NEW YORK QUALITY CARE
Addressing Social Determinants of Health: Actionable Insights for an Accountable Care Organization
“Social Determinants of Health (SDoH) refer to the conditions in which people are born, grow, work, live, and age, and the wider set of forces and systems shaping the conditions of daily life.” These conditions are complex, interconnected, and they can adversely impact a patient’s long-term health outcomes. In this project, students used mixed-methods research to provide actionable insights for NewYork Quality Care (NYQC)—the accountable care organization (ACO) of Weill Cornell Medicine, Columbia and NewYork-Presbyterian—on how to improve its efforts to address the SDoH needs of its patients. Students conducted an empirical analysis of NYQC’s Medicare claims data to examine spending and utilization at the ACO. In addition, students conducted semi-structured interviews with the ACO’s care management and clinical documentation team leaders. Based on the findings, students provided NYQC with a list of 7 recommendations to help the ACO adequately address the SDoH needs of its patient population with the goal of reducing unnecessary health care spending and improving patient outcomes.

WEILL CORNELL GRADUATE SCHOOL OF MEDICAL SCIENCES, DEPARTMENT OF POPULATION HEALTH SCIENCES
Cost Effectiveness of Annual Prostate MRI Guided Biopsy for Treatment of Prostate Cancer
MRI and MRI-guided biopsy enable enhanced identification of clinically significant Prostate Cancer (PCa). Through targeted biopsies, they reduce invasiveness. Yet, there is a lack of evidence for their cost-effectiveness as screening tools. Students examined the cost-effectiveness of integrating MRI and MRI-guided biopsy to predict outcomes of men being screened for PCa. A decision-analytic Markov model was constructed from a federal payer perspective with a 10-year time horizon and a 65-year-old male assigned for the base case. The model was simulated separately for four different prostate-specific antigen (PSA) levels using Monte Carlo microsimulation with 100,000 trials. The input values of probabilities, costs, and quality-adjusted life years (QALY) for the model were derived from the literature and expert consultation from medical professionals. Cost-effectiveness was calculated through incremental cost-effectiveness ratios (ICER). One-way sensitivity analyses were performed using key parameters for the two strategies. The parameters included the sensitivity and specificity of the tests.

HEALTH AND HOPE MYANMAR
mHealth in Myanmar: Community-Based Participatory Design of a Population Health Surveillance Data Collection Application Organization
Myanmar’s Chin people face multiple cultural, structural, and institutional barriers to accessing adequate healthcare. Health and Hope Myanmar (HHM) and Health and Hope UK (HHUK), community partners in this work, are the only providers of healthcare services to the ethnic minority regions of the Chin. A barrier to understanding health needs and implementing new programs involves a lack of actionable population-level health surveillance data. Weill Cornell Medicine students worked collaboratively with HHM to create mobile technology-based surveillance forms to improve data collection methods and increase accuracy. More accurate surveillance data will help HHM understand the state’s greatest health concerns, then implement and evaluate programs to address related issues. Students conducted a workflow analysis of existing paper-based data collection forms by interviewing the key stakeholders from HHUK and HHM, including the midwives, traditional birth attendants (TBAs), and community health workers (CHWs). Students used CommCare, an open-source platform designed by Dimagi, for data collection in low-resource settings, to facilitate design of the mobile phone-based application. They also iteratively created prototype designs of the data collection tools. Students employed a user-centered, participatory design approach that actively elicited feedback from the stakeholders in the design process to help ensure the design met their requirements and was usable in the specific context. The students’ final product involved a mobile health-based application for population health surveillance data collection.