The background of the cover features a grayscale photograph of the University of Houston campus. In the foreground, there are several large, modern academic buildings with flat roofs and multiple stories. In the background, the Houston skyline is visible under a clear sky. A prominent red vertical bar is overlaid on the right side of the image, containing the title text. A thin white vertical line is positioned to the left of the main title text.

**University of Houston**

**Review of  
Academic  
Centers and  
Institutes**

**2021**

# Humana Integrated Health System Sciences Institute

## GOALS AND OBJECTIVES

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The Humana Integrated Health System Sciences Institute is a strategic partnership between the University of Houston (UH) and Humana. The institute seeks to increase the value of health care and improve health outcomes through interprofessional health education (IPE), innovative research, and community engagement. Working with colleges across the UH campus, community partners, and colleagues across multiple sectors, the institute's goal is to advance the health of our community by focusing on social needs, risk factors, and determinants of health and by increasing the use of value-based care (VBC) delivery models. Specifically, the goals of the institute are to:

1. Train health care professions students, faculty, and clinicians to thrive in and shape health systems using evidence-based approaches developed through the institute's research agenda.
2. Improve the health of populations and communities by engaging communities and practices.
3. Engage in research that furthers treatment models and the overall advancement of clinical sciences in primary care, nursing, pharmacy, social work, and other areas, including the delivery of high-value care and value-based payment models.

## MISSION STATEMENT

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*To be a leader in **health systems science** by producing **high-impact research to inform policy**; facilitating **innovative IPE programs** that prepare the next generation of health care clinicians to lead team-based practice; and developing novel programs that support population health and community transformation, with an emphasis on Houston's Third Ward and East End. We do this by integrating social and medical data to drive evidence-based practices, test the efficacy of new models of care in real-world settings, and contribute to the university's goal to enhance student success and increase research and scholarly productivity.*

UH draws strength from its diversity to transform lives and communities through education, research, service, and innovation in a real-world setting. In line with this overarching mission, the Humana Institute fosters interprofessional, team-based care in the Colleges of Medicine, Nursing, Optometry, Pharmacy, and Social Work. Recognizing the wealth of health expertise within UH, the institute has developed collaborations that extend beyond the health professions.

For example, in creating a VBC specialization ([Coursera](#)), we partnered with the College of Education to develop both the educational pedagogy and refine the course content. Consisting of six courses and a capstone project, the specialization is designed to develop an awareness of VBC reimbursement and operating models (Table 1), providing health systems science education for a broad range of learners, including health professions faculty, students, and staff; industry leaders; and lay community members. For clinicians, this first-of-its-kind specialization provides the tools necessary to support development of novel ideas and skills to elevate frontline patient care. To date, almost 2,000 learners have enrolled in the specialization, with more than 3,500 completing the Introduction to VBC module. The overall course rating is 4.8/5.0. We have successfully obtained continuing education credits for physicians and nurses and are exploring expansion to other health professions during 2022. In addition, we have obtained microcredentialing for this course via Credly.



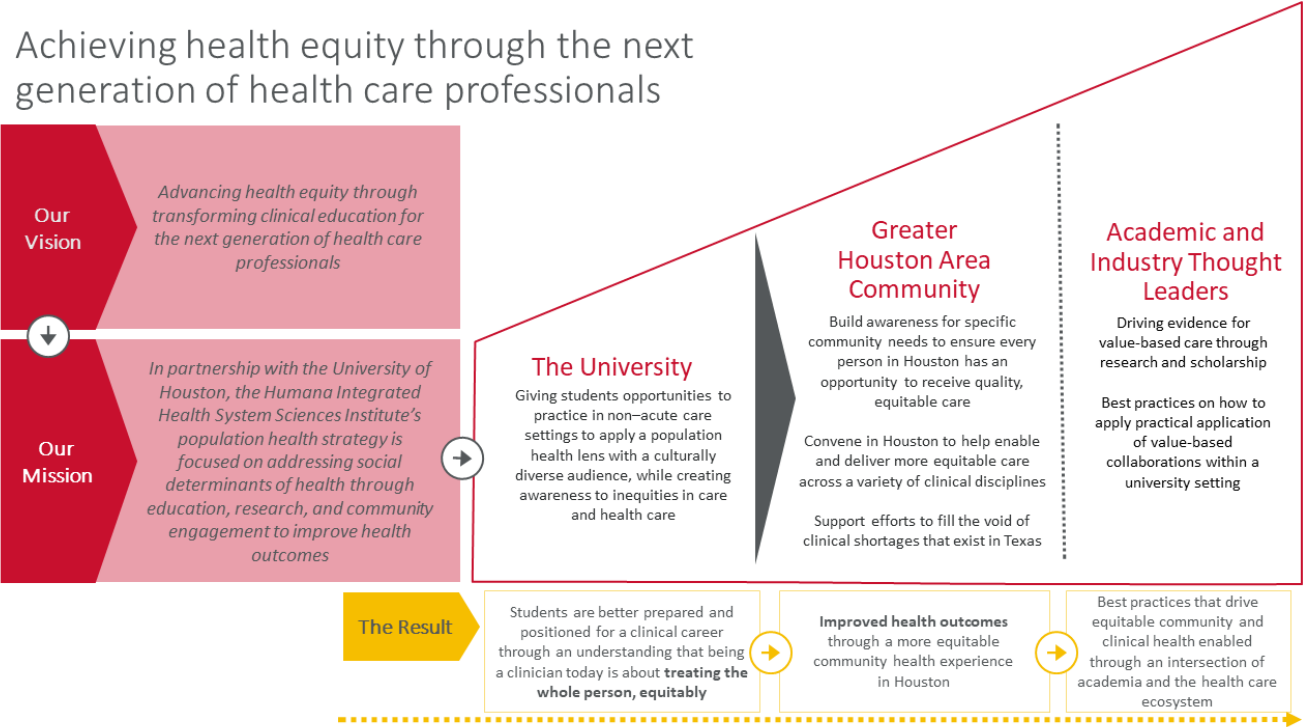
**Table 1. Value-Based Care Specialization Courses**

Course	Description
Introduction to VBC and the US Health Care System	Provides introduction to VBC concepts.
Population Health	Addresses population health and related key terms to refine understanding of population health and influencers of health care costs, including social determinants of health.
Managing Processes to Improve Outcomes	Introduces critical office-based processes that a VBC practice must manage in the drive toward improved patient outcomes.
Reimbursement Models	Builds high-level knowledge of the current medical-coding and payment mechanisms of most US health care services. Examines the importance of coding to reflect chronic conditions and other diagnoses accurately and how VBC and value-based payments utilize these measures and data.
Organizational Competencies	Highlights the changes required by an organization to succeed in VBC and value-based payment.
Quality Improvement in Organizations	Explores ways that provider organizations can successfully move from volume to value through implementing quality improvement plans and continuous quality improvement.
Capstone Project	Integrates the work learners have completed in this specialization, allowing them to reflect on their learning and implement a VBC initiative within their organization.

In order to develop a strong and diverse workforce of future health professionals, it is important to expose students of diverse backgrounds and interests to new learning opportunities from various sectors of the health ecosystem. Specifically designed to increase representation of minority students in population health, the inaugural Summer Health Equity Research Program was a 6-week, mentored, virtual research and training experience for 18 UH medical students and 21 undergraduate students from 9 historically Black colleges and universities (HBCUs) and minority-serving institutions (MSIs) nationwide. Each week included approximately 40 hours of synchronous learning, group activities, and independent-learning tasks, equipping students with skills in health equity, population health, community engagement, and research methods. The program introduced research methods and taught students to collaboratively address complex social issues impacting health equity, as they would in their future medical careers.

Overall, this collaboration with the College of Medicine Office of Research, Humana, and Dispensary of Hope, inspires health care professionals who are skilled in advancing population and community health and who have a passion for working with underserved communities. The research conducted by the Humana Institute, in collaboration with academic, community, and industry partners, informs its coordinating and supporting role in facilitating the establishment of new educational initiatives.

### Achieving health equity through the next generation of health care professionals



## PROJECTED ACCOMPLISHMENTS WITHIN 5 YEARS

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1. Advance understanding of how social risk influences health, contributes to disparities, and impacts health care value (see Workforce Development, Funding, Presentations, Publications).
2. Develop collaborations with community partners to develop research and educational initiatives guided by community needs (see Interactions with Outside Agencies).
3. Foster student success through workforce development programs focused on training the next generation of health professionals, researchers, and leaders skilled in improving health care value, enhancing population health, and mitigating health disparities (see Table 3 and Appendix).
4. Engage in scholarly activities to disseminate findings to inform clinical practice, health policy, and population health programs aimed at mitigating health inequities (see Funding, Publications).

## PERSONNEL

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- LeChauncy Woodard, MD, MPH—Founding Director
- Omolola E. Adepoju, PhD, MPH—Research Director
- Ben King, PhD, MPH—Epidemiologist
- Jiangtao Luo, PhD—Statistician
- Lauren Gilbert, PhD—Community Health Initiative Leader
- Sumaita Choudhury, MPH—Program Manager
- Monica McKey—Administrative Assistant to Dr. Woodard

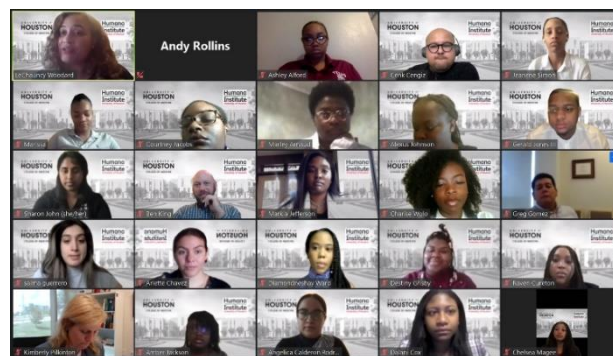
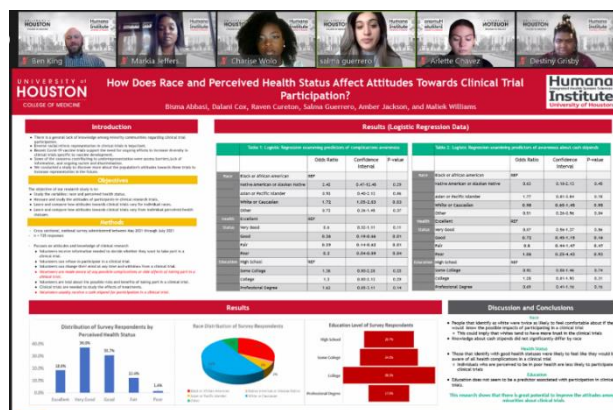
## INTERACTIONS WITH OUTSIDE AGENCIES

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Other than Humana, the Humana Institute has forged meaningful partnerships with community-based organizations, academic partners, foundations, and national leaders in health care:

- |   |                               |   |
|---|-------------------------------|---|
| ▪ Boynton Chapel United Methodist Church  | ▪ Texas Southern University   | ▪ American Heart Association  |
| ▪ University of Texas (UT) at Austin School of Social Work                        | ▪ Texas State University      | ▪ Center for Innovations in Quality, Effectiveness and Safety (IQEST) |
| ▪ UT Health Science Center at Houston School of Public Health                     | ▪ Texas A&M University        | ▪ Veterans Administration Quality Scholars (VAQS)                     |
| ▪ UT Rio Grande Valley  | ▪ Baylor College of Medicine  | ▪ Center for Recovery and Wellness Resources                          |
| ▪ University of North Carolina at Chapel Hill                                     | ▪ Dell Medical School         | ▪ Lone Star Circle of Care  |
| ▪ City of Houston Health Department   | ▪ Mercer University           | ▪ Blodgett Urban Gardens  |
| ▪ Center for Civic and Public Policy Improvement                                  | ▪ Houston Recovery Center     |   |
| ▪ Harris Center for Mental Health and Intellectual/Developmental Disability (IDD) | ▪ Harris County Public Health |   |
| ▪ Coalition for the Homeless Houston  | ▪ Walmart Foundation          |   |
| ▪ Cuney Homes Redevelopment Project   | ▪ New Hope Housing            |   |
|   | ▪ Dispensary of Hope (DOH)    |   |
|   | ▪ Center for Houston's Future |   |

Initiatives with these partners include collaborations on research projects, educational initiatives, and community-engaged programs. For example, DOH, which collects and distributes millions of dollars in pharmaceuticals annually to low-income, chronically ill patients, partnered in the Summer Health Equity Research Program for medical students. As part of this partnership, DOH identified several research questions to help inform its population health initiatives. Medical-student teams, guided by mentors and coaches, including Dr. Hillary Blackburn, Vice President of DOH, conducted scoping reviews of the literature to address issues such as the role of federally qualified health centers in improving medication access and factors influencing medication adherence in patients with diabetes. Students from both the medical- and undergraduate-student programs shared their findings with DOH, with industry and community partners, and with UH faculty and staff during a virtual research day, during which Ms. Lharissa Jacobs, Vice President of Health Strategies at the American Heart Association, served as the keynote speaker. As an outgrowth of this initiative, multiple student groups have presented their work at regional and national conferences, while another used its project as a catalyst to develop a mentoring program with Blackshear Elementary, located in the Third Ward. This effort also became the genesis for a partnership between the institute and the American Heart Association to address food insecurity by developing a Student Food Council that will provide stipends to five students from varied disciplines at UH and Texas Southern University to address food security and nutrition within our community. Additionally, this work will examine the role of access, adoption characteristics, and food retail network participation in VBC initiatives targeting food insecurity.



Similarly, the institute has partnered with local health departments, community organizations, university colleagues, and industry to address the COVID-19 pandemic through educational programs, provision of vaccinations (COVID-19 and influenza) co-located with social services, and curriculum development. Examples of these initiatives are described in Table 2.

**Table 2. Partnered Initiatives to Address COVID-19 Pandemic and Health Disparities**

Initiative	Description	Partners
COVID-19/Influenza Vaccination Event	Provided COVID-19 and influenza vaccinations to Third Ward community, co-located with community food distribution and social resource information	<ul style="list-style-type: none"> <li>▪ Boynton United Methodist Church</li> <li>▪ Walgreens</li> <li>▪ UH College of Medicine Student TMA Chapter</li> <li>▪ Houston Food Bank</li> </ul>
Facebook Live COVID-19 Education Series	Engaged medicine faculty in four-session Facebook Live to educate about COVID-19, address vaccine hesitancy, and dispel COVID-19 myths/disinformation	<ul style="list-style-type: none"> <li>▪ Humana</li> <li>▪ State government officials</li> <li>▪ Health Department leadership</li> <li>▪ UH College of Medicine faculty</li> </ul>
Disaster Preparedness in Minority, Community-Dwelling Seniors	Developed webinar series and distributed emergency preparedness kits to address community needs / disaster preparedness among Houston seniors in aftermath of Hurricane Harvey, Winter Storm Uri, and COVID-19	<ul style="list-style-type: none"> <li>▪ Walmart Foundation</li> <li>▪ Texas A&amp;M University</li> </ul>
Texas Southern University COVID Conversations	Panel discussion about vaccine hesitancy	<ul style="list-style-type: none"> <li>▪ Texas Southern University School of Pharmacy and Health Sciences</li> <li>▪ Baylor College of Medicine</li> </ul>
UH Downtown President's Lecture	Panel discussion about COVID-19 and health equity in communities of color	<ul style="list-style-type: none"> <li>▪ UH Downtown</li> <li>▪ UH College of Medicine</li> </ul>
Mayor's COVID-19 Task Force	Endowed Chair Sheara Jennings contributed to the Health Equity Response Task Force addressing health disparities exacerbated by COVID-19	<ul style="list-style-type: none"> <li>▪ UH Graduate College of Social Work</li> <li>▪ College of Medicine</li> <li>▪ City of Houston</li> </ul>
Grand Rounds Conversation with Dr. William Shrank, Humana Chief Medical and Corporate Affairs Officer	College-wide presentation "Reducing Waste, Friction, and Inequities in Health Care: A Conversation with Dr. William Shrank"	<ul style="list-style-type: none"> <li>▪ UH College of Medicine</li> <li>▪ Humana</li> </ul>
Visiting-Professor Student Lecture with Dr. Nwando Olayiwola	College-wide student presentation "Committing to Health Equity: My Journey and Humana's Approach" paired with student-leader discussions to identify opportunities for student-led initiatives to address health equity	<ul style="list-style-type: none"> <li>▪ UH College of Medicine</li> <li>▪ Humana</li> </ul>
Addressing Vaccine Hesitancy	Effort to address vaccine uptake among UH students	<ul style="list-style-type: none"> <li>▪ UH health-related student organizations</li> <li>▪ Harris County Public Health</li> </ul>
Healthy Parents, Healthy Kids: Policy, Practice, and Equity for Thriving Young Families	Panel within a day of learning and action to address maternal mortality, Medicaid expansion, father support, and social determinants of health and disparities for young children and new parents, and health equity across race and class	<ul style="list-style-type: none"> <li>▪ Hobby School of Public Affairs</li> <li>▪ Texas Working at the Intersection for Safe Families</li> <li>▪ First3Years Houston</li> <li>▪ UH Healthy Start</li> </ul>

The Humana Institute has also leveraged external partnerships to create programming to advance IPE for students within and outside UH. Building on the 2019 IPE Summit hosted by the Humana Institute at UH, national IPE experts from the UT Austin School of Social Work, University of North Carolina at Chapel Hill, and UT Rio Grande Valley collaborated with the Humana Institute to host a virtual IPE Summit addressing lessons learned from the pandemic. The summit connected 79 leaders in IPE from institutions across Texas covering topics including building resilience, collaborating to solve wicked problems, and creating partnerships to advance health.



## ROLES WITHIN UH AND THE COMMUNITY

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### *University of Houston*

The mission of the Humana Integrated Health System Sciences Institute centers on the health professions colleges. However, in addition to these colleges, the institute has purposely forged collaborations spanning education and research across the university to include faculty and students from UH Colleges of Business, Technology, Education, and Natural Science and Mathematics. Throughout all collaborations, the unifying theme has focused on improving the value of health care and population health outcomes by addressing social determinants of health.

In 2021, the Humana Institute supported Dr. McClain Sampson of the Graduate College of Social Work (\$50,000 total funding) to examine the impact of maternal medical homes. The institute also supported the launch of a Nurse Telehealth Managed Care Clinic (College of Nursing), providing \$75,000 in start-up funding for needed equipment, and establishment of a medical-legal partnership between the UH College of Medicine and Lone Star Circle of Care (\$36,688 total funding). Dr. Sheara Jennings of the Graduate College of Social Work received \$25,000 in pilot funding to support preliminary work to address the mental health needs of minority communities within Houston as part of the institute's work to address loneliness among community-dwelling seniors. Additionally, Dr. Ioannis Kakadiaris (Department of Computer Science) was awarded \$40,412 in funding to support graduate students to develop a chatbot to support co-location of vaccination services with food distribution sites. This work was foundational to the submission of a partnered National Institutes of Health (NIH) grant (principal investigator [PI]: Bettina Beech) with which the institute and institute partners Humana and Walgreens are collaborating. (Table 6 in Contracts and Grants describes projects in detail.)

The institute has previously provided funding to support student stipends and subsequently in-kind data support to the Data Analytics in Students' Hands (DASH) program in collaboration with Dr. Dan Price (Honors College) and Dr. Claudia Neuhauser (Data Sciences Institute), as well as data to examine the use of artificial intelligence to predict diabetes outcomes (co-PIs: Winston Liaw, Ioannis Kakadiaris). Finally, as part of its ongoing workforce development efforts, the institute has supported students across numerous colleges within UH and local universities to create pathways to careers in health-related fields. In 2021, more than 50 students from UH participated in projects with the institute or with our industry partner, Humana. Students engaged in health equity projects, clinical rotations, and other health service-related projects (see Table 3 and Appendix). Several students have subsequently successfully secured admission to medical schools and health policy internships, as well as permanent positions with Humana.



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**Table 3. Workforce Development by College/Institution**

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College/Institution	Students	Engagement
HBCUs, MSIs	21	Undergraduates, Summer Health Equity Research Program
College of Medicine	18	Summer Health Equity Research Program
College of Pharmacy	10	Advanced Pharmacy Practice Experience rotation with Humana
College of Nursing	7	Clinical rotations, Iora and Centerwell primary care clinics
College of Medicine	4	Clinical rotations, Iora and Centerwell primary care clinics
College of Business	1	Marketing internship, Humana
Department of Mathematics	1	Research assistant, Humana-funded projects on artificial intelligence to address food insecurity
Graduate College of Social Work	1	Health equity internship with Humana, role of promotoras in population health management

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### ***Houston Community***

Within the Houston community, our work focuses on improving population health outcomes by addressing social determinants of health, with the greatest attention on the Third Ward, East End, and Northwest Houston. Projects have been varied, focusing on older adults, Medicaid enrollees, individuals experiencing homelessness or substance abuse, and populations with low health literacy and socioeconomic status. As part of our work, we have partnered with community working groups to identify health priorities from the community’s perspective, to develop the infrastructure needed to support community-based participatory research, and to initiate collaborative projects addressing local priorities, such as food insecurity, social isolation, and direct services to support healthy food access in the Third Ward. At the beginning of the COVID-19 outbreak, community member–initiated focus groups were established to understand its impact on families in Houston’s Sunnyside, Old Spanish Trail, and Third Ward areas.

A separate UH institute with activities similar to the Humana Institute is the Health Research Institute. Dr. Woodard, the Humana Institute Director, serves as the Health Research Institute Center for Addictions Research and Cancer Prevention Community Engagement Core Director, promoting synergy between the two institutes and serving as a catalyst for ongoing collaboration.

### **ANTICIPATED CHANGES**

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**Size:** As we continue to successfully obtain grant funding, we anticipate increasing administrative (e.g., research assistant, project coordinator) and methodologic (e.g., quantitative and qualitative analysts) staff. Additionally, we will continue to grow our student pathways by providing internships to undergraduate and graduate students.

**Budget (Internal vs. External Support):** The institute is supported by a philanthropic gift from Humana. Currently, this funding supports a portion of institute salaries, with the remaining funding providing support to endowed chairs across the health professions colleges, as well as unrestricted funding to the College of Medicine. We anticipate continued infrastructure support from this philanthropic gift. Consistent

with our current efforts, we will seek grant funding (e.g., federal, philanthropic, and foundation support) to increase institute capacity and create additional collaborations both internal and external to UH. We expect that infrastructure funding from Humana will remain stable while external funding will maintain its upward trajectory. We will continue to use additional project-based funding from our partnership with Humana to support initiatives and projects university-wide aligned with the institute’s mission.

**Administrative Structure and Governance:** The institute has an advisory council composed of the associate provost and the deans from the Colleges of Nursing, Social Work, Pharmacy, Optometry, and Medicine. This body meets quarterly, provides feedback to the institute’s director and other leadership regarding the extent to which it is meeting its mission, identifies areas of collaboration within UH, and provides strategic guidance. Additionally, the institute’s Collaborative Research Steering Committee, consisting of faculty across UH and Humana, provides guidance and central coordination of all research activities involving partnered projects (e.g., those that utilize Humana clinical/administrative data).

**Mission and (New/Updated) Goals:** The mission of the institute will continue to focus on improving the value of care and population health outcomes through IPE, research, and community engagement. Aligned with these goals, the institute’s focus has sharpened to align our strategic plan with ongoing health equity initiatives at the health care system, education, and community levels, as well as the strategic priorities of our partners also centering on health equity.

**New/Updated Metrics:** We do not anticipate significant changes to our overall metrics in the immediate future; however, as we expand our capacity, we expect an increase in the scope of our dissemination efforts through both scholarly presentations and publications and alternative metrics (e.g., social media uptake, internal/external collaborations).

## CURRENT MEASURES OF PERFORMANCE

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### *Personnel*

**Table 4. Humana Institute Personnel**

<b><u>Faculty: 4</u></b> Dr. LeChauncy Woodard, 50% Dr. Omolola Adepoju, 50% Dr. Ben King, 10% Dr. Lauren Gilbert, 10% Dr. Jiangtao Luo, 10%	<b><u>Staff: 2</u></b> Sumaita Choudhury, 100% Monica McKey, 100%	<b><u>Masters’ students: 2</u></b> Jason Franco-Castano Minji Chae	<b><u>Undergraduates: 3</u></b> Rebecca Mak Sharonya Shetty Brandon Warner
	<b><u>Postdoctoral fellows: 1</u></b> Lyoungh Hee Kim	<b><u>Doctoral students: 0</u></b>	

In addition to directly hired personnel, the institute has members and collaborations spanning multiple colleges, including the Honors College; the Colleges of Natural Sciences and Mathematics, Education, Medicine, Social Work, Nursing, and Optometry; and the Data Sciences Institute.

## Contracts and Grants

Funding proposals submitted by Humana Institute faculty are detailed in Table 5, and funding from Humana totaling \$472,100 to support health equity initiatives is detailed in Table 6.

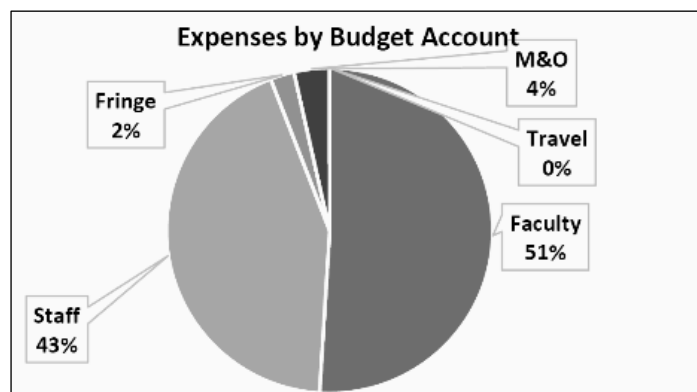
<b>Table 5. Humana Institute Funding Proposals</b>		
Proposal Topic	Sponsor	Amount
Community-Engagement Research Alliance (CEAL) Grant: Deliberative and Participatory Approaches to Address COVID-19 and Influenza in African American and Hispanic/Latino Communities in Texas. <i>PI: Dr. Bettina Beech, Institute Co-I: Dr. LeChauncy Woodard</i>	CEAL Consortium	\$145,000 awarded
Disaster Planning, Preparedness, Response, and Recovery Among the Minority Aging Population in Houston, Texas from the Effects of Pandemics. <i>PI: Dr. Omolola Adepoju, Co-PI: Dr. LeChauncy Woodard</i>	Walmart Foundation	\$250,000 awarded
National Institute on Minority Health and Health Disparities (NIMHD) Research Center in Minority Institutions (RCMI): Exploring the provider- and organization-level barriers to medication for opioid use disorder (MOUD) treatment for Black Americans. <i>PI: Dr. Lauren Gilbert</i>	NIMHD RCMI	\$50,000 awarded
Exploring the fit of naloxone distribution and trainings as opioid-related harm reduction strategies in Black communities. <i>PI: Dr. Carmen Masson, Institute Sub-PI: Dr. Lauren Gilbert</i>	National Institute on Drug Abuse	\$23,760 awarded
Accelerating Delivery of Vaccines for COVID and Influenza Among Seniors (ADVANCES), a community-based, cluster randomized trial. <i>PI: Dr. Bettina Beech, Institute Co-Is: Dr. LeChauncy Woodard, Dr. Winston Liaw</i>	NIH	\$3,527,244 submitted
Texas CEAL Consortium: Identifying Facilitators and Barriers to Increasing COVID-19 Vaccination and Trial Participation in Vietnamese Americans. <i>PI: Dr. Bich-May Nguyen, Institute Co-I: Dr. Lauren Gilbert</i>	National Heart, Lung, and Blood Institute; NIH	\$116,122 awarded
Hot Topics in Menopausal Education for Physicians and Their Diverse Patients. <i>PI: Kimberly Pilkinton, Institute Co-PI: Dr. Lauren Gilbert</i>	Pfizer	\$98,637 awarded
Exploring the provider- and organization-level barriers to MOUD treatment for Black Americans. <i>PI: Dr. Ezemenari Obasi, Institute Pilot PI: Dr. Lauren Gilbert</i>	UH HEALTH Center for Addictions Research and Cancer Prevention; NIMHD RCMI	\$50,000 awarded
A Qualitative Exploration of the Experiences of African Americans Diagnosed with OUD in Houston Communities. <i>PI: Dr. Lauren R. Gilbert</i>	UH Division of Research New Faculty Grant	\$6,000 awarded
National Initiative to Address COVID-19 Health Disparities Among Populations at High-Risk and Underserved, Including Racial and Ethnic Minority Populations and Rural Communities. <i>PI: Dr. Bettina Beech, Institute Co-I: Dr. LeChauncy Woodard</i>	Centers for Disease Control and Prevention	\$500,000 awarded
UH Interprofessional Health Education and Training Collaborative. <i>PI: Dr. LeChauncy Woodard</i>	Office of the Provost Multicultural Success Funding	\$40,000 awarded

**Table 6. Humana Institute–Humana Partnered Health Equity Programs**

Program	Description	Funding
UH Office of Research–Humana Institute Health Equity Research Program <i>L. Woodard, B. Beech, L. Adepoju</i>	This robust biomedical science research experience was reinforced by ongoing year-round mentoring for UH medical students interested in health equity research. 18 medical students completed an in-depth, mentored, health sciences immersion experience culminating with presentations at Health Equity Research Day. Several groups presented their findings at regional and national meetings.	\$128,000
Undergraduate Health Equity Research Training Program with HBCUs and MSIs <i>L. Woodard, B. Beech, L. Adepoju</i>	To address the critical shortage of underrepresented racial/ethnic minorities, individuals with disabilities, and low-income / educationally disadvantaged individuals in biomedical research and the health professions, we designed, implemented, and conducted a preliminary evaluation of an evidence-based, culturally relevant research training and mentoring program specifically designed for college students from groups underrepresented in biomedical science. This program engaged 21 students from 9 HBCUs and MSIs nationally.	\$40,000
Health Equity in Birth and Postpartum <i>M. Sampson, J. Dobbins, E. Bell</i>	This project leverages an ongoing community-based program at the UH Graduate College of Social Work that aims to decrease infant and maternal mortality (UH Healthy Start program). UH Healthy Start is a federally funded program that emphasizes community outreach and case management for direct program services to improve health. To address data gaps, investigators are conducting a rigorous, data driven analysis of maternal and infant health outcomes during the perinatal period to inform programs and services on how to prevent severe morbidity and mortality among our most at-risk populations.	\$50,000
Intergenerational Links: Fighting Loneliness in the Era of COVID-19 and Beyond <i>L. Adepoju, L. Woodard, S. Jennings</i>	This project leverages ongoing work to address loneliness in underserved, community-dwelling seniors by examining opportunities to expand efforts to vulnerable populations (uninsured, working poor, minority communities) in Houston.	\$115,599
Achieving Health Equity: How Community Health Workers (CHWs) Can Help Close Gaps in Health Care Disparities <i>L. Gilbert, L. Adepoju</i>	This project explores the experiences of CHWs and individuals with whom they have worked to identify their impact on communities and the health care system. It gives a better understanding of the CHW role from the patient, community stakeholder, and CHW perspectives. The findings will be used for a white paper to show the impact of CHWs on improving health outcomes and health literacy in a chronically ill population.	\$16,401
UH Medical-Legal Partnership: Improving Health by Addressing Health-Harming Legal Needs <i>W. Liaw, J. Dobbins, L. Woodard</i>	This collaborative project between UH Colleges of Medicine and Law and Lone Star Circle of Care implements and evaluates a partnership to address health-harming legal needs through referral to Lone Star Legal Aid in order to conduct legal assessments and develop plans to address identified legal issues.	\$36,688
Chatbot Development <i>I. Kakadiaris</i>	To ensure that individuals providing social services have access to timely, accurate information regarding the COVID-19 vaccine, we develop virtual conversation agent (e.g., chatbot) technology to provide up-to-date data and guidance regarding specific issues related to vaccine hesitancy and uptake. This work was foundational to the NIH ADVANCES grant submission (see Table 5).	\$40,412
Pilot project with Health Research Institute <i>L. Woodard, E. Obasi, L. Adepoju, J. Dobbins</i>	In collaboration with the Health Research Institute, we will develop a request for authorization to solicit pilot projects from UH faculty/students to address topics that advance health equity.	\$45,000

## Expenditures

	Original budget	Adjustment	FY21 expenses	FY21 committed	Balance
State	\$118,667	\$150,395	\$253,098	-	\$15,964
State grant	-	\$22,562	\$(7,441)	-	\$30,003
Local	\$386,683	\$(352,434)	\$68,050	-	\$(33,801)
Gifts	-	\$460,412	\$148,414	-	\$311,998
<b>Total</b>	<b>\$505,350</b>	<b>\$280,935</b>	<b>\$462,121</b>	-	<b>\$324,164</b>



	Faculty	Staff	Total
Current	1.21	2.03	3.24
Committed	0.00	0.00	0.00
Search	0.20	0.00	0.20
FY target	1.41	2.00	3.41
<b>% to target</b>	<b>86%</b>	<b>102%</b>	<b>95%</b>

Employee Name and Title	FTE Status
LeChauncy Woodard, Founding Director	0.51
Omolola Adepoju, Clinical Assoc. Prof.	0.50
Lauren Gilbert, Clinical Asst. Prof.	0.10
Ben King, Clinical Asst. Prof.	0.10
Monica McKey, Admin. Asst.	1.00
Sumaita Choudhury, Program Manager	1.00
Rebecca Mak, Temp. Staff (Humana gift)	0.03

## Publications and Presentations

### Presentations

Institute faculty and students disseminated work in a variety of settings including local, regional, and national meetings (full list available upon request) including Beyond Flexner, American Public Health Association (APHA), American Society of Health Economists, Texas American College of Physicians (ACP) Annual Meeting, Texas Academy of Family Physicians (TAFP) Annual Session and Primary Care Summit, and the Center for Houston’s Future. Notably, the institute’s work to examine “Health-Related Social Needs Among Older Adults with Mental Illness” (L. Adepoju and L. Woodard

[UH]; N. Patel, Stephanie Franklin, and Jess Dobbins [Humana]) was selected as the award winner for the Erickson Award from the Aging in Public Health Section of APHA. Additionally, a student-team (Rosemary Agwuncha, Christian Colin, and Elissa Nguyen) project of the Summer Health Equity Research Program, “Barriers in Access to Medication in the Uninsured and Underinsured Post-ACA: A Scoping Review,” was selected as the first-place winner in its category at the TAFP Research Poster Competition.

The Humana Institute’s work has also been disseminated in the popular press, including *Fierce Healthcare* and *Managed Healthcare Executive*, as well as via podcasts with Healthcare Strategies, Integrated Care, and the Healthcare Information and Management Systems Society. Links to select podcasts are included below:

- [See You Now podcast](#)
- [Healthcare Strategies—Emphasizing Patient Experience in Value-Based Care to Improve Collaboration](#)
- [An Educational Course to Advance Value-Based Care—with Tray Cockerell and Avra Bowers—Health Podcast Network](#)

### Publications

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### ***Community Outreach and Service***

The Humana Institute focuses on communities in the greater Houston metropolitan area. These include the Third Ward, East End, and Northwest Houston. Through community linkages, the institute infuses research with collaboration from the community, connects patients with community resources, and implements quality improvement principles within community practices. For example, the institute regularly collaborates with community working groups in Houston's Third Ward and East End. The purpose of the groups is to work with members of the community to identify health priorities from the community's perspective and to develop research and other collaborative projects that address these priorities. From these efforts, a food insecurity collaborative that includes residents and community partners is working to address food insecurity and nutrition in the Third Ward.

Immediate results from the community working groups include research around food insecurity and direct services to support access to healthy food in the Third Ward. For example, the College of Medicine and the Humana Institute partnered with the American Heart Association, Humana, Lone

Star Circle of Care, and Third-Ward faith-based institutions to provide free produce and toiletries to members of the community. Additionally, to address social isolation in seniors, the UH-Humana partnership paired UH students with community-dwelling elderly who had screened positive for loneliness. At the beginning of the COVID-19 outbreak, community members initiated focus groups to understand the impact of COVID-19 on families in Houston's Sunnyside, Old Spanish Trail, and Third Ward areas. A member of the Humana Institute worked with the group to design a focus-group protocol and facilitate focus-group sessions. The institute also leveraged funding from the Walmart Foundation to create disaster preparedness kits that were distributed to seniors in the Third Ward. Insights from our community engagement are combined with quantitative and qualitative data to inform continuous learning and the provision of health care services aligned with the needs and values of these local communities.

## **FUTURE MEASURES OF PERFORMANCE**

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Given the nascent stage of the Humana Institute as a university-level academic institute, we do not expect the five-year projected outcomes to shift significantly over the next year. Our current measures of performance are as follows:

1. Advance understanding of how social risk influences health, contributes to disparities, and impacts health care value.
2. Develop collaborations with community partners to develop research and educational initiatives guided by community needs.
3. Foster student success through workforce development programs focused on training the next generation of health professionals, researchers, and leaders skilled in improving health care value, enhancing population health, and mitigating health disparities.
4. Engage in scholarly activities to disseminate findings to inform clinical practice, health policy, and population health programs aimed at mitigating health inequities.



# Appendix

**Table A1. Student Development in 2021**

Student Name	College	Project/Internship/Rotations	Current Position/s
Kathy Vo	UH-COP	Humana pharmacy mentee	PharmD P3 student, pharmacy technician at Walmart
Kevin Le	UH-COP	Humana pharmacy mentee	PharmD P3 student, pharmacy technician at United Memorial Medical Center
Thi Cong	UH-COP	Humana pharmacy mentee	PharmD P3 student
Tobby Coggins	UH-COP	Humana pharmacy mentee	PharmD P2 student
Phalguni Maisuria	UH-COP	Humana pharmacy mentee	PharmD P3 student, pharmacy intern at Kroger
Jaceline Tuyet Tran	UH-COP	Humana pharmacy mentee	BPharm student, pharmacy intern at Walgreens
Duc Huynh	UH-COP	Humana APPE rotations	PharmD P3 student, pharmacy intern at Walgreens
Sally Wang	UH-COP	Humana APPE rotations	PharmD P3 student
Tiffany Chov	UH-COP	Humana APPE rotations	PharmD P3 student, pharmacy intern at CHI St. Luke's Health–The Vintage
Erin Anderson	UH-COP	Humana APPE rotations	PharmD P3 student, pharmacy intern at CVS Health
Bisma Abbasi	UH Department of Biology	SHERP	Senior biology student
Ashley Alford	Texas Southern University	SHERP	Biology graduate, planning to go to medical school
Marley Arnaud	Southern University	SHERP	Sophomore
Arlette Chavez	UH Department of Biology	SHERP	Biology graduate, applying for medical schools
Dalani Cox	Spelman College	SHERP	Sophomore studying mathematics
Raven Cureton	Howard University	SHERP	Senior studying human sports medicine
Marissa Goodwin	Fort Valley State University at Georgia	SHERP	Sophomore studying biology
Destiny Grisby	Tougaloo College	SHERP	Junior studying biology
Salma Guerrero	Texas Southern University	SHERP	PharmD P2 student, pharmacy intern at Walgreens
Uyai Ibanga	Texas Southern University	SHERP	Planning to get a master's degree in public health
Amber Jackson	Tougaloo College	SHERP	Junior studying psychology
Courtney Jacobs	Prairie View A&M University	SHERP	Sophomore studying biology
Markia Jefferson	Baylor University	SHERP	Pursuing a master's in public health, outreach coordinator with Doctors for Change, vice-chair of Convention Planning Committee, chair of SNMA Global Health Experience Subcommittee, director of outreach for Pre-College Research Institute at Harvard University, contact tracer

Student Name	College	Project/Internship/Rotations	Current Position/s
Sharon John	UH Department of Biology	SHERP	Applying to medical schools
Alexus Johnson	Mississippi Valley State University	SHERP	Sophomore studying biology
Gerald Jones III	Xavier University of Louisiana	SHERP	Junior studying biology
Chelsea Magee	Texas Southern University	SHERP	Freshman studying clinical laboratory sciences
Jeanene Simon	Texas Southern University	SHERP	Senior studying respiratory therapy
Madison Townsend	Howard University	SHERP	Freshman studying biology
Maleik Williams	Clark Atlanta University	SHERP	Chemistry graduate, pursuing research opportunities in chemistry/astrochemistry
Charise Wolo	Texas Southern University	SHERP	Postbaccalaureate student studying biology
Rosemary Agwuncha	UH-COM	SHERP	Second-year medical student
Christian Colin	UH-COM	SHERP	Second-year medical student
Elissa Nguyen	UH-COM	SHERP	Second-year medical student
Cenk Cengiz	UH-COM	SHERP	Second-year medical student, president of AMA Chapter at UH-COM
Sarah Snyder	UH-COM	SHERP	Second-year medical student
Kennedi Wilson	UH-COM	SHERP	Second-year medical student
Charles Anugwom	UH-COM	SHERP	Second-year medical student
Brianna Gonzales	UH-COM	SHERP	Second-year medical student
Zikora Stephens	UH-COM	SHERP	Second-year medical student, leadership roles in SNMA UH Chapter and Women's Health Interest Group
Luan Tran	UH-COM	SHERP, student scholarly project on medical-legal partnership	Second-year medical student
David Cardenas	UH-COM	SHERP	Second-year medical student
Breanna Chachere	UH-COM	SHERP	Second-year medical student
Sakina Chinwala	UH-COM	SHERP	Second-year medical student
Angelica Calderon Rodriguez	UH-COM	SHERP	Second-year medical student
Nabeel Ahmad	UH-COM	SHERP	Second-year medical student
Jalyce Taylor	UH-COM	SHERP	Second-year medical student, member of NAACP Houston Branch, Mary Susan Moore Medical Society, and SNMA
Diamondneshay Ward	UH-COM	SHERP	Second-year medical student
Marina Arocha	UH-COM	Student scholarly project on medical-legal partnership	Second-year medical student
Cassidy Daniel	UH College of Social Work	SHERP-Research Day	Graduate student in social work

Student Name	College	Project/Internship/Rotations	Current Position/s
Maya Singh	UH	SHERP-Research Day	Undergraduate student
Ryan Bailey	UH-CON	Humana clinical rotations	RN-BSN
Nancy Enaboifo	UH-CON	Humana clinical rotations	RN-BSN
Aimee Gaytan	UH-CON	Humana clinical rotations	RN-BSN
Megan Hitch	UH-CON	Humana clinical rotations	RN-BSN
Pamela Ugorji	UH-CON	Humana clinical rotations	RN-BSN
Grace Thomas	UH-CON	Humana clinical rotations	RN-BSN
Juanita Ward	UH-CON	Humana clinical rotations	RN-BSN

*Notes.* AMA: American Medical Association; APPE: Advanced Pharmacy Practice Experience; NAACP: National Association for the Advancement of Colored People; RN-BSN: Registered Nurse–Bachelor of Science in Nursing; SHERP: Summer Health Equity Research Program; SNMA: Student National Medical Association; UH-COM, -CON, -COP: University of Houston College of Medicine, College of Nursing, College of Pharmacy