



RUTGERS
BIOMEDICAL AND
HEALTH SCIENCES

ONE RPATHS



The Way Forward

STRATEGIC PLAN 2022-2027

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Preface | By the President

I am happy to endorse the Rutgers Biomedical and Health Sciences Strategic Plan for 2022–2027 and the thoughtful, collaborative work that stands behind it.

Since the establishment of the university's Rutgers Biomedical and Health Sciences division in 2013, through the excellence of its students and postdoctoral and clinical trainees, the dedication of its staff, the brilliance and innovation of its faculty, and the leadership of its administrators and unit directors, RBHS has become a pillar of the university across its essential functions: research, education and training, clinical care, and community outreach.

RBHS has distinguished itself as a leading academic health center committed to excellence. Its scientists and practitioners are making discoveries in the causes and treatments of cancer, heart disease, obesity, brain function and injury, and other medical conditions, and translating those findings into the clinical and preventive care they provide. Its outstanding faculty is training the researchers and practitioners of the coming decades not only to be expert nurses, dentists, physicians, pharmacists, scientists, and health care professionals but also to be compassionate, collaborative, and committed to eliminating health disparities and serving as role models to those who will follow them. On the clinical practice front, Rutgers Health has rapidly developed a reputation for high-quality, patient-focused care across the State of New Jersey.

My introduction to RBHS came in the earliest months of the COVID-19 pandemic, before I even arrived at Rutgers, when I learned about its intensive involvement in the battle against this deadly virus and the worldwide pandemic. At a time when schools, universities, and businesses were closing their doors to protect against transmission, RBHS researchers were seeking answers and serving patients: conducting clinical trials for the vaccines in use today; developing a new way to test rapidly for COVID; providing front-line care; and graduating medical, nursing, and pharmacy students early so they could join the cause as soon as possible.

Like everyone at Rutgers, I take great pride in the success of RBHS over the past nine years since its inception. Yet I know from my conversations with Chancellor Brian Strom and other leaders during my presidency that more hard work, building on these accomplishments, is needed for RBHS to reach the level of excellence our state, our university, and our patients deserve.

This document is further proof of the RBHS community's commitment to an ambitious vision of national prominence and leadership as a model academic health center. Situated in one of the most diverse states in the country, RBHS boldly seeks to define excellence in expanding health care access, in increasing the diversity and inclusiveness of its own community, in training the next generation of health providers, scientists, and innovators, and in forging a culture of collaboration, respect, and accountability. Having witnessed the quality and dedication of this community over the past two years, I am confident that in carrying out this plan, RBHS will not only enhance its visibility and standing, but also inspire other academic health centers to follow a similar path.

Jonathan S. Holloway, PhD

President and University Professor | Rutgers University



Message | From the Chancellor

Created by a historic 2013 merger, with its first five-year strategic plan released in November 2014, RBHS has rapidly developed into one of the nation's premier academic health care centers, committed to a mission of excellence in biomedical and health sciences education, research, and patient care.

In February 2020, a newly formed Strategic Planning Steering Committee (SPSC) held its kickoff retreat to begin developing a revised and refreshed RBHS strategic plan that builds and expands upon the many accomplishments of the first plan.

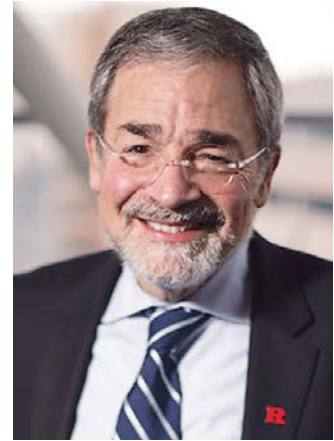
As we began planning for the next five years, the nation was faced with a period of unprecedented disruption: a global COVID-19 pandemic, a contentious national presidential election cycle, and civil unrest as the country confronted widespread concerns about racial and social inequities. Furthermore, the COVID-19 pandemic highlighted the disproportionate impact on the health and well-being of disenfranchised and underserved individuals and communities. It has been an enormously challenging time for all of us, but I am so proud and privileged to be a member of the RBHS community, which came together to confront the pandemic with resilience, perseverance, volunteerism, and as a critical partner to the State of New Jersey to implement recommended safety measures.

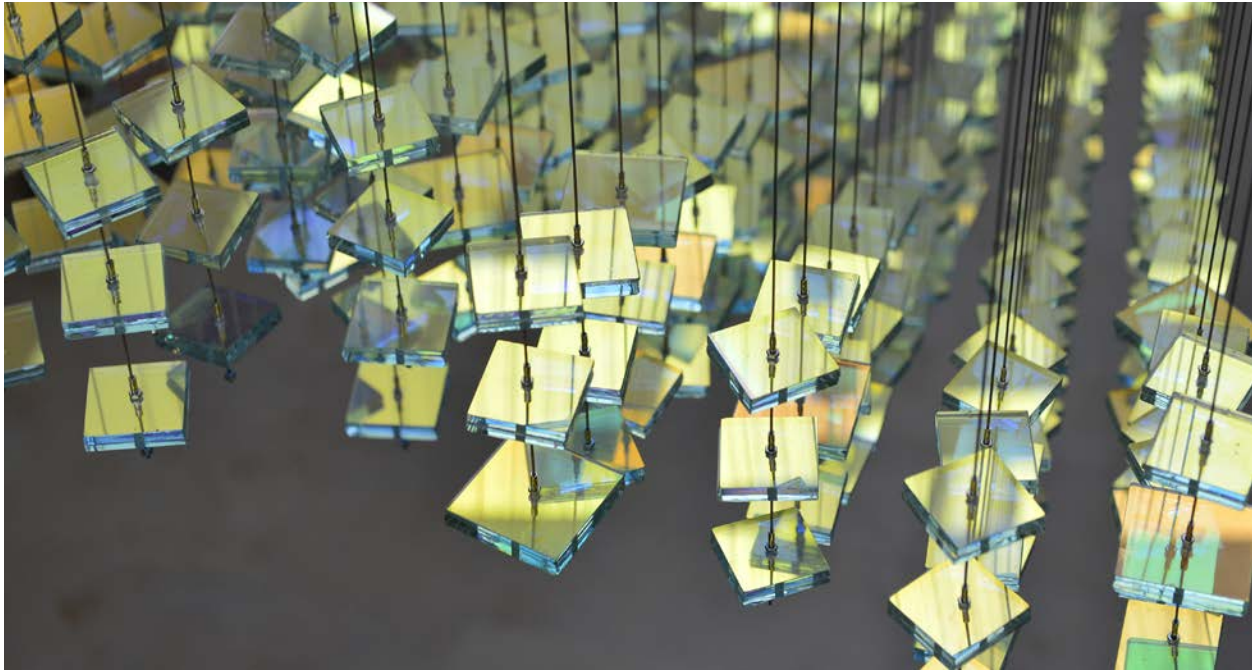
I am extremely grateful for the exceptional work carried out by the SPSC and the very broad and active engagement and input by the entire RBHS community, including many committees and subcommittees, multiple town hall meetings, broad survey responses, and the many meetings with key stakeholders and leaders from Rutgers University, the four chancellor-led units, RWJBarnabas Health, University Hospital, and the state. Several committees will now be established to develop and fulfill an implementation plan that includes defining criteria for assessment of the strategic plan, monitoring its progress, and adjusting its goals as needed, since the plan is intended to be a living document. The 2022–2027 strategic plan provides an innovative blueprint for One RBHS as we work together to define and shape The Way Forward.

I thank President Holloway for his support of our strategic plan and the introductory comments he has provided. I look forward to working with the RBHS community and our collaborators, and assisting in every way, to succeed in meeting the goals of “One RBHS: The Way Forward” 2022–2027 strategic plan.

Brian L. Strom, MD, MPH

Inaugural Chancellor, Rutgers Biomedical and Health Sciences
Executive Vice President, Health Affairs | Rutgers University





Executive Summary

Rutgers Biomedical and Health Sciences (RBHS) is one of the largest and most comprehensive academic health centers in the nation, encompassing eight schools, eleven major centers and institutes, and a vast statewide behavioral health network. RBHS was created by a historic merger in July 2013, in accordance with the 2012 New Jersey Medical and Health Sciences Education Restructuring Act. The creation of RBHS within Rutgers, The State University of New Jersey, established it as one of the largest academic institutions in the U.S. providing clinical care, education and training, research and innovation, and service to a state with a population of more than 9 million. As reaffirmed in this strategic plan, RBHS is a leading academic health center, known for its interprofessional model of health care education, commitment to improving access to high quality clinical services, innovative research, and deep engagement with the community. We will pursue these four core missions according to our fundamental values of respect, collaboration, inclusion, excellence, innovation, and accountability.

The first eight years of RBHS represented a transformational period of tremendous expansion and growth. The inaugural RBHS 2014–2019 strategic plan provided a bold vision for the integration and assimilation of much of the former University of Medicine and Dentistry of New Jersey (UMDNJ) within Rutgers University. This restructuring was foundational, representing the largest higher education merger in U.S. history, and created a new, forward-looking organization. The restructuring created opportunities for collaboration and synergy and positioned RBHS as a consolidated unit, to respond to the health priorities of the time. Great progress was made in the inaugural plan with the transformative clinical affiliations with RWJBarnabas Health, the implementation of a new faculty practice model, and substantial gains in research funding in many areas, including four signature programs, one emerging signature program, and four complementary programs. Opportunities also were identified in other areas, such as interprofessional education, health care innovation, and population health. There were predictable challenges of such a large integration—chief among them was clarifying the RBHS identity and brand, both internally and externally, particularly considering the affiliation with RWJBarnabas Health. Additionally, there were challenges that were not as easily predicted, such as the almost immediate pivot of operations during the COVID-19 pandemic, in which Rutgers emerged as a national leader in its response.



Early in his presidency, Rutgers President Jonathan Holloway outlined his commitment to three core value propositions that will be the cornerstones of his presidency: 1) the relentless pursuit of academic excellence; 2) the need to develop strategic institutional clarity; and 3) the achievement of a beloved community. President Holloway envisions a culture that emphasizes diversity, inclusion, and respect. His stated goals include reducing the narrative complexity of Rutgers and bringing coherence to a university strategy that will strengthen Rutgers' position in New Jersey and in higher education nationally—all values and goals very much shared by the administration, faculty, and staff of RBHS.



For its part, the new 2022–2027 strategic plan focuses on moving beyond the Rutgers–UMDNJ integration by advancing the vision of One RBHS through four mission-based and five unifying theme-based goals. The plan defines a path for continuing efforts over the next five years to bring to fruition the ideal of One RBHS to position Rutgers to be a state, national, and international leader in the biomedical and health sciences.

The Aim is Clear:

To realize our collective vision of a multidisciplinary, multidimensional, and multifaceted organization—in which the whole is far greater than the sum of its parts—and to embody this concept as the fundamental expression of the One RBHS identity.

An integrative approach will enable RBHS to advance clinical care, education, research, and community engagement in important new directions; facilitate a population-based, value-driven health care infrastructure by building on its recognized strengths; engage with local and global communities; and leverage the interprofessional synergies among its schools, centers, and institutes. Further, RBHS will strengthen its many ties with the state and federal governments and foster new public-private collabora-

tions with industries vital to New Jersey's economy. RBHS is poised to take advantage of, and excel in, this new environment, with its uniquely diverse workforce, systems-aligned model for clinical care and community service, interprofessional health care education using team-based care models, and a full spectrum of research and innovation.



Background | Rutgers, The State University of New Jersey

Rutgers, The State University of New Jersey is the eighth oldest higher education institution in the U.S. and the nation's only university that is a colonial college, land-grant institution, and public research university. Rutgers was founded in 1766 as the all-male Queen's College in New Brunswick, New Jersey, and renamed Rutgers College in 1825. The New Jersey College for Women, now Douglass Residential College, was founded in 1918 and, in 1955, became part of what is now Rutgers University–New Brunswick. State legislative acts in 1945 and 1956 designated Rutgers as The State University of New Jersey. The University of Newark, now Rutgers University–Newark, joined Rutgers in 1946. The College of South Jersey, now Rutgers University–Camden, joined Rutgers in 1950. A state legislative act in 2013 transferred much of what was the University of Medicine and Dentistry of New Jersey (UMDNJ) to Rutgers, leading to the formation of what today is Rutgers Biomedical and Health Sciences (RBHS) and adding the most recent piece to the institution.

Today, Rutgers is a leading national research university system comprised of four chancellor-led units (CLUs): three geographically distinct that include Rutgers University–Camden, Rutgers University–Newark, Rutgers University–New Brunswick, and RBHS, the fourth CLU that spans multiple locations, including Newark, New Brunswick, and satellite locations throughout the state. Rutgers is the only public institution in New Jersey holding membership in the Association of American Universities and one of only 62 members in the nation. Rutgers joined the Big Ten Division I collegiate athletic conference in July 2014, and, in doing so, joined the Big Ten Academic Alliance—formerly named the Committee on Institutional Cooperation—a consortium of 14 world-class research universities.

Rutgers’ mission is to provide for the instructional needs of New Jersey’s citizens through its undergraduate, graduate, postgraduate, and continuing education and training programs, and to conduct cutting-edge research that contributes to the health, basic science, environmental, social, and cultural well-being of the state. Rutgers also aids the economy and the state’s businesses and industries and per-



forms public service in support of the citizens of the state and its local, county, and state governments. Rutgers is the fourth-largest non-governmental employer in New Jersey, directly and indirectly supporting more than 58,000 jobs in the state. Rutgers provides almost \$7 to the New Jersey economy for every \$1 invested by the state.

As one of the nation’s most diverse universities (according to *U.S. News and World Report*), Rutgers is committed to diversity and inclusion as a key foundational element of its strategic plan. Rutgers draws strength from the rich variety of perspectives and life experiences of our students, faculty, staff, and members of surrounding communities. More than 70,000

students—from all 50 states and more than 130 countries—attend Rutgers, across its 33 schools and colleges. Approximately 50,000 are undergraduates and 21,000 are graduate students across the Rutgers campuses: Camden (7,200); Newark (13,600); New Brunswick (43,400); and the nearly 6,800 students who are enrolled in an RBHS degree program. Rutgers offers more than 100 undergraduate majors and more than 200 graduate degree programs. There are 8,700 full- and part-time faculty and nearly 15,000 full- and part-time staff members. More than 530,000 alumni reside throughout the world, including all 50 states and six continents.



NEW PRESIDENT AND NEW VISION | In July 2020, Jonathan Holloway, PhD, a renowned historian and scholar, took office as the 21st president of Rutgers. As Rutgers refines its mission of becoming the very best public research university, President Holloway envisions a culture that emphasizes diversity, inclusion, and respect. In his opening message, President Holloway shared his belief that a university should aspire to be a beloved community. He pointed out that a beloved community is not a place where everyone agrees with one another, but rather a true marketplace of ideas and opinions that engages in authentic listening and dialogue—a place where members acknowledge that, while they may disagree at times, they have something valuable in common, belong to the same community, and share an obligation to take care of it.

In his September 2020 address to the University Senate, comprising faculty, students, staff, and alumni, President Holloway highlighted three value propositions that will be the touchstones of his presidency: 1) the relentless pursuit of academic excellence; 2) the need to develop strategic institutional clarity; and 3) the achievement of a beloved community. His stated goals include reducing the narrative complexity of Rutgers and bringing coherence to a university strategy that will strengthen Rutgers' position in New Jersey and in higher education nationally. Rutgers is known for being an incredibly diverse university and the new university administration is committed to delivering on the principles of equity and inclusion, which require constant attention to operationalize. In “doing its part in repairing the world,”

Rutgers will take concrete and measurable actions to address social, economic, and racial inequities. This work will grow out of community conversations and engagement as well as presidential and other CLU initiatives that reflect institutional best practices in the broader world of higher education.

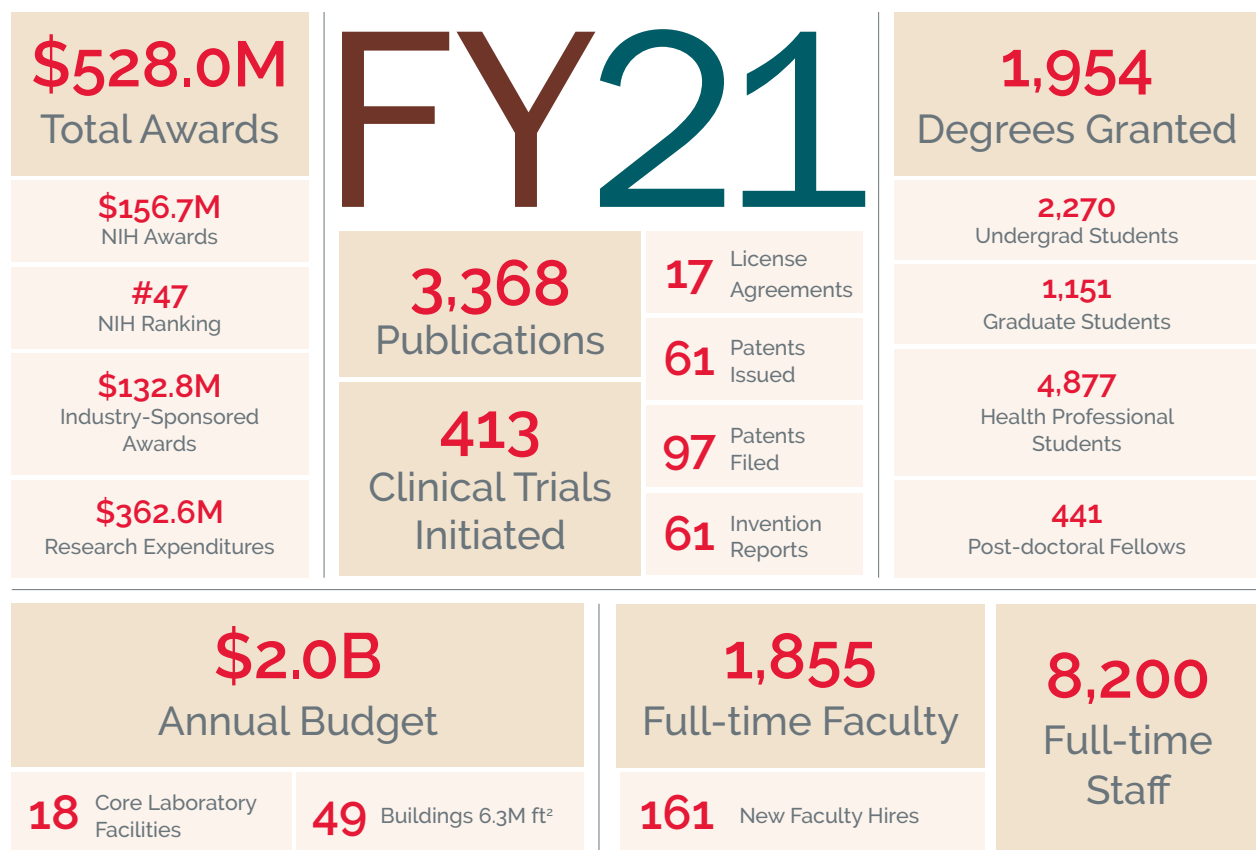
The president has defined five priorities that encapsulate areas where the university needs to make progress: 1) recruit, retain, and develop a diverse community, 2) promote inclusive scholarship and teaching, 3) define sustainable and substantive community engagements, 4) build the capacity of leaders to create inclusive climates, and 5) develop an institutional infrastructure to drive change. These priorities reflect shared objectives that enable us to define benchmarks for achievement and structural mechanisms for accountability to be a beloved community. Building on the University's Equity Audit in the fall of 2020, the University Diversity Strategic Planning process is assessing and aligning efforts across the CLUs and the central administration to institutionally embrace diversity, inclusion, and equity as core values. Each organizational unit across Rutgers University is using the diversity strategic planning process to describe their current state, envision their ideal state, and define measurable goals, identifying actionable steps to create a more inclusive future.



Rutgers Biomedical and Health Sciences

The 2012 New Jersey Medical and Health Sciences Education Restructuring Act (N.J.P.L. 2012, c.45) established Rutgers Biomedical and Health Sciences (RBHS) in July 2013, as the health care, education, research, and clinical division at Rutgers. In December 2013, Brian L. Strom, MD, MPH, became the inaugural chancellor of RBHS, which comprises a broad spectrum of health professions schools, research centers and institutes, and clinical practices, including a statewide behavioral health care network. Since its creation, RBHS has provided new models for clinical care and community service, educated several generations of health care providers utilizing team approaches to care, and conducted basic science, clinical, health services, population-based, and translational research. The RBHS schools, centers, and institutes are geographically located on the New Brunswick campus, both in New Brunswick and Piscataway; at the Rutgers Health Sciences campus at Newark; and at affiliated clinical and practice locations throughout New Jersey. RBHS, now an integral component of Rutgers University, works synergistically with many other academic, research, and clinical units throughout Rutgers and the region.

The integration of the former UMDNJ and Rutgers created considerable opportunities for collaboration and synergy. In July 2014, Rutgers College of Nursing (Newark and New Brunswick) and Rutgers School of Nursing (previously part of UMDNJ) merged to form Rutgers School of Nursing. RBHS is also home to two allopathic medical schools located approximately 30 miles apart: New Jersey Medical School (NJMS) in Newark and Robert Wood Johnson Medical School (RWJMS) in New Brunswick. Originally affiliated with different parent universities, the two medical schools were combined by statute in 1970 under the College of Medicine and Dentistry of New Jersey (later UMDNJ). As geographically distinct entities, the two medical schools developed separate and, at times, complementary clinical practices, patient bases, and research strengths. To create academic strength and greater efficiency within RBHS and across Rutgers, the two medical schools now share a growing number of joint department chairs and other related joint initiatives. Additionally, graduate biomedical training programs, previously existing as distinct entities at Rutgers–New Brunswick and UMDNJ, were integrated under Rutgers School of Graduate Studies. Additional integration occurred with the expansion of Rutgers Cancer Institute of New Jersey to Newark, and the establishment of the new Brain Health Institute, which brings together faculty from across the university.



With the establishment of RBHS, Rutgers now stands as one of the nation's largest, most comprehensive university-based centers for studying and improving human health and health care (Miller & Golembeski 2019a; 2019b). The eight RBHS schools (**Appendix A**) collectively comprise New Jersey's largest and most influential constellation of academic institutions devoted to medicine, dentistry, biomedical sciences, pharmacy, public health, nursing, and the full spectrum of allied health careers.

RBHS major research centers and institutes (**Appendix A**) focus on five signature programs (cancer, environmental and occupational health, infection and inflammation, neuroscience, and community health and health systems) and four complementary programs (clinical research, drug discovery and development, informatics, and public health, including global health). A commitment to clinical and community service is integral to the missions of all RBHS schools, centers, institutes, and its behavioral health center. There are more than 2.1 million patient visits to Rutgers Health practices annually, more than 1,300 clinical providers working to advance top-quality health care, more than 450 clinical trials in progress at any given time, and \$450 million spent annually on life sciences research and development.



RBHS health care providers deliver a wide range of high-quality patient care services across the New Jersey. Faculty practices currently operate at New Jersey Medical School (NJMS), Robert Wood Johnson Medical School (RWJMS), Rutgers School of Dental Medicine (RSDM), School of Health Professions (SHP), and the School of Nursing (SN). University Behavioral Health Care (UBHC) is one of the nation's largest behavioral health care networks. RBHS and RWJBarnabas Health have collaborated to create the largest academic health system in New Jersey, comprising a broad network of hospitals and health care facilities to deliver patient care, provide educational experiences for students, and

conduct clinical research. The legislation also made University Hospital in Newark an academic medical center with its own board of directors as of July 1, 2013. University Hospital is now a principal teaching hospital of NJMS, RSDM, and other Newark-based health professional education programs, home to a Level 1 Trauma Center, and a regional resource for specialized services and critical care.

Given its focus on biomedical and health care education, research, clinical care, improving access to health care, and reducing health disparities, there are specific characteristics that distinguish RBHS from the other Rutgers units, including: postgraduate training for clinical residents and specialty fellows, continuing medical education, hospital and clinical affiliations, and the provision of health care services to the community. For Rutgers and the region, there are many advantages to having a highly

regarded integrated health care division attached to New Jersey's state university. Rutgers attracts top-flight faculty and students, optimizing health care for New Jersey residents and beyond. Rutgers is also conducting more cutting-edge health care research and discovery than ever before. These contributions accelerate New Jersey's economic growth while attracting public and private collaborations and support.

The inaugural RBHS strategic plan, finalized in November 2014, consisted largely of specific initiatives focusing on clinical, research, educational, and community service programs, as well as administrative and financial strategies designed to support these specific initiatives. RBHS strategic initiatives in the first five years focused on translating the aspiration and key areas of the universitywide strategic plan into the proper context for RBHS, capitalizing on its unique niches and operationalizing the integration of the former UMDNJ with Rutgers. (For more information on highlights of accomplishments from the 2014–2019 strategic plan, see [Appendix B](#).)

RBHS's achievements were put to the test by the COVID-19 pandemic. RBHS leaders, faculty, staff, and students were confronted by numerous challenges, meeting them with creativity, determination, and stamina during a dynamic and unpredictable period. Despite the challenges posed by this unprecedented global pandemic, RBHS has made significant progress as the leading academic health center in New Jersey, and is also making significant national contributions to combat this pandemic. Rutgers alumni and friends of RBHS also came together to provide gifts and philanthropic support. (For more information on selected highlights of the RBHS response to the COVID-19 pandemic, see [Appendix C](#).) Additionally, a comparison of 40 health sciences universities was conducted to provide context for identifying RBHS's competitive advantages and potential challenges to inform strategies for the five-year strategic plan. (For more information on the comparative analysis, see [Appendix D](#).)





Strategic Plan | Strategic Planning Process

The chancellor initiated the strategic planning process by appointing a Strategic Planning Steering Committee (SPSC), aided by a Coordinating Committee (Table 1). A planning retreat held in February 2020 included a wide range of RBHS leadership and internal stakeholders. Eight major themes and subcommittees were formed and co-chairs identified (Appendix E). This was the first in an extensive series of activities designed to elicit the broadest possible participation by the RBHS community (faculty, staff, students, and trainees), Rutgers University at large, the two major teaching hospitals (University Hospital and Robert Wood Johnson University Hospital), RWJBarnabas Health, and the New Jersey Department of Health. Soon after the launch of the strategic planning process, the world was brought to a halt with the unprecedented pandemic of COVID-19 in March of 2020.

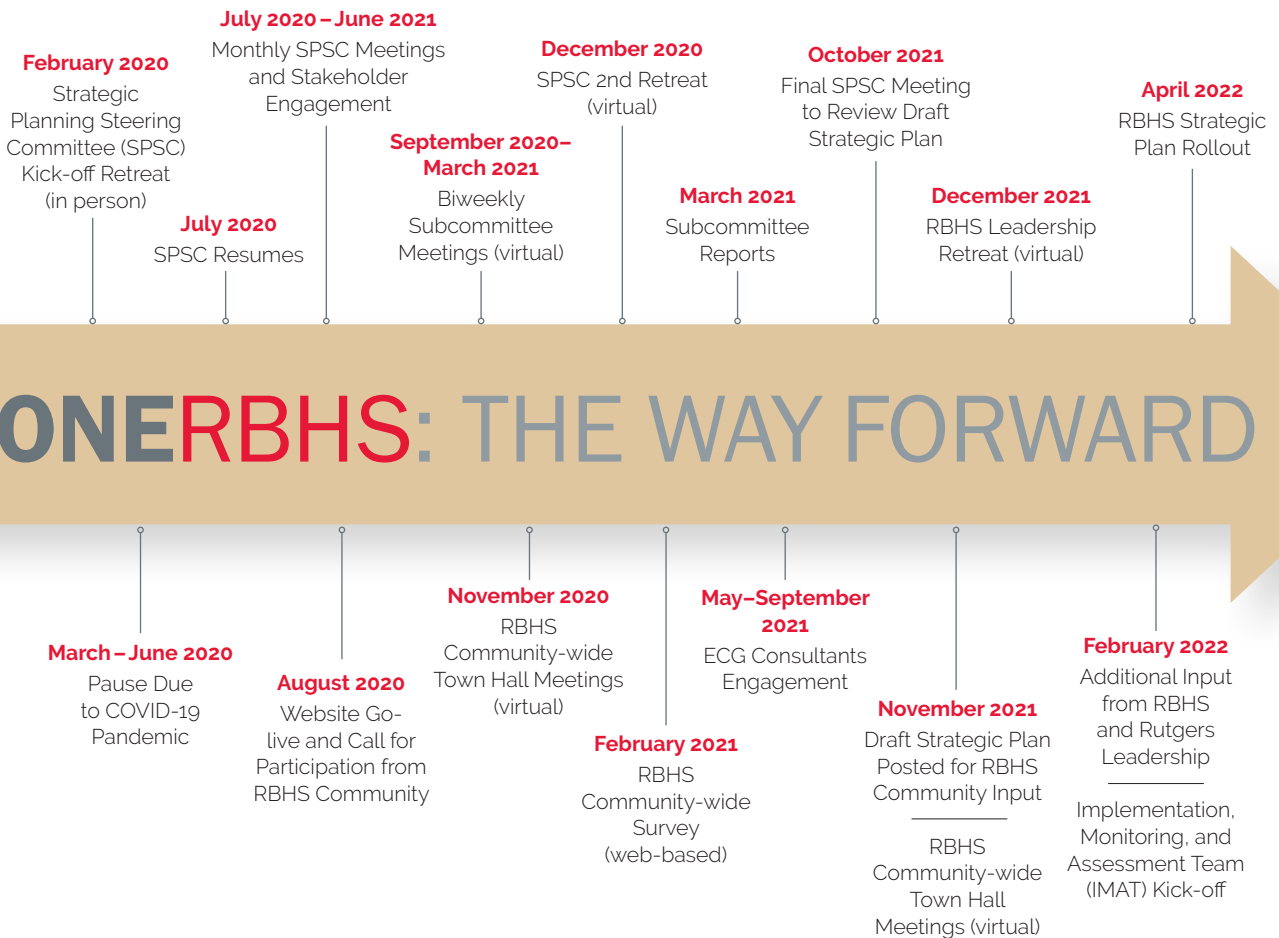


Table 1. Strategic Planning Committee Members

STRATEGIC PLANNING STEERING COMMITTEE (SPSC) MEMBERS
Andy Anderson, MD • President and Chief Executive Officer, RWJBarnabas Health Medical Group
Joseph Barone, PharmD • Dean and Professor, Ernest Mario School of Pharmacy
Sylvia Christakos, PhD (SPSC co-chair) • Distinguished Professor, New Jersey Medical School
Karen D’Alonzo, PhD • Associate Professor, Division of Nursing Science, School of Nursing
Cecile Feldman, DMD, MBA • Dean and Professor, Rutgers School of Dental Medicine
Bruce Haffty, MD, MS • Chair of Radiation Oncology and Associate Vice Chancellor for Cancer Programs, Cancer Institute of New Jersey
Zach Hosseini, BA • Associate Vice Chancellor for Marketing and Communications, RBHS
Shawna Hudson, PhD • Research Division Chief and Professor, Family Medicine and Community Health, Robert Wood Johnson Medical School
Teri Lassiter, PhD, MPH • Assistant Dean for Equity, Diversity, and Inclusion, School of Public Health; Assistant Professor, Department of Urban-Global Public Health, School of Public Health (RBHS Faculty Council representative)
Gwendolyn Mahon, MSc, PhD (SPSC co-chair) • Dean and Professor, School of Health Professions
Reynold A. Panettieri, Jr, MD • Vice Chancellor for Translational Medicine, RBHS; Professor, Robert Wood Johnson Medical School
Pamela Valera, PhD, MSW • Assistant Professor, Department of Urban-Global Public Health, School of Public Health
Kyle Warren, PhD, MAE • Senior Vice Dean, Administration and Student Services, School of Nursing
SPSC COORDINATING COMMITTEE
Gwendolyn Mahon, MSc, PhD (SPSC co-chair) • Dean and Professor, School of Health Professions
Sylvia Christakos, PhD (SPSC co-chair) • Distinguished Professor, New Jersey Medical School
Brent Ruben, PhD • Distinguished Professor, Communication, Rutgers School of Communication and Information; Advisor for Strategy and Planning, Office of the Executive Vice President for Academic Affairs; Senior Fellow, Center for Organizational Leadership
Bishr Omary, MD, PhD • Senior Vice Chancellor for Academic Affairs and Research, RBHS
Meredith Mullane, MA • Vice Chancellor for Academic Affairs, RBHS
Adrienne Ettinger, ScD, MPH, MS • Chief of Staff for Research, RBHS
Denisse Caban-Santiago, BS • Executive Assistant, RBHS

The strategic planning process paused for four months as the university and RBHS focused on the immediate needs of our patients, students, faculty, and staff. By July 2020, the process resumed and the RBHS strategic plan was developed according to the timeline shown (Figure 1). A website was developed to promote remote participation and provide ongoing updates to the RBHS community. An environmental scan provided a framework for identifying RBHS’s competitive advantages and potential challenges, as well as short- and long-term opportunities. Participation in the subcommittees by RBHS community members—including faculty, staff, students, and trainees—was solicited through email, a website, and a community-wide survey (see **Appendix E** for list of subcommittee membership). Participation was not limited to the strategic plan committees; a wide range of approaches was utilized to engage all members of the RBHS community in the strategic planning process. Additional input was solicited through email, phone calls, a website portal, two phases of community-wide virtual town hall meetings, and two community-wide surveys. Utilizing the recent advances and popularity of web-based conferencing, the town halls had very strong attendance and active participation.

Figure 1. Timeline for Development of the Strategic Plan



During the first three virtual town halls, community members engaged in discussion on many critical questions, gathering comments and suggestions through real-time polls, surveys, chat boxes, and word clouds. To illustrate, one of the important interactive questions asked during the town halls was: “What are three words that come to mind to describe the culture you would like to see at RBHS?” The word clouds generated by this question (Figure 2) and the data collected from other questions greatly influenced the direction of the plan and refinement of our vision and values.

From September 2020 to March 2021, the subcommittees met regularly to engage internal and external stakeholders, review data, and develop measurable objectives. A second SPSC retreat was held in December 2020 to review progress and provide further direction to the subcommittees. In March 2021, the subcommittees produced reports with details of strategic activities and initiatives to be considered. Meetings with leadership and stakeholders continued through July 2021 (Appendix F), followed by compilation of the subcommittee reports into an initial draft of the plan (see Appendix G for a list of references). The initial draft of the plan was shared with the RBHS community in November 2021, coupled with three additional community-wide town halls and an online survey to seek a final round of input. All the feedback from the activities described above was thoroughly reviewed and considered in the final iteration of the new strategic plan. The bold vision of One RBHS presented in this strategic plan would not have been possible without the collective and essential involvement and input by the RBHS community, Rutgers University leadership, affiliates, and stakeholders.



Figure 2. Word clouds generated in real-time during three virtual town halls with RBHS community in 2020.



Commitment to Diversity, Equity, and Inclusion

A commitment to diversity, equity, and inclusion at Rutgers University has been highlighted as a distinct and major pillar of the strategic direction and plan. The overall framework for the “University Diversity Strategic Plan” has five priorities (inset).

University Diversity Strategic Plan Priorities

- 1 • Recruit, retain, and develop a diverse community
- 2 • Promote inclusive scholarship and teaching
- 3 • Define sustainable and substantive community engagement
- 4 • Build the capacity of leaders to create inclusive climates
- 5 • Develop an institutional infrastructure to drive change

These priorities are woven into the RBHS strategic plan. RBHS is deeply committed to diversity, equity, and inclusion (DEI) and is actively engaged in a process of institutional transformation to create a culture of belonging for all. In 2019, the chancellor appointed an inaugural vice chancellor for diversity and inclusion (VCDI) to champion, lead, and implement a fully integrated DEI strategy and enhance initiatives that foster an inclusive culture at RBHS. The creation of the VCDI position was one of the primary recommendations of the report titled Best Practices for the Recruitment and Retention of Minority Faculty (2017), authored by RBHS faculty members. The VCDI established and works closely with a Diversity Leadership Council comprised of diversity leaders from across RBHS to implement

multiple initiatives, such as an aspirational RBHS DEI Statement, and promote affinity groups to build community and foster deeper dialogue around DEI issues. “One RBHS: The Way Forward” reflects the RBHS commitment to make DEI a priority, integrated into all aspects of the new strategic plan.

Mission

Provide exceptional health care, education and training, research, and discovery for the people of New Jersey and beyond



Vision

To be a distinguished national model for health care access and quality, research and innovation, interprofessional education and health care, and community service and engagement

Values

Dedicated to respect, collaboration, inclusion, excellence, innovation, and accountability in all that we do



Foundation

At the foundation of “One RBHS: The Way Forward” are the RBHS mission, vision, and values (above). The mission and vision statements from the 2014 strategic plan were updated to reflect the values and strategic priorities in relation to the university’s structure within the state of New Jersey. The six fundamental values (respect, collaboration, inclusion, excellence, innovation, and accountability) emerged directly from the feedback of the RBHS community and stakeholders during the strategic planning process.

Strategy

Central to achieving the vision of One RBHS as a unified entity is strengthening our collective identity, building connections across disciplines and mission areas, and promoting a culture of respect and inclusion. This was reiterated by leaders and representatives from internal and external stakeholder groups and the RBHS community.

Consistent with these aspirations, “One RBHS: The Way Forward” includes nine strategic goals: five unifying theme (U) goals and four mission-based (M) goals. The five unifying themes described within this plan are: 1) people and workforce; 2) inclusive, respectful, and accountable culture; 3) team-based approaches; 4) enabling systems and structures; and 5) connections and identity. These themes are integrative and cross-cutting because of their span across the four traditional core RBHS mission areas—clinical care, education and training, research and innovation, and community engagement. The objectives identified for each of the four traditional mission goals link the inaugural RBHS 2014–2019 strategic plan to ‘the way forward’ toward our aspirational One RBHS. Collectively, these goals are consistent with, and reinforce, President Holloway’s three value propositions—becoming a beloved community, advancing academic excellence, and achieving greater strategic clarity. Importantly, implementation of the objectives and initiatives for each of the nine goals, while adhering to our values and mission, is foundational to the success of the strategic plan (see Implementation, Monitoring, and Assessment).



Each of the nine overarching strategic goals is focused on leveraging strengths and opportunities, creating greater unity and coherence, achieving optimal organizational alignment and structural clarity, and enhancing the effectiveness and efficiency of administrative processes and technology to achieve excellence at RBHS.



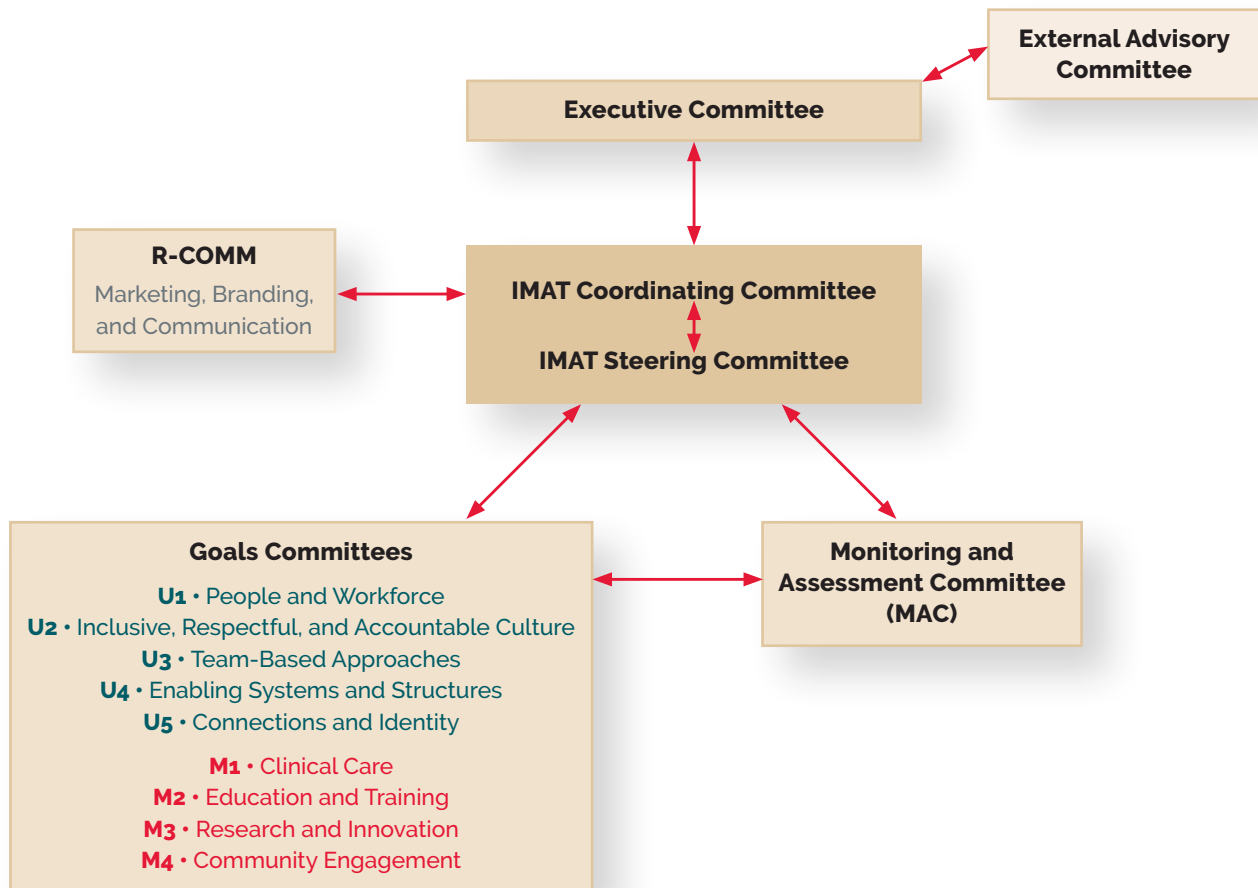
Implementation, Monitoring, and Assessment

To achieve the strategic goals articulated in this plan, an Implementation, Monitoring, and Assessment Team (IMAT) will be assembled and charged shortly after the final strategic plan is released (Figure 3). This is an opportune moment in RBHS's history to develop a comprehensive set of outcome measures and key performance indicators that reflect impact across our broad range of disciplines and mission areas. The IMAT will develop expanded performance, outcome, and impact metrics, drawing on leading practices nationally, to help to monitor and evaluate individual and collective progress and success across mission areas and unifying themes. Traditional benchmarks include such well known metrics as: sponsored research award dollars, total enrollment numbers, student success, scientific awards, national rankings, and financial stability. While necessary and useful, these metrics do not fully capture all the aspirations articulated in the plan that touch upon the broad and multi-dimensional impact of RBHS on the state, nation, and globe. The portfolio of potential impact measures should also showcase the many activities, accomplishments, and outcomes with which members of our community identify, and that many of our community and affiliates consider as distinguishing features and elements of pride for RBHS as an institution. The additional metrics would focus on impacts such as culture change, process improvements, innovation and entrepreneurship, connections and identity, workforce development, wellness, feedback from RBHS community surveys, and team-based approaches and collaborations.

Outlining such an inclusive approach to defining excellence, in addition to traditional measures of success, is another way that RBHS can be a national leader as a premier academic health center. The IMAT will be charged with the development of milestones and timelines, identification of responsible parties and deliverables, and resources needed to implement the goals’ objectives.

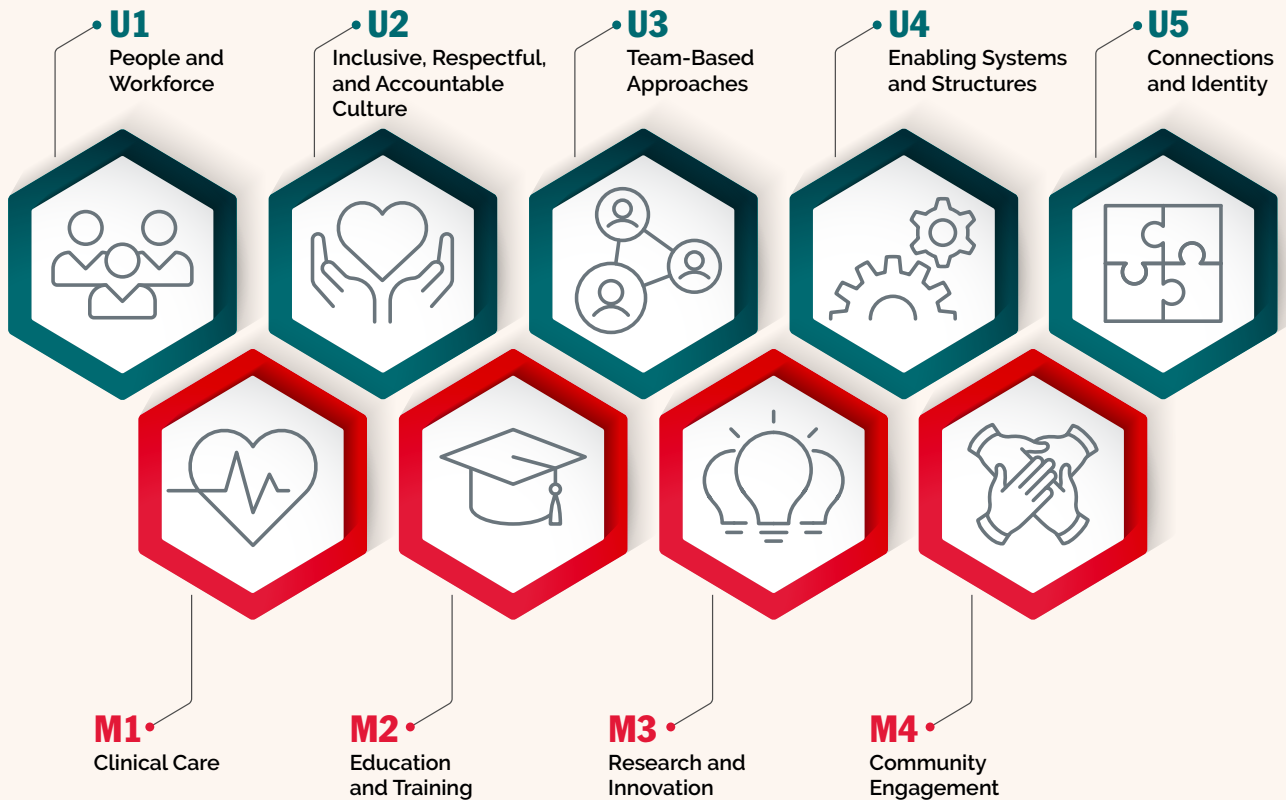
The IMAT will coordinate the iterative process of tracking progress, assessing outcomes based on new and existing metrics, and making refinements as needed for each of the goals, objectives, and specific initiatives or activities as indicated in the examples below. Each year, a progress report will be developed by the IMAT and disseminated to the RBHS community, and the individual units that comprise RBHS will coordinate via the chancellor’s office to align their unit plans with the overarching RBHS plan in both time and approach. The intent is that individual units within RBHS will incorporate the vision and goals advanced in the RBHS plan, and Rutgers University overall, within their own planning and implementation efforts.

Figure 3. Implementation, Monitoring, and Assessment Team (IMAT) Framework



Overview of Strategic Goals

STRATEGIC GOALS: UNIFYING THEME



STRATEGIC GOALS: MISSION-BASED

Unifying Theme (“U”) Goals

U1 People and Workforce

Grow and support an exceptional, compassionate, and diverse workforce

U2 Inclusive, Respectful, and Accountable Culture

Foster a culture of respect that prioritizes inclusion and accountability

U3 Team-Based Approaches

Emphasize team-based and collaborative approaches across all mission areas

U4 Enabling Systems and Structures

Increase the effectiveness of enabling systems, structures, and processes

U5 Connections and Identity

Develop and promote a shared One RBHS identity

Mission-Based (“M”) Goals

M1 Clinical Care

Actualize interprofessional synergies to optimize clinical care and the patient experience

M2 Education and Training

Educate, train, and prepare a diverse New Jersey biomedical and health sciences workforce

M3 Research and Innovation

Build on RBHS strengths and opportunities to excel in discovery and innovation

M4 Community Engagement

Engage meaningfully with local and global communities

Unifying Theme Goals with Objectives



Goal U1

Grow and support an exceptional, compassionate, and diverse workforce



Our people are at the heart of a successful One RBHS. The objectives of this goal are focused on developing, supporting, and promoting our workforce, including our students and trainees who represent our future. The growth and evolution of the RBHS community is centered on a commitment to principles of diversity, equity, and inclusion, and RBHS core values.

U1. Objective 1. Recruit, promote, and retain highly qualified and compassionate faculty, staff, students, trainees, and leaders from diverse backgrounds and experiences.

Specific Initiatives

- 1a) Coordinate efforts between all the RBHS schools, RWJBarnabas Health, and University Hospital to recruit and retain highly qualified, dedicated professionals in clinical care, education, research, and service.
- 1b) Identify and leverage pathway programs and support networks within the university and external community to grow and sustain enrollment, retention, wellness, and success of students and trainees.
- 1c) Provide high-quality human resources support to excel in unit-level recruitment and onboarding services for the RBHS workforce.
- 1d) Develop expanded metrics of success and measures of impact across the disciplines that recognize contributions to RBHS and Rutgers Health.
- 1e) Support processes to address equity in salary, benefits, and other resources.

U1. Objective 2. Support the recruitment, inclusion, and retention of diverse faculty, staff, students, trainees, and leaders.

Specific Initiatives

- 2a) Ensure that diversity, equity, and inclusion policies and guidelines are clearly communicated and implemented to support the recruitment of diverse faculty, staff, students, and trainees.



- 2b) Develop outreach and recruitment strategies to reach and engage diverse candidates as part of the search, hiring, and onboarding processes.
- 2c) Provide pathways for career development, promotion, retention, and leadership advancement for faculty, students, trainees, and staff across diverse backgrounds.
- 2d) Leverage the Presidential Faculty Diversity Initiative and consider supplemental RBHS recruitment programs to enhance the diversity of our faculty and trainees.
- 2e) Promote scholarly activities that advance the commitment to diversity, equity, and inclusion.

U1. Objective 3. Enhance professional development, advancement, and recognition by providing support and mentorship for growth opportunities for faculty, staff, students, and trainees at all levels.

Specific Initiatives

- 3a) Delineate clear guidance for faculty at all levels to pursue career advancement in research, education, clinical care, team science, and community engagement, and support professional development in these areas.
- 3b) Expand opportunities for faculty leadership development through mentored administrative roles.
- 3c) Develop and enhance training and pathway programs for the recruitment and retention of educators, particularly in fields where there is a national shortage of practitioners.
- 3d) Create professional growth and enhancement activities for staff in leadership and personal development for higher-level administrative roles.
- 3e) Build a culture of recognition and celebration, encouraging nominations of faculty, staff, students, and trainees for appropriate internal and external honors, awards, and recognitions at all levels.

U2

INCLUSIVE,
RESPECTFUL,
AND
ACCOUNTABLE
CULTURE



Goal U2

Foster a culture of respect that prioritizes inclusion and accountability

This unifying theme focuses on developing the ideal RBHS workplace that fosters a positive environment to nurture, empower, and support the RBHS community to achieve excellence. The objectives of this goal aim to recognize and celebrate our different qualities and experiences, and promote a climate of inclusion, respect, and belonging for all in the spirit of forming a ‘beloved community.’ Additionally, personal, leadership, and institutional collective accountability are paramount to successfully achieving this goal.

U2. Objective 1. Promote a culture of respect and belonging that recognizes and values multiple points of view irrespective of a person’s role, professional field, or background.

Specific Initiatives

- 1a) Design and implement an RBHS-wide campaign to advance “A Culture of Respect” at RBHS, as a demonstration project and a component of President Holloway’s tenet of a beloved community.
- 1b) Develop programming at all levels focused on behaviors necessary to promote a culture of respect.
- 1c) Implement an ongoing cultural assessment program for RBHS with the aim of developing a signature experience focused on respect in the RBHS work environment.
- 1d) Conduct town halls, focus group meetings, opportunities for meeting with leadership, and leadership walkabouts to discuss updates, progress, ideas, potential initiatives, concerns, and challenges with community members.
- 1e) Initiate RBHS “sharing days” that include opportunities for units to share successes and accomplishments.

U2. Objective 2. Enhance individual and collective accountability for creating a respectful and inclusive environment throughout RBHS.

Specific Initiatives

- 2a) Foster an environment in which every person feels responsible and advocates for living by RBHS’s stated values.



- 2b) Implement programs that raise awareness and provide training on unconscious bias to promote cultural humility.
- 2c) Enhance leadership training to ensure that RBHS leaders develop or enhance critical competencies, including skills necessary for implementing diversity, equity, and inclusion policies and programs.

U2. Objective 3. Foster behaviors, practices, and approaches that consider personal and professional morale and well-being.

Specific Initiatives

- 3a) Assess and understand the morale and wellness challenges that are affecting different parts of the RBHS community across the mission areas.
- 3b) Design and implement programs to build a culture of wellness at RBHS for faculty, staff, students, and trainees.
- 3c) Provide training for leadership on approaches to support personal and professional morale and well-being for faculty, staff, students, and trainees.
- 3d) Provide consistent training and support for leadership at all levels so that well-being is habitually considered in decision processes affecting RBHS missions.

U3

TEAM-BASED
APPROACHES

Goal U3

Emphasize team-based and collaborative approaches across all mission areas

A unique aspect of RBHS is its comprehensive constellation of health professions schools (dentistry, health professions, medicine, nursing, pharmacy, and public health) and affiliations with the major statewide health system—RWJBarnabas Health, the state’s only public tertiary care hospital—University Hospital, and the VA New Jersey Health Care System. These affiliations afford significant opportunities for RBHS to contribute, excel, and lead in team-based and collaborative approaches to interprofessional education, clinical care, research, and community engagement.

U3. Objective 1. Establish RBHS as a research and innovation center that leverages its strengths to promote team-based, interprofessional education, research, and clinical care to holistically address the health needs of the populations and communities we serve.

Specific Initiatives

- 1a) Provide seed funding for interprofessional and integrative care projects or research collaborations involving two or more disciplines, Rutgers schools, or RBHS affiliates, to create a culture of interprofessional practice that reflects team-based science and clinical care.
- 1b) Foster affiliations with community agencies that focus on underserved populations to improve health equity and increase the quality of the collaborations.
- 1c) Identify key ambulatory practice sites (e.g., National Committee for Quality Assurance [NCQA] Patient-Centered Medical Homes) for beta-testing with team-based models of care and support, scaling innovations based on evidence of impact.
- 1d) Establish an interprofessional clinic system, fully incorporating students and trainees as value-added resources, in collaboration with RBHS and its affiliated teaching hospitals.
- 1e) Develop infrastructure to support interprofessional service-learning projects.



U3. Objective 2. Collaborate to share resources and create opportunities by fostering community and interprofessional participation among RBHS units across Rutgers University and beyond.

Specific Initiatives

- 2a) Produce a landscape assessment report to determine current team-based, integrated care initiatives that can be leveraged or spread, and specific populations or conditions that should be the target of research and innovation.
- 2b) Develop a common set of competencies and outcome metrics for interprofessional teamwork, team practice, and integrated care.
- 2c) Ensure that all trainees and members of the health care team are trained in a common high-performance team construct such as AHRQ's Team STEPPS® or RWJBarnabas Health's high reliability organization (HRO) performance culture.
- 2d) Assess existing school-level programs to understand whether they are already engaged with interprofessional teams, have capacity for more students and trainees, and/or will benefit from engaging students or trainees beyond their unit.
- 2e) Establish performance metrics that recognize the contribution of all team members to achieving optimal health outcomes as well as key quality, impact, and financial metrics.

U3. Objective 3. Enhance bidirectional integration of basic, clinical, translational, and population-based research efforts to build and synergize impactful team collaborations.

Specific Initiatives

- 3a) Identify and invest in novel platforms to enhance science across disciplines (e.g., biomedical and health informatics) and recognize the importance of team science in faculty appointments and promotions.
- 3b) Grow the use of the newly deployed EPIC electronic health records system for translational research to improve patient care.
- 3c) Develop a mechanism to seed pilot projects to facilitate research collaborations involving clinical and basic science research across the translational continuum.
- 3d) Identify disease-specific and subject matter experts to champion building patient or participant cohorts.
- 3e) Build on current research strengths and work through existing and new centers of excellence to set standards and expectations for the delivery of care that focuses on the patient and the community to advance new therapies, preventive health, and evidence-based health care.



U3. Objective 4. Advocate within the institution, and at the state and national levels, for policy and regulatory changes that promote and strengthen team-based, interprofessional practice.

Specific Initiatives

- 4a) Conduct an audit of internal credentialing procedures and practice structures throughout RBHS, RWJBarnabas Health, and University Hospital to identify cultural, structural, or regulatory barriers to effective team-based care.
- 4b) Advocate to better align licensing and scope of practice with team-based care, ensuring all health care professionals are functioning at the top of their license.
- 4c) Advocate for acceleration of payments to align incentives with team-based care delivery models and advance value as defined by access, affordability, experience, quality, safety, and equity.
- 4d) Advocate to modernize guidelines that reflect and promote team-based care delivery.
- 4e) Establish regular meetings between RBHS professional schools and the Rutgers Government Affairs office to prioritize legislative and regulatory initiatives that will positively impact and support Rutgers and RBHS strategic priorities.

U4ENABLING
SYSTEMS
AND
STRUCTURES**Goal U4****Increase the effectiveness of enabling systems, structures, and processes**

There are several enabling systems and administrative structures that need to be enhanced for RBHS to fulfill its mission and succeed in implementing its strategic goals. The following objectives focus on infrastructure needs and administrative functions, ensuring efficient systems, structures, and processes, and improving knowledge and information management.

U4. Objective 1. Assess and identify high-impact opportunities to improve operational and financial processes, technology, and support systems.
Specific Initiatives

- 1a) Establish an RBHS-wide chancellor's advisory committee to conduct a systematic review of the structure and function of operational and financial processes, technology, and support systems.
- 1b) Leverage processes and systems to support collaboration between and across RBHS units and chancellor-led units, in consideration of the responsibility center management (RCM) funds flow.
- 1c) Create opportunities for communication and collaborative planning between RBHS and RWJBarnabas Health information technology (IT) teams to ensure systems integration between the two entities.
- 1d) Ensure organizational, cultural, and leadership effectiveness by leveraging industry approaches to enhance efficiency and process improvement.
- 1e) Foster and support a culture of improvement, aspirational goals, and sustained excellence and efficiency across academic programs and support units.

U4. Objective 2. Identify and consolidate isolated, underutilized, or duplicative units, space, or services so that the sum is greater than the individual parts.
Specific Initiatives

- 2a) Review facilities and space utilization while considering administrative, clinical, research, and instructional needs to deliver on the RBHS mission considering remote work, telehealth, and virtual learning opportunities.
- 2b) Determine if isolated, underutilized, or inadequate space can be repurposed or renovated for equitable and efficient utilization of resources.

- 2c) Explore the possibility of joint RBHS–Rutgers departments across the chancellor-led units to synergize efforts and maximize impacts (e.g., biomedical engineering, biochemistry and molecular biology, human genetics).
- 2d) Evaluate options for further collaboration and potential consolidation of medical schools to synergize efforts and maximize outputs.

U4. Objective 3. Improve knowledge and information management practices across RBHS to enhance strategic decision-making and implementation, improve organizational effectiveness, and drive institutional success.

Specific Initiatives

- 3a) Appoint an RBHS administrator as “knowledge manager” to ensure optimal collection and use of high-quality data and information for decision-making and to develop policies and procedures around information and knowledge management at RBHS.
- 3b) Engage units in the design and maintenance of an RBHS knowledge management system to ensure that accurate source data is identified, captured, maintained, and shared appropriately.
- 3c) Identify unit-based data stewards to feed into a larger RBHS knowledge management system on a regular basis, so information can be transformed into usable knowledge for learning, innovation, and strategy.
- 3d) Develop key performance indicators and timelines across the mission areas and unifying themes to support strategic plan implementation and improve organizational processes, outcomes, and impacts.
- 3e) Apply descriptive and predictive modeling techniques to recognize patterns, analyze trends, identify actionable data insights, and develop informed policies, procedures, and strategies.



U5

CONNECTIONS
AND IDENTITY**Goal U5****Develop and promote a shared One RBHS identity**

RBHS and Rutgers Health are relatively new branded entities, including our clinical affiliations with RWJBarnabas Health and University Hospital. This presents an opportunity for RBHS to address identity challenges, grow reputation, and promote philanthropic collaborations and gifts. The adoption of a singular, unique identity to unite the Rutgers health affairs mission is critical to the long-term success of the institution as we build New Jersey's premier academic health center into a nationally renowned system.

U5. Objective 1. Elevate the university's reputation by creating a unified brand for RBHS and Rutgers Health that will be adopted across the university's clinical, education, research, and service missions.

Specific Initiatives

- 1a) In collaboration with RWJBarnabas Health, develop a unifying brand platform (e.g., Rutgers Health) that highlights the benefits of the affiliation to the population of New Jersey and beyond.
- 1b) Develop a shared communications strategy between RBHS and health system affiliates, strengthening and clarifying the Rutgers Health brand.
- 1c) Develop an RBHS marketing campaign targeted at elevating RBHS's reputation by effectively communicating clinical, educational, research, and community engagement successes to internal and external audiences.

U5. Objective 2. Enhance communication and collaboration among and between RBHS, the other chancellor-led units, and the university leadership via cross-unit planning.

Specific Initiatives

- 2a) Enhance communication among and between RBHS, the other chancellor-led units, and the university leadership as related to mission, accomplishments, strategic goals, premier endeavors, and collaboration opportunities.
- 2b) Align complementary efforts to increase collaborations, avoid duplication, and decrease competition for limited internal and external resources.
- 2c) Conduct regular chancellor-led strategic meetings to include report-outs and coordination of projects identified as aligned or mutually supporting regarding resources and project outcomes/impacts.



U5. Objective 3. Promote the philanthropic culture of giving within RBHS.

Specific Initiatives

- 3a) Aim to increase major ($\geq \$100,000$) and principal ($\geq \5 million) gifts from alumni, grateful patients, friends of health care, foundations, and corporations.
- 3b) Foster a culture that encourages faculty, staff, students and trainees, and alumni to actively engage with the Rutgers University Foundation in the identification, cultivation, and stewardship of donors and prospective donors.
- 3c) Collaborate with the Rutgers University Foundation to make sustainable investments in RBHS development resources.
- 3d) Bring clarity and focus to fundraising efforts by allocating development staff and resources toward strategic priorities and areas that have the best potential to garner private philanthropic interest.
- 3e) Ensure that RBHS and RBHS fundraising priorities are well-represented in Rutgers University's comprehensive fundraising campaign that is anticipated to cover the period 2023 to 2028.
- 3f) Seek opportunities to collaborate with RWJBarnabas Health on joint fundraising initiatives that have the potential to grow the pool of prospective donors for both entities.

Mission-Based Goals with Objectives

M1 CLINICAL CARE

Goal M1

Actualize interprofessional synergies to improve clinical care and the patient experience



RBHS represents New Jersey's only comprehensive academic health care system, and includes world-class faculty, staff, students, and other trainees across the full spectrum of educational and training opportunities, research, and health care delivery. The objective of this goal is to leverage the comprehensive and unique aspects of RBHS and Rutgers University, coupled with the unique affiliations with RWJBarnabas Health, University Hospital, and the VA New Jersey Health Care System to lead by improving the health of our communities through the delivery of the highest quality of, and access to, integrated and interprofessional clinical care and preventive health.

M1. Objective 1. Build an integrated, collaborative, patient-centered workforce and interprofessional care environment that leverages the expertise and breadth of our health care faculty, students and trainees, and support teams.

Specific Initiatives

- 1a) Support a faculty navigator to improve the onboarding process within RBHS and the affiliated health care facilities with a focus on a high-impact orientation program and a streamlined credentialing process.
- 1b) Educate collaborative, practice-ready health professionals who are fully equipped to function effectively in an interprofessional care environment.
- 1c) Work with health system and hospital affiliates to develop and retain the highest caliber talent.
- 1d) Promote diverse representation from a variety of health professions in leadership and decision-making roles and as members of strategic committees within RBHS and our health system and hospital affiliates.
- 1e) Expand and diversify faculty recruitments using strategic and mission support to increase tenure and nontenure faculty positions across all RBHS schools.

M1. Objective 2. Embrace and utilize existing and new technologies to facilitate team-based, patient-centered care.

Specific Initiatives

- 2a) Leverage technology and informatics to continuously improve and standardize best practices for the individual patient and for our communities.
- 2b) Optimize electronic health records using the newly deployed EPIC system to create comprehensive documentation with contributions to care by a broad range of health professions.
- 2c) Build a mechanism to promote and manage referrals among specialties and disciplines as part of growing one-stop destinations for patients.
- 2d) Advance and promote the development of innovative technologies that the broader health care team can collectively use to care for patients (e.g., telehealth, apps, chat, text).
- 2e) Acknowledge and adhere to communication preferences of patients and families.

M1. Objective 3. Work with our strategic health care affiliates to foster and further develop service lines and clinical centers of excellence and align our joint strategic goals.

Specific Initiatives

- 3a) Further develop service lines to foster efficiencies in care delivery; standardize clinical workflows, processes and practices; and foster internal collaborations and coordination of care.
- 3b) Build on current centers of excellence in cancer, infection and inflammation, and neuroscience, and further develop emerging centers of excellence in primary care, cardiovascular and metabolic diseases, behavioral health, population health, and other key service lines.
- 3c) Increase internal and external referrals and clinical volumes to our current and emerging centers of excellence, and increase the visibility, reputation, and rankings of our clinical programs as compared to peer institutions.
- 3d) Align, where possible, the clinical and clinical research strategic goals of Rutgers Health and RBHS with our affiliate health systems.

M1. Objective 4. Identify tactics to remove barriers and optimize access and coordination of care.

Specific Initiatives

- 4a) Assure that patients, regardless of their point of entry into the health care system, have full and readily available access to all facilities, specialty programs, technologies, and clinical trials.
- 4b) Promote and manage internal referrals among specialties and disciplines and across facilities.

- 4c) Create new team-based, interprofessional, patient-centered performance dashboards with an expanded set of outcomes that reflect the health care team’s responsibility for integration across the continuum of care.
- 4d) Foster affiliations with community agencies that focus on health equity and marginalized populations and make efforts to improve the quality of existing collaborations.

M1. Objective 5. Accelerate the transition from fee-for-service to value-based health care delivery.

Specific Initiatives

- 5a) Develop meaningful metrics and hold responsible parties accountable for achieving progress toward establishing a value-based care model.
- 5b) Develop a robust communication and educational program to inform patients, communities, and the interprofessional health care team on value-based care delivery.
- 5c) Work with strategic affiliates and external payors to develop and promote alternative payment models that optimize value-based care delivery.
- 5d) Support care models that optimize the full interprofessional health care team to deliver the most cost-effective, high-quality coordinated care to patients.



M2EDUCATION
AND
TRAINING**Goal M2****Educate, train, and prepare a diverse New Jersey biomedical and health sciences workforce**

The objectives of this goal focus on fostering excellence in the delivery of health professions and biomedical sciences education by leveraging the strengths of our interprofessional community of educators across RBHS to recruit, train, support, and prepare a diverse and highly competitive New Jersey biomedical and health sciences workforce. The objectives also highlight the need to enhance the RBHS-wide teaching and learning infrastructure and elevate the recognition of educators and educational administration.

M2. Objective 1. Establish a process to provide support for the schools in developing programming to prepare a diverse and interprofessional 21st century health care workforce.

Specific Initiatives

- 1a) Promote an understanding of diversity, equity, and inclusion within academic disciplines and incorporate the need for cultural competency and humility across all health professions curricula.
- 1b) Create a searchable database to catalog shared teaching and learning resources (e.g., courses, modules, lectures, or webinars) and document interprofessional competencies across RBHS health professions programs.
- 1c) Implement a micro-credentialing and badging program across RBHS health professions education and research training programs.

M2. Objective 2. Identify ways to recognize, measure and reward excellence in teaching and educational program administration, including the criteria utilized in reappointment, promotion, and tenure review.

Specific Initiatives

- 2a) Evaluate the existing criteria for reappointment and promotion to reflect and recognize the importance of quality clinical and discipline-specific teaching and educational administration.
- 2b) Offer faculty on the educational track professional development support for designing education research and disseminating scholarly work on teaching and education.



M2. Objective 3. Engage, recognize, and retain Rutgers University, RWJBarnabas Health, and University Hospital practitioners as critical clinical preceptors and educators.

Specific Initiatives

- 3a) Increase awareness among senior leaders and clinical managers of the importance of teaching and mentoring as part of the core educational mission.
- 3b) Identify and grow a network of practitioners across Rutgers University, RWJBarnabas Health, and University Hospital to engage in clinical education as preceptors for students and trainees from all RBHS health professions schools.
- 3c) Provide training and professional development programs for preceptors and clinical educators across RWJBarnabas Health hospitals and University Hospital.
- 3d) Develop consistent standards and expectations for the clinical learning environment across all RWJBarnabas Health hospitals and University Hospital.
- 3e) Develop opportunities for recognition of providers in our health system affiliates who engage in the clinical education of students and trainees from all RBHS health professions schools.

M3RESEARCH
AND
INNOVATION**Goal M3****Build on RBHS strengths and opportunities to excel in discovery and innovation**

The objectives of this goal focus on building on the existing strengths of established and emerging strategic research areas, identifying and cultivating new areas of impactful and innovative research, and growing our research portfolio and presence to be leaders among our peer institutions. An important RBHS advantage is its affiliations with RWJBarnabas Health, University Hospital, and the VA New Jersey Health Care System, which provide access to patients for translational and clinical research, and proximity to New Jersey's extensive biotechnology and pharmaceutical companies. A robust RBHS research enterprise will improve health in New Jersey, address health-related social inequities, and provide an engine for discovery, innovation, and economic development.

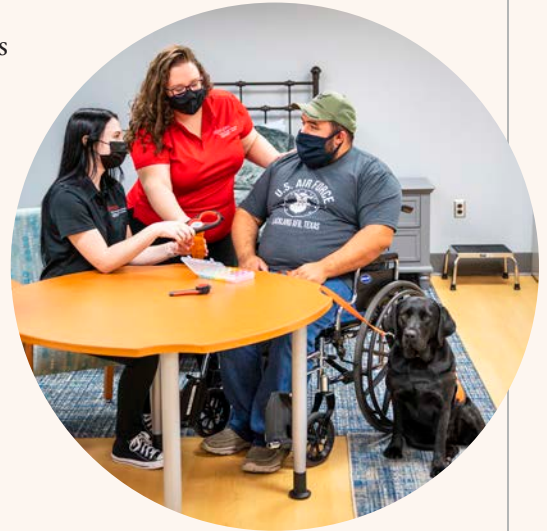
M3. Objective 1. Cultivate and grow research and innovation in targeted focus areas that have regional, national, and global impact.
Specific Initiatives

- 1a) Foster the continued growth of research programs from the inaugural strategic plan, including the signature areas of cancer, environmental and occupational health, infection and inflammation, neuroscience, and community health and health systems, and the complementary areas of clinical research, drug discovery and development, biomedical and health informatics, and public and global health.
- 1b) Cultivate four new signature areas: the microbiome, cardiovascular and metabolic disease, the biological basis of health and disease, and the intersection of climate change with health and the health care system.
- 1c) Conduct population research that examines the range of factors influencing health, including biomedical, behavioral, social, ethical, economic, and political studies at the individual, community, and population levels.
- 1d) Invest in innovative approaches that advance discovery (e.g., biomedical and health informatics, artificial intelligence, new transformative technologies and devices, novel experimental and disease model systems).
- 1e) Promote the dissemination of RBHS research findings and, when relevant, translate findings to practice and policy.

M3. Objective 2. Support and grow mutually beneficial research affiliations and scholarly activities that promote health equity, and individual, community, and population health.

Specific Initiatives

- 2a) Leverage community affiliations and stakeholder collaborations to conduct impactful clinical and population-based research to achieve health equity and enhance community and population health.
- 2b) Integrate diverse disciplinary, stakeholder, and community perspectives to engage multiple points of view on addressing problems and creating solutions through new interventions or programs, practices, or policies.
- 2c) Support community and population health research that addresses social determinants of health and improves health systems infrastructure, including programs, practices, and policies.
- 2d) Address emerging community health needs, including public health emergencies, by supporting adaptable, innovative, outcome-focused, and sustainable programs, practices, and policies.
- 2e) Tackle global health inequities by conducting research in communities around the world.



M3. Objective 3. Amplify and expand team science and collaborative research.

Specific Initiatives

- 3a) Develop collaborative, multidisciplinary teams that share a common understanding of language used and promote blending of perspectives across disciplines and experiences.
- 3b) Facilitate and build multi-investigator emphasis areas to obtain support from large or consortium NIH, NSF, other federal and nonfederal award mechanisms (e.g., program projects, specialized centers of excellence).
- 3c) Provide organizational structures, policies, practices, and resources to promote effective team science (e.g., acknowledgement of team science in recruitment, appointments and promotions, recognition).
- 3d) Explore the use of technology to enhance collaborations and reduce time required for coordination of activities.
- 3e) Design initiatives to reduce barriers for effective collaboration across the Rutgers chancellor-led units and across our health system affiliates.

M3. Objective 4. Create, support, and evaluate centralized core facilities and research support services and structures that reduce administrative burdens.

Specific Initiatives

- 4a) Evaluate core facilities and research resources to improve efficiency and reduce redundancy.
- 4b) Evaluate utilization of wet and dry laboratory space to optimize the potential for strategic growth.
- 4c) Review needs for renovation and modernization of existing space and the building of new state-of-the-art collaborative and interdisciplinary platforms.
- 4d) Devise mechanisms that minimize administrative burdens while ensuring regulatory compliance and safety.
- 4e) Develop an RBHS-wide biomedical informatics strategy to leverage resources of RBHS's clinical affiliate, RWJBarnabas Health, by catalyzing a new core activity in clinical informatics based on the EPIC system electronic health records and other datasets to enhance translational research, improve patient care, and advance biomedical discovery and innovation.

M3. Objective 5. Enhance mechanisms for promoting technology transfer and supporting investigator-initiated research and innovation.

Specific Initiatives

- 5a) Provide support to investigators to highlight the benefits of innovation and emerging technologies relating to medical or scientific utility, ability to attract funding, market viability, and possibilities for technology transfer.
- 5b) Deploy strategies linking investigators and establishing major research institutional collaborations with pharma and biotech companies.
- 5c) Develop an organized and robust data management system where information can be utilized for internal and external stakeholders.
- 5d) Evaluate the regulatory and policy environment to determine the implications for technology transfer.
- 5e) Institute programs that enhance and support the success, visibility, and growth of faculty research efforts (e.g., bridge funding, pilot grants, award nominations and recognitions).



M4COMMUNITY
ENGAGEMENT**Goal M4****Engage meaningfully with local and global communities**

The objectives of this goal are meant to ensure that, as a public institution, we are engaged with our local and global communities to advance research, education, and clinical care through service that addresses relevant community health challenges and needs. By engaging with these communities in ongoing collaborations, we can work together to improve and sustain health. Another important aspect of community engagement is to expose students and trainees to learning opportunities that expand consciousness of their impact on the communities they serve and increase awareness of the cultural and societal factors that affect health.

M4. Objective 1. Coordinate community engagement efforts to address health issues of mutual concern and ensure effective leveraging of community and university resources.

Specific Initiatives

- 1a) Engage with our local and global communities to advance research and service that addresses major societal issues, and partner with these communities in sustained collaborations that will serve to improve our collective futures.
- 1b) Bring together multisector collaboratives and support community-led collaboratives to advance community health.
- 1c) Foster affiliations with community agencies that focus on health equity and underserved populations and make efforts to improve the quality of these collaborations.
- 1d) Encourage the use of evidence-based practices to employ a health equity lens in community engagement programming.
- 1e) Integrate diverse disciplinary, stakeholder, and community perspectives to engage multiple points of view, to address problems and create solutions.



M4. Objective 2. Coordinate community engagement activities across RBHS and with all Rutgers chancellor-led units, the New Jersey Department of Health, and other state community services.

Specific Initiatives

- 2a) Establish a compendium of ongoing community service activities throughout RBHS (and Rutgers) to facilitate collaboration and operationalize community engagement across the mission areas in ways that faculty, staff, students, and trainees will recognize.
- 2b) Create an incubator system to foster community-focused research, education, and clinical collaborations across RBHS and Rutgers.
- 2c) Establish collaborations to address the community and population health needs of New Jersey by involving local organizations, state and federal agencies, philanthropic donors, and other stakeholders in the development of community-based research, learning, and service initiatives.
- 2d) Connect community affiliates to resources at RBHS and Rutgers, including faculty expertise, research findings, education tools, clinical services, and student service-learning opportunities.
- 2e) Include community representatives in program development and implementation of the RBHS strategic plan.

M4. Objective 3. Provide faculty, staff, students, and trainees with opportunities to learn about community engagement to positively impact community and population health.

Specific Initiatives

- 3a) Work with strategic clinical affiliates to invest in programs for health care access, prevention, primary and specialized care, and public health to promote community and population health.
- 3b) Work with strategic affiliates to move toward a value-based health care delivery system in the communities we serve, including more emphasis on social determinants of health and population health.
- 3c) Engage in training to build capacity to address health issues of mutual concern and ensure best practices in community engagement to promote community and population health.
- 3d) Provide learning opportunities for students and trainees with community members from surrounding underserved communities to gain exposure to research or training opportunities at Rutgers.

RBHS Schools, Centers, and Institutes

RBHS Schools

Ernest Mario School of Pharmacy
 New Jersey Medical School
 Robert Wood Johnson Medical School
 Rutgers School of Dental Medicine
 School of Graduate Studies
 School of Health Professions
 School of Nursing
 School of Public Health



Original RBHS Centers and Institutes

Rutgers Cancer Institute of New Jersey
 Center for Advanced Biotechnology and Medicine
 Environmental and Occupational Health Sciences Institute
 Institute for Health, Health Policy, and Aging Research
 University Behavioral Health Care

New RBHS Centers and Institutes

Brain Health Institute
 Center for Population–Level Bioethics
 Center for Tobacco Studies
 Rutgers Global Health Institute
 Institute for Infectious and Inflammatory Disease
 Rutgers Institute for Translational Medicine and Science

RBHS Schools



Ernest Mario School of Pharmacy

The School of Pharmacy has a long and illustrious history, dating back to 1892 when the state's first pharmacy program was launched in Newark. In 1971 the Rutgers College of Pharmacy moved to William Levine Hall on the developing Busch Campus in Piscataway. Programs expanded as an emphasis on clinical care and pharmaceutical research transformed the educational experiences for our students. In 2002, the school was renamed the Ernest Mario School of Pharmacy (EMSOP). In the early years of the 21st century, the Susan Lehman Cullman Lab for Cancer Research was built to support expanding research programs. The latest building project, the 2017 addition to the Levine building (24,882 ft²), provides strong support for the educational programs, with significant new space for classrooms, simulation labs, and student study spaces. The new EMSOP addition includes state-of-the-art classrooms, hospital simulation spaces, a mock intravenous admixture lab, telepharmacy suite, patient assessment rooms, and administrative space. These new facilities support state-of-the-art high fidelity/immersive simulations for PharmD students and pharmacy residents, RBHS schools and centers, and, increasingly, education and training for clinicians across RWJBarnabas Health.

Today, EMSOP is a leading institution dedicated to excellence in pharmacotherapeutic health care and biomedical education, innovative and visionary research, scholarship in the pharmaceutical sciences, clinical practice affiliations with health care institutions and industry, and outreach and community services that address the needs of the citizens of New Jersey and society at large. The school continues to build on its four pillars of excellence: teaching, research, clinical practice, and service.

More than 100 full-time faculty are housed across five departments: chemical biology, pharmacy practice and administration, pharmacology and toxicology, pharmaceuticals, and medicinal chemistry. Key areas of research include cancer prevention, anti-viral drug development, environmental and viral toxicology, drug metabolism and drug transporters, novel antibiotics and anticancer drugs, drug delivery and nanotechnology, and medical countermeasures against chemical threats. Pharmacy school faculty actively collaborate in major research programs, primarily with faculty at Rutgers Cancer Institute of



New Jersey and the Environmental and Occupational Health Sciences Institute (EOHSI). In FY 2020, EMSOP faculty received more than \$13 million in competitive research funding (\$10.5 million from NIH) and ranked sixth for NIH awards among pharmacy schools in the Big Ten Academic Alliance.

EMSOP offers the Doctor of Pharmacy (PharmD) program, which provides a strong foundation in basic and clinical sciences coupled with an emphasis on patient-centered care. The program offers diverse opportunities and experience in clinical practice, the biopharmaceutical industry, public health agencies, managed care, and laboratory and computational

research. Approximately 200 students complete the doctorate program each year. In 2021, the school graduated its first class of PharmD students who benefited from a major curricular transformation, with integrated coursework in systems and therapeutics, greater emphasis on professional development, structured interprofessional opportunities, and enhanced focus on the pharmacy patient care process. PharmD students at EMSOP may augment their education with dual-degree programs: PharmD/PhD; PharmD/MBA; PharmD/MPH; PharmD/MS in health outcomes, policy, and economics; and PharmD/MD (the first such program in the U.S.). In addition to the doctoral degree, the school offers

a master's program jointly with the School of Public Health: the MS in health outcomes, policy, and economics. Forty-five students are currently enrolled in this program. Also, EMSOP faculty direct three PhD/MS programs for approximately 50 students, in toxicology (offered jointly with Robert Wood Johnson Medical School), medicinal chemistry, and pharmaceuticals; they also contribute to other graduate programs throughout the university.

Pharmacy practice clinical faculty maintain practices at 20 key hospital and health care sites in northern and central New Jersey, including Robert Wood Johnson University Hospital, an RWJBarnabas Health facility, as well as Hackensack University Medical Center, Penn Medicine Princeton Medical Center, Henry J. Austin Clinic, and the Eric B. Chandler Health Center. Clinical practice areas include internal medicine, infectious disease, critical care, emergency medicine, pediatrics, oncology, neuropsychiatric pharmacotherapy, and community-based ambulatory care. With a focus on interprofessional practice for the improvement of therapeutic outcomes, the faculty practice expands the role of the pharmacist on the health care team.

Postdoctoral research associates have opportunities in comprehensive clinical residency and fellowship programs in diverse fields, including pharmacy practice, the pharmaceutical industry, and health outcomes research. Continuing education programs promote achievement, retention, and strengthening of professional competencies, support lifelong learning opportunities, and serve the varied educational needs of the pharmacy practitioners of New Jersey. The Rutgers Pharmaceutical Industry Fellowship program, launched more than 30 years ago, is today the largest such program in the U.S., training more than 200 fellows each year. Participants are primarily recent PharmD graduates, and now also include several physicians who seek training for careers in the pharmaceutical industry. In FY 2021, the school received \$31 million, primarily from industry collaborators, to support this highly regarded program.





New Jersey Medical School

Rutgers New Jersey Medical School (NJMS) is an academic, biomedical research, and health care enterprise whose mission is to prepare humanistic leaders in global health care and pioneering science by building upon strengths in diversity, educational innovation, immersive clinical training, and transformative research. Founded in 1954 and based in Newark, NJMS educates students and trains physicians and scientists to meet society's current and future health care needs.

At NJMS, the number of applicants has increased annually from 2017 to 2021, with 6,728 applications for 2021. The entering class of 2021 includes students from 54 colleges, 22 states, and 18 countries, speaking 19 languages. Some 28% are students from communities that are underrepresented in medicine, and 51% are women. NJMS provides medical education to 750 medical students, who comprise one of the most diverse student bodies in the U.S. The curricular competencies include mastery and integration of clinical, basic, and health system sciences; excellence in clinical skills; excellence in professionalism and humanism; commitment to the health of the community and appreciation of social and cultural diversity; dedication to lifelong learning and personal wellness; and development of effective skills in education and communication. In addition to the MD degree, NJMS, either with other RBHS schools or with affiliated institutions, offers joint baccalaureate-MD (BA/MD, BS/MD), an advanced standing program in oral and maxillofacial surgery (OMFS/MD), MD/MBA, MD/MPH, and MD/PhD degrees.

The NJMS curriculum is divided into three phases, where each segment is taught with an integrated organ systems approach and/or a clinically focused component. Key features are dedicated integration/assessment weeks and capstone courses to enhance critical thinking and problem-solving skills through clinical case-based discussion, ample time for career exploration through electives and selectives, and specialty-specific skills preparation for transition to residency. In July 2019, NJMS enrolled its first cohort into the accelerated three-year primary care MD program, addressing the national and state shortage of primary care physicians. This parallel curriculum builds upon the strengths of the four-year curriculum with clinical experiences and community activities. NJMS's curriculum has unique strengths, with a special commitment to the health of underserved communities. For example, a service-learning requirement teaches students to identify and reflect upon community needs and assets, fostering an enhanced sense of civic responsibility. Distinction tracks in the areas of entrepreneurship and innovation in medicine, global health, medical education, service, research, and urban health provide enhanced professional development for select students.

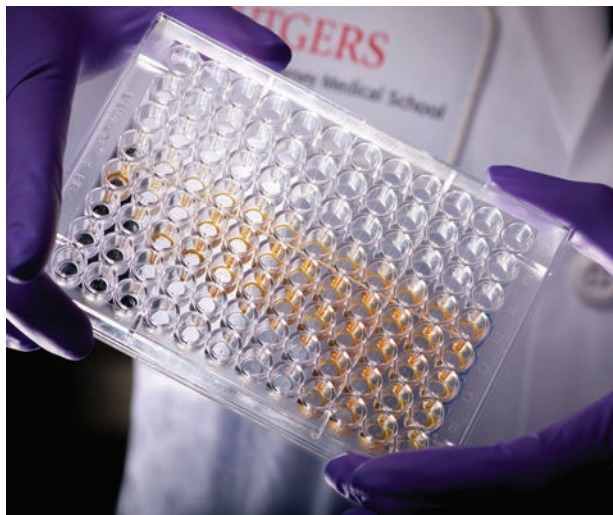


Medical students receive clinical training through rotations at multiple hospitals, including caring for under-resourced and underinsured populations as well as predominantly suburban populations. Hospitals include University Hospital, NJMS's principal teaching hospital and New Jersey's busiest level 1 trauma center, Veterans Administration (VA) New Jersey Health Care System in East Orange, Cooperman Barnabas Medical Center, Morristown Memorial Hospital, Newark Beth Israel Medical Center, and Jersey City Medical Center. NJMS students consistently match at a rate higher than the national average in the National Resident Matching Program and, in recent years, have averaged between 98–100%.

Through affiliations with RWJBarnabas Health, University Hospital, and several other hospital affiliates, NJMS has focused on promoting health equity by addressing the social determinants of health. NJMS and University Hospital are continuing to transition the ambulatory practices to University Hospital, with the goal of having one unified, high-functioning, and high-quality practice on the NJMS/University Hospital campus. NJMS and University Hospital have also directed significant resources toward a state-of-the-art liver transplant and future simultaneous liver-kidney transplant and electrophysiology programs at University Hospital, which will ultimately benefit the local community.

In addition, through affiliations with RWJBarnabas Health, NJMS has expanded cardiothoracic surgery, ENT, gynecology/oncology, general surgery, orthopedics, pathology, pediatric pulmonology, pain management, vascular surgery, physical medicine & rehabilitation, hepatology, and neurology programs. The Rutgers Center for Transgender Health (RCTH) is a collaborative center providing the full spectrum of medical, psychiatric, and surgical care for the transgender person. This program celebrates diversity and inclusion by delivering world-class, person-centered care for patients with an emphasis on access to care, reducing LGBTQ health care disparities.

There are 560 full-time, 87 part-time, and nearly 1,700 volunteer faculty in NJMS basic science and clinical departments. Faculty represent a diverse population. Annually, an average of 50 NJMS faculty members receive Castle Connolly Top Docs distinction. In FY 2021, 407 full-time clinical faculty members covered more than 239,000 ambulatory patient visits, including 40,000 telehealth visits. NJMS clinical faculty provide services through their academic departments, at 14 patient care off-site locations, and within world-class centers and institutes, including the Global Tuberculosis Institute,



the North Jersey Orthopedic Institute, the New Jersey Poison Information and Education System (NJPIES), NJMS Autism Center, Hispanic Center of Excellence, and the Rutgers Center for Transgender Health. NJPIES provides approximately 50,000 poison and drug consultations annually to New Jersey residents and clinicians.

In FY 2021, NJMS faculty received a total of \$127 million in extramural awards. Of this total, \$80.5 million was NIH funding. Areas of research excellence include inflammation and

infectious disease, cardiovascular disease, pain and addiction, and neurodegenerative diseases. NJMS faculty conducting research in these fields frequently publish in high-impact journals, and work from these groups has led to the development and commercialization of novel products for clinical use. Researchers' specific interests range from developing new therapies for autoimmune disease, including multiple sclerosis, to the development of state-of-the-art methods to diagnose infectious agents. NJMS occupies approximately 1,145,300 ft² across six facilities in Newark. Education, research, clinical care, and administrative operations are located in the Medical Science Building (which opened in 1976), the Cancer Center (opened in 2009), the International Center for Public Health and Regional Biocontainment Laboratory, the Doctors Office Center, and the Behavioral Health Sciences Building, with limited occupancy of the administrative complex buildings.



Robert Wood Johnson Medical School

Originally founded in 1961 as the two-year Rutgers Medical School, Rutgers Robert Wood Johnson Medical School (RWJMS) conferred its first medical degrees in June 1974. It now counts nearly 6,500 graduates among its alumni and has 649 full-time, 199 part-time, and 1,961 volunteer faculty members. For more than 60 years, RWJMS has maintained a commitment to excellence and innovation that is reflected in its core missions of education, research, patient care, and community health. Today, RWJMS encompasses 20 basic science and clinical departments and nearly a half-dozen major institutes, including the Cardiovascular Institute, the Child Health Institute of New Jersey, and the Institute for Neurological Therapeutics.

RWJMS and Robert Wood Johnson University Hospital, RWJMS's principal teaching hospital, comprise New Jersey's premier academic medical center. In addition, the medical school has more than 45 additional hospital affiliates and ambulatory care sites throughout the region. In FY 2021, RWJMS faculty physicians, who deliver care through Rutgers Health, part of the RWJBarnabas Health system's combined medical group, provided 507,983 patient visits. The practice has implemented EPIC as the new electronic medical record system and is focused on patient safety and the provision of quality clinical programs that deliver optimal outcomes. Signature programs include cardiovascular care, trauma, transplantation, and women's and children's health.

RWJMS's student population includes more than 749 medical students, 46 of which are MD/PhD students in programs offered jointly with Rutgers School of Graduate Studies or Princeton University. In addition, the medical school offers several dual-degree programs: MD/MPH, jointly with the School of Public Health; MD/MBA, in conjunction with Rutgers Business School–Newark and New Brunswick; and MD/MSCTS with Rutgers School of Graduate Studies. A PharmD/MD program, the first of its kind in the nation, is available jointly with Rutgers Ernest Mario School of Pharmacy. The RWJMS Office of Global Health offers opportunities for medical students to participate in international rotations, providing learning opportunities and advocacy for medically underserved patient populations. The school is also responsible for the education of more than 450 residents and fellows in more than 50 programs, 40 accredited by the Accreditation Council for Graduate Medical Education, including unique programs in: cardiothoracic anesthesia, colorectal surgery, developmental behavioral pediatrics, forensic psychiatry, hematology-pathology, vascular/interventional radiology, complex general surgical oncology, radiation oncology and pediatric endocrinology. RWJMS has been highly successful in the National Resident Matching Program, averaging a 96.6% match rate over the past decade. A new “5 Cs” curriculum was adopted in 2021, with a focus on curiosity, critical thinking, clinical skills, competency-based education, and compassion. It further integrates foundational and clinical science, with curricular threads in evidence-based medicine, health systems science, and health equity, and helps to ground professional identity formation in a longitudinal physicianship course.

RWJMS receives extramural support for research from federal and nonfederal sources and has achieved national and international recognition. In FY 2021, RWJMS faculty received a total of \$188.2 million in extramural awards. Of this total, \$72 million in grants and subcontracts was received from NIH. Substantial strength exists within cancer, child health, neuroscience, and cell biology research programs. Among the significant external grant funders, the Robert Wood Johnson Foundation has supported programs in child health and population health. The Clinical Research Center at the medical school, a core resource across the university to conduct clinical trials, was instrumental in the swift pivot and launch of multiple therapeutic studies to treat COVID-19. It also supported the Johnson & Johnson vaccine trial (ENSEMBLE) for which the school's site had the second highest number of participants worldwide, as well as Pfizer's pediatric vaccine clinical trial.

In addition to a significant increase in NIH and extramural research funding, RWJMS has earned several accolades during the past five years. Two of its investigators discovered and patented the enzyme replacement therapy for Batten disease. Within education, the school earned a full, eight-year LCME accreditation with the next survey visit in 2026. A new curriculum was planned during the height of the pandemic in 2020 and implemented at the start of the 2021–2022 academic year. The school's clinical operations earned its inaugural Comprehensive Accreditation for Ambulatory Health Care by The Joint Commission in 2017 and the ambulatory practice was reaccredited in 2020.

The medical school's Eric B. Chandler Health Center is one of the few federally qualified health centers to be owned and operated jointly by a medical school and community board. The center strives to eliminate barriers to obtaining quality, family-oriented primary and dental health for its diverse, multicultural population by providing comprehensive acute and chronic care to patients of all ages. The center receives 57,000 annual patient visits at its two locations in New Brunswick and a satellite location in New Brunswick High School. The health center received \$4.3 million in funding from the U.S. Human Resources and Services Administration (HRSA) to respond to the COVID-19 pandemic and expand access to needed care. As part of the public health response to the pandemic, the health center has administered more than 17,000 COVID vaccines. RWJMS also facilitates student involvement in the greater New Brunswick community through programs such as the student-led Homeless and Indigent Population Health Outreach Project (HIPHOP). The HIPHOP–Promise Clinic provides student-run, faculty supervised health care to homeless and uninsured members of our community. The HIPHOP–Community Health Initiatives, which seek to provide students with service-learning opportunities, has undergone expansion by increased integration into the medical school curriculum. For example, Rutgers' Project ECHO, part of the Office of Community Health, provides collaborative, case-based online medical education on specialty subjects through live video conferencing. Throughout the pandemic, Project ECHO worked with the state to disseminate real-time COVID-19 testing, treatment, and vaccine best practice information to providers statewide. The Chandler Health Center once again was designated a Level 3 Patient Centered Medical Home by the National Committee for Quality Assurance (NCQA), signifying that Chandler has exceeded national benchmarks. The health center also received the HRSA Quality Improvement Award, given to the highest-performing health centers nationwide.



RWJMS conducts educational, research, and clinical activities in facilities space totaling more than 1.2 million ft² in 14 Rutgers-owned buildings, including the 221,000 ft² Clinical Academic Building in New Brunswick, home to outpatient care, research and service laboratories, academic offices, and support programs; the 125,000 ft² Research Building in Piscataway, which features 27 scientific labs; and the 166,000 ft² Child Health Institute of New Jersey. The medical school also operates out of nine leased spaces, including clinical centers in central New Jersey. The medical school's education program will be relocated to the \$665 million New Jersey Innovation and Technology Hub in New Brunswick, physically aligning the pre-clinical and clerkship training programs in adjacent facilities.



Rutgers School of Dental Medicine

Rutgers School of Dental Medicine (RSDM), established in 1954, is the state's only dental school. It operates New Jersey's largest oral health care system, accommodating more than 150,000 patient visits annually. Its nine academic departments include community health, endodontics, oral biology, oral and maxillofacial surgery (OMFS), orthodontics, periodontics, pediatric dentistry, orthodontics, and restorative dentistry. More than 250 full- and part-time faculty members hold appointments at RSDM, along with more than 100 volunteer faculty members. RSDM's mission is to improve health and quality of life by preparing the next generation of oral health care professionals and scientists, providing the highest quality, evidence-based oral health care serving our state and communities worldwide, and advancing health through discovery and innovation.

RSDM offers a Doctor of Dental Medicine (DMD) degree as well as numerous postdoctoral programs, and has an active continuing dental education program. More than 400 students are enrolled in the four-year DMD program or the 27-month DMD program for qualified dentists trained outside the U.S. or Canada, and more than 70 students are pursuing postdoctoral education. The school offers both a master's in dental science (MDS) and master of science in dentistry (MSD). Students can earn postgraduate certificates in endodontics, pediatric dentistry, orthodontics, periodontics, and prosthodontics and orofacial pain. Continuing education and preceptorship programs are offered in infectious disease, oral medicine, oral and maxillofacial radiology, and orthodontics. RSDM also hosts general practice and oral surgery residencies. A master's and a PhD in oral biology are jointly offered with the School of Graduate Studies (SGS). In addition, seven- and eight-year joint-degree programs are offered: DMD/MPH with

the School of Public Health, DMD/MS biomedical informatics with the School of Health Professions, DMD/MS oral biology and DMD/PhD with SGS, and OMFS/MD with NJMS.

The school is the largest provider of care to New Jersey's special needs patient population, who are treated at the Delta Dental of NJ Special Care Center at RBHS in Newark. It is also the largest New Jersey provider of Medicaid dental services, drawing patients from all 21 counties and surrounding states. Several thousand state residents also benefit from the school's community service activities, including oral cancer screenings, patient education, and programs for Newark school children, who are treated at the Brunsdén–Villa Pediatric Center. In addition to student clinics in Newark, the dental school operates



a faculty practice, emergency service, and the University Hospital dental service. The school serves patients with complex medical histories, including infectious diseases such as hepatitis and HIV/AIDS. RSDM is the largest of only twelve programs nationwide to receive Part F Ryan White Community-Based Dental Partnership Program funding for patients with HIV/AIDS. It also operates a maxillofacial prosthodontics program that develops facial prostheses for patients disfigured by trauma or cancer treatment.

Additional clinical services are provided through the school's statewide network for oral health, which provides services to low-income patients at facilities in southern New Jersey. The network houses the school's community-based dental education program (CODE), a service-learning

program for fourth-year students, which is regarded as a national model. In addition, the school has three centers of excellence: the Center for Temporomandibular Disorders and Orofacial Pain, the Ina and Howard Drew Maxillofacial Imaging Center, and the Delta Dental of NJ Special Care Center. Faculty also collaborate with University Hospital at the University Craniofacial Center of New Jersey.

In terms of research funding, RSDM faculty received \$4.2 million during FY 2021, ranking 18 out of 66 schools in funding from the National Institute of Dental and Craniofacial Research (NIDCR). The RSDM research programs involve oral infectious diseases, neurophysiology of pain, and genomics. There are three core centers of research: the Dental Research Center and the Center for Oral Infectious Disease, both housed in the Department of Oral Biology, and the Center for Orofacial Pain, housed in the Department of Diagnostic Sciences.



School of Graduate Studies

The integration of the RBHS schools into Rutgers promised the possibility of an infrastructure that supports the education and training of biomedical and health sciences research teams of the future, breaks down traditional silos, and enhances opportunities for interdisciplinary and translational research training. Following four years of planning, and based on the input of faculty, students and administrators across Rutgers–New Brunswick and RBHS, this possibility was realized with the 2017 merger of the New Brunswick-based Graduate School and the RBHS-based Graduate School of Biomedical Sciences (GSBS) into the new School of Graduate Studies (SGS). The graduate programs previously held within GSBS, as well as additional health-related RBHS-based PhD programs, coalesced to form a new unit: SGS–Biomedical and Health Sciences (SGS–BHS). In this new model, the unit dean of SGS–BHS, who reports to the RBHS chancellor, also serves as the vice dean of SGS, who reports to the SGS dean, facilitating collaboration across campuses as well as within and among disciplines.

The mission of SGS–BHS is to develop scientists who will contribute new knowledge in the biomedical and health disciplines through creative research and scholarship, and become the future scientific leaders in academics, industry, and government. It is enabled by the coordination of biomedical and health science programs across RBHS and Rutgers–New Brunswick, together with the wealth of educational opportunities offered by the humanities and social and physical science disciplines on the New Brunswick campus. SGS–BHS is poised to play a leading national role in the development of new

curriculum and broader opportunities for the biomedical and health scientists of the future, encourage and facilitate research collaborations among biomedical and health scientists across Rutgers, and raise the visibility of graduate education at Rutgers, attracting top students from premier colleges worldwide.

With programs based on the Newark and New Brunswick/Piscataway campuses, SGS–BHS offers doctoral and master’s degrees, as well as certificates and concentrations in many biomedical and health disciplines. Currently hosting 1,000 students across RBHS, SGS–BHS draws its more than 600 educators from the research faculty of RBHS schools (NJMS, RWJMS, RSDM, SPH, EMSOP, SN), schools based in Rutgers–New Brunswick (primarily School of Arts and Sciences [SAS], School of Engineering [SOE], School of Environmental and Biological Sciences [SEBS]), other New Jersey research-intensive universities (New Jersey Institute of Technology, Princeton University) as well as industry. Doctoral programs offered include biochemistry, biomedical engineering, cell and developmental biology, cell and molecular pharmacology, immunology and infectious disease, integrative biology, environmental and exposure science, molecular biology, molecular genetics, neuroscience, nursing, physiology, public health, and toxicology. Several dual degree doctoral programs are also available, including MD/PhD (NJMS, RWJMS, Princeton), DMD/PhD (RDSM), DPT/PhD (SHP) and PharmD/PhD (EMSOP).

Master-level training is offered through three programs. The master of science (MS) is a thesis-based program that can concentrate on any of the biomedical disciplines represented by our PhD programs. The master of biomedical sciences (MBS) program is an intense program designed to meet the diverse needs of students intending to pursue an advanced degree program (MD, DMD, PhD) and/or industry-based careers. This program offers opportunities to participate in medical school-level courses and specialized mentoring from faculty in our professional schools. Approximately 70% of our MBS students are accepted into advanced degree programs (including those at RWJMS, NJMS and RSDM). The master of science in clinical translational science (MSCTS) program is designed to train future leaders in clinical and translational research. Students are expected to hold advanced degrees and can choose to concentrate in either the translational research or the clinical research track, depending on their career goals. Dual master’s degree programs are also available, includ-



ing the MS/MBA degree (offered with Rutgers Business School), the MS/MPH degree (offered with SPH) and the MSCTS/MD degree offered with RWJMS. SGS–BHS also offers certificate programs in pharmacological science, stem cell biology and clinical/translational science.

A plethora of studies over recent years has exposed a gap in our traditional training of biomedical and health scientists—the lack of formalized training in the complementary skills needed for a successful career. In response to this need, SGS–BHS has developed several opportunities to further the career development of our trainees. The largest of these programs, initially funded by the NIH, is iJOBS (interdisciplinary Job Opportunities for Biomedical Scientists), a career development program that maintains research as the primary trainee focus while offering programming to broaden trainees’ perspectives, experiences, and knowledge regarding academic and non-academic careers. Covering a wide spectrum of career tracks in academics, industry, government, and nonprofits, as well as essential skills in communication, financial management, and business management, iJOBS has allowed us to expand the traditional doctoral training more broadly for success in life sciences careers. This program, initially begun on the New Brunswick campus, has expanded to all research-intensive universities in New Jersey, providing career enhancement to more than 1,000 pre- and postdoctoral trainees.



Several outreach programs focus on teaching science and research methods to local high school and community college students; some of these programs have been recognized at the national level. SGS–BHS also participates in state and national educational programs for high school and undergraduate students, including the New Jersey Science Olympiad, the national Brain Bee, and the NJ SEEDS program, to prepare academically talented, financially limited youth for success at competitive schools. Finally, a long history of NIH-funded grant support has allowed us to develop unique training opportunities for underrepresented graduate students.



School of Health Professions

Rutgers School of Health Professions (SHP), established in 1976, is the largest and most diverse health professions school in the nation. SHP’s mission is to improve people’s lives in New Jersey and beyond, through quality education, innovative research and scholarship, superior service, and cutting-edge clinical practice. With a vision centered on continuing to be an international leader in the preparation of holistic and dynamic health care professionals through education and research, SHP’s graduates are prepared to be progressive, interprofessional practitioners and leaders in the ever-changing health care landscape. As a well-recognized national leader in health professions education, we adapt to changing educational requirements, as well as geographic and profession-specific needs related to the health care workforce.

With more than 35 programs in seven departments, ranging from certificates to doctoral degrees, the school serves approximately 1,500 students annually. SHP has approximately 150 full-time faculty members and more than 250 volunteer faculty. Faculty are experts in their respective fields, with most actively involved in, or leading, local, national, or international consortia and professional organizations. In addition to our physical locations in Newark, Blackwood, and Piscataway, and as the first health professions school in the nation to offer distance program participation via online and hybrid courses and clinical affiliates located across the nation, we reach students and practitioners through a virtual classroom around the globe. Our areas of education include clinical laboratory sciences and cytopathology;

cardiac sonography and diagnostic medical sonography; clinical nutrition sciences; physical therapy, occupational therapy, and speech-language pathology; physician assistant; psychiatric rehabilitation and counseling; health informatics, medical coding, health information management; clinical research management; health care management; and health professions education.

SHP enrolls students from every county in New Jersey, 41 states, and six countries around the world. SHP has a highly diverse student body, which is helping to transform the health care workforce to be more representative of the populations they will go on to serve after graduation.

In addition to education, SHP conducts research and produces cutting-edge scholarship supporting scientific knowledge in the health disciplines, with a focus on rehabilitation, nutrition, health informatics, community outreach, health disparities, and psychiatric rehabilitation. Since 2015, a major focus has been on expanding and further developing the research mission. Over the last five years, SHP has recruited ten research faculty in the targeted areas of rehabilitation, informatics, and nutrition. Grant submissions have increased from 12 in 2015 to 82 in 2020. In fiscal year 2018, the school was awarded \$1.87 million in state and federal funding, five times the amount of the previous year. In fiscal year 2019, SHP faculty were awarded more than \$5.37 million in state and federal funding, kick-starting a vibrant and robust grants portfolio for the school. While the 2020 awards were also strong, with faculty receiving \$4.45 million in state and federal funding, 2021 was a record-breaking year: SHP faculty were awarded more than \$10.5 million in federal and state funding.

SHP's focus on community engagement goes well beyond service to surrounding areas. SHP's Health Science Careers program collaborates with 41 New Jersey high schools to provide college-level health sciences courses for college-level credit for approximately 2,500 students each year. SHP provides free clinical services to underserved populations through the student-led physical therapy clinic, the speech-language pathology clinic, and the physician assistant-led Health Outreach Practice Experience clinic (HOPE). SHP also oversees a large occupational and physical therapy practice that services K–12 public school students in greater Newark. The Integrated Employment Institute successfully improves employment skills and employment of those individuals with, or those working with populations with severe mental illness or in recovery from substance use disorders.





School of Nursing

Rutgers School of Nursing (SN) offers a broad array of academic programs to prepare excellent nurse clinicians, nurse leaders and scientists. As a top-rated school, both in the state and across the nation, SN contributes significantly to patient care, patient care research, and the preparation of a highly skilled and robust nursing workforce. The school's three campuses are strategically located in Newark, New Brunswick, and Blackwood, ensuring easy access from throughout the state. Among its recognitions, the school is a National League of Nursing (NLN) Designated Center of Nursing Education Excellence, and has received a Best School for Men in Nursing award for the past four years in a row.

The school's educational mission is to prepare highly qualified nurses at all levels of higher education to meet the diverse needs of patients, families, and caregivers across the continuum of care. Toward that end, SN offers degree programs at the undergraduate, masters, and doctoral levels. The undergraduate nursing program offers a bachelor's degree in nursing, preparing graduates to sit for the national nursing licensure examination. The doctor of nursing practice (DNP) degree offered by the school prepares nurse practitioners and other advanced practice nurses to provide expert primary and specialized care at an advanced, doctoral level. More than 11 DNP clinical specialties are offered, including nurse anesthesia, midwifery, psychiatric mental health, emergency care, acute and primary care pediatrics, acute and primary care adult-gerontology, family primary care, women's health, and health care leadership.

The school's doctoral program prepares nurse-scientists to launch programs of funded research aimed at improving population health, health care systems, and the care of individuals.

The School of Nursing enrolls approximately 1,700 students, including 1,000 undergraduate students, 60 master's and post master's students, 600 DNP students, and 40 PhD students. Each year the school graduates approximately 330 new registered nurses, 150 new doctoral-prepared advanced practice nurses, and 4 new PhD-prepared nurse scientists. Among the school's 110-full-time faculty members, 16 are fellows of the American Academy of Nursing and four are fellows of the American Association of Nurse Practitioners.

The school's research mission contributes to the health and well-being of diverse populations, and fosters research initiatives that generate, test, and refine disciplinary knowledge and inform health policy at the local, national, and global levels. Faculty conduct intervention studies designed to reduce health disparities, improve health equity, enhance patient safety and quality outcomes, promote health and comfort,

and reduce suffering. Through the Northeast Institute for Evidence Synthesis and Translation (NEST), faculty researchers provide evidence to guide practice and policy. The school receives approximately \$40 million in extramural awards and contracts each year, including approximately \$6 million in NIH awards.

A key component of SN's mission is providing clinical services for local communities. The Rutgers Community Health Center, located in Newark, provides primary care and wellness programs to local residents. The François-Xavier Bagnoud Center is committed to improving the health of vulnerable women, children, youth, and families, and serves as a national resource and training center for HIV prevention and care. The New Jersey Collaborating Center for Nursing collects and analyses nurse supply and demand data and makes evidence-based recommendations to state policymakers regarding the nursing workforce.





School of Public Health

Rutgers School of Public Health (SPH) was established in 1998 and is New Jersey's only accredited school in the discipline. SPH is located in Newark and Piscataway/New Brunswick, with satellite locations throughout the state and around the world. Outlined in its 2020-2025 strategic plan, SPH's vision and mission are rooted in the tenets of social justice and health equity, supported by the pillars of education, research, and community engagement. SPH has 85 primary faculty members across four departments; 733 students (representing an 81% increase in applications); newly constituted administrative support offices; and interdisciplinary centers, which, since 2017, have all supported the enormous transformation of SPH, resulting in increased prominence both within the university and the discipline. At the onset of 2017, *U.S. News and World Report's* peer evaluations ranked SPH at 2.3, with their most recent 2021 report placing the school at 3.1 (scale of 1–5, with 5 being highly ranked).

SPH faculty, supported by the Office of Research, are actively engaged in scholarship to advance public health and well-being. SPH incorporates five interdisciplinary research centers, including: the Center for Public Health Workforce Development; the Center for Health, Identity, Behavior and Prevention Studies; the Center on Gun Violence Research; the Center for Cancer Health Equity; and the Center for South Asian Quantitative Health & Education. Many faculty members are also affiliated and work closely with universitywide centers and institutes, including the Environmental and Occupational Health Sciences Institute and Rutgers Cancer Institute of New Jersey. In fiscal year 2021, SPH faculty members were awarded \$34.1 million in funding, representing a 43% increase from fiscal year 2018,

with growth projected for the next five years. Of this 2021 funding, \$17.7 million was awarded by federal agencies, including NIH, the U.S. Centers for Disease Control and Prevention, Health Resources and Services Administration, and the Environmental Protection Agency.

SPH offers several postbaccalaureate certificate programs and four different degrees, including: master of public health (MPH); master of science (MS); doctorate in public health (DrPH); and doctorate in philosophy (PhD). SPH also offers several dual-degree programs, including the master of social work (MSW)-MPH and the articulated bachelor of arts (BA)/bachelor of science (BS)-MPH offered jointly by the School of Arts and Sciences (SAS) and RBHS. SPH has developed modern concentrations in pharmacoepidemiology, population aging, population mental health, and LGBTQ health. SPH also provides critical safety training to hazardous waste workers and workers in the construction trades. SPH proactively evaluates and modifies its programs to further incorporate e-learning, to enhance tailored instruction and assessment, and to ensure that all courses are inclusive of diverse voices and populations. SPH offers global education opportunities in Europe, Asia, and Africa.



SPH is actively involved with the people and populations they seek to serve through initiatives like the New Jersey Community Contact Tracing Corps. Collaborations with the Greater Newark Health Care Coalition and the Hetrick-Martin Institute have led to the training of community COVID-19 vaccine ambassadors and influencers, the development of supportive online environments for Black queer youth, and more. SPH also offers high school students an opportunity to learn more about public health through its immersive summer camp. The signature initiative of SPH, the Urban Public Health Paradigm (Big Cities Program), convenes representatives from government, community-based organizations, businesses, and communities to collaboratively develop new approaches to better support health through research, and to offer hands-on learning, and community-embedded service delivery.



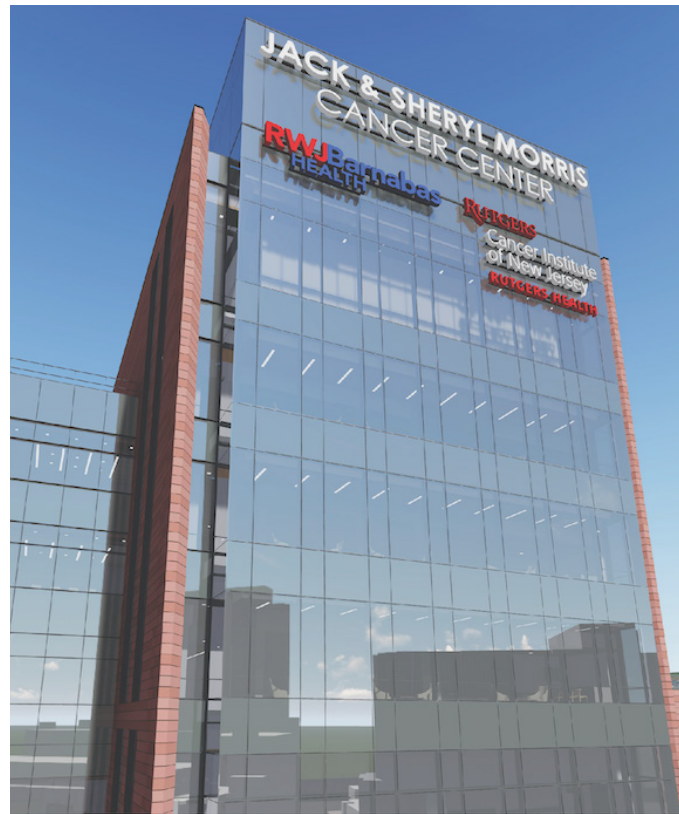
Original RBHS Centers and Institutes

Rutgers Cancer Institute of New Jersey

As New Jersey's only National Cancer Institute (NCI)-designated Comprehensive Cancer Center, Rutgers Cancer Institute of New Jersey, together with RWJBarnabas Health, is dedicated to improving the prevention, detection, treatment, and care of patients with cancer through the transformation of laboratory discoveries into clinical practice. In collaboration with RWJBarnabas Health, Rutgers Cancer Institute delivers advanced comprehensive cancer care to adults and children, including access to clinical trials; conducts cutting-edge cancer research; and provides outreach and education regarding cancer prevention, detection, and treatment.

Rutgers Cancer Institute's research program members had a total of \$107.7 million in peer-reviewed funding in FY 2021, of which \$100.1 million was received from NIH.

The coveted NCI comprehensive designation is granted competitively to institutions characterized by scientific excellence and the ability to bring research discoveries to patients. To gain a comprehensive designation, NCI's highest ranking, a center must meet rigorous criteria in cancer care, research, prevention, education, and service to its catchment area. NCI-designated centers, such as Rutgers Cancer Institute, are the centerpiece of the nation's effort to reduce disability and death from cancer and are heralded as providing great value to any state committed enough to obtain and maintain such an institution. An NCI-designated center brings value to the state and its citizens through opportunities, prestige, resources, and funding not otherwise available. The institute manages more than 100,000 patient visits per year and approximately 250 clinical trials at its 225,000 ft² facility in New Brunswick and, along with RWJBarnabas Health, cares for more than one-third of New Jersey's cancer patients. A dedicated team of nationally renowned specialists, including medical oncologists, surgical oncologists, radiation oncologists, social workers, and nurses, identify and meet the needs of the individual patient.



The institute's research programs and shared resource core facilities enhance and support the cancer research of more than 300 members from multiple schools throughout Rutgers University, Princeton University, and collaborating institutions. Current research programs and initiatives include: cancer metabolism and immunology; metabolic interactions between the tumor and the rest of the body, focusing on how the body supports tumor growth and metastasis, and how tumors induce cachexia; dietary strategies for the prevention and treatment of cancer; the interplay of host metabolism, the gut microbiome and the anti-cancer immune response; pharmacology; genomic instability and cancer genetics; precision medicine; cellular therapies; community outreach and engagement and reducing cancer health disparities throughout New Jersey; biomedical informatics; and systems biology. The institute also has a multi-pronged effort to ensure diversity within its faculty, scientific members, trainees, and staff. Basic scientists, clinical researchers, and population scientists meet regularly to exchange information and ensure that laboratory discoveries are refined and applied to clinical care as quickly as possible, that clinical observations reach laboratory researchers on a continuing basis, and that prevention strategies are interwoven into all research programs.

Educational efforts include formal training programs, seminars, and educational events targeted to faculty, postdoctoral and predoctoral fellows, high school science teachers, and undergraduate and high school students. The institute offers a residency training program in radiation oncology, as well as fellowship training in hematology/oncology and surgical treatment for breast cancer. The institute's oncology nursing education program provides a wide variety of continuing education for cancer-focused nurses throughout New Jersey. The institute hosts a statewide Annual Retreat on Cancer Research in collaboration with the New Jersey Commission on Cancer Research (NJCCR) and a joint Annual Research Symposium with Princeton University. The institute's Rutgers Youth Enjoy Science initiative aims to address cancer disparities in our catchment area by reducing educational inequities, and provides cancer research training and professional development support to high school science teachers and high school and undergraduate students from diverse backgrounds.

In collaboration with the New Brunswick Development Corporation, RWJBarnabas Health and the institute broke ground in 2021 on the Jack and Sheryl Morris Cancer Center, the state's first freestanding cancer hospital. Scheduled to open in 2024, this \$750 million, 510,000 ft², state-of-the-art structure will house inpatient, outpatient, and ancillary services all under one roof. This is in addition to laboratories where critical scientific investigation will be amplified, enabling physician-scientists to translate findings directly to patients. With the help of a key \$25 million investment in the project from Middlesex County, workforce training and education will be offered to job applicants through an affiliation with Middlesex College and others to foster innovation and discovery, and provide an environment filled with robust educational prospects for county residents.

Center for Advanced Biotechnology and Medicine

The Center for Advanced Biotechnology and Medicine (CABM) was founded in 1985 and designated by the New Jersey Commission on Science and Technology as a New Jersey Advanced Technology Center. CABM is located on the Busch Campus in Piscataway in a 100,000 ft² building completed in 1990. Its mission is to make fundamental discoveries in biomedical research, develop new technologies, translate these to improve human health, and educate a next generation of scholars in the biomedical sciences. CABM has nineteen faculty members who hold academic appointments in departments within RWJMS, EMSOP, and the Rutgers–New Brunswick School of Arts and Sciences. Several CABM faculty members are also members of Rutgers Cancer Institute or are non-resident members of the Rutgers Center for Integrative Proteomics Research. Several CABM faculty members hold administrative leadership positions.



Interdisciplinary research at CABM is aimed at discovery and characterization of potential therapeutic targets with projects focused in the areas of infectious disease, neurodevelopmental/neurodegenerative disorders, the microbiome, rare diseases, and cancer. Infectious disease programs advance development of new drugs to combat drug-resistance in HIV, characterize new targets for SARS-CoV-2 drugs, and explore antibiotics effective against drug-resistant pathogenic bacteria. Programs in neurodevelopment, neurodegeneration, and disease focus on a newly discovered

autism susceptibility gene, genetic loci for schizophrenia, and an enzyme replacement treatment for Batten disease, a fatal hereditary childhood neurodegenerative disorder. They also examine key steps in retinal development, mechanisms of regulation of circadian clocks, and neuronal circuit mechanisms of deficits in learning and memory. Programs in genetics highlight RNA metabolism pathways, as well as coupling functional genomics techniques with computational modeling to understand gene regulation in human health and disease. Microbiome programs are focused on obesity and other metabolic processes, type 1 diabetes and other immunological disorders, and autism and other neurodevelopmental disorders, as well as malignancy. The rare disease focus involves studies of porphyrias and diseases caused by mutation in the intermediate filament cytoskeletal proteins, and drug development for these disorders. Cancer programs focus on identifying and exploiting metabolic vulnerabilities, regulatory mechanisms and metastasis in breast cancer, and combination therapies for lymphoma. Advanced technologies are central to these projects.

CABM faculty established and manages core facilities with shared equipment, including a biological mass spectrometry facility, an X-ray crystallography laboratory, and a bioinformatics core. Many projects are conducted collaboratively between CABM investigators and investigators throughout Rutgers. CABM faculty received a total of nearly \$5.4 million in extramural awards in FY 2021, of which \$4 million was received from NIH. CABM faculty members are active in classroom and laboratory teaching. Trainees include undergraduate and graduate students from many different programs, medical students, postdoctoral fellows, and visiting faculty scholars. The NIH-funded Biotechnology Training Program for doctoral students, co-established and co-directed with the Rutgers School of Engineering's Department of Biomedical Engineering, is now in its 32nd year of support and is Rutgers' longest running NIH training program. CABM also hosts a summer undergraduate research experience. CABM initiatives with biotechnology and pharmaceutical industry collaborators are central to its mission. CABM has spawned two biotechnology companies: Prodaptics Pharmaceuticals, Inc., established in 2011, and Nexomics Biosciences, established in 2008. A collaboration with BioMarin Pharmaceuticals resulted in the first approved therapy to treat Batten disease. CABM is one of the centers of the Rutgers University Microbiome Program, and its related New Jersey Kids Study.

Environmental and Occupational Health Sciences Institute

The Environmental and Occupational Health Sciences Institute (EOHSI) was established in 1986 in recognition of the environmental and occupational challenges facing residents of New Jersey, the nation, and the world. EOHSI's major objectives are to identify and measure environmental and occupational chemicals and stressors to which humans are exposed at work, home, and play; and to advance understanding of mechanisms by which these exposures impact human health. Researchers apply the knowledge to develop risk assessments, prevention, intervention, and mitigation strategies to reduce exposures and their adverse human health impacts, and develop and deliver treatments to exposed patients. EOHSI members also respond to emerging environmental issues, threats and disasters, whether natural or man-made, to assess exposures and risk to communities, first responders and clean-up crews.

The institute's educational mission includes the development of programs that engage high school, undergraduate, graduate, postgraduate and professional students in environmental research to train the next generation of environmental health professionals. In addition, EOHSI educates and empowers



affected populations through community-engaged research and citizen science. The institute's members contribute to the development of public policies related to environmental and occupational risks by serving as advisers to international, national, state, and local governments as well as organizations, including advocacy groups, non-governmental organizations, and community corporations.

EOHSI's 78,000 ft² building on the Busch Campus houses research laboratories for approximately twenty resident faculty scientists. To accomplish its transdisciplinary mission, the institute collaborates with more than 60 non-resident members representing more than twenty departments and schools across Rutgers. Institute members are affiliated with five highly interactive divisions organized around specific research affinities and approaches: environmental and population health biosciences; global environmental health; toxicology; clinical research and occupational medicine; and community and government engagement. The goal of the institute is to provide a physical and intellectual hub that integrates environmental health related research and fosters long-term multidisciplinary collaborative research within RBHS and across all of Rutgers.

To accomplish its integrative research mission and goals, EOHSI is home to multiple externally funded centers, including the National Institute of Environmental Health Sciences (NIEHS) Center for Environmental Exposures and Disease (CEED) presently in its 35th year of NIH funding; the EOHSI Clinical Center; the CounterACT Research Center of Excellence, currently in its 15th year of funding and renewed for another five years; the Ozone Research Center; and the Center for Exposure and Risk Modeling. In-house core laboratory facilities funded by EOHSI and the various centers include the Chemical Analysis Facility Core, the Controlled Exposure Facilities Core Laboratory, the Computational Chemodynamics Core Laboratory, the Analytical Cytometry/Image Analysis Shared Resource Core, the Histopathology Core, and the recently added Nanoscience and Advance Materials Center.

EOHSI supports three graduate education programs. The NIEHS-funded joint graduate program in toxicology is currently in its 35th year of NIH funding and was renewed for another five years. This training grant, administered by EMSOP, supports masters and doctoral degrees and postdoctoral fellowships, and provides advanced training in mechanistic toxicology, offering research tracks in molecular toxicology, biochemical toxicology, neurotoxicology, and environmental toxicology. The graduate program in exposure science offers a doctoral degree specific to the human aspects of environmental science. In 2011, it received the first training grant in exposure science to be awarded by the NIEHS. It was subsequently renewed in 2017.

The institute's nationally accredited environmental and occupational medicine residency training program focuses on the recognition, prevention and treatment of adverse health conditions associated with patient exposures or injuries encountered in home, community, and workplace environments. Residents evaluate patients in EOHSI's on-site clinical center. The residency program leads to board eligibility in

environmental and occupational medicine. EOSHI's clinical center is designed to meet the environmental and occupational health needs of New Jersey's workforce, while also serving as the clinical center for many RBHS employees. The clinical center employs occupational physicians, nurses, psychologists, social workers, and industrial hygienists and accommodates approximately 6,500 clinical visits annually, including research subjects and employee health visits. Additionally, the clinical center provides ongoing monitoring examinations to approximately 3,500 first responders and individuals directly affected by the September 11th terrorist attacks as part of the NIOSH funded World Trade Center (WTC) Health Program.

Institute for Health, Health Policy, and Aging Research

Since its 1985 founding, the Institute for Health, Health Care Policy and Aging Research (IFH) has become a hub for multidisciplinary and translational research focused on improving population health. The institute continues to foster rigorous theory-based research and innovative training, and supports collaborative opportunities for investigators across Rutgers and beyond. The institute is focused on advancing the translation of knowledge to impact policy and practice, with an



emphasis on sustainable engagement and reciprocal relationships with community collaborators to better understand the ubiquitous issues that affect health outcomes. The institute's 200 faculty members represent more than 30 schools, institutes, and units and the nearly 30 adjunct members represent national and international universities. Seven IFH faculty members have been elected to the Institute of Medicine of the National Academy of Sciences. The institute is embracing population health more comprehensively by actively addressing challenges in the areas of health equity, healthy aging, behavioral

health, pharmacoepidemiology, health services, and health policy research. This work is supported by core infrastructure pillars: business and grants management, information technology, survey/data, community outreach, communications and marketing, and development and philanthropy.

The institute's 57,000 ft², custom-designed academic and research building with clinical and behavioral research space, located in downtown New Brunswick, is home to more than a dozen research centers and programs. These programs include the Center for Asian Health; Center for Health Services Research; Center for Healthy Aging; New Jersey Health Initiatives; Center for State Health Policy;

Center for Population-Level Bioethics; Center for Population Behavioral Health; Center for Pharmacoepidemiology and Treatment Science; Asian Resource Center for Minority Aging Research Catalyst Program; New Jersey Population Health Cohort Study; Chinese Health, Aging, and Policy Program; Community Health and Aging Outcomes Lab; New Jersey Practice-Based Research Network; and the Community Resource Hub. Faculty members at IFH hold research and training grants funded by NIH, the Robert Wood Johnson Foundation (RWJF), state agencies and other major funding organizations. Institute faculty received a total of \$22.5 million in awards in FY 2021. The institute's research has guided national recommendations within health care and legislation such as the Affordable Care Act, along with helping develop many health promotions strategies.

The institute is actively involved in developing future scholars through education and training programs and mentoring for postdoctoral trainees and graduate and undergraduate students. The Howard Leventhal Scholarship provides promising doctoral candidates with funds necessary to jump start their investigative careers. The Center for Pharmacoepidemiology and Treatment Science provides instruction and mentorship in research on utilization, safety, and effectiveness of treatments using real-world data. The statewide grantmaking program of RWJF, New Jersey Health Initiatives, located at Rutgers University–Camden, funds a wide range of innovative community-based service implementation projects to build a culture of health.

University Behavioral Health Care

University Behavioral Health Care (UBHC), established in 1971, offers a full continuum of evidenced-based and compassionate behavioral health and addiction services to individuals and families across New Jersey. University Correctional Health Care (UCHC) is a subunit of UBHC that provides physical health, mental health and sex offender-specific treatment services to the inmates, residents, and parolees of the New Jersey Department of Corrections, the Juvenile Justice Commission, and the State Parole Board. UBHC and UCHC have an annual operating budget of \$345 million and employ 2,000 people.

UBHC's 1,200 health professionals and support staff are dedicated to service excellence and are leaders in the advancement of mental health for the people of New Jersey and the nation. With an annual budget of \$140 million, it is one of the largest providers of behavioral health and addiction services in the state. UBHC operates across various sites, with primary locations in Piscataway and Newark. Services are readily accessible and include inpatient, outpatient, intensive outpatient, partial hospitalization, screening, crisis stabilization, family and caregiver support, community outreach and case management, supportive housing, supported employment, prevention and consultation, employee assistance programs, school-based programming, and a licensed therapeutic school from preschool through high

school. Specialty services include the New Jersey suicide prevention helpline and peer helplines for police, veterans, active military, teachers, nurses, behavioral health professionals, and mothers of special needs children. In FY 2020, UBHC treated 109,866 individuals and touched the lives of hundreds of thousands through peer support, training, and educational initiatives. UBHC is the primary mental health training resource for the New Jersey Department of Human Services, Children and Families, and Department of Corrections. UCHC's 800 employees provide comprehensive health services for 13,000 inmates in 12 adult correctional facilities, 300 residents in the 15 juvenile justice correction locations, and 800 individuals in the ten state parole board offices. UCHC has a budget of \$205 million and has achieved national recognition as a model for the advancement of physical and mental health services delivery within a criminal justice system.

UBHC provides training to medical students, residents, fellows, social work and nursing students, and psychology interns. Annually, UBHC supports the education of nineteen psychiatric residents and fellows, including two forensic fellows, and thirteen psychology interns, including four forensic placements, all sponsored by American Psychological Association-accredited programs, and dozens of social work interns. In FY21, UBHC received \$5.5 million in federal grant funds, \$19.2 million in state grant funds and an additional \$2.2 million in non-governmental grant funds. UBHC's total indirect cost recoveries were \$6.6 million in FY21. UBHC received a generous donation of \$30 million in 2019 from alumna Marlene Brandt that has led to the development of the Brandt Behavioral Health Treatment Center and Residence, which opens its doors in 2022. In close collaboration with the Rutgers Graduate School of Applied and Professional Psychology, this state-of-the-art residential treatment facility will also provide outpatient services, along with specialized behavioral health resources for the community.



New RBHS Centers and Institutes

Since the adoption of the strategic plan in 2014, RBHS has launched six new centers and institutes to advance signature priorities of the plan in targeted biomedical, clinical, and translational research areas.

Brain Health Institute

The Brain Health Institute (BHI) was established in 2013 as a Rutgers-wide entity, as the 2014 strategic plan was being formed, with recruitment of its first director in 2014, to become an internationally recognized center for basic, translational, and clinical research into the biological bases of human brain function and dysfunction. By supporting and coordinating neuroscience across all campuses, BHI's mission is to unite Rutgers University's dynamic and diverse neuroscience community. BHI uses an institutional perspective to help realize the full potential of neuroscience research at Rutgers. It serves as a major hub for the Rutgers neuroscience community and is a growing interdisciplinary institute consisting of more than 300 principal investigators with neuroscience laboratories across 33 departments and seven schools of various campuses of Rutgers University and RBHS. BHI is a virtual institute with administrative offices located in the School of Public Health/RWJMS Research Building in Piscataway. Rutgers currently has more than 1,000 neuroscience investigators, trainees and staff spread over multiple campuses across the state, with expertise spanning the entire spectrum of neuroscience disciplines. One of the main goals of BHI is to facilitate communication and collaborations between these Rutgers neuroscientists. BHI identified four areas of strength in the newly integrated Rutgers, and created four corresponding focus areas as opportunities for further development of neuroscience at Rutgers:

neurodevelopment (e.g., autism spectrum disorder, schizophrenia, Tourette's); neurodegeneration and injury (e.g., Alzheimer's disease, multiple sclerosis, Parkinson's disease, spinal cord and traumatic brain injury); cognitive and sensory neuroscience (e.g., age-related dementias, pain, auditory disorders); motivational and affective neuroscience (e.g., addiction, eating disorders, obesity, depression, anxiety). Since 2014, BHI has developed new research centers and initiatives within the four focus areas. As a component of the Rutgers Brain Health Institute, Rutgers University Addiction Research Center (RARC) engages faculty across all Rutgers schools and campuses with expertise in



addiction prevention, research, treatment, education, and public policy. In addition, BHI has recruited 21 high-caliber, extramurally funded, established and early career faculty, with expertise in the four focus areas, into various schools and departments at Rutgers. At their recruitment, these faculty had combined annual total grant awards exceeding \$20 million. The total amount of NIH funding to Rutgers for brain, neuroscience, and mental health research is more than double that of all other New Jersey universities combined. Rutgers currently ranks fifth among the fourteen Big Ten universities for total brain, neuroscience, and mental health research funding.

Center for Population-Level Bioethics

The Center for Population-Level Bioethics (CPLB) was founded in 2019. The center is dedicated to the study of macro-level bioethical dilemmas: those that arise outside the clinical encounter, at the level of the population, the state, the country, or the globe. Examples include how to prioritize resources between disease areas, rural and urban patients, and age cohorts or generations; how to conceptualize, measure and evaluate health inequalities or disease severity; the acceptability of paternalistic health promotion measures; appropriate health system pandemic response; and distributive aspects of (action on) climate change. The CPLB approach emphasizes collaboration and interdisciplinarity, seeking to inform and be informed by other fields of inquiry such as general ethics and philosophy, health policy, and health economics. CPLB publishes in high-impact venues on these questions, holds public events, and organizes CPLB Dilemmas, where ethicists, policymakers, and experts from a variety of disciplines weigh in on important and timely ethical issues in health policy, and train postdoctoral fellows. CPLB stands out in research relating to the distribution of risks between persons, groups, countries, and generations, as well as to the environment, environmental justice, and long-term effects of policy on human and animal welfare.

Rutgers Global Health Institute

Rutgers Global Health Institute (RGHI) was established in 2017 as an outcome of the universitywide and RBHS strategic plans. RGHI aims to promote health equity in New Jersey and around the world, with a focus on health care access and social determinants of health in underserved populations. The institute emphasizes team-based, interprofessional approaches that draw participation from across and beyond Rutgers. RGHI's members include more than 100 diverse faculty and professionals from across most of the university's schools and from all Rutgers locations. These members have generated award-winning research that has influenced fields such as infectious diseases, women's and gender studies, biomedical informatics, epidemiology, health systems, environmental and ecological science, and translational medicine. Faculty also are actively involved in mentoring diverse future

scholars and practitioners at the undergraduate, graduate, and postdoctoral levels. Among these future scholars are the members and leaders of the 70-plus member student council, which also represents many Rutgers schools and programs. The institute's main office is in New Brunswick, with additional operations based in several of New Jersey's underserved communities, including Newark and Trenton, as well as in the African country of Botswana. Program staff are involved in important on-the-ground efforts as part of two broad initiatives: Equitable Recovery for New Jersey's Small Businesses and the Botswana–Rutgers Partnership for Health. To effectively engage communities and build trust, and to build a diverse, inclusive atmosphere, the institute has focused on hiring people who live in the communities we serve. The Equitable Recovery program provides crucial support to small businesses and nonprofit organizations in low-income and minority communities, which have suffered disproportionately because of the COVID-19 pandemic. The program includes many services that meet the diverse needs of employers, employees, and their families, ultimately building community resilience. The Botswana–Rutgers Partnership for Health, which involves Botswana's Ministry of Health and Wellness and the University of Botswana, is addressing the rising burden of cancer in Botswana and throughout sub-Saharan Africa. The affiliation relationship is helping to strengthen health systems through capacity-building initiatives in education, training, and research endeavors. The work of the institute begins with service—identifying, collaborating, and creating long-term solutions together with communities in need of our help. Through these sustained relationships, RGHI also educates future global health leaders and practitioners and answers key research questions to improve health in vulnerable populations and bring about lasting, transformational impact.



Institute for Infectious and Inflammatory Diseases

The Institute for Infectious and Inflammatory Diseases (i3D) is dedicated to fostering innovative, cross-disciplinary, basic, and translational research and education focused on diseases of infectious or inflammatory origin. i3D currently has strong programs ranging from fundamental laboratory research to clinical trials testing the efficacy of COVID-19 vaccines. Community outreach is also an essential component of i3D, including patient enrollment in large clinical trials in Newark and new pipeline programs to involve community high school and college students in i3D immersive laboratory and learning research experiences. i3D was launched in 2016 and is a Rutgers-wide institute

that currently includes 53 faculty members and 150 faculty associate members, receiving a total of \$69.6 million in NIH funding in FY 2021. Most of these faculty are members of one of four distinct centers within the i3D umbrella: the Center for Emerging and Re-emerging Pathogens; the Center for Immunity and Inflammation; the Public Health Research Institute (PHRI); and the more recently established Center for COVID Response and Pandemic Preparedness (CCRP2) that was established in March 2020 as a prompt response to the COVID-19 pandemic. The i3D faculty members have appointments in both clinical and basic science departments across NJMS.



Overall, across these different centers, i3D has recruited 24 new faculty members on the tenure-track as full members of i3D since 2015. i3D has also recently recruited a senior faculty member who will direct a newly formed center focused on virology and named the Center for Virus-Host-Innate-Immunity (CVHII). In collaboration with the Brain Health Institute, i3D is also building a new program in neuro-inflammation, which bridges expertise across these two large institutes. Areas of current strength within i3D include pathogen diagnostics, immunology of infectious disease, inflammatory diseases including lupus and inflammatory bowel diseases, immunology of fungal infections, microbiome research, allergic inflammation, cancer immunology, pathogenic mechanisms, pain, structural biology, and tuberculosis. A number of these studies are already being translated to new treatments for disease or

novel diagnostics for identification of specific pathogens. For example, fundamental research in i3D has recently led to the development of a biotech company, NemaGen Discoveries, Inc., which is testing novel therapies targeting mast cells for treatment of asthma and allergies. Global NIH-funded research sites in India, Uganda, Brazil, and South Africa perform basic, translational, and clinical studies with high threat pathogens including SARS, tuberculosis, HIV, and Candida. Research cores provide essential equipment, facilities, and highly trained staff not typically available in laboratories of individual investigators. i3D faculty are scientific directors of many of our core facilities, including the new Rutgers-wide gnotobiotic germ-free core facility for microbiome research; a state-of-the-art microscopic imaging core facility; the bioinformatics and genome sequencing core; and the flow cytometry core. i3D in Newark also operates the NIH-funded Rutgers Regional Biocontainment Laboratory (RBL), one of 12 in the U.S., where research on highly infectious select pathogens can be conducted in biosafety level 3 laboratory (BSL3) conditions. The RBL has a highly active BSL3 vivarium, for research with experimental models, as well as substantial in vitro culture facilities.

Center for Tobacco Studies

One of the newest RBHS centers, the Rutgers Center for Tobacco Studies (CTS), became a chancellor-level center in 2019 and engaged faculty across RBHS and Rutgers University in its mission to reduce tobacco-related morbidity and mortality. CTS is focused on research that informs tobacco interventions, including regulations and policies; the delivery of evidence-based treatment; dissemination of research findings to key stakeholders; and training of treatment providers and the next generation of tobacco control researchers. The CTS began in 2000 as the Tobacco Surveillance and Evaluation Research Program (TSERP) at the School of Public Health. While its primary mission was to evaluate New Jersey's Comprehensive Tobacco Control Program, the program later expanded its population focus beyond the state, secured grants from NIH and the Robert Wood Johnson Foundation, and became a recognized center. The Tobacco Dependence Program delivered face-to-face, evidence-based tobacco treatment and provided continuing education in tobacco treatment for health care professionals. In 2009, Congress passed the Family Smoking Prevention and Tobacco Control Act (TCA), giving the U.S. Food and Drug Administration (FDA) regulatory authority over tobacco products, and the center once again expanded its research focus and included the emerging field of tobacco regulatory science.

In 2018, in collaboration with investigators at the University of Pennsylvania, the CTS became one of only nine centers of excellence in tobacco regulatory science supported by the NIH and FDA. Globally, tobacco-caused diseases kill one in ten adults and such deaths are projected to exceed 8 million annually by 2030. Tobacco use disproportionately impacts vulnerable populations. Accordingly, the mission of the center is to reduce and ultimately eliminate tobacco-related morbidity and mortality in New Jersey, the U.S., and globally. The center is comprised of eleven core faculty members in New Brunswick and seven additional associate faculty members. Center members hold faculty appointments in schools including SPH, RWJMS, and Rutgers–New Brunswick's Graduate School of Applied and Professional Psychology and the School of Arts and Science's Department of Psychology. Collectively, CTS members received a total of \$4.6 million in extramural awards in FY 2021; of this funding, \$4 million was received from NIH. CTS is a nationally recognized resource in the areas of tobacco policy, tobacco regulatory science, tobacco cessation, tobacco control programming and evaluation, and communication and marketing. Center



members serve as advisers to national, state, and local organizations on these topics, including the National Academies of Sciences, Engineering & Medicine; the U.S. Centers for Disease Control and Prevention; the National Cancer Institute; the FDA; and the New Jersey Department of Health.

The center has a long-standing commitment to the state of New Jersey, and the Center's Tobacco Dependence Clinic has treated more than 8,000 smokers and tobacco users since its inception. As a leader in tobacco treatment, the center also provides technical assistance to the eleven state-supported "Quitcenters," and is actively engaged in increasing smoking cessation delivery in cancer centers throughout the state, via the Cancer Center Cessation Initiative (C3I), part of NCI's Moonshot Initiative, in collaboration with Rutgers Cancer Institute. CTI also offers cutting edge, nationally recognized, continuing education for clinicians. It is one of only a handful of programs accredited by the Council of Tobacco Treatment Training Programs. The training curriculum prepares clinicians to become certified tobacco treatment specialists and draws from the center members' treatment and research expertise. To date, the Center has trained 3,200 health professionals from 48 states and eleven countries, impacting tobacco treatment delivery across the country and the globe.

Rutgers Institute for Translational Medicine and Science

The interdisciplinary Rutgers Institute for Translational Medicine and Science (RITMS) focuses on therapeutic and diagnostic approaches to understanding the heterogeneity of disease pathogenesis, susceptibility, and responses to therapy. Fostering a discovery to practice to policy approach, RITMS uses state-of-the-art "omic" approaches, informatics and high-throughput human cell and tissue models to enable the discovery of biomarkers and therapeutics to cure disease and to predict patients' responses to treatment. RITMS receives extramural support from the NIH and industry; members include faculty, postdoctoral fellows and students from the schools of medicine, public health, nursing, dentistry, and pharmacy.

The RITMS manages the only NIH-supported Clinical and Translational Science Award (CTSA) hub in New Jersey, the New Jersey Alliance for Clinical and Translational Science (NJ ACTS). NJ ACTS represents the largest statewide alliance devoted to translational science that boasts a membership of over 120 scientists across Rutgers, New Jersey Institute of Technology, and Princeton University. Alliance institutional members are dedicated to translating discoveries into new therapeutics, devices, and software focused on improving health. Also, RITMS is the administrative home for Rutgers Optimizes Innovation, an NIH-sponsored program that supports commercialization of academic assets and fosters programmatic development of entrepreneurs. Located in the Children's Health Institute of New Jersey, the RITMS occupies 8,000 ft² of laboratory and office space equipped with state-of-the-art molecular imaging, biochemical instrumentation, vivarium, and exposure biology capabilities.

Accomplishments of the Inaugural Strategic Plan

The inaugural RBHS strategic plan was released in November 2014 with the following key initiatives:

Academic Initiatives

- Signature Research Programs
- Complementary Research Programs
- Educational Initiatives

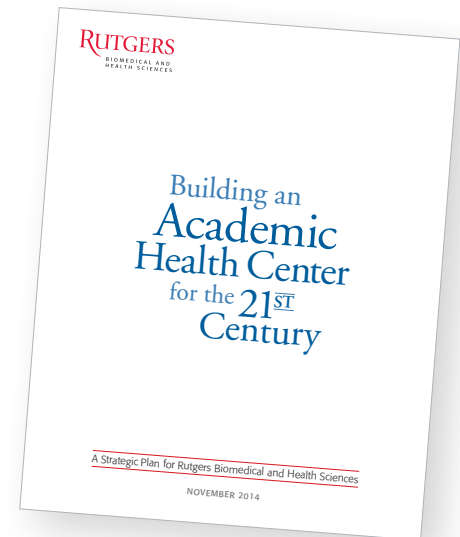
Clinical Initiatives

Community Service Activities

Integration Among Schools and Across Rutgers

Other Enabling Structures

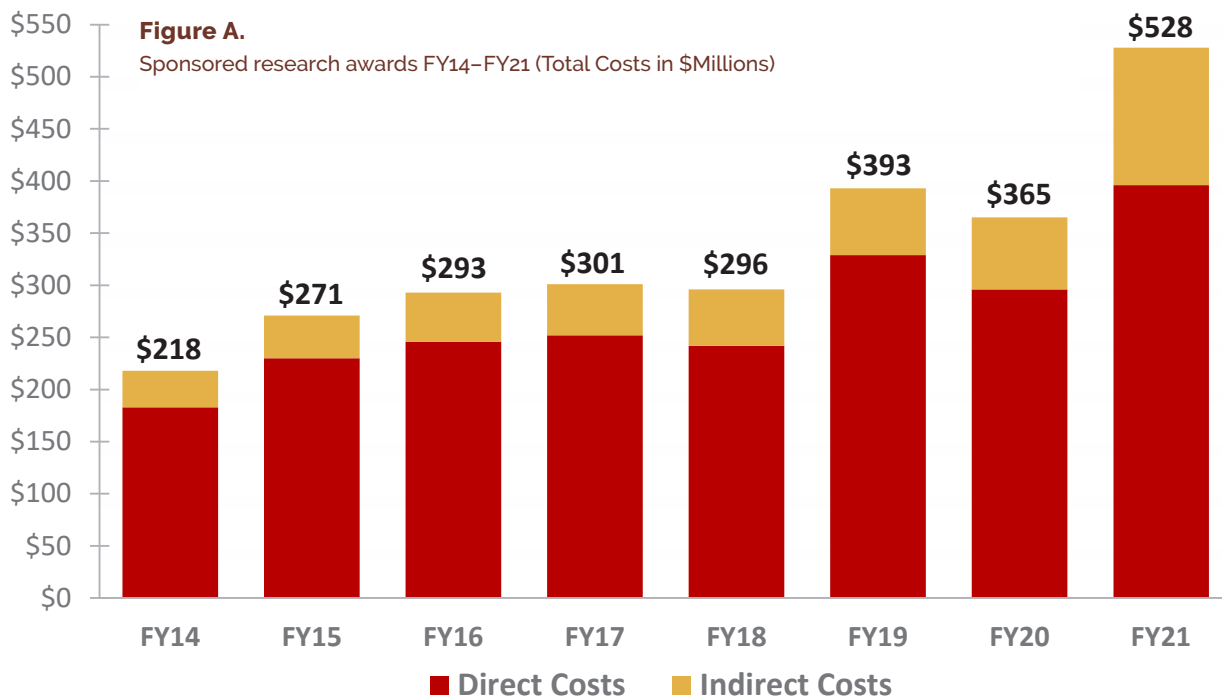
Financial and Development Strategies



Selected highlights for each of the key initiatives appear below.

Academic Initiatives

RBHS sponsored research awards increased by 142% from \$218 million in FY2014 to \$528 million in FY2021.



SIGNATURE RESEARCH PROGRAMS

Five signature areas of research strengths, highlighted below, were chosen for strategic investment from among twenty areas, based on analyses of existing areas of strengths, gaps, potential impact, and likelihood for growth, with the objective to build these areas across all RBHS units to become among the best in the nation.

Cancer

- A new director of Rutgers Cancer Institute of New Jersey was appointed in 2016.
- In 2018, NCI renewed the Rutgers Cancer Institute core center grant, along with its status as New Jersey's only NCI-designated comprehensive cancer center.
- Rutgers Cancer Institute leveraged its relationship with its NCI Research Consortium partner, Princeton University, to establish the Ludwig Cancer Research Princeton Branch—a collaboration between Princeton, Rutgers Cancer Institute and RWJBarnabas Health—with several Rutgers Cancer Institute faculty named to lead the branch. Their work on cancer metabolism complements that of the recently launched Duncan and Nancy MacMillan Cancer Immunology and Metabolism Center of Excellence, which resulted in the recruitment of new immunology-focused faculty and working groups and the establishment of a new Good Manufacturing Production (GMP) facility.
- Rutgers Cancer Institute received an additional \$10 million state appropriation in 2021 to support pediatric cancer research.
- Rutgers Cancer Institute received an NIH T32 training grant enabling investigators from Rutgers and Princeton University to mentor postdoctoral trainees in cancer metabolism and tumor-host interactions.
- The Center for Cancer Health Equity at Rutgers Cancer Institute and Rutgers School of Public Health has seen significant growth in the short time since its establishment. This includes establishment of the Cancer Community Action Board (CCAB). In collaboration with the CCAB, the first cohort of the Citizen Scientist Program was trained and new cohorts continue to be enrolled.
- To further demonstrate the institute's commitment to embracing and reflecting the diversity within our state and nation, a new associate director of diversity, equity, and inclusion (DEI) was recruited to establish a DEI office and various initiatives for Rutgers Cancer Institute over the next several years.
- Rutgers Cancer Institute's ScreenNJ initiative received a \$2 million increase in its FY21 budget (total of \$4 million) to expand services for all preventable cancers and hereditary risk assessment plus acquisition of a mobile unit.

- Rutgers Cancer Institute and Rutgers Global Health Institute established a global oncology fellowship in Botswana as part of the hematology-oncology fellowship program at RWJMS and in collaboration with the University of Botswana and Botswana Ministry of Health and Wellness.

Environmental and Occupational Health

- A new director of the Environmental and Occupational Health Sciences Institute (EOHSI) was appointed in 2017.
- EOHSI played a significant role in the award of the NIH CTSA grant to RBHS.
- In 2018, the NIH NIEHS P01 Center Grant for Environmental Health Sciences was renewed; the Center for Environmental Exposures and Disease (CEED) was established with funding from NIH in 1987 as one of 22 environmental health sciences core centers in the country.
- In 2021, Rutgers University CounterACT Research Center of Excellence was renewed by NIH. CounterACT focuses on the development of new and improved medical counter-measures against high priority chemical threats.
- EOHSI has supported recruitments, in collaboration with EMSOP and SPH, of multiple outstanding faculty members with strong research programs in the areas of environmental epidemiology, maternal-child health, endocrine disruptors, nano-materials toxicology, exposure science and engineering.
- The institute has expanded its footprint in community-engaged research and environmental justice through both research and educational programs.
- The toxicology training grant and clinical residency grants were also renewed and expanded in the number of trainees supported.
- EOHSI researchers, in collaboration with Infinite Biologicals, Inc., developed the first robust and widely used saliva-based PCR test for Sars-CoV-2 infection and played a central role in modeling the spread of COVID-19 in communities across the New Jersey.
- In 2021, a new director of the Division of Environmental and Population Health Biosciences was recruited.

Infectious Disease

- The new Institute for Infectious and Inflammatory Diseases (i3D) is developing areas of strength, including pathogen diagnostics, immunology of infectious disease, inflammatory diseases including lupus and inflammatory bowel diseases, immunology of fungal infections, microbiome research, allergic inflammation, cancer immunology, pathogenic mechanisms, pain, structural biology, and tuberculosis.

- Institute faculty have published papers in high-impact journals, such as the New England Journal of Medicine, Science Immunology, Science, Immunity, and Nature Immunology. These publications represent major contributions to these fields.
- In 2020, i3D established the Center for COVID Response and Pandemic Preparedness (CCRP2) as the Rutgers-wide institutional hub for COVID-19 research and innovation.
- Several studies carried out by i3D investigators are already being translated to new treatments for disease or novel diagnostics for identification of specific pathogens. For example, fundamental research in i3D has recently led to the development of a biotech company, NemaGen Discoveries, Inc., which is testing novel therapies targeting mast cells for treatment of asthma and allergies.
- Groundbreaking research in conjunction with the biotech company Cepheid has led to the development of new diagnostics for detection of tuberculosis and SARS-Cov-2, the causative agent of COVID-19.
- Global NIH-funded research sites in India, Uganda, Brazil, and South Africa perform basic, translational, and clinical studies with high threat pathogens including SARS, tuberculosis, HIV, and Candida.

Neuroscience

- In 2014, the inaugural director of the Brain Health Institute (BHI), a joint initiative of RBHS and Rutgers–New Brunswick, was appointed.
- BHI launched the Rutgers Alzheimer’s Disease & Dementia Research Center (RUADRC) in 2017. RUADRC research focuses on identifying disease mechanisms using genetic, cellular, organismal, and behavioral approaches in animal and human model systems. Understanding disease mechanisms will help uncover pathways to drug development.
- The Rutgers–Princeton Center for Computational Cognitive Neuropsychiatry (CCNP) was formed by BHI in 2016 as a major collaborative effort to leverage the expertise in Princeton’s Department of Psychology and Neuroscience Institute and multiple departments across Rutgers.
- In 2022, BHI recruited a director of the new Rutgers Addiction Research Center (RARC). RARC is the only comprehensive addiction center in New Jersey with the capacity to impact the addiction epidemic through cutting-edge approaches from precision medicine, preclinical research, treatment and care of individuals and families coping with addiction, public policy innovation and reform, and interprofessional education of clinical, research, and criminal justice workforces.

- Over the past seven years, BHI has recruited 21 high-caliber, extramurally funded, senior and junior faculty.
- In 2014, just prior to the launch of BHI, the total FY NIH grant awards to Rutgers for brain, neuroscience, and mental health research was \$33 million. In 2020, the total NIH grant awards to Rutgers for brain, neuroscience, and mental health research increased to nearly \$84 million.

Community Health and Health Systems (Emerging Signature Program)

- The program's goal is to promote evidence-based population health improvement by engaging diverse communities and advancing delivery system innovation.
- In 2016, an executive director of health systems and population health integration was recruited.
- Rutgers Cancer Institute's ScreenNJ collaborates with, connects, and supports health care provider agencies, public health agencies, and community organizations throughout the state to provide education, refer patients, or directly provide cancer screening services to reduce cancer mortality rates and disparities. ScreenNJ has provided education on screening guidelines to more than 11,000 health care professionals. It has also connected more than 51,000 at-risk members of the public to cancer screening education and prevention, screened more than 40,000 uninsured/underinsured individuals at risk for colorectal cancer, screened more than 2,800 uninsured/underinsured individuals at risk for lung cancer, and linked more than 6,000 individuals with tobacco cessation support.
- The Cancer Institute launched the BEAT Platform (Bridging Divides, Education & Empowerment, Arts Expression, Touching Lives), a web-based, interactive platform highlighting the arts as a mechanism for cancer-related messaging.
- RWJMS launched the Rutgers Center Advancing Research and Evaluation for Patient-Centered Care (CARE-PC) as a cross-disciplinary affiliation mobilizing resources across RBHS schools and institutes. The center serves as a hub for patient-centered research, connecting researchers with clinicians who are addressing health disparities and barriers to care among all patient populations. The goal is to better enable patients across health systems to make informed health decisions and play a role in their own care.
- In 2017, the Office of Health Affairs was established at Rutgers University. The office began implementing a structure and processes to improve health synergies across Rutgers by incorporating leaders for student health and occupational health into a unified, universitywide clinical enterprise.

- SPH worked in collaboration with the New Jersey Department of Health (NJDOH) to launch the NJ Community Contact Tracing Corps program to support the response to the COVID-19 pandemic.
- RBHS participated in the NJDOH Commissioner’s Professional Advisory Council to support the response to the COVID-19 pandemic and developed community education programs through its “On the Pandemic” podcast (15 episodes), conducted 15 health briefings, and managed the state’s COVID19 Call Center through the NJMS Poison Control Center.
- In 2021, a vice chancellor of population health for RBHS and a deputy chief population health officer at RWJBarnabas Health was appointed.

COMPLEMENTARY RESEARCH PROGRAMS

The complementary programs focus on research areas that are essential for the growth and development of RBHS and critical for the success of RBHS signature programs and the Rutgers mission. RBHS leads the complementary programs in clinical research and public health; the other two (informatics, and drug discovery and development) are led by the university’s central administration with RBHS participation.

Clinical Research (led by RBHS)

- In 2016, the Rutgers Institute for Translational Medicine and Science (RITMS) was established, and an inaugural director was recruited.
- In 2019, the NIH awarded the Clinical and Translational Science Award (CTSA) to RITMS and, with Princeton University and New Jersey Institute of Technology, created the New Jersey Alliance for Clinical and Translation Science (NJACTS).
- A clinical trials office was established in 2020 for the purposes of advancing and enhancing RBHS clinical research.

Public Health, Including Global Health (led by RBHS)

- In 2015, SPH was reorganized, moving most faculty affiliations in the RWJMS Department of Environmental and Occupational Medicine and NJMS Department of Preventive and Community Health to SPH.
- In 2016, a director was appointed to create the Rutgers Global Health Institute. The institute was formally established in 2017 with a Rutgers-wide membership, governance, and strategic plan.
- A new SPH dean was appointed in 2017.

Drug Discovery and Development (led by Rutgers)

- Rutgers joined the international Academic Drug Discovery Consortium as the first member in New Jersey.
- Rutgers Translational Science (RTS) was established, with capabilities in molecular design and synthesis (laboratories on the Busch Campus), a molecular imaging center (Gordon Road), research pathology (Gordon Road), and small molecular plating/screening (School of Environmental and Biological Sciences).
- Rutgers receives \$4 million as a new hub under the NIH REACH program to accelerate development of biomedical technologies into commercially viable diagnostics, devices, therapeutics, and tools.

Informatics (led by Rutgers, with RBHS accomplishments listed below)

- In 2021, an associate vice chancellor (AVC) for clinical innovation and data analytics was appointed to foster a culture of innovation across multiple medical and health disciplines and provide leadership on operational data analytics and clinical decision-making support systems. The AVC works closely with RBHS leadership, the combined clinical practice, and RWJBarnabas Health leadership to advance evidence-based practices for qualitative implementation improvement to ensure robust, dynamic, and high-value clinical decision support.
- In 2021, a chief research informatics officer was appointed to address the challenges and opportunities of conducting research in an increasingly complex, data-intensive health care environment. The officer works closely with Rutgers Office of Information Technology, the New Jersey Alliance for Clinical and Translational Science, the RBHS Office of Research, and collaborators throughout RWJBarnabas Health to expand informatics and data analytics capacity.
- EPIC is being implemented as the electronic health record system.

EDUCATIONAL INITIATIVES

Seven initiatives were undertaken to improve or enrich educational and training programs across RBHS.

Novel Approaches to Teaching

- Several simulation laboratories are now being operated at SN, EMSOP, SHP, NJMS, and RWJMS to enhance the learning experience by creating a realistic clinical experience in a controlled environment.

Graduate Medical Education

- Established the Health Education Executive Council (HEEC) and a subcommittee, Inter-professional Programs Advisory Committee (IPAC), with membership from Rutgers and RWJBarnabas Health.
- Rutgers Health's sponsoring institution status was established by the Accreditation Council for Graduate Medical Education, becoming the largest graduate medical education (GME) program in New Jersey and one of the largest in the nation, representing more than 1,600 residents and fellows.
- An inaugural RBHS vice chancellor for graduate medical education and enterprise-wide designated institutional official was appointed to advance the training of the 1,600 GME residents and fellows across Rutgers Health and RWJBarnabas Health.

Interprofessional Education

- A vice chancellor for interprofessional programs was appointed and named the Hunterdon Chair in Interprofessional Education at RWJMS.
- The Interprofessional Education Faculty Advisory Council (IPEFAC) was formed and meets monthly to oversee the development and implementation of RBHS interprofessional education activities. IPEFAC members represent EMSOP, the Graduate School of Applied and Professional Psychology, NJMS, RWJMS, RSDM, SHP, SN, SPH, and SSW.
- The RBHS Office of Interprofessional Programs website was developed and implemented.

Undergraduate Health-Related Education

- Nearly 2,400 students enroll in RBHS undergraduate programs each year, ranging from bachelor's degrees in nursing, cardiovascular and diagnostic medical sonography, psychiatric rehabilitation counseling, occupational therapy assistant, health information management, and medical laboratory sciences, to the six-year doctor of pharmacy (PharmD) degree, the entry-level degree for pharmacists.

Pipeline/Pathway Programs

- The NJMS Office for Diversity and Community Engagement and the RSDM Office for Student Affairs, Diversity, and Inclusion have established many federally and privately funded pipeline programs to build and strengthen affiliations. NJMS's SMART and RSDM's Decision for Dentistry are pre-college enrichment programs. The Hispanic Center of Excellence Summer Youth Scholars Program, the Health Careers Opportunity

Program, the Gateway to Dentistry Program, the Robert Wood Johnson Foundation/the American Association of Medical Colleges/the American Dental Education Association Summer Medical and Dental Education Program, and Mini-Medical School are college-level enrichment programs.

- RWJMS INSPIRE, sponsored by the NIH’s Institutional Research and Career Development Award (IRACDA), is a postdoctoral program to train the next generation of scientists. This program also provides opportunities for undergraduates from diverse backgrounds to explore research careers in biomedical sciences.
- SHP’s health science careers program, a partnership with 100 New Jersey high schools, provides 4,000 high school students a year with the opportunity to obtain credit towards a Rutgers undergraduate degree while in high school, as well as providing exposure to health professions career options at Rutgers.

Leadership Training

- In collaboration with the Rutgers Center for Organizational Leadership, the Academic Leadership Program at RBHS was developed as a venue for faculty administrators to examine and further develop their leadership, management, and organizational competencies. In 2018–19, the first cohort was enrolled in the one-year series of workshops, discussions, and projects, and the fourth cohort (2021–22) is currently ongoing.

Joint Degree Programs

- **EMSOP:** PharmD/MD (jointly with RWJMS); PharmD/PhD (toxicology, medicinal chemistry, or pharmaceuticals, jointly with the School for Graduate Studies); PharmD/MBA (jointly with Rutgers Business School); and PharmD/MPH and PharmD/MS-HOPE (Health Outcomes, Policy, and Economics), both jointly with the School of Public Health.
- **NJMS:** MD/PhD (jointly with the School of Graduate Studies); MD/MPH (jointly with the School of Public Health); MD/MBA (jointly with Rutgers Business School).
- **RWJMS:** MD/PhD (jointly with the School of Graduate Studies); MD/MPH (jointly with the School of Public Health); MD/MBA (jointly with Rutgers Business School); MD/JD (jointly with Rutgers Law School); MD/MSCTS (jointly with the School of Graduate Studies).
- **RSDM:** DMD/PhD (jointly with the School of Graduate Studies); DMD/MPH (jointly with the School of Public Health); and DMD/MBA (jointly with Rutgers Business School).

- **SGS:** MD/PhD (jointly with NJMS, RWJMS, Princeton); DMD/PhD degree (jointly with RSDM); DPT/PhD (jointly with SHP); and the PharmD/PhD (jointly with EMSOP); MS-Biomedical Sciences/MBA degree (jointly with Rutgers Business School), the MS-Biomedical Sciences/MPH degree (offered jointly with SPH) and the MS-Clinical and Translational Sciences/MD (jointly with RWJMS).
- **SHP:** Doctor of Physical Therapy/PhD (jointly with the School of Graduate Studies); MS Physician Assistant/MPH (jointly with the School of Public Health); MS Clinical Nutrition/MPH (jointly with the School of Public Health); BS (Psychiatric Rehabilitation and Psychology, Medical Laboratory Science, Health Information Management, Cardiovascular Sonography, Diagnostic Medical Sonography), all jointly with Rutgers–Newark School of Arts and Sciences; Doctor of Physical Therapy and Doctor of Clinical Nutrition, both articulation with Rutgers–New Brunswick School of Arts and Sciences; MS (Health Informatics, Health Care Management, Rehabilitation Counseling, Clinical Trial Management), all articulation with Rutgers–Camden School of Arts and Sciences; various joint BS degrees with Kean University, Bloomfield College, Fairleigh Dickinson University, Felician College, Georgian Court College, New Jersey City University, Ramapo College of New Jersey, and College of Saint Elizabeth.
- **SN:** MS in Nursing (Advanced Community Health Nursing Leadership Program)/MPH (under revision, jointly with the School of Public Health)
- **SPH:** MD/MPH (jointly with NJMS, RWJMS); DO/MPH (jointly with Rowan University); DMD/MPH (jointly with RSDM); JD/MPH (jointly with Rutgers Law School); PharmD/MPH (jointly with EMSOP); PharmD/MS-HOPE (jointly with EMSOP); PsyD/MPH (jointly with the Graduate School of Applied and Professional Psychology); MBA/MPH (jointly with Rutgers Business School); Master of Biomedical Science (MSB)/MPH (non-thesis)(jointly with the School for Graduate Studies); MS-Biomedical Science/MPH (jointly with the School for Graduate Studies); MS-Clinical Nutrition/MPH (jointly with SHP); MS Physician Assistant/MPH (jointly with SHP); MSW/MPH (jointly with the School of Social Work); MPP/MPH (jointly with the Bloustein School of Public Policy); MPA/MPH (pending approval, jointly with the Bloustein School of Public Policy); MS in Nursing (Advanced Community Health Nursing Leadership Program)/MPH (under revision, jointly with the School of Nursing).

Professional and Continuing Education

- The RBHS Interprofessional Continuing Education (IPCE) program, a collaboration of NJMS, RWJMS, SN, EMSOP, and UBHC, offers coordinated continuing education designed to promote interprofessional and discipline-specific collaborative care that is quality focused, safe, patient-centered, and evidence-based.

Clinical Initiatives

The RBHS strategic plan included several important initiatives designed to enhance its clinical enterprise.

Branding

- In conjunction with a systemic review of the overall structure of the clinical practices and an in-depth analysis of key functional components of patient care delivery at Rutgers, a new, consistent, overarching brand of Rutgers Health now identifies the health care delivery umbrella. This brand should be easily recognized and understood by the university community, patients, consumers, potential donors, and industry collaborators, such as pharmaceutical and biotechnology companies. Additional work is ongoing to further align and clarify the brand, following on the affiliation with RWJBarnabas Health.

Clinical Affiliations

- In 2015, Robert Wood Johnson Health System and Barnabas Health signed the agreement which outlines the merger between these two leading health systems to form RWJBarnabas Health, a network of health care providers in New Jersey that includes academic centers, acute care facilities, and research hospitals, with the goals of increasing collaboration on educational and research programs.
- In July 2017, RWJBarnabas Health and Rutgers signed a letter of intent to affiliate to enhance the relationship between the health care delivery system and academia, invest in research and education, expand access to high-quality care and make New Jersey communities healthier. Within 12 months, a transformative agreement was reached to invest more than \$1 billion over two decades, establish the state's largest comprehensive medical group, and form an overarching integrated academic health system.
- In 2018, a new Master Affiliation Agreement was signed between Rutgers and RWJBarnabas Health forming the largest and most comprehensive academic health system in New Jersey. This swift approach to a major collaboration was driven by the strategic importance of the relationship and a desire to make the shared vision a reality.
- In 2019, the Clinical Management Operating Committee was formed to coordinate clinical activity across the Rutgers Health/RWJBarnabas Health alliance.
- The Integrated Practice Agreement for RWJBarnabas Health and RWJMS was signed on December 24, 2020, to create (effective July 1, 2020) the RWJBarnabas Health–Rutgers Medical Group, comprising 1,800 physicians in a fully integrated, multidisciplinary, physician-led academic medical group that is a national model for health transformation.

- The Integrated Practice Agreement for RWJBarnabas Health and the Rutgers Cancer Institute of New Jersey, effective July 1, 2021, aligned the clinical enterprises.

Accountable Care Organization

- In 2016, the Rutgers Health Network was structured as a clinically integrated network, having a corporate relationship with Rutgers, and meeting the legal and structural requirements of a Medicare accountable care organization (ACO).
- In 2016, the Rutgers University Board of Governors authorized the creation of Rutgers Health as an innovative, statewide academic health care brand to revolutionize patient care across New Jersey.
- Rutgers Health brings together all the clinical activities that are provided through our medical and health professions schools, centers, institutes, and practices under one umbrella.

Patient Access Initiatives

- In 2015, the potential for an RBHS-wide multi-specialty, multi-professional faculty practice plan was reviewed, and clinical operations were assessed across departments of multiple schools and campuses, clinical care units, and licensed providers.
- In 2015, additional practices were added to the patient call center.
- In 2016, Rutgers Health Group was established with its own board and annual budget.
- In 2016, University Dental Associates opened a new faculty practice in New Brunswick.
- Initiatives were funded by the New Jersey Medicaid Access to Physician Services (MAPS) program to increase access for Medicaid patients through Rutgers Health practices.

Community Service Activities

Several community service and community engagement activities emerged as components of many RBHS strategic plan signature programs, complementary programs, educational initiatives, and clinical initiatives.

- In 2017, RBHS participated in Newark 2020, an initiative to support economic growth and development.
- In 2019, the New Jersey Center on Gun Violence Research was launched publicly by Governor Phil Murphy.

- In 2019, a director of community engagement was appointed to enhance alliances with surrounding communities.
- The New Jersey Alliance for Clinical and Translational Science (NJ ACTS) received a \$5 million NIH grant to launch outreach campaigns and expand access to COVID-19 testing for underserved and vulnerable communities in New Jersey as part of the RADx Underserved Populations (RADx-UP) program in the Rapid Acceleration of Diagnostics (RADx) initiative. The grant funds the New Jersey Healthcare Essential WoRker Outreach and Education Study—Testing Overlooked Occupations, or NJ HEROES TOO, focusing on the Black and Latinx communities disproportionately affected by COVID-19 in places where Rutgers academic medical centers are deeply rooted. NJ ACTS collaborated with community and health care organizations in Essex, Middlesex, Passaic, and Union counties to co-design this study.
- The Rutgers Global Health Institute established Equitable Recovery for New Jersey’s Small Businesses, a program offering crucial support to small businesses and local nonprofit organizations in low-income and minority communities, which have suffered disproportionately because of the COVID-19 pandemic. The program also has improved access to COVID-19 testing and vaccines for vulnerable groups across New Jersey.

Integration Among Schools and Across Rutgers

RBHS reorganized and integrated several programs to ensure academic strength and efficiency within RBHS and across Rutgers.

Nursing Merger

- On July 1, 2014, the Rutgers College of Nursing (Newark and New Brunswick) and the Rutgers School of Nursing (legacy UMDNJ) merged to form the Rutgers School of Nursing (SN). For more information, see Appendix A.

Joint Clinical Chairs

- The inaugural strategic plan proposed joint recruitment of highly regarded leaders as joint clinical department chairs when concurrent chair vacancies occur in the same department in both medical schools, or by filling a chair in one school by appointing the chair in the other school as chair of both departments. Currently, there are five joint clinical department chairs in neurology, neurosurgery, radiation oncology, pathology, immunology and laboratory medicine, and psychiatry.

Designing the Multi-Professional Faculty Practice of the Future

- An agreement was reached in 2016 on a vision and specific set of design principles to guide the development of the integrated interprofessional practice and a three-component organizational model to support the development of an integrated clinical enterprise across Rutgers. An Integrated Practice Agreement was signed that integrates RWJMS's clinical operations in New Brunswick with RWJBarnabas Health medical group practices. Key among the transformative efforts of the affiliation is the formation of a comprehensive medical group comprised of employed physicians and other health care professionals from RWJBarnabas Health and Rutgers Health. The new integrated practice group is one of the largest in the country, with a unified health mission that complements the high-quality standards of teaching and research excellence.

Reorganizing and Strengthening Doctoral Programs in Biomedical Sciences

- In 2017, the Rutgers–New Brunswick-based Graduate School and the RBHS-based Graduate School of Biomedical Sciences (GSBS) were merged into the new School of Graduate Studies (SGS). For more information, see Appendix A.

Reorganizing the Basic Sciences Across Rutgers

- A task force was convened in January 2015 by the RBHS chancellor to examine the reorganization of basic sciences across Rutgers. The task force recommended that reorganization of basic sciences be put on hold.

Roles of Centers and Institutes

- The RBHS research centers and institutes work with RBHS and other schools across Rutgers to serve as hubs for interdisciplinary research and collaboration in major theme areas. For more information, see Appendix A.

Additional Integrative Activities

- In considering possible synergies between the two RBHS medical schools, the chancellor charged the Future of Academic Medicine Committee to examine the impact of remaining as two medical schools, continuing the collaborations and integration that are ongoing, or combining into a single medical school with two co-equal campuses. In 2020, the Committee issued a report detailing the advantages and challenges of each model.

Other Enabling Structures

Additional infrastructure needs were identified to support signature programs, complementary programs, educational initiatives, clinical initiatives, and community service activities. Selected highlights appear below:

Advancing Institutional Stature

- Several key recruitments were completed to provide RBHS support more broadly, including a senior vice chancellor for academic affairs and research, serving as chief academic and scientific officer, to lead the education, faculty development, and research missions of RBHS.
- RBHS took advantage of the alignment of RBHS and Rutgers strategic initiatives to fund some of its priorities, including Henry Rutgers University Professors, Henry Rutgers Term Chairs, and the Chancellor's Scholars. Chancellor's scholarships were also established to attract the highest quality faculty for interdisciplinary positions focused on research.
- The Chancellor's Rising Star Scholars Program was initiated to identify students of the medical schools, based on academic achievement; excellence in discovery, innovation and entrepreneurship; and a commitment to join Rutgers Health or RWJBarnabas Health as an employed clinical faculty member at the completion of their Rutgers Health-based residency or fellowship. Awardees receive \$20,000 for each year they remain employed by Rutgers or RWJBarnabas Health, up to ten years, with a potential total benefit of \$200,000 to each Rising Star.
- RBHS-sponsored research funding increased from \$218 million in FY14 to \$528 million in FY21, representing a 142% increase over time; approximately 37% of FY21 awards are from federal sources.
- Rutgers medical schools have increased in the national rankings; the School of Nursing ranks in the top tenth percentile nationally among graduate schools of nursing; the School of Health Professions is highly ranked in physical therapy and rehabilitation sciences.
- RBHS faculty have been elected to several prestigious honorific organizations, including the Association of American Physicians (12); the American Academy of Arts and Sciences (7); the Fellows of the American Association for the Advancement of Science (35); the American College of Dentists (21); the Institute of Medicine/National Academy of Medicine (8); and the National Academy of Sciences (5). Additionally, many RBHS faculty hold elected positions in several honorific associations and societies.

Faculty Development

- Two provosts were appointed for the New Brunswick and Newark campuses.
- A vice chancellor for faculty development was appointed to develop a formalized mentoring program. Additionally, several mentoring training workshops have been initiated, including the Academic Leadership Program, Women in Leadership series, and an annual faculty development symposium. Since 2015, the chancellor's office has sponsored up to three outstanding candidates annually for participation in the Higher Education Resource Services (HERS) leadership development program for women in academia at Bryn Mawr College.
- An inaugural vice chancellor for diversity and inclusion was appointed in 2019 and RBHS adopted a statement on diversity, equity, and inclusion.
- An agreement was established with the VA New Jersey Health Care System that allows for the recruitment of joint faculty.

Facilities

- University Facilities and Capital Planning worked closely with the RBHS chancellor on master planning efforts so that the university's board-approved physical master plan was updated to include RBHS in 2017.
- Efforts are underway in Newark to renovate and modernize the Medical Science Building which, together with University Hospital, anchors the academic health center in Newark. Major new investments are planned to create a state-of-the-art health care facility.
- Planning has also begun to develop new simulation and clinical space for RSDM.
- In June 2021, RWJBarnabas Health and Rutgers Cancer Institute, in collaboration with the New Brunswick Development Corporation, broke ground on the Jack and Sheryl Morris Cancer Center.
- In October 2021, work began on the New Jersey Innovation & Technology HUB in New Brunswick that will be the site of a Rutgers translational research facility and RWJMS academic building.



Financial and Development Strategies

Several administrative and financial challenges were identified to be addressed as part of the inaugural strategic plan, including working toward more uniform and standardized administrative and financial policies, enhancing research administrative infrastructure, and improving financial performance. Selected highlights appear below:

Administrative Challenges and Financial Improvement Strategies

In FY2014, RBHS had a budgeted deficit of approximately \$54 million, yet the faculty had not had a union contract and raises for six years. Beginning in FY2016 through FY2019, RBHS closed with an operating surplus of anywhere between \$20 and \$30 million.

- In FY2015, RBHS appointed a senior vice chancellor and chief financial and administrative officer.
- Since FY2015, revenue from clinical operations and hospital affiliates increased over 9% on average per year through FY2019.
- In FY2017, a director for the Office of RBHS Faculty Affairs was recruited. Policies and procedures were implemented to streamline faculty recruitment.
- During this same period, sponsored research awards increased just under 10% on average per year.
- A structured budgeting and variance analysis process was implemented and is utilized by all RBHS units.
- Instilled leadership accountability for financial performance with incentive programs.
- Rutgers shifted to a ‘responsibility center management’ model in which revenue-generating units are responsible for managing their own revenues and expenditures and covering their indirect cost allocations.
- Created mission-based income statements, including faculty effort by mission area.
- Implemented monthly financial closing and reporting processes.
- Developed financial models to incentivize the RBHS schools and major institutes and centers to recruit outstanding faculty, support and grow research cores, and retain faculty.

- Strategic funds were created for one-time investments and key recruitments from operating funds.
- The RBHS entities turned their operations into positive margin-generating enterprises.
- Developed and funded a Rising Star Program designed to retain top medical students to complete residency/fellowships at Rutgers Health/RWJBarnabas Health. Successfully committed 26 students and designated another 80.
- Created an RBHS staff mentoring program to promote a culture of mentorship for staff to build networks across RBHS. Membership has reached 50 staff members across RBHS.
- In collaboration with the Rutgers Center for Organizational Leadership, developed a year-long development program for faculty administrators to examine and further develop their leadership, management, and organizational competencies with attention to current bio-medical and health sciences challenges and opportunities at the national and state level, and within Rutgers and RBHS. In its first three years, 66 faculty leaders completed the program. The program is currently in its fourth year with a cohort of 18 participants.
- Negotiated two successor collective negotiations agreements with the American Association of University Professors–Biomedical and Health Sciences of New Jersey (AAUP–BHSNJ) bargaining unit, with each contract providing new incentives for faculty productivity, including a multimillion-dollar clinical incentive plan and various research incentives. Negotiated a new component of compensation, called the fully variable supplement. Developed an out-of-cycle process to reward faculty for exceptional performance. In each of the two consecutive contracts, negotiated increases to base compensation, independent of these other incentives.
- A Master Affiliation Agreement was executed between RWJMS and Robert Wood Johnson University Hospital (RWJUH) which included mission support for the research enterprise for the first time.
- A Master Affiliation Agreement was executed between RBHS and RWJBarnabas Health providing significant investment in the clinical, education, and research enterprise.
- A series of Clinical Services Agreements were executed between University Hospital, NJMS, and RSDM.
- Implemented Oracle Fusion Cloud Enterprise Performance Management (EPM) and Enterprise Resource Planning (ERP) to improve financial management and reporting systems across Rutgers.
- An online expense and travel management system was implemented along with a new procurement system.

- Research administration and reporting systems were developed and implemented.
- An online, non-aligned performance management system was implemented and has been used successfully across RBHS.
- Existing debt was restructured for RBHS entities through 2036.
- New appointment and promotion procedures for faculty were implemented.

Development Activities

- Recruited an RBHS vice president for development, and associate vice presidents for the Cancer Institute, the medical schools, and the RBHS professional schools.
- Launched fundraising program for Corporate/Foundation Relations to coordinate efforts throughout RBHS and recruited a senior director to lead the program.
- Created focus on leadership giving, major and principal gifts; restructured staff and changed job descriptions to focus fundraisers on individual giving and collaboration.
- Launched a Grateful Patient and Family fundraising program.
- With support from the chancellor's office, led a scholarship match campaign that raised more than \$2 million in scholarship support for RWJMS, SN, and RSDM, while engaging more than 200 new donors.
- RBHS total philanthropic revenue increased 166% from FY14 to FY20.
- Shepherded two transformational gifts for RBHS initiatives, including \$25 million for the Duncan and Nancy MacMillan Cancer Immunology and Metabolism Center of Excellence and \$30 million for the Brandt Behavioral Health Treatment Center and Residence.
- Began planning for a comprehensive fundraising campaign.
- Conducted a study and established a plan to launch a joint statewide campaign to fight cancer in conjunction with RWJBarnabas Health.
- Redirected fundraising focus in support of Rutgers' response to COVID-19, which permitted raising funds in support of research and clinical care and helped launch the donor-supported COVID-19 Student Emergency Fund.
- Total philanthropic dollars increased by \$65.1 million, representing an increase of 144% from FY2015 to FY2019.



Response to the COVID-19 Pandemic

Rutgers University has been at the forefront of the fight against the COVID-19 pandemic. Since March 11, 2020, when the World Health Organization officially declared COVID-19 a global pandemic, RBHS has been actively engaged in the COVID-19 response. The RBHS and Rutgers-wide community pulled together and responded to meet the needs of the moment, leveraging the strengths of all its mission areas. RBHS continues to provide leadership, innovative research, education, and clinical care as the COVID-19 response evolves. Nearly two years after the pandemic began, COVID-19 is still a public health problem and a cause of morbidity and mortality, adding new and challenging academic, clinical, and logistical hurdles we have had to overcome. Despite the challenges posed by this unprecedented global pandemic, RBHS has made significant progress as the leading academic health center in New Jersey, making important national contributions to combat this disease. Rutgers University employs more than 8,000 individuals across its statewide clinical enterprise, including a wide range of licensed health professionals and support staff. Since the start, RBHS clinicians remain on the front lines caring for patients across our wide spectrum of clinical sites and providing essential mental and physical health care across New Jersey.

While the pandemic affected strategic planning efforts across Rutgers, it also highlighted the strengths and growth of RBHS as New Jersey's premier academic health center, built over the course of the past eight years. These areas include biomedical, clinical, and translational research—accelerating the discovery and evaluation of novel diagnostics, therapeutics, and vaccines for COVID-19; health professions education and clinical training; patient care; public health interventions, education, and outreach to our host communities; and expanded resources for mental health. The full breadth and depth of the contributions across RBHS are too numerous to catalogue in this appendix, but an abbreviated summary of the highlights is included below.



Each of RBHS's schools and units served enormously important roles assisting the state and the world in its efforts to combat the pandemic. During the COVID-19 peak, our educational programs migrated to a primarily remote platform, with limited in-person simulation and clinical training with affiliates while ensuring trainee and student safety. In the spring of 2020, the Ernest Mario School of Pharmacy (EMSOP), the School of Nursing (SN), the School of Health Professions (SHP), and the two medical schools graduated students early to support critical national and local health care workforce needs. New Jersey Medical School's (NSMS) New Jersey Poison Control Center, also known as the New Jersey Poison Information and Education System (NJPIES), operates the state's COVID-19 hotline, providing medical information about COVID-19. NJPIES answered more than 100,000 calls since the start of the pandemic. SHP, as part of workforce development for New Jersey Alliance for Clinical and Translational Science (NJACTS), worked to cultivate and train the clinical research workforce when pharmaceutical companies faced an urgent need to expedite COVID-19 vaccine trials. During the initial surge, while personal protective equipment (PPE) was in short supply nationwide, Robert Wood Johnson Medical School (RWJMS) students, working with the Rutgers Schools of Engineering, Arts and Sciences, and Environmental and Biological Sciences, manufactured some PPE items, such as face shields and intubation boxes, using 3D printing technology.

University Behavioral Health Care and University Correctional Health Care served more than 36,000 clients, trained 65,000 behavioral health staff statewide, and handled more than 500,000 calls in their national call center, including those on new phone lines dedicated to providing COVID-19 and health care worker support. Rutgers School of Dental Medicine (RSDM) converted its facilities as overflow treatment space for University Hospital during the height of the pandemic and later adapted to social distancing and new PPE protocols to continue teaching and offering treatment as the state's largest

provider of oral health care. The School of Public Health (SPH) also collaborated with the state to launch the Community Contact Tracing Corps Program, which trained more than 2,000 contact tracers statewide, also helping to design an exhibit about contact tracing at the Liberty Science Center.

The Environmental and Occupational Health Sciences Institute (EOHSI) supported efforts to reduce viral load in homes and workplaces, inactivate the virus in public transportation, evaluate COVID infection risk in health care providers, and develop a publicly available app (NJ COVID-19 Project) to track multiple facets of the infection across the state. The Occupational Health Clinic at EOHSI provided significant support to keep the university operational, especially before vaccines were available. The clinic staff provided onsite testing to RBHS staff who believed they were exposed, administering the saliva test to employees in their cars, creating one of the first on-site, drive-by testing spots. The occupational health physicians and residents staffed the EOHSI helpline for any RBHS employee with questions about potential exposures, the isolation policy following such an exposure, the efficacy of the testing methods, the likelihood of transmission, and disinfection procedures.

Rutgers' vaccination centers administered thousands of COVID-19 inoculations. RWJMS's Eric B. Chandler Health Center has administered more than 13,000 doses of vaccine to date, working with community organizations to ensure access to underserved populations. Rutgers Global Health Institute helped improve COVID-19 vaccine and testing access in low-income and minority communities by offering numerous pop-up clinics with on-site support in multiple languages, as well as a strong community engagement and boots-on-the-ground outreach. SPH also worked to provide testing and vaccination in underserved areas. Faculty members at EMSOP participated in immunization administration training programs for 90 pharmacists and 30 pharmacy technicians across the state and helped train more 400 student pharmacists to support vaccination efforts statewide. EMSOP also collaborated across RBHS and helped manage the interprofessional training of many members of our vaccination corps.

Despite the “rampdown” of non-COVID-19-related research because of the need for social distancing measures that protected the research workforce (Omary et al. 2020), RBHS researchers led a wide range of scientific investigations including, but not limited to: SARS-CoV-2 testing, vaccines, treatment,



and etiology, and fundamental biomedical, epidemiological, community-based, and social sciences research. As part of these efforts, RBHS launched the Center for COVID-19 Response and Pandemic Preparedness (CCRP2) within NJMS's Institute for Infectious and Inflammatory Diseases as the Rutgers-wide institutional hub for COVID-related scientific research and innovation. CCRP2 has served as a catalyst for building a highly prominent COVID-related research presence at Rutgers and fostering collaborations with industry. Scientific expertise and biosafety level 3 (BSL-3) facilities have enabled CCRP2 to lead in the response to the COVID-19 threat in New Jersey, emerge as national leaders, and start work on preventing future pandemics.

From February 2020 to January 2022, RBHS has surpassed \$74.8 million in extramurally sponsored research activity related to COVID-19. To date, RBHS has secured:

- 28 clinical trials (eight federally supported and 20 industry-sponsored), representing \$23 million;
- 427 proposal submissions, representing total potential project costs of \$1.2 billion;
- 164 awards, representing \$74.8 million, with a projected multi-year total of over \$200 million, that includes support for organized research and other equipment, service, and training grants;
- One NIH G20 grant to support modernization of the Regional Biocontainment Laboratories, \$3.3 million;
- 403 IRB protocols generated for COVID-19 related research.



Some of the research highlights involving national leadership in the fight against COVID-19 include:

- A Rutgers research team completed the first evaluation of a new rapid COVID-19 test given emergency approval by the FDA. The test, developed by CEPHEID, a U.S. molecular diagnostics company, is fast and easy to perform without the need for a centralized laboratory.
- In April 2020, the FDA granted an EUA for the first approved saliva test to detect SARS-CoV-2, created by RBHS-affiliated faculty and RUCDR Infinite Biologics. Since then, a revised EUA for an at-home saliva sample collection was also approved and Rutgers/RUCDR launched a \$44 million spinoff company, Infinity BiologiX LLC.
- RBHS proudly served as a COVID-19 vaccine clinical trial site for phase 3 testing of the Moderna, Johnson & Johnson, and Pfizer vaccines. The RWJMS site for Johnson & Johnson's vaccination trial was the second largest recruiter in the world, which helped facilitate FDA approval of the vaccine for public use.

- RBHS launched the nation's first prospective study of health care workers exposed to COVID-19, including more than 800 employees from Rutgers, Robert Wood Johnson University Hospital and University Hospital, to explore new drug treatments, antibody testing, and long-term health tracking in the hope of providing insight into the disease and prevent its spread. RBHS was also awarded \$1.6 million in NIH funding to create a national collaborative network to identify risk and protective factors that may allow clinicians or public health professionals to predict which children are at the greatest risk for serious illness from COVID-19.
- RWJMS serves as a national hub for pediatric sites as part of the NIH's \$470 million RECOVER research initiative to study long-term and delayed impacts of COVID-19 in children. The Collaborative Long-term Study of Outcomes of COVID-19 in Kids (CLOCK) consortium at Rutgers is recruiting children, adolescents, and young adults from across the U.S. into the NIH's RECOVER cohort study.
- RSDM spearheaded COVID-19 research in the NIH/NIDCR-supported National Dental Practice Based Research Network, examining the role of testing and the safety climate in community-based practice.

In RBHS's role as key advisors and health practitioners, RBHS continued to work with the university's central administration to keep the Rutgers community healthy amidst surging cases across the state. RBHS has been an integral part of the Rutgers-wide recovery and repopulation efforts, providing guidance on testing protocols, safety and disinfection, epidemiological forecasting, travel policies, risk mitigation, and more. This was accomplished thanks in no small part to the tireless efforts of



dedicated individuals who planned, managed, and supported tactical implementation of strategic testing, vaccination administration, and record verification and management. RBHS worked diligently to obtain, create, and deploy PPE. Many of our students played critical and selfless roles in these efforts, making test kits, staffing hotlines, scheduling appointments, and much more. Rutgers emerged as a national academic leader as the first university in the U.S. to announce a decision to require COVID-19 vaccination of all students for fall 2021 (Calcado et al. 2022). RBHS also undertook multiple intentional strategies to help build a sense of community during the disruptions caused by the pandemic (Lamba et al. 2021).

RBHS experts continue to regularly disseminate timely and accurate information to individuals, the media, community-based organizations, and local, state, and federal leaders. In a time of widespread confusion and deliberate misinformation, RBHS was a consistent presence in the media, with countless news stories acknowledging our expertise and work, with a potential reach of billions worldwide. RBHS faculty and leaders participated in online community forums, and initiated podcasts and live briefings, to share accurate information about the disease; the public health imperatives of lockdowns, mask-wearing, and “flattening the curve;” use of testing capacity; and vaccine safety. These stories were shared millions of times across social media platforms.

With the breadth of expertise in infectious disease, public health, nursing, dental care, pharmacy services, health professions education, and a multitude of other related disciplines, RBHS became a resource for national, state, and local leaders during the pandemic. As envisioned by the 2014 strategic plan, RBHS has built a platform for conducting rigorous research within the laboratory, translating discoveries to direct clinical interventions, and informing public policy decisions with timely, scientifically rigorous, and consistent advice.

Throughout these past two years, RBHS has demonstrated how much we have to offer our patients, students, host communities, home state, and beyond. The COVID-19 pandemic brought these qualities into sharper focus: it revealed our breadth across many disciplines; rigor and depth in our research; the resilience, bravery, and compassion of our colleagues; and commitment to serve our community.



Comparison of Selected Health Sciences Universities

A total of 40 universities (Table A) were identified for comparison, including 31 from the Association of American Universities (AAU), 30 from the Association of Academic Health Centers (AAHC), and eight from the Big Ten Academic Alliance (Figure A).

Table A. Health Sciences Universities Included in the Comparison

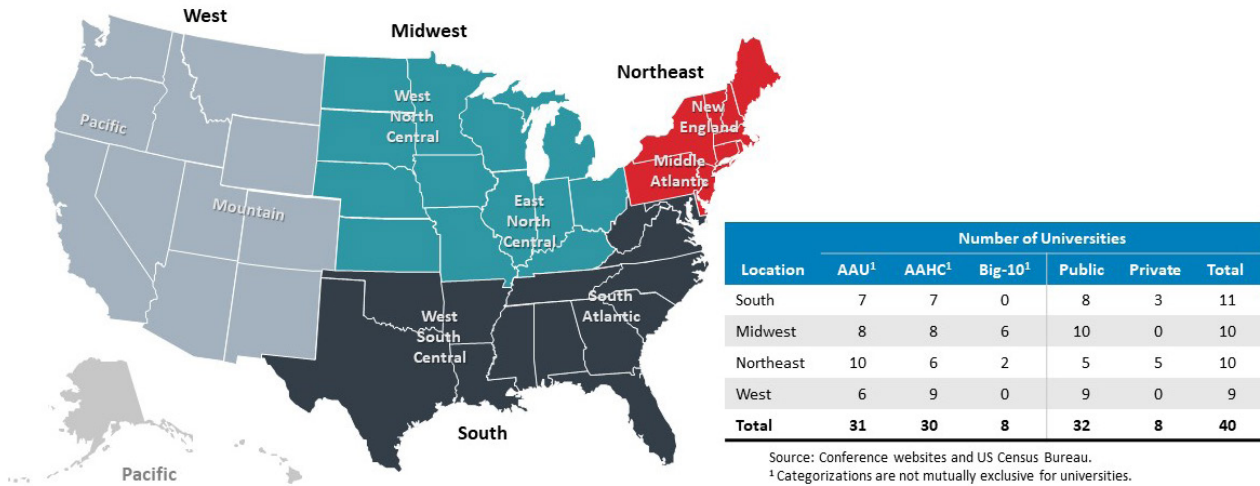
University	Big Ten	AAU	AAHC	Region	Division	Control
Indiana University	Yes	Yes	No	Midwest	East North Central	Public
The Ohio State University	Yes	Yes	Yes	Midwest	East North Central	Public
University of Illinois at Chicago	No ¹	No	Yes	Midwest	East North Central	Public
University of Iowa	Yes	Yes	Yes	Midwest	West North Central	Public
University of Kansas	No	Yes	Yes	Midwest	West North Central	Public
University of Michigan, Ann Arbor	Yes	Yes	No	Midwest	East North Central	Public
University of Minnesota, Twin Cities	Yes	Yes	Yes	Midwest	West North Central	Public
University of Missouri, Columbia	No	Yes	Yes	Midwest	West North Central	Public
University of Nebraska Medical Center	No ¹	No	Yes	Midwest	West North Central	Public
University of Wisconsin, Madison	Yes	Yes	Yes	Midwest	East North Central	Public
Medical University of South Carolina	No	No	Yes	South	South Atlantic	Public
Texas A&M University, College Station	No	Yes	No	South	West South Central	Public
University of Florida	No	Yes	No	South	South Atlantic	Public
University of Maryland, Baltimore	No ¹	No	No	South	South Atlantic	Public
University of North Carolina at Chapel Hill	No	Yes	Yes	South	South Atlantic	Public
University of Texas Health Science Center at San Antonio	No	No	Yes	South	West South Central	Public
University of Texas at Austin	No	Yes	No	South	West South Central	Public
Virginia Commonwealth University	No	No	Yes	South	South Atlantic	Public
Oregon Health & Science University	No	No	Yes	West	Pacific	Public
University of Arizona	No	Yes	Yes	West	Mountain	Public
University of California, Irvine	No	Yes	Yes	West	Pacific	Public
University of California, Los Angeles	No	Yes	Yes	West	Pacific	Public
University of California, San Diego	No	Yes	Yes	West	Pacific	Public
University of California, San Francisco	No	No	Yes	West	Pacific	Public
University of New Mexico	No	No	Yes	West	Mountain	Public
University of Utah	No	Yes	Yes	West	Mountain	Public
University of Washington	No	Yes	Yes	West	Pacific	Public
Pennsylvania State University	Yes	Yes	Yes	Northeast	Middle Atlantic	Public
Rutgers University	Yes	Yes	Yes	Northeast	Middle Atlantic	Public
Stony Brook University, State University of New York	No	Yes	Yes	Northeast	Middle Atlantic	Public
University at Buffalo, State University of New York	No	Yes	No	Northeast	Middle Atlantic	Public
University of Pittsburgh	No	Yes	Yes	Northeast	Middle Atlantic	Public
Boston University	No	Yes	No	Northeast	New England	Private
Columbia University	No	Yes	No	Northeast	Middle Atlantic	Private
New York University	No	Yes	No	Northeast	Middle Atlantic	Private
University of Pennsylvania	No	Yes	Yes	Northeast	Middle Atlantic	Private
Yale University	No	Yes	Yes	Northeast	New England	Private
Duke University	No	Yes	Yes	South	South Atlantic	Private
Emory University	No	Yes	Yes	South	South Atlantic	Private
Vanderbilt University	No	Yes	Yes	South	East South Central	Private

Sources: Big Ten Academic Alliance, Association of American Universities (AAU), Association of Academic Health Centers (AAHC) Conference websites and U.S. Census Bureau.

¹ The flagship campus of the university belongs to this conference (e.g., University of Illinois, Urbana-Champaign belongs to the Big Ten whereas University of Illinois, Chicago belongs to the Horizon League).

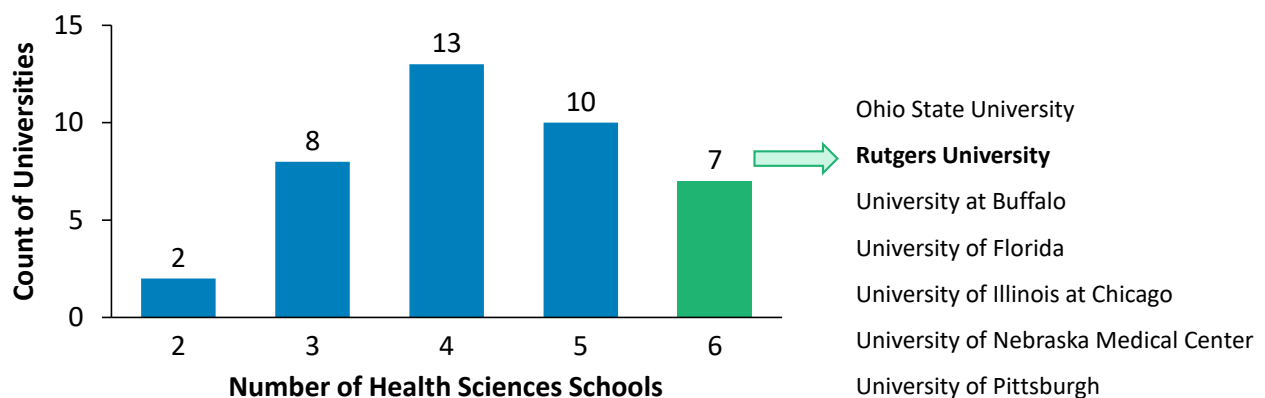
There were 32 public universities and eight private universities included either for their geographic proximity to Rutgers (e.g., Northeast region) and/or for their interest to RBHS as peer aspirants. All 40 universities included a medical school and at least one other health sciences school (e.g., dentistry, pharmacy, nursing, public health, and health professions).

Figure A. Summary of Health Sciences Universities Included in Comparisons



Among the 40 universities included in the comparisons, Rutgers is one of seven that include all six types of health sciences schools; the number of different types of health sciences schools ranged from two to six. (Figure B).

Figure B. Number of Health Sciences Schools in the Health Sciences Universities



Key Takeaways

- Of the universities reviewed, 95% have a school of nursing, 68% have a school of dentistry, 65% have a school of pharmacy, and 63% have a school of public health, while only 40% have a stand-alone school of health professions. RBHS has a comprehensive health sciences portfolio and is unique in having two separate allopathic medical schools; this is among the most complete offering in the tristate area and rivals only a handful of universities nationally.
- Of the seven universities with comprehensive health sciences (Figure B), three (Ohio State University, University of Florida, University of Pittsburgh) have a clinical affiliate with a significant number of nationally ranked specialties, per *U.S. News & World Report 2020–2021*. Of note, cancer, diabetes and endocrinology, nephrology, pulmonology and lung surgery, and urology are specialties that are ranked in all three. Thirty-six percent of the universities reviewed have a high degree of integration within the clinical enterprise, i.e., between/among hospital(s) and faculty group practice(s). This considers five alignment classification models and Rutgers' pursuit of greater integration follows a trend of many academic health systems (AHS) redesigning their corporate, governance, leadership, and financial structures to deliver seamless and high-quality patient care and to become nimbler and more competitive in the health care market.
- Of the universities reviewed, Rutgers University ranks 24th in terms of research expenditures across all colleges and 23rd in terms of FY 2020 NIH awards to the university. Rutgers' average NIH funding per principal investigator (PI), (\$694,565 for 306 PIs), is in line with the average for all the reviewed universities (\$692,090; 413 PIs) and exceeds that of Northeast region universities (\$684,632; 466 PIs) and all public universities (\$655,390; 369 PIs).
- Interdisciplinary centers and methods are well represented on separate Interprofessional Practice and Education Center (IPEC) websites for the health sciences universities profiled (e.g., Rutgers; Ohio State; University of Illinois–Chicago) and IPEC membership is clearly stated where applicable.
- Of the 40 universities, 26 have a single “health sciences” landing page, which eases navigation and improves user experience. Of those 26 universities compared in most depth, all have a consistent visual identity among their health sciences colleges as measured by uniformity of website design across health sciences; use of health sciences logos and university branding; stated mission, vision, or values; and an emphasis on services and offerings. The university and school brands are displayed in a uniform way due to the use of brand guides. A close review of each health sciences school's websites revealed distinguishing factors that can provide design lessons for RBHS.

- When comparing the seven universities that include the six health sciences schools (Table B), or the six health sciences schools within those universities, NIH funding has steadily increased over time (FY18 to FY21) for Rutgers University and for RBHS. Notably, RBHS ranked fifth in NIH funding among the health sciences schools of the seven universities for FY2018 and FY2019 and ranked fourth for FY2020 and FY2021. This analysis does not take into account the number of funded faculty and trainees in the health sciences schools.

Table B. NIH Awards*† and Derived Rankings‡ for Comprehensive Health Sciences Universities**
Fiscal Years (FY) 2018–FY2021 (award dollars in millions)

Organization§	FY2018			FY2019			FY2020			FY2021		
	Total NIH Awards	Derived Rank	Health** Percent (\$ of Total)	Total NIH Awards	Derived Rank	Health** Percent (\$ of Total)	Total NIH Awards	Derived Rank	Health** Percent (\$ of Total)	Total NIH Awards	Derived Rank	Health** Percent (\$ of Total)
University of Pittsburgh	\$536.5	4	91 (\$488.4)	\$546.4	6	91 (\$495.2)	\$570.1	9	90 (\$512.5)	\$597.8	11	92 (\$551.0)
Ohio State University	\$169.3	46	70 (\$118.6)	\$209.8	37	75 (\$157.2)	\$241.3	37	75 (\$181.1)	\$230.4	41	76 (\$174.7)
Rutgers University	\$169.1	47	62 (\$104.7)	\$193.0	44	65 (\$126.4)	\$212.5	46	67 (\$142.1)	\$227.9	43	67 (\$151.6)
University of Illinois	\$194.6	36	58 (\$113.3)	\$226.2	36	58 (\$130.4)	\$225.0	43	62 (\$140.6)	\$226.4	44	60 (\$136.8)
University of Florida	\$178.5	39	84 (\$150.3)	\$190.4	46	83 (\$158.9)	\$188.9	50	86 (\$161.9)	\$212.5	46	86 (\$184.1)
University of Nebraska	\$105.8	68	79 (\$83.5)	\$111.1	73	76 (\$84.9)	\$117.7	73	77 (\$90.2)	\$112.2	74	80 (\$89.5)
University at Buffalo, SUNY	\$64.7	95	69 (\$44.9)	\$65.6	102	65 (\$42.9)	\$73.4	105	71 (\$52.2)	\$71.2	109	69 (\$49.4)

*Awards combined where schools from singular universities are listed as separate entries (as published by Blue Ridge Institute for Medical Research, http://www.brimr.org/NIH_Awards/NIH_Awards.htm)

†Data exclude subawards from other awardee organizations; R&D contracts are included

‡Ranks derived from combined totals for the six health professions school types (unpublished data)

§Organizations listed in FY21 ranked order

**Comprehensive health sciences universities include the following school types: medical, dental, nursing, pharmacy, public health, health professions; excludes other school types (e.g., optometry, osteopathy, veterinary)



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Subcommittee Members*: Shawna Hudson (co-chair), Karen D'Alonzo (co-chair), Pamela Valera (co-chair)

**Ad hoc committee comprised of three steering committee members to examine other subcommittee goals and objectives to ensure community engagement was incorporated throughout the core mission areas and unifying themes.*

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Biological Basis of Disease Workgroup: Hyung Jin Ahn (chair), Lauren Aleksunes, Steven An, Namita Damle, Andrew Evens, Laura Fabris, Michael Gatza, Salma Jabbour, Reynold Panettieri, Karen Schindler, Marc Tambini

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Andrea Conklin Bueschel • Senior Vice President for Administration and Chief of Staff

Brian Ballentine • Senior Vice President for Strategy

Michael Gower • Executive Vice President for Finance and Chief Financial Officer

Prabhas Moghe • Executive Vice President for Academic Affairs

Enobong (Anna) Branch • Senior Vice President for Equity

Christopher Molloy • Rutgers–New Brunswick Chancellor

Nancy Cantor • Rutgers–Newark Chancellor

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Joan Collier • Director of Institutional Equity & Strategic Initiatives, Rutgers–New Brunswick

Sharon Stroye • Director of Public Engagement, Rutgers School of Public Affairs and Administration

Sunita Kramer • Assistant Vice Provost, Rutgers–New Brunswick

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Rutgers Biomedical and Health Sciences

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Vicente Gracias • Senior Vice Chancellor for Clinical Affairs

Denise Rodgers • Vice Chancellor for Interprofessional Programs

Sangeeta Lamba • Vice Chancellor for Diversity and Inclusion

Jeff Carson • Provost, RBHS New Brunswick/Piscataway

Chantal Brazeau • RBHS Chief Wellness Officer

Perry Halkitis • Dean, School of Public Health

Linda Flynn • Dean, Rutgers School of Nursing

Cecile Feldman • Dean, Rutgers School of Dental Medicine

Maria Soto-Greene • Executive Vice Dean, New Jersey Medical School

Justin Sambol • Senior Associate Dean for Clinical Affairs, New Jersey Medical School

Caroline Dorsen • Associate Dean, School of Nursing

Donna Fuedo • Assistant Dean for Experiential Education, Ernest Mario School of Pharmacy

Nancy Kirsch • Vice-Chair, Rehabilitation and Movement Sciences, Rutgers School of Health Professions

Karen Shapiro • Chief Administrative Officer, Rutgers School of Health Professions

Alfred Tallia • Professor and Chair, Department of Family Medicine and Community Health

Riva Touger-Decker • Chair, Clinical and Preventive Nutrition Sciences, School of Health Professions

Ryan White • Director, Clinical Practice, Physician Assistant, School of Health Professions

Eric Jahn • Senior Associate Dean for Community Health, Robert Wood Johnson Medical School

Alma Merians • Chair, Rehabilitation and Movement Sciences, School of Health Professions

Mary Bridgeman • Clinical Professor, Pharmacy Practice and Administration, Ernest Mario School of Pharmacy

Kathleen Bolmer • Nurse Manager, Department of Medicine, Robert Wood Johnson Medical School

Interprofessional Programs Advisory Committee (IPAC)

RBHS Council of Research Deans

RBHS School and Unit Communications staff

RBHS Student Focus Group • student representatives from NJMS, SPH, RSDM, SN, SGS

University Hospital

Shereef Elnahal • President and Chief Executive Officer

Tanya Freeman • Chairperson, Board of Directors

Robert Iannaccone • Executive Vice President

Chris Pernell • Chief Strategic Integration and Health Equity Officer

Alyssa Lord • Executive Director of Community and Population Health Services

Frank Hickey • Interim Vice President of Ambulatory Care Services

RWJBarnabas Health

Barry Ostrowsky • President and Chief Executive Officer

John Doll • Chief Financial and Administrative Officer

Michael Knecht • Senior Vice President of Strategic Marketing and Communications

Bill Arnold • President, Robert Wood Johnson University Hospital

Jack Morris • Founding Chair of the Corporate Board, Robert Wood Johnson University Hospital

Mark Manigan • Chief Strategy and Business Development Officer

Kristin Petersen • Senior Vice President and Chief Strategy Officer

Lina Shihabuddin • Chief Medical Officer, Primary Care Service Line, RWJBarnabas–Rutgers Medical Group

Frank Sonnenberg • Chief Medical Informatics Officer, RWJBarnabas–Rutgers Medical Group

Joyce Schneiderman • Department of Medicine

Lydia Stockman • Senior Vice President of Clinical Operations, Robert Wood Johnson University Hospital

Veterans Affairs New Jersey Health Care System

Kevin Beck • Associate Chief of Staff for Research and Development

New Jersey Department of Health

Judith Persichilli • Commissioner

Community Organizations

Keri Logosso-Misurell • Greater Newark Healthcare Coalition & Healthy Greater Newark ACO

Catherine Wilson • President and CEO, United Way of Greater Newark

Outside Universities

Kauline Cipriani • Associate Dean for Inclusive Excellence, The University of North Carolina at Chapel Hill, Gillings School of Global Public Health

Rogério Pinto • Associate Dean for Research and Innovation, University of Michigan School of Social Work

Patricia Ohtake • Assistant Vice President for Interprofessional Education, University at Buffalo, The State University of New York

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