Different as they may seem, all three are connected through health disparities research.

Health disparities: the variations in medical conditions for patients with different racial, ethnic, socioeconomic, cultural, geographic or other factors. The phrase applies to numerous conditions and involves people all over the country and the world. And, health care disparities—inequalities in medical services, health education and clinical access available to patients—are pervasive, too.
University of Chicago physicians and social scientists are investigating these topics and creating new ways to work with the South Side community to improve the health of its residents. Researchers here delve into social factors, cultural inequities, statistical differences in disease rates, and disparities in medical treatment and quality of care. A major portion of the work aims to create interventions that eliminate disparities in care. But Chicago teams also investigate the illnesses under the skin and the way different bodies are affected by diseases, stress or medication. Collaboration among social scientists, psychologists, economists and many medical departments has led to major discoveries about health and health care disparities.

The city of Chicago provides an ideal setting for such research. The city suffers from worse disparities than many other places. More black women here die of breast cancer, research has shown, because of the number of grant applications it has reviewed dollars in grants that are distributed from RWJF. The funds support a variety of health care disparities interventions that address cardiovascular disease, depression and diabetes.

According to Chin, disparities research falls into three categories:

- Describing the phenomena that make up the disparities, such as health and health care differences based on racial or ethnic background or socioeconomic status.
- Determining why the disparities exist, and the social or other factors that influence them.
- Creating solutions and interventions to improve the quality of care for underserved populations or for the patients affected by disparities.

The diversity of the city’s population makes it a “rich place to study and make a difference,” said Marshall Chin, MD, associate professor of medicine and director of one of the primary disparities research programs at the university—Finding Answers: Disparities Research for Change.

“Frankly, I think disparities are common everywhere,” Chin said. “Differences in health conditions and medical care, he added, are “equally unacceptable no matter where we are.”

The issue reaches far beyond the campus, the South Side or the city of Chicago. Three years ago, the Robert Wood Johnson Foundation (RWJF), a national, private foundation devoted to health care. Chin’s Finding Answers project found a home at the University of Chicago. Three years ago, the Robert Wood Johnson Foundation (RWJF), a national, private foundation devoted to improving health and care for Americans, launched a set of initiatives to reduce racial and ethnic disparities in American health care. Chin’s Finding Answers project found a home at the University of Chicago.

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Through such collaborative research, Gehlert said, “like- minded people across the campus have connected.” The university’s reputation on the subject of disparities has also brought in top-notch scholars such as geneticist Rick Kittles, who she added.

Kittles, PhD, associate professor of genetic medicine, found that a genetic variation on a particular region of chromosome 8 increased the risk of prostate cancer among black and white men. But African-American men also carried an additional genetic variation, with an even greater cancer risk.

Prostate cancer, the second leading cause of cancer death in men, strikes African-Americans at a disproportionately high rate. By further studying this genetic variation, Kittles has said, researchers “may be able to develop molecular targets for improved screening, early detection and possibly treatment.”

The study shows that ancestry plays a role in disease genes, Kittles said. “Since African-Americans vary significantly in genetic ancestral proportions and the prevalence of prostate cancer is almost two-fold higher among African-Americans compared to European Americans,” he said, “the use of ancestry-informative markers for association with prostate cancer is quite powerful.”

Genetic research at Chicago has shown other staggering differences between races, revealing how diseases can differ under the skin. Professor Funmi Olopade, MD, who studies breast cancer and genetics, discovered that women of African ancestry are more likely to be diagnosed with a virulent form of the disease than women of European ancestry. By studying cancer patients in Nigeria, Senegal and North America, her research team found that cancerous tumors from African women were more likely to originate from a different group of cells and don’t respond to some standard therapies.

“We have known for a long time that breast cancer is not one disease and that it may be somehow different in Africa,” said Olopade, director of the Center for Clinical Cancer Genetics at the University of Chicago and a 2005 MacArthur Fellow. “But there was no real sense of how much of that was biology and how much was environment. Now we have clear evidence that nature plays an important role. These tumors are biologically quite different in ways that make this a worse disease.”

Angel Jacobs, a 29-year-old Chicago resident, is one of Olopade’s patients. After Jacobs found a lump, she was diagnosed with breast cancer at the University of Chicago Medical Center, where she came for regular care. Chemotherapy and radiation treatment have left her cancer-free, but the knowledge lingers that her genes carried this high-risk disease.

“I feel like I manage it pretty well,” said Jacobs, who visits Olopade and a radiologist every three to six months for check-ups. “It’s just something that you deal with forever. It’s not something that’s curable at this point.”

Disparities researchers at the University of Chicago

Part of the struggle with treating breast cancer and its related inequities in the city of Chicago is educating patients about the disease and the availability of mammograms. Monica Peek, MD, an assistant professor of general internal medicine, knew Chicago had serious health disparities with breast cancer mortality when she moved to the city in 2001 and was concerned that the women most affected were not getting the health education they needed.

While working at Cook County Hospital and Rush Medical Center, she started a program to train women who lived in the Chicago neighborhood called Rockwell Gardens, an aging American College of Physicians and the American Medical Association, attempt to address health disparities.

Intervention and education programs, like the one Peek created, put disparities research into practice in affected communities. Internist and pediatrician Debrah Burnet, MD ’98, founded a community-based research project called Reach In!, which community leaders teach families about healthy eating and exercise. The goal is to lower the risk for diabetes and obesity for African-American youth on the South Side. That program, in its pilot phase and current version, has helped more than 100 families learn about nutrition and activity.

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Diverse disparities research

As these outreach programs demonstrate, much work focuses on racial, ethnic or socioeconomic disparities. But research on the topic goes far beyond skin color, income or the community in which patients reside. Before Scott Cook, PhD, became deputy director of Chicago’s Finding Answers program, he was on the ground level of disparities interventions, working as a clinical psychologist at the Howard Brown Health Center, a Chicago organization that serves the lesbian, gay, bisexual and transgender (LGBT) population. That background gives Cook a unique perspective on health and care disparities based on LGBT medical needs.

Health disparities such as high rates of HIV infections, particularly in gay men of color, higher smoking rates than the mainstream population, and high rates of syphilis necessitate research on care and interventions that cater to the LGBT community. Disparities in medical care can arise when doctors are not comfortable with or educated about cultural and medical issues specific to LGBT patients. Cook’s work and expertise show disparities that impact people who may not first come to mind when discussing the subject.

Cook worked with four community organizations to develop a smoking cessation intervention program based on an existing American Lung Association curriculum but tailored to the LGBT community in Chicago. He is now working on a similar project targeted to help HIV-positive men stop smoking.

Through Finding Answers, Cook helps iron out problems that grant recipients may have: finding resources, staying on budget, following their plans or struggling with technology. He is part of the team that analyzes program results to determine how the successful interventions can be applied to other health centers and promoted around the country.

Other major projects at the university are tied closely to health disparities research, though that label is not always used. One such initiative is the Clinical and Translational Science Award, a $25 million grant from the National Institutes of Health to rapidly transfer innovative scientific research into treatments for patients. The project will connect disease research, which may yield discoveries about how diseases differ among diverse patient populations, to efforts to bring better treatments to patients, particularly those on the South Side of Chicago who often lack access to medical care.

Cook’s work and experience tie into historical and political issues specific to LGBT patients. His orientation in 2006 included a class called “Health Care Disparities in America.”

“I didn’t know what to expect,” he said, adding, “it thought it would be interesting.”

Shumway and his peers heard lectures, statistics, and historical and hypothetical cases about disparities. But what he and many students hardest were visits to local clinics and Cook County Hospital.

“All of us who are working on care for the underserved get labeled as disparities researchers,” Hickner said, adding, “If people put that label on me, that’s fine.”

Alyna Chien, MD ’01, has always been interested in vulnerable populations. A University of Chicago “trainer” from undergraduate through her MD, and as an instructor of pediatrics she worked with refugee and immigrant populations as a social worker prior to medical school, as well as with uninsured and underinsured African-American patients on the South Side during her medical training.

Her research, now based at Children’s Hospital Boston, investigates health care performance incentives—such as pay-for-performance and public reporting attempts to tie physician rewards or penalties to the quality of care they deliver and patient outcomes. This strategy is being adopted by many commercial health insurance companies and Medicare. While Chien’s main focus is on whether these incentives work, she is also studying how performance incentives impact the care of vulnerable populations.

“All the mainstream does can impact underserved populations,” she said. The incentives could help vulnerable groups, she noted, because health care overall may improve by aligning payment with quality. But vulnerable populations—with resource-constrained settings—may not be able to compete with clinics practicing in more affluent areas, particularly if rewards tend to be earned by wealthier providers in the first place. “In general,” Chen said, “care is getting better—but faster for mainstream improvements than for underserved populations.”

Opening students’ eyes to inequality

Dean Shumway grew up in Idaho where he was relatively unaware of the concept of health care disparities, he said. So when he arrived at the University of Chicago Pritzker School of Medicine, he had a blank slate on the topic—but not for long. His orientation in 2006 included a class called “Health Care Disparities in America.”

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First-year Pritzker students toured area clinics and hospitals, including Jackson Park Hospital, pictured here. Above, Jackson Park’s directory of surgery Darlyne Faye, RN, lectured on white label (unaffordable to students about surgical beds and common procedures at the hospital. Photos by Dan Dry

The class particularly focuses on “making things relevant to Chicago,” said Eric Chen, a Pritzker student who will start his second year this fall. Since taking the class, Chen has volunteered in the community and with the Health Professions Recruitment and Exposure Program, a medical student-run project that teaches local high school students about health care careers.

Students in the class take excursions to community health care centers such as the Washington Park Children’s Free Clinic, Cook County Hospital, the Friend Family Health Center, Access Community Clinics and the University of Chicago Medical Center emergency room.

The class includes several sessions of discussion time, as well as for students to tackle lingering questions and analyze their experiences and lessons. The subject can be highly controversial and emotional.

“I think that has to be handled in just the right way,” said Vela, who closely monitors students’ reactions to topics and the reviews the class garners each year.

One particular discussion from the class sticks in Shumway’s memory. How, he asked, could physicians with radically different backgrounds from their patients relate to the people they serve? The words he heard in response from Michelle, MD, a physician and assistant professor, made an impression: “The fact that you want to understand your patients’ lives will make all the difference.”

—SV