



UCI Health Affairs

BRILLIANT FUTURE
THE CAMPAIGN FOR **UCI**

“The Susan and Henry Samueli College of Health Sciences has been established as a first-of-its-kind alliance across health disciplines, merging their strengths to transform healthcare and wellness. Our impact is amplified by the seamless transfer of advances into clinical practice at UCI Health and collaboration with superb colleagues across the university. Our new planned UCI Health Medical Complex in Irvine aims to provide a new level of care for Orange County. We have big dreams for the future because we know it is our responsibility to do what others cannot and then we share what is possible.”

— Steve Goldstein, M.D., Ph.D.
Vice Chancellor, Health Affairs



UCI Health Affairs: The Future of Health Begins Here

Many people imagine the future of health, but we are creating it. The visionaries at UCI have designed a multidisciplinary engine of systemic change that draws on the strengths of two powerhouses: **UCI Health** and the **Susan and Henry Samueli College of Health Sciences**.

Our dedication to integrative health augments our patient-centered approach to discovery, teaching and healing. The people we serve inspire us to demand the best for them today and to explore uncharted territory so that we can make what is impossible now the standard of care tomorrow.

For you, for members of our community and for people around the globe, we are harnessing resources across the university to enhance well-being and save lives. The next phase of our team-based ventures will focus on four mutually reinforcing goals.

- **Advancing a paradigm-shifting model of wellness for individuals and populations**
- **Delivering world-class healthcare to patients throughout Orange County**
- **Educating a diverse health workforce for the future**
- **Pushing the boundaries of innovation and discovery**

Who We Are

UCI Health is the only academic health system in Orange County and provides the primary teaching sites for our health sciences students and professional trainees. We use the latest clinical research, including studies pioneered by our investigators, to offer patients the most advanced therapies available. No other institution is better positioned to improve health and wellness in Orange County.

The Susan and Henry Samueli College of Health Sciences was created to educate future generations of healthcare professionals in four schools that foster interdisciplinary research and team-based learning: the School of Medicine, the Sue & Bill Gross School of Nursing, the planned School of Pharmacy and Pharmaceutical Sciences (currently the Department of Pharmaceutical Sciences), and the planned School of Population and Public Health (currently the Program in Public Health). With the Susan Samueli Integrative Health Institute, a foundational partner of the college, we are advancing a model of wellness, prevention and care for the whole person within the community.

Collaborations with colleagues throughout the UCI campus amplify our impact. Clinicians and researchers work side by side with computer scientists, engineers and scholars in the arts, humanities, social sciences, business and law. Our trailblazing discoveries are changing the way we study, diagnose and treat patients both regionally and globally.

Partnerships with the other academic medical centers and professional schools in the UC system and affiliations with extramural healthcare, technology and pharmaceutical enterprises in Southern California further accelerate our progress.

We are problem solvers. With our academic and community partners, we are forging a brilliant future for us all. Your partnership will galvanize support for our far-reaching vision.



The Action Plan

The future of health that we are creating reflects a campuswide commitment to transformational change that serves the public good. Here, we offer a preview of what success looks like:

Advancing a paradigm-shifting model of wellness for individuals and populations

Breakthrough discoveries and technological advances have radically changed healthcare in the past 20 years and ushered in the era of disease prevention and precision care. These approaches recognize the unique biological characteristics of individuals and their environment so that physicians

can foresee and prevent illnesses and treat diseases with therapies that are best for each patient. But that's only part of our model.

We expand our focus and strengthen our impact by combining prevention and precision care with population health, a discipline that examines groups of people based on health risks and demographics to promote wellness and prevent disease in populations. The goal is to advance the health of communities by avoiding illness, fostering well-being and, as required, delivering the right care to the right individuals and the right populations at the right time. This paradigm shifts the emphasis from illness to wellness





and uses game-changing technologies — as simple as cell phones and as complex as machine learning — to revolutionize the ways we manage the health of our patients. At UCI Health, we already use cutting-edge diagnostic tests to tailor lifestyle and medical decisions. For example, tools powered by artificial intelligence speed the review of CT scans and pathology specimens while increasing accuracy.

Now, our providers are among the first to use “big data” from millions of people to predict if our patients are at risk. This information allows

our healthcare teams to create evidence-based, preventive health plans and design therapeutic interventions that consider genetics, environment and lifestyle. We are guided by a winning strategy: apply technological progress to a humanistic model of health.

Healthcare will be transformed again in the next 20 years. We will leave no stone unturned to realize our dreams of wellness through prediction, prevention, personalized treatment and population health.







Delivering world-class healthcare to patients throughout Orange County

We are dedicated to serving members of the community and patients who travel to us to receive specialty care. Deliberate geographic expansion will support our vision.

To extend our impact, we are planning to build a state-of-the-art medical complex on the UCI North campus — our version of a healthcare environment for the future. The proposed UCI Health Medical Complex in Irvine aims to house up to a 110-bed hospital and an advanced medical outpatient facility, both dedicated to specialty services, including comprehensive care for cancer, neurosciences, orthopedics, and advanced medical and surgical procedures. The complex will be supported by an emergency department to stabilize critically ill patients, especially those requiring specialty services. The UCI Center for Child Health, also proposed for the new complex, will consolidate all pediatric

services in one place and offer unparalleled continuity of care from birth through early adulthood, with an emphasis on children with chronic conditions.

In these modern, easily accessible facilities, patients will find the exceptional treatments, clinical trials and integrative therapies they can expect only from UCI Health. By virtue of being on the UCI campus, this venue is intended to create new opportunities for healthcare providers and other UCI faculty to collaborate on high-impact discoveries, building on a long history of productive interdisciplinary engagement. Conditions like these catalyze innovation.

The new UCI Health Medical Complex will become *the destination* for patients seeking superior healthcare and lifesaving therapies offered nowhere else in the region.



Educating a Diverse Health Workforce for the Future

Experts agree that to improve healthcare, bridges must be built across disciplines. UCI strategically formed the Susan and Henry Samueli College of Health Sciences to build such bridges — and to succeed where others have failed. Our health sciences students are the beneficiaries of a unique interprofessional approach to education. Well-versed in the tenets of evidence-based integrative health and team-based care, students in our four pioneering schools learn to work together so they can thrive in contemporary healthcare settings that serve culturally, linguistically and economically diverse populations.

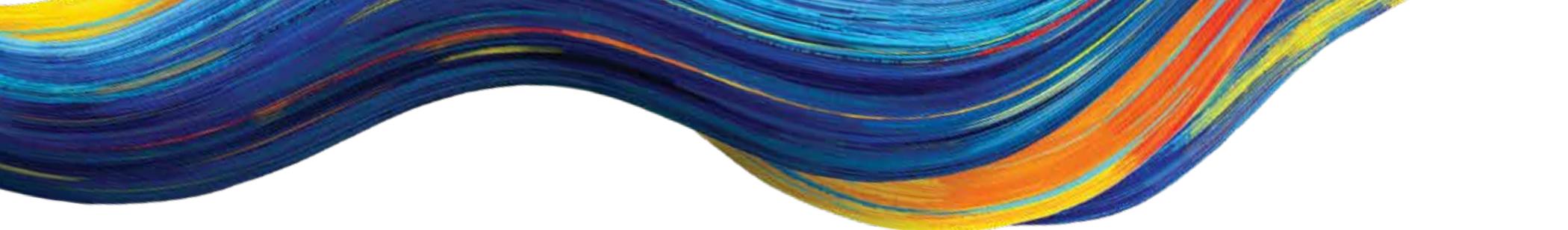
Educating a diverse workforce equipped to deal with healthcare inequities and able to address a looming workforce crisis is central to our collegewide mission. With your support, we will offer qualified students from all backgrounds and communities the opportunity to advance in the health professions — a proven requirement to deal with healthcare inequality and to address the needs of a growing, aging and increasingly diverse population in California and the nation.

According to the California Future Health Workforce Commission, co-chaired by Janet Napolitano, as president of the University of California, and Lloyd Dean, as president and CEO of Dignity Health, California faces a looming health workforce crisis. The Commission recommends specific actions to create a workforce that is not only diverse but also able to deal with health disparities.

We recruit a broad array of talented students to study the health sciences and prepare to enter the future health workforce, including students from underrepresented and first-generation college backgrounds. Our pipeline benefits from the remarkable pool of UCI undergraduates, as well as from students at universities, community colleges and high schools regionally and statewide who are interested in our undergraduate and graduate programs.

Through scholarships and fellowships, we seek to diminish burdensome student debt so that aspiring healthcare professionals are free to follow their passions and choose a broad range of specialties that may be less remunerative than other choices. For some students, this means practicing in underserved areas, where the shortages of physicians and primary care workers are especially acute.





Scholarships designated for students committed to working in underserved communities strengthen the overall health workforce and attract students to programs expressly designed to meet the health demands of underserved populations. Current examples include the two mission-based educational tracks that the School of Medicine has created for future physicians: the Program in Medical Education for the Latino Community (PRIME-LC) and Leadership Education to Advance Diversity–African, Black and Caribbean (LEAD-ABC).

Students from all the schools benefit from scholarships and fellowships. Nursing and pharmacy students with advanced training learn to operate with greater authority on interprofessional healthcare teams and fill gaps in primary

care. Public health scientists learn to improve the health and well-being of populations on local and global scales.

Comfortable in both the laboratory and the clinic, our health sciences students are trained to succeed in complex patient-centered environments. And they understand the importance of balancing technological progress with the humanistic aspects of patient care.

Many of our graduates remain in California, so patients throughout the state benefit from the achievements of our gifted students, who are dedicated to improving the healthcare ecosystems of California and, through strong programs in global health, offering their services beyond our national borders.



“PRIME-LC prepared me to work with Latino patients, but more important, it allowed me to develop my leadership and analytic skills. It has also created a massive supportive network of like-minded physicians throughout the state committed to improving the health of our underserved communities. I feel very supported by my fellow alumni and see PRIME-LC’s influence all around me.”

*— Karla Garcia, M.D. '10
Family Medicine, MPH (Harvard)*



“We connect innovative medical discoveries with the humanistic aspects of patient care. With a focus on integrative health, we deliver a patient-centered approach to healing.”

*— Michael J. Stamos, M.D.
Dean, UCI School of Medicine*



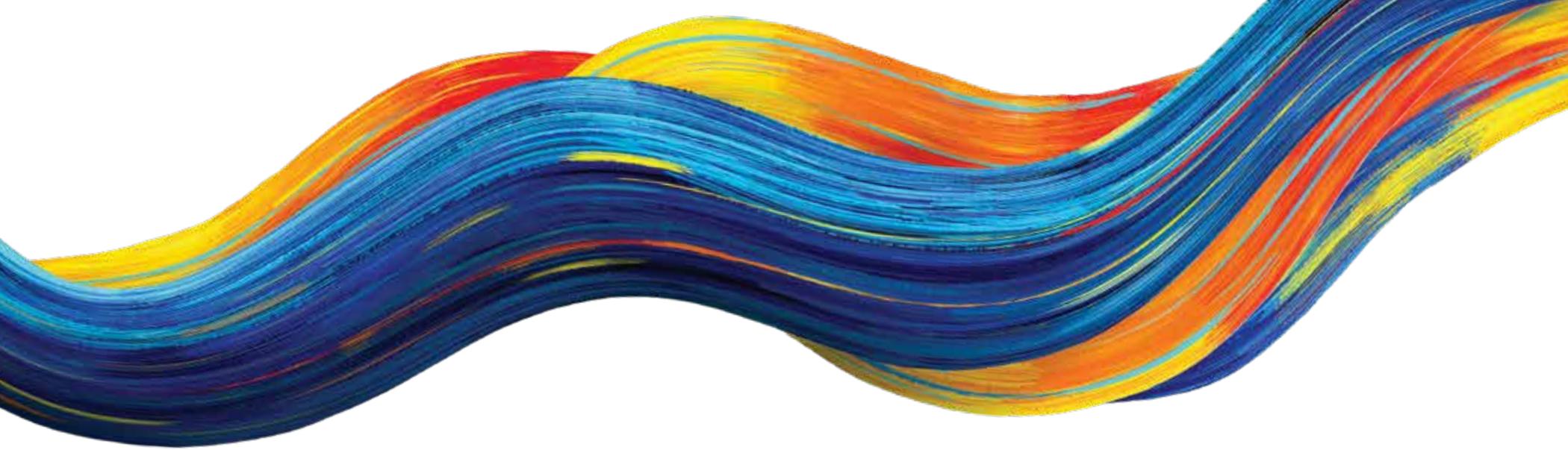
Pushing the Boundaries of Innovation and Discovery

UCI Health Affairs has earned a reputation as a champion of patient-centered innovation and discovery. While exceptional in their own rights, our dedicated teams collaborate across schools, departments, programs and disciplines to deliver unparalleled whole person care and advance both the practice and the science of healing. We magnify our impact when we work together to move discovery from inspiration to practice.

The schools and units that form the Susan and Henry Samueli College of Health Sciences contribute their unique expertise to our collective efforts:

School of Medicine

The UCI School of Medicine shines on the world stage as an enterprising champion of innovation and discovery. An integral part of the Susan and Henry Samueli College of Health Sciences and UCI Health, we are collaborating with partners campuswide to advance high-impact medical research, educate a diverse health workforce and deliver evidence-based, patient-centered healthcare. The more than 400 medical students, 130 masters and doctoral students and 700 residents and fellows whom we train each year thrive in an academic environment that nurtures big ideas and reaffirms the American Dream. The brilliant future that we envision propels us forward.



Sue & Bill Gross School of Nursing

The UCI Sue & Bill Gross School of Nursing is at the forefront of the nursing sciences revolution that is transforming healthcare delivery, education and research. Our stellar faculty and gifted students are dedicated to keeping people healthy in their homes by advancing

the science of compassionate integrative healthcare, fostering technological innovations and filling the need for primary care providers in underrepresented communities. Compassion is a vital thread that runs through our curriculum. We are the voices for those in need.



“Whether you are pursuing a state-of-the-art nursing career in research, academia or patient care, the UCI Sue & Bill Gross School of Nursing is where passions to enhance the health of our communities are nurtured.”

*— Adey Nyamathi, Ph.D., ANP, FAAN
Founding Dean and Distinguished Professor.*



Planned School of Pharmacy and Pharmaceutical Sciences

Building on the success of the UCI Department of Pharmaceutical Sciences, we are creating a world-class School of Pharmacy and Pharmaceutical Sciences that focuses on the whole patient by spanning the continuum from drug discovery to clinical practice. Pharmacy students with training in integrative health will learn to operate with greater

authority on interprofessional healthcare teams and fill gaps in primary care. Pharmaceutical sciences students will gain a solid foundation in drug discovery and translational research that prepares them to advance new treatments and possible cures. We are empowering a new breed of pharmacists and pharmaceutical scientists.

A male scientist with short dark hair, wearing safety glasses and a blue lab coat, is focused on his work. He is wearing light blue nitrile gloves and using a pipette to transfer liquid into a small vial. The background is a blurred laboratory with various equipment and shelves. The image is framed by colorful, abstract brushstrokes in shades of blue, yellow, and red at the top and bottom edges.

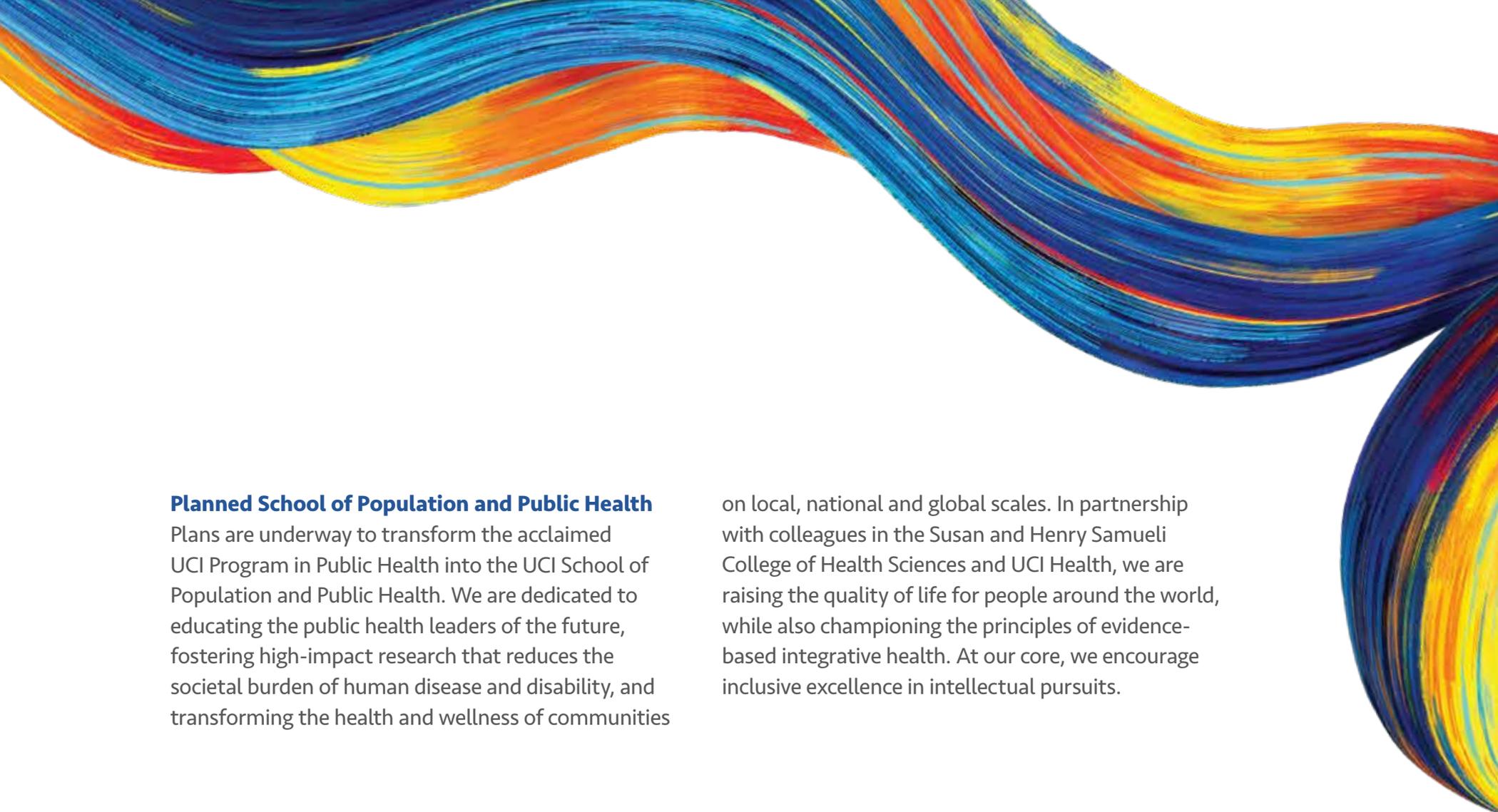
“Unrestrained by outmoded traditions, the UCI School of Pharmacy and Pharmaceutical Sciences will teach a new generation of healthcare leaders to accelerate scientific, clinical and educational innovations that save lives, reduce healthcare costs and optimize medication use.”

*— Jan D. Hirsch, B.S. Pharm, Ph.D.
Director and Founding Dean*

“The planned UCI School of Population and Public Health is poised and prepared to turn challenges into opportunities for optimal health and wellness in our community and communities across the globe. We want to leverage the relationships of UC partners and stakeholders who share our commitment to bringing public health issues to the forefront through research, education and public service.”

*— Bernadette Boden-Albala, Dr.P.H.
Director and Founding Dean*





Planned School of Population and Public Health

Plans are underway to transform the acclaimed UCI Program in Public Health into the UCI School of Population and Public Health. We are dedicated to educating the public health leaders of the future, fostering high-impact research that reduces the societal burden of human disease and disability, and transforming the health and wellness of communities

on local, national and global scales. In partnership with colleagues in the Susan and Henry Samueli College of Health Sciences and UCI Health, we are raising the quality of life for people around the world, while also championing the principles of evidence-based integrative health. At our core, we encourage inclusive excellence in intellectual pursuits.



“We would like to be known as thoughtful healthcare leaders who see the whole person and emphasize not only expanding the years one lives or the life span but also increasing the number of healthy years during that time and focusing on the health span.”

*— Shaista Malik, M.D., Ph.D., M.P.H., FACC
Founding Executive Director*



Susan Samueli Integrative Health Institute

The UCI Susan Samueli Integrative Health Institute is pioneering a multidisciplinary, evidence-based, integrative approach to health that informs and underpins the Susan and Henry Samueli College of Health Sciences. Our transformative model combines the best conventional medical practices

with the most effective complementary therapies to promote optimal health through all the stages of life. In partnership with colleagues in the college and UCI Health, we are expanding our scope so that more people will benefit from our trailblazing research, bold educational programs and compassionate, whole person care.

The Case of Doris:

State-of-the-Art Science + Compassionate Patient Care in 2025

Our care for Doris, a hypothetical patient in 2025, illustrates how teams from UCI Health Affairs and across the UCI campus even now work together to push the boundaries of innovation and discovery. Researchers are studying better ways to diagnose, treat, cure and prevent a host of diseases and debilitating conditions. They are also investigating lifestyle choices that promote wellness. Patients benefit from our strategic approach to collaborative research and integrated, coordinated care.

1 Genetic Testing and Risk Assessment

Doris is a 44-year-old mother of three and an account executive at an Orange County financial institution. She has been healthy all her life. As residents of Irvine, Doris and her family receive their care at the UCI Health Medical Complex in Irvine and its Center for Child Health. Because of a history of breast cancer in her family, Doris is referred by her primary care physician to a genetic counselor at UCI, who recommends genetic testing.



Doris learns that she has a gene variant that modestly increases her chances of developing ovarian cancer during her lifetime, but that neither of her two daughters have inherited the variant. Based on a risk model developed by researchers in the UCI School of Population and Public Health, she is invited to participate in a clinical-trial screening for ovarian cancer at the NCI-designated, UCI Chao Family Comprehensive Cancer Center.

2

Clinical Trial: Screening for Ovarian Cancer

At the cancer center, Doris learns that there is no method to screen for ovarian cancer, but two new technologies developed at UCI are in a clinical trial: a device from the Department of Biomedical Engineering can capture and analyze rare tumor cells in the blood of patients with early stage cancer, and a new X-ray technology developed at the UCI Beall Applied Innovation Institute that images the abdomen and ovaries with 1/100th the radiation of a CT scan and are analyzed with a computer program developed at the UCI Center for Artificial Intelligence. Doris agrees to participate in the study, which requires that she submit blood samples twice yearly and have an annual ovarian scan.



3

Abnormal Ovarian Scan: Comprehensive Plan of Care

Two years later, Doris is contacted because her latest scan shows an abnormality that requires further evaluation. She has an appointment in a multidisciplinary women's health clinic at the UCI Health Medical Complex, where physicians from the divisions of Gynecologic Oncology and Medical Oncology from the UCI School of Medicine and colleagues from the Department of Radiological Sciences, the Sue & Bill Gross School of Nursing, and the School of Pharmacy and Pharmaceutical Sciences see patients together to develop a comprehensive plan of care in a single visit.



Doris is naturally apprehensive about what lies ahead, but her anxiety is alleviated somewhat after she is referred to an oncology social worker and assigned a personal nurse navigator to help guide her through the next steps. She also agrees to participate in a study with the Sue & Bill Gross School of Nursing that uses a personal electronic tablet to monitor her symptoms and overall well-being as a cancer patient.

4 Minimally Invasive Biopsy

The group of experts recommends that Doris have a biopsy. She is admitted to the specialty hospital at the UCI Health Medical Complex in Irvine for this procedure, which is done using minimally invasive laparoscopic surgery. The procedure is uneventful, and Doris goes home later that day. Her biopsy specimen is submitted for pathological analysis, and a portion is processed by the UCI Molecular Pathology laboratory for next-generation DNA sequencing to determine whether there are specific mutations present that might influence the choice of additional therapies.



5 Adjuvant Treatment: Targeted Oral Medication

A few days later, Doris receives the news in her doctor's office that the biopsy is positive for ovarian cancer, but that it is likely that all the cancerous tissue was removed. However, her medical oncologist recommends that Doris receive additional "adjuvant" treatment to decrease the possibility of local or regional recurrence of the cancer.



At first, Doris refuses this option because she does not want to have chemotherapy and cope with all the side effects associated with it. Her oncologist explains that the recommendation is for a course of treatment with a "targeted" oral medication that is designed to kill cancer cells that carry a specific gene mutation while sparing normal tissues, and she should experience minimal side effects. Hearing this, Doris agrees to the treatment, which will last six months.

6 Whole Person Care

A clinical pharmacist from the UCI School of Pharmacy and Pharmaceutical Sciences is assigned to Doris and carries out a comprehensive assessment of her heart, liver and kidney functions as she prepares to start the new medication. She is also referred to the Susan Samueli Integrative Health Institute, where a specialist reviews the list of dietary supplements Doris takes and makes recommendations about which might interfere with her cancer therapy, and what new supplements may improve her sleep and her overall metabolism and well-being. At the Samueli Institute, Doris also takes advantage of classes in mindfulness and tai chi, which help her cope with the stress of dealing with her cancer.



7 Life as a Cancer Survivor: Ongoing Support from UCI

Five years later, Doris is cancer-free. She continues to participate in the screening program and is now considering whether the option of prophylactic removal of her remaining ovarian tissue (oophorectomy) is the right one for her. As a cancer survivor, she is continuously supported by the UCI Health system as a partner in her care: her primary care physician, gynecologic oncologist, medical oncologist, nurse navigator and integrative health provider continue to coordinate her follow-up care and monitoring, which must be lifelong. The process is facilitated by UCI Health's sophisticated electronic health record system, whose MyChart patient portal allows Doris real-time access to her health practitioners, appointments and test results.



8 Anti-Cancer Champions: A Family Affair

Doris, her two daughters and her two granddaughters make walking together in the annual UCI Anti-Cancer Challenge a family affair. Every time Doris and her family cross the finish line, they celebrate their good fortune. They also reaffirm their commitment to raise funds for cancer research that can lead to cures for other women with ovarian cancer and promote early detection of this devastating disease.





How You Can Help

We invite you to explore new frontiers of health and wellness with us. Working hand in hand, we have the power to achieve what others only imagine. The time to act is now, and we are ready to lead the way.

Please consider investing in our bold vision for UCI Health and the Susan and Henry Samueli College of Health Sciences. With your partnership, we will transform healthcare, health education and health research for the future.



For more information, please visit:
brilliantfuture.uci.edu/uci-health-affairs



The UCI “surge” mark represents the energy, efforts and actions of the entire UCI community in our pursuit of a Brilliant Future. The interweaving colors embody the bold diversity of thoughts and individuals that are opening the world to new paths and perspectives. And the circular motion is indicative of the collaboration that drives our constant progression toward a greater tomorrow.

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