

Health@ASU Campaign Prospectus

December 2015

Campaign ASU 2020

Animated by Arizona's pioneering spirit, a dozen years ago Arizona State University set forth on an uncharted venture – to design and evolve a public university of extraordinary impact for a nation and world whose needs and demands are briskly outpacing traditional educational models.

We imagined a university that would increase access to education while maintaining an excellent academic experience and impacting our communities on a local, national, and global scale. Already, this dream has transformed Arizona State University into the most innovative university in the nation as recognized by *U.S. News & World Report*. Yet ASU has not achieved this transformation through its central leadership alone. This vision has become a reality through the tireless work of visionary faculty and staff, and thanks to meaningful private contributions from community members who are committed to and inspired by these same goals.

The commitment to access, excellence, impact and innovation has permeated the entire university, and is especially prevalent in the colleges, programs, and research that make up Health@ASU. The College of Nursing and Health Innovation (CONHI), the College of Health Solutions (CHS), the Biodesign Institute and ASU's collaboration with the Mayo Clinic have made great strides toward realizing the dream of a New American University – but there is much to be done. Arizona State University is poised to elevate and accelerate its path to becoming a global leader in higher education.

We are not complacent, we are energized. We are not siloed, we work in concert. Through a university-wide, strategic fundraising campaign, our united efforts toward achieving these aims will be enhanced by the support of our community.

Throughout the journey, the support of generous supporters has fueled the trajectory of Health@ASU:

- Funding from the Florence Ely Nelson Presidential Endowed Chair helped the Biodesign Institute's Dr. Charles Arntzen develop the ZMapp vaccine, which saved the lives of two American Missionaries who contracted Ebola in West Africa in 2014. When taken to scale, ZMapp could rid the world of this deadly virus.
- Dozens of donors have provided nearly \$8 million in endowed scholarship support for CONHI students, alleviating financial burden for high-achieving students with a passion for providing care to others in their time of need.
- Seed funding from the Virginia G. Piper Charitable Trust led to the establishment of CHS' groundbreaking School for the Science of Health Care Delivery. The first of its kind in the nation,

the school offers degree programs that prepare students to drive change and address the critical needs of the health sector which include improving population health, reducing the cost of health care, and enhancing patient experience.

- Benefactors inspired by the collaboration between Arizona State University, a world-class academic institution, and the Mayo Clinic, the internationally renowned leader in health care delivery, have provided philanthropic investments that will lead to a Phoenix branch Mayo Medical School, opening in 2017.

The time is now to embark upon a coordinated, comprehensive fundraising campaign that will spark an even greater impact on our efforts to create solutions to society's most pressing health care challenges. Not only will this campaign enhance our ability to prepare thousands of highly-trained health professionals across a wide range of disciplines, it will also allow us to advance bold and transformative ideas in health care. For example, the development of revolutionary technology will reveal the structure and dynamics of biomolecules and unlock the keys to more effective treatments for diseases such as cancer and cystic fibrosis. Likewise, a new interdisciplinary center focused on compassion and mindfulness will train individuals to respond to stressful conditions in productive ways, and support well-being, resilience, and long-range health. From advancing groundbreaking research to increasing access for students to achieve their educational dreams, ASU Campaign 2020 will define our university as a 21st century leader in health education and research.

Health@ASU in Campaign ASU 2020

In the United States today, health expenditures on a per capita basis are at least 50 percent higher than the next most costly country. Our health outcomes, such as life span and infant mortality rates, rank us 30th to 40th among developed countries. We spend 95 percent of our health dollars on health care, yet health care only determines 10 percent of the health of a population. Our country suffers disparities in health delivery outcomes and does not adequately meet the health care needs of vulnerable populations, such as the uninsured or underinsured, the elderly, low-income children, the homeless, and those with severe mental illness.

In 2007, the Institute of Healthcare Improvement (IHI) published a framework to help organizations and communities structure solutions to our healthcare problems. This perspective, called the *Triple Aim*, is to simultaneously improve the patient care experience, improve the health of the population, and reduce per capita health care costs. At the heart of the Triple Aim is to redirect healthcare dollars to prevention and wellness, thereby improving outcomes and reducing the need for sick care. These are some of the most pressing health care challenges in the United States for which Health@ASU is creating solutions.

CONHI and CHS prepare thousands of students annually to serve society through solutions-oriented degree programs designed to address our most daunting health care challenges – improving population health, reducing the cost of health care, and enhancing patient experience. CONHI operates a nurse practitioner clinic, open to the public, on its downtown Phoenix campus, further demonstrating its commitment to serving society. The ASU Biodesign Institute represents Arizona's single largest research infrastructure investment in the Biosciences. Its 65 tenured research faculty members, who include one Nobel Prize winner and four National Academy members, collaborate with research and commercial enterprises around the world to address today's critical global challenges in healthcare, sustainability, and security. Society also benefits from ASU's partnerships with leading health care

organizations like the Mayo Clinic in delivering life-saving research and exceptional education opportunities to future health care providers.

Improving population health, reducing the cost of health care, and enhancing patient experience are audacious goals. However, thanks to world-class leadership, Health@ASU stands poised to create measureable impact in these areas. Dr. Keith Lindor, former dean of the Mayo Medical School, is an international authority on liver disease and current dean of CHS. CONHI is led by Dean Teri Pipe, former director of Nursing Research and Innovation at Mayo Clinic and a 2014 Robert Wood Johnson Executive Nurse Fellow. And former provost and executive vice president at the University of Texas MD Anderson Cancer Center Dr. Ray Dubois is at the helm of the ASU Biodesign Institute as its executive director.

Since the beginning of Campaign ASU 2020, investors have contributed more than \$40 million in philanthropic resources to Health@ASU. These funds have been critical to our success in launching new programs, advancing faculty research, creating access to education, and ensuring students' success.

Health@ASU has five objectives for Campaign ASU 2020:

1. Ensure all students (undergraduate and graduate) with the ability and ambition to attend ASU and enroll in one of the Health@ASU degree programs will have the opportunity, regardless of their socioeconomic status, through scholarship and fellowship support.
2. Students will be embraced by an environment that provides resources to aid in their success and global involvement, community service, and personal growth.
3. Students will study with the finest health educators and researchers.
4. Health@ASU faculty members will engage students in pursuing interdisciplinary research to pioneer new frontiers of knowledge and provide solutions to some of our most pressing health care challenges.
5. Engage with the communities Health@ASU serves by utilizing our health care and health promotion expertise to create a stronger culture of health.

Health@ASU Campaign ASU 2020 Objectives

Ensure Student Access and Excellence

\$8,000,000

The objectives of Campaign ASU 2020 are very much tied to the vision of the New American University. The first objective of the campaign is ensuring student access and excellence by ensuring students who have the ability and ambition to attend ASU will have the opportunity through scholarship and fellowship support.

This objective is especially critical for CONHI and CHS. Given an extremely high demand for skilled workers across the health workforce, health-related academic degrees are in equally high demand, yet the cost of attaining these degrees can be prohibitive. With philanthropic contributions, Health@ASU

has the opportunity to meet this demand in the marketplace by creating greater access to our degree programs through scholarship support.

There are several programs where increased scholarship support is a high priority. The College of Nursing & Health Innovation programs with the greatest need for increased scholarship and fellowship support are the RN to BSN program, the Doctor of Nursing Practice (DNP) program, and the PhD program. With the Institute of Medicine stating a need for 80 percent of all nurses to be baccalaureate prepared by 2020, the RN to BSN program is an especially strong focus area for the College of Nursing & Health Innovation. Many RN to BSN students are non-traditional and see the cost of education as a significant barrier. In the 2015-16 academic aid year, less than 1% (6) of the 627 students enrolled in the RN to BSN program received private scholarship support. The college had a total of \$16,500 in private scholarship awards to offer, with the average award of less than \$3,000. **Through Campaign ASU 2020, we seek to attract well-qualified RN to BSN students to our program by offering and additional \$100,000 in annual support with an average award of \$5,000 per student.**

In addition, as access to health care continues to rise, the shortage of doctors will become more prevalent, which will increase the reliance on advanced practice nurses. CONHI seeks to meet this demand through its DNP program. **With 220 students currently enrolled in the DNP program and \$60,000 in annual private scholarships, CONHI seeks to increase accessibility to the DNP program by leveraging Campaign ASU 2020 to increase annual scholarship awards to \$160,000.**

The PhD in nursing and health care innovation is designed for scholars who wish to pursue careers as leaders in health policy, education and research. This degree will also help address a national need for faculty and researchers who are increasingly in short supply. The 41 CONHI PhD candidates submitted a total of 94 scholarship applications in the 2015-16 academic aid year. This is a strong indicator of financial need. **Campaign ASU 2020 will enable CONHI to help meet this need for CONHI PhD students by reaching a steady state of \$150,000 in annual awards.**

Within CHS, one of the most pressing opportunities for increased scholarship and fellowship support lies in the School for the Science of Health Care Delivery (SHCD). The undergraduate and graduate degree programs within this school are the first of their kind in the country that teach the next generation of health care professionals how to achieve better results at lower costs in a complex and rapidly changing environment. This relatively new program is considered extremely important to the College, yet has only \$1,000 in private scholarship support available to attract and retain students. With approximately 150 students currently enrolled in Science of Health Care Delivery programs, and plans for continued growth, **CHS seeks to offer \$100,000 in annual private scholarship support for SHCD students through Campaign ASU 2020.**

In addition, the CHS programs with the highest enrollments are in the School of Nutrition and Health Promotion. In academic year 2015-16 combined enrollments for the Nutrition, Kinesiology, and Exercise and Wellness programs total nearly 1,900 students. During this same academic year, the college received nearly 550 applications for private scholarship awards and enough funding was available to award only 14 students an average of less than \$2,000. **Through Campaign ASU 2020 we will seek to increase private scholarship support to \$200,000 annually with an average award of \$4,000.**

Biomedical Informatics (BMI) and Biomedical Diagnostics and (BMD) are fields that are increasingly recognized as essential to the advancement of the health industry connecting basic sciences with practical application of clinical sciences. These programs are critical to achieving meaningful solutions that improve health care delivery and patient outcomes. The school does not currently have any philanthropic financial aid to offer its 100 students enrolled in undergraduate, graduate, and PhD programs. **Through Campaign ASU 2020, seeks to meet a portion of the student financial need in these programs by increasing philanthropic financial aid to \$100,000 annually with an average award of \$5,000 per student.**

The Bachelor of Science in Medical Studies is a new degree program that provides students interested in health care and medicine with a well-rounded foundation in social sciences, humanities, interprofessionalism, and leadership, in addition to the basic health/medical science prerequisites necessary for graduate programs in health care and medicine. The curriculum for this program has been designed to meet new MCAT requirements. High enrollments are expected for this program without any philanthropic financial aid currently available for interested and qualified students with financial need. **CHS plans to leverage Campaign ASU 2020 to attract a steady state of \$200,000 in annual scholarship awards for Medical Studies students.**

While the Biodesign Institute is not a degree-awarding academic unit, many PhD candidates work in Biodesign labs during their studies. Unfortunately, once they earn their PhD the Biodesign Institute has very limited funding available to retain these individuals, thus relinquishing opportunities to foster their critical research at ASU. There is a great need for post-doc fellowship funding that can be used by the Biodesign Institute to retain researchers after they have earned their PhD. **Through the efforts of Campaign ASU 2020 it is our aim to reach a steady state of \$140,000 annually to support two Post-Doc fellows.**

Champion Student Success

\$3,500,000

ASU's Charter is very clear that we not only measure our success by whom we include but also by our students' success. The second objective of Campaign ASU 2020 is promoting student success by creating a stimulating atmosphere that fosters global involvement, community service, creative expression, and personal growth.

Within each of the Health@ASU units, there are a number of excellent funding opportunities that promote student success. For example, CONHI has placed a high priority on raising funds to expand our simulation and learning resources capabilities. Additional space is needed to create a new simulation suite that would be adaptable for specific healthcare environments including medical offices, hospitals, homes, and long-term care facilities. In addition, the college would like to attract funding to create travel abroad opportunities for students. Studying abroad helps students gain a better sense of purpose for their career, strengthen their identity, discover their passions, and build skills that prepare them to enter the workforce. Furthermore, the college is seeking travel funding that would enable students to attend regional and national conferences after they have been selected to share their research. Students are currently expected to pay for their own travel which greatly limits their ability to participate. Lastly, the college would like to establish a career and life planning / mentorship program for our students. We believe this is an important step in helping to ensure their success long after they graduate from our program. **Through the efforts of Campaign 2020 CONHI seeks \$1,750,000 to fund these priorities.**

The College of Health Solutions also has several priorities focused on promoting an atmosphere that fosters student success and growth. For example, the Science of Health Care Delivery program aims to establish an annual lecture series with leaders from across the health sector to discuss key issues and trends in the health care industry with students and members of the community. The Doctor of Behavioral Health program seeks funding to increase the profile of their annual Integrated Care Conference. The conference has been an important lever in bringing online students to Phoenix every year to promote engagement with faculty and one another. Furthermore, the college seeks additional philanthropic investments to operate and sustain its Summer Health Institute. The Summer Health Institute provides students who have completed their junior year of high school with a one-week, immersive interprofessional education experience. Lastly, the college has encountered numerous students facing dire financial circumstances which limited their ability to remain, or be successful, in school. The college seeks philanthropic investments towards a student relief fund that would provide temporary support to a student that could be the difference between withdrawing from school and earning a degree. **With the momentum of Campaign ASU 2020, CHS seeks to raise \$1,000,000 in support of these programs.**

The Biodesign Institute is home to some of the most brilliant scientists in the world, including a Nobel Laureate. Biodesign seeks to attract funding that would leverage the remarkable reputation of the institute by creating a Nobel Symposium Series, thereby creating a stimulating opportunity for students, faculty, and community members to learn and better understand the fields of research from Nobel Laureates around the world. In addition, it seeks to expand upon current summer internship programs for high school students. With philanthropic support, we have a tremendous opportunity to engage a greater number of young minds in the fascinating research taking place within the Biodesign Institute. **Campaign ASU 2020 will increase funds available for these programs to a steady state of \$100,000 annually.**

Elevate the Academic Enterprise \$6,000,000

The third objective of Campaign ASU 2020 is to ensure students will study with the finest teachers and researchers by building the strength of our faculty. This key priority for Health@ASU is underscored by the fact that there is currently only one endowed faculty position in the College of Nursing & Health Innovation and none in the College of Health Solutions.

Much like with scholarship support, all academic programs would benefit from endowed faculty positions. Endowed faculty positions provide ancillary funding that helps CONHI and CHS' attract the finest teachers and researchers to our units. It is our goal during the campaign to secure new endowed professorships and chairs based on the interest of the donors. However, CONHI has identified undergraduate and PhD faculty positions as key areas of need for endowed faculty support. CHS has identified the School for the Science of Health Care Delivery and the School of Nutrition and Health Promotion as key programs that would benefit from endowed faculty support. **CONHI and CHS seek to establish five additional endowed faculty positions ranging from \$500,000 to \$1,000,000 each.**

To advance its bio-inspired research mission, the Biodesign Institute has established more than a dozen different research centers and labs. Endowed chairs for center directors are a key priority for the Biodesign Institute. In addition, the Biodesign Institute seeks to establish a fund that can be used to cover travel expenses for junior faculty members to present their important research findings at regional,

national, and international conferences. The opportunity to do so would broaden the impact of their work. **Biodesign is seeking endowed funding of \$2,000,000 through Campaign 2020 to advance these efforts.**

Fuel Discovery, Creativity, and Innovation

\$45,000,000

The fourth objective of Campaign ASU 2020 is to fuel discovery, creativity, and innovation. The Health@ASU units play a critical role in achieving this campaign objective through the students and faculty members who come together within and across disciplines to pioneer new frontiers of knowledge and provide solutions to global challenges.

There are three primary priorities in the College of Nursing & Health Innovation that fall under this category. The first is the proposed Center that will focus on applied compassion and mindful living. The scope of the Center will go beyond any one college, department or academic entity. It has been shown that the practice of mindfulness is a productive response to stressful conditions that support well-being, resilience and long-range health. Mindfulness is an approach that is capturing the imagination of researchers, business leaders, educators, athletes, and health professionals.

Another priority for the College of Nursing & Health Innovation is the Center for Advancing Interprofessional Practice, Education, and Research. The mission of the Center is to improve healthcare quality, access, and affordability through education, practice and research on high-value teamwork and collaboration. The Center is grounded in the commitment to achieve the National Quality goals for the United States through high-value teamwork. Its emphasis is on advancing education, practice and transdisciplinary research on the art and science of working effectively together to improve patient care, close the gap between academe and practice, and generate new knowledge through synergy.

Lastly, the College of Nursing & Health Innovation would like to leverage the efforts of the Campaign to build and sustain a sleep and chronobiology facility that will generate research and grant support to establish ASU as a major center for research in this area. The proposed facility will be multidisciplinary, as it will be used by researchers in CONHI, the College of Health Solutions, psychology, and biology who have already expressed strong interests in such a facility. This facility will allow us to establish sleep and chronobiology as a viable field of academic study at a variety of research and training levels. Such a proliferation of curriculum as well as multidisciplinary faculty would lend itself well to the development of interdisciplinary training programs supported through National Institutes of Health funding mechanisms.

Similarly, the College of Health Solutions also has three primary priorities for Campaign ASU 2020 that fall within this objective. The Bio-Behavioral Center for Precision Health will expand upon existing strengths and collaborations among faculty who had traditionally focused on either biomedical/metabolic outcomes or on behavioral outcomes and situate these collaborations within the context of "Precision Health Promotion." Like Precision Medicine, Precision Health Promotion would account for the lifestyle, environment, and genetic/metabolic individuality of each person, however it would focus on the question, "When is the optimal time and method(s) to engage/re-engage individuals in their own health promotion efforts?" Researchers from across the College of Health Solutions, College of Nursing and Health Innovation, School of Sustainability, School of Biological and Health Systems Engineering, Mayo

Medical, Project HoneyBee and other internal/external entities will readily connect with and contribute to this center.

In addition, the college aims to establish the Center for Digital Health Solutions, which will be strongly linked to Biomedical Informatics. The purpose of the Center is to address the impact of digital technologies to diagnose and monitor patient conditions and translate the data into useful clinical actions. The ability to respond to patients' conditions in near real-time can dramatically change the way health and health care will be conceived, delivered, and funded in the next 10 years. The potential for more immediate responses can improve clinical outcomes, enable much greater home care, inform and empower patients to become part of health solutions, and provide tools for clinicians to work with patients for improved outcomes at dramatically lower costs. The translation of genomic data overlaps with Campaign Mayo's Center for Individualized Medicine priority, which is focused on providing answers to diseases based on new ways to use your genome to provide an accurate diagnosis and best treatment plan.

In an effort to launch and sustain the work of these centers, CONHI and CHS is seeking \$25,000,000 in private contributions through Campaign ASU 2020.

Nearly all of the work that takes place in the Biodesign Institute could be included in this objective. However, there are two efforts underway that stand out as emerging priorities. The first is the efforts taking place within the Center for Applied Structural Discovery to build the world's first compact X-ray Free Electron Laser. This work will develop new revolutionary techniques that reveal the structure and dynamics of biomolecules toward new visionary discoveries in medicine and energy conversion. This new technology has the potential to provide critical knowledge for building new energy systems that can keep up with global demand by rapidly accelerating the time it takes to solve the mysteries of photosynthesis. Using the same techniques, the center is also actively investigating devastating diseases such as cancer, cystic fibrosis and infectious diseases, which would accelerate the time for developing effective treatments. This priority also overlaps with Campaign Mayo's Biomedical Research priority, which is focused on applying basic science to unlock secrets of cells and translating knowledge into first time cures and treatments. **Biodesign is seeking \$20,000,000 in private philanthropic funding through Campaign ASU 2020 to successfully complete the world's first compact X-ray Free Electron Laser.**

Enrich Our Communities

\$1,625,000

The fifth objective for Campaign ASU 2020 is to development vibrant communities. The university does this by engaging with the communities it serves through strategic partnerships and acts as a force for social progress, economic growth, and cultural enrichment. With the ASU Charter stating that the university will assume responsibility for the overall health of our community, Health@ASU clearly plays an important role in this objective.

The largest priority under this objective for the College of Nursing & Health Innovation is the Student Health Outreach for Wellness (SHOW) Community Initiative. SHOW provides health services to homeless individuals during weekends when health services outside emergency care facilities are rarely available. SHOW is the community's first student-run clinic. In addition to caring for the homeless, the clinic functions as a learning laboratory that offers hands-on experience to improve students' health

education and prepares the next generation of healthcare leaders. SHOW is located at the current location of the Healthcare for the Homeless Clinic on the Human Services Campus in Phoenix. **In an effort to sustain SHOW operations, CONHI seeks \$250,000 in annual contributions through Campaign ASU 2020.**

The College of Health Solutions is actively engaged in the community in many ways. Camp Crave is one tangible example of a community program that we seek to expand through Campaign ASU 2020. Children in grades 4–6 are invited to attend this interactive day camp that combines food, fun and fitness. Each day will include exciting fitness activities to get campers energized and excited to learn about nutrition and food culture. In addition, participants will experience unique foods and try out their cooking skills in a real kitchen atmosphere while making healthy meals using the information they learn. The college is seeking funding to purchase a mobile van that would enable us to take Camp Crave on the road and generate a greater impact. **CHS will leverage Campaign ASU 2020 to secure \$200,000 in funding for capital and operational support of Camp Crave.**

In addition, the College of Health Solutions would like to increase support for the Speech and Hearing Science Hearing for Humanity program. Hearing for Humanity takes Doctor of Audiology students across the globe to provide humanitarian audiological services for 5 weeks. The students gain valuable clinical experience and insight into the dire need for education, prevention, and treatment of hearing loss in developing countries. Hearing for Humanity took the students to schools for the deaf, medical clinics, villages and orphanages where they provided hearing exams and hearing aid services, often in very challenging environments. In both Kenya and Malawi, they witnessed firsthand the impact of hearing loss in these developing countries and the limited services available for individuals with hearing loss. In total, 445 children and adults were tested. Additionally, the team fit 66 hearing aids, took 240 ear impressions for permanent and temporary custom earmolds, and tested numerous existing hearing aids to evaluate their functioning and appropriateness. **An additional \$25,000 in annual support would ease the burden of the financial expense for students and provide additional resources, such as hearing aids, to those in need.**

One example for how the Biodesign Institute engages the community is through the Night of the Open Door activities. The faculty and research centers go to great lengths to provide hands-on, fun, scientific activities for children and youth. It provides children with insight into a world they might not know existed, perhaps sparking an interest in scientific research that could alter the course of their life. Biodesign would like to build on this program, expand their offerings during Night of the Open Door and create bigger opportunities to engage with the community through this event. **An additional \$10,000 in annual support through Campaign ASU 2020 would help the Biodesign Institute achieve this goal.**

Conclusion

Health@ASU is uniquely qualified to drive a culture of health in our local and national communities. We are producing lifetime learners and equipping them to discover solutions to health care's most pressing challenges and inspire pride in our health system. From groundbreaking scientific breakthroughs to the front lines of innovative health education, Campaign ASU 2020 will place Health@ASU at the forefront of leading health institutions in the United States. The opportunity is now to pave the way for our next generation of innovative health leaders and enhance our position as a pioneer in health research and discovery.