can the Medicine and the Human Experience (MHE) curriculum be revised to ensure students effectively apply knowledge of social determinants of health (SDOH) in patient care?" Yes, this question can be completed during the rotation by focusing on co-designing curriculum prototypes, analyzing qualitative data from student and community feedback, and developing and evaluating pre- and post- curriculum surveys to measure the impact of these changes	The student will be working on a curriculum development study that incorporates elements of qualitative research and cross- sectional survey analysis. The focus of the study will be on the design, implementation, and evaluation of the revised Medicine and the Human Experience (MHE) curriculum. The implementation plan for the curriculum begins with a co-design phase, during which the student will participate in five 2-hour co-design sessions with community partners. These sessions aim to refine curriculum prototypes based on stakeholder input, with qualitative data analysis playing a key role in integrating feedback from these discussions. The Community Advisory Panel (CAP) will also play a significant role in the process. The student will collaborate with the CAP to align the curriculum with community needs and priorities, ensuring its sustainability through ongoing guidance and input. Pre- and post-curriculum surveys will be designed and implemented to measure medical students' understanding of social determinants of health (SDOH) and their ability to apply this knowledge in patient care. The data gathered from these surveys will be analyzed to identify areas for improvement and to validate the effectiveness of the revised curriculum. The final rollout of the curriculum will incorporate findings from the co-design phase and survey analyses, and it will be piloted with the next cohort of medical students. The success of the curriculum will be evaluated through survey results and qualitative feedback from participants. Additionally, the student will contribute to scholarly outputs by preparing abstracts or manuscripts detailing the process and findings, which can be submitted for publication or presented at academic conferences
MPACT Clinical Trial about Mindfulness and Chronic Low Back Pain	Paula Gardiner	Family Medicine and Community Health	Research	How does mindfulness help reduce chronic low back pain?	How can mindfulness help people who have chronic low back pain	Randomized Control Trial
Summer produce distribution at a community health center	Melanie Gnazzo, MD	Family Medicine and Community Health	Community Health	Food insecurity is widely recognized as a social determinant of health that has significant impact on overall health and well being, and can be addressed with existing resources. The Family Health Center of Worcester is a federally qualified health center in an urban neighborhood, at which the patients are more likely to experience food insecurity than the general population of Worcester. The Community Harvest Project of Grafton, MA, is a farm that provides 100% of its harvest to hunger relief. Since 2013 the Family Health Center of Worcester and the Community Harvest Project and UMass Chan Medical students have collaborated to give free produce to patients during the summer season.	Students engaged with the collaboration will have two primary roles. 1) coordinate and implement the produce distribution. This will involve part-time work over 6-8 weeks during the summer. It can involve hands-on work at the farm, bagging produce, transporting produce to the FHCW, and working with staff at the FHCW to distribute to patients. 2) Quality improvement project. This can be tailored to the program's needs and the student's interests. In 2024, the student surveyed staff to assess the impact of produce distribution on staff workflow and staff retention. Prior QI projects assessed patient satisfaction with the produce, patient engagement with the produce, self-reported health outcomes, and screening processes for SDOH at the FHCW.	This is a direct community service project with a Quality Improvement process.
ELM--Experiences with Long term antidepressant Medication	Alison Karasz	Family Medicine and Community Health	Research	Long term antidepressant use is very common in the United States. Yet the benefits of antidepressant medications are slim and controversial, while some evidence suggests growing health risks from long term use. This study is interviewing doctors and patients regarding their experiences and decision making with long term use.	What are doctor and patient experiences iwht long term use? How can doctor and patient experiences help to understand the factors underlying long term use? Are there different pathways to long term use, varying by culture, ethnicity, and SES? What are potential targets for de-prescribing?	qualitative study
Experiences with isolation and loneliness among post partum women in India	Alison Karasz	Family Medicine and Community Health	Research	What are causes of post partum isolation/loneliness in Indian mothers of different SES groups? What are mothers' experiences of loneliness and isolation? What role do gender roles play in this experience?	See above	Qualitative interviews (translated/transcribed) will be analyzed. Hindi/Urdu speaker an advantage.
Improving Participation in Pulmonary Rehabilitation through Peer-Support and Storytelling	Peter Lindenauer	DHDPS, Baystate Health	Research	What are best ways to encourage patients to attend pulmonary rehabilitation?	Patients will gain experience in recruitment, intervention delivery, reviewing patient data and conduct qualitative interviews.	Clinical trial
Linkages between addiction treatment providers and recovery courts	Ekaterina Pivovarova	Family Medicine and Community Health	Research	what is the impact of a linkage facilitation intervention on access to care for individuals involved in recovery courts	evaluate findings from qualitative interviews and support manuscript development	qualitative data from three site pilot
Trends in the Treatment of Youth in Foster Care	Heather Forkey, MD	Pediatrics	Research	Analysis of foster care clinic patient data for diagnostic and clinical management trends	What does the Foster Children Evaluation Service (FaCES) clinic QI data for the past 5 years demonstrate?	Quality Improvement clinic descriptive analysis
Supporting Foster Parents Understanding of and Response to Trauma in Foster Youth	Heather Forkey, MD	Pediatrics	Community Health	Creation of learning modules and resources for birth parents and foster parents	How does a foster parent and birth parent understand and respond to trauma in foster youth?	Literature and resource scan and distillation for lay foster and birth parent population