

**A Report
to the RBHS
Chancellor
from
The Future of
Academic Medicine
Committee**

Jan. 10, 2020



RUTGERS

Robert Wood Johnson
Medical School



RUTGERS

New Jersey Medical School

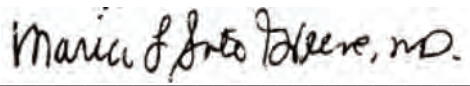
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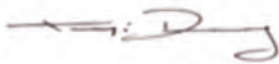
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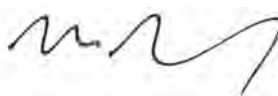
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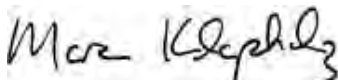
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Executive Summary

In considering possible synergies between the two Rutgers Biomedical and Health Sciences (RBHS) medical schools, Chancellor Strom charged the Future of Academic Medicine Committee to think boldly, but to also consider the details that have shaped and continue to make New Jersey Medical School (NJMS) and Robert Wood Johnson Medical School (RWJMS) distinctive and appealing to both faculty and students. The scope of the review was to examine the impacts of remaining as two medical schools, continuing the collaborations and integration that are already occurring, or combining into a single medical school with two co-equal campuses. The scope was broad, requiring a deep examination into the differences and similarities of the two medical schools as it pertains, in particular, to undergraduate medical education.

While the Committee acknowledges that clinical consolidation is already in progress, as is Graduate Medical Education (GME) restructuring, members must pay careful attention to how these changes impact the academic mission of both schools. Furthermore, in keeping with the RBHS vision of collaboration, we must also continue to grow through faculty-led research within the schools, institutes and interdisciplinary centers. Given these anticipated changes, the committee focused on the opportunities, and challenges, associated with levels of integration or complete integration as one Liaison Committee on Medical Education (LCME)-accredited school.

The Committee applied multiple strategies in its planning process. The Committee held town hall meetings at NJMS and RWJMS and solicited input from faculty, staff, administrators, students, trainees and community representatives. Subcommittees were formed to concentrate on the Education and Research missions. Questions were developed around the continuum of change associated with the potential models under consideration.

The report details the advantages and challenges of each model. Although the Committee is not making a single recommendation about which model should be embraced, members identified some practical suggestions for addressing “low-hanging fruit” that can be pursued regardless of which model is selected and which provide the opportunity for future integration as a single medical school with co-equal campuses. The schools should continue current collaborative and integrative efforts such as increased access to electives across institutions, faculty development, shared content expertise through greater use of technology, and addressing student indebtedness.

If a single school is to be considered, the most important factor would be ensuring the ability to develop an organizational, administrative, curricular and financial framework that satisfies LCME requirements for accreditation. Merging NJMS and RWJMS into a single school, albeit with distinctive programs and differing strengths at each campus, could be very unique. If Rutgers is to create a new, single entity, there needs to be greater clarity regarding the vision of what can be achieved. What would distinguish the new medical school? What is it that the newly imagined entity would do that goes beyond what the two medical

schools currently do? What would the state-of-the-art undergraduate medical education and first-rate research programs look like? To transform the institution for the next century, what are the educational and research resources that will attract and retain the best faculty and students?

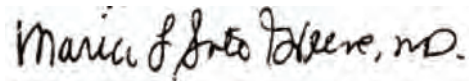
Therefore, a merger of the two medical schools with co-equal campuses should only be undertaken if it results in a **bold and transformational** change, **significant investment** in both schools is provided, and it includes open and multi-faceted communication, cooperation and collaboration **at every level. Given its uniqueness, we recommend consultation with the LCME on an ongoing basis. Finally, it is imperative that close attention be paid to the organizational structure that is charged with building a unified and cohesive identity while valuing the culture of each school.**

The Committee sincerely thanks Chancellor Brian Strom for the opportunity to provide this report that has the potential to positively impact the future of academic medicine in New Jersey and beyond, for many years to come.

Sincerely,



Thomas Hecker, PhD
Co-chair



Maria L. Soto-Greene, MD, MS-HPed, FACP
Co-chair

The Context

On Aug. 12, 2012, Governor Chris Christie signed into law the **New Jersey Medical and Health Sciences Education Restructuring Act**, which planned for the incorporation of seven of the University of Medicine and Dentistry of New Jersey's (UMDNJ) eight schools, as well as the Cancer Institute of New Jersey and University Behavioral Health Care, into a single entity within Rutgers [https://integration.rutgers.edu/45_Final_HigherEd_Restructuring_Bill_Corrected.pdf].

The law went into effect July 1, 2013, with the formation of **Rutgers Biomedical and Health Sciences** (RBHS) to serve as the umbrella organization for most legacy UMDNJ schools and clinical units, several pre-existing Rutgers entities (School of Nursing, Ernest Mario School of Pharmacy and the Institute for Health), and two research units [Center for Advanced Biotechnology (CABM) and Environmental and Occupational Health Sciences Institute (EOHSI)] that historically were jointly operated by Rutgers and UMDNJ.



This legislation restructured the higher education system in the State to provide for more vigorous educational communities that will provide opportunities for students and the workforce necessary to attract crucial private sector jobs as this century unfolds. The legislation fulfills the longstanding goal of Rutgers University to acquire a medical school and become a comprehensive public research university. Rutgers has long sought to regain a medical school as part of its curriculum; by Rutgers' own public statements, acquiring a medical school will propel Rutgers into a top-tier research university, and place it at or near the top 20 public universities in the nation. Very few great research universities lack a medical school. This legislation addressed these issues and established a first-class comprehensive public research university-based health science center in New Jersey through the transfer of New Jersey Medical School, Robert Wood Johnson Medical School, as well as several other schools and units, to Rutgers. Upon the transfer of the schools, institutes, and centers of the University of Medicine and Dentistry of New Jersey to Rutgers, The State University of New Jersey, the Cancer Institute of New Jersey became an independent institute at Rutgers and is distinct and separate from any individual school.

The seven schools that were part of UMDNJ:

- Graduate School of Biomedical Sciences
- New Jersey Dental School
- New Jersey Medical School
- Robert Wood Johnson Medical School
- School of Health Related Professions
- School of Nursing
- School of Public Health

Since 2013, progress has been guided by the intent of the legislation and by the RBHS Strategic Planning Process, initiated by RBHS Chancellor Brian Strom in December 2013 [*Building an Academic Health Center for the 21st Century*, rbhs-stratplan.rutgers.edu]. RBHS aspired “to be recognized as one of the best academic health centers in the U.S., known for its education, research, clinical care, and commitment to improving access to health care and reducing health care disparities.” This goal would be achieved through “dedication to elevated standards of excellence and innovation, interprofessional collaboration and integration, and deep engagement with the community (*Building*, p. 19).” Proposed initiatives and recommendations were adopted, addressing the full range of the RBHS mission: research, education, clinical care, community, and public policy.

In *Building*, the twin priorities of clinical care and education were linked: “excellence is required across all clinical programs because of its health care delivery mission and the need to provide comprehensive health services to local communities and New Jersey’s residents. Consequently, RBHS will strive to provide excellence in primary care and in specialized clinical care services. Similarly, comprehensive excellence is essential for educational programs. Clinical and educational initiatives will be developed accordingly (*Building*, p.13).”

Specific educational initiatives highlighted the importance of the student experience:

- **Novel approaches to teaching:** Create learning environments that promote quality and patient safety while continuing to advance

educational excellence for future health care providers of the State of New Jersey and the nation as a whole. Among the practices cited as novel approaches was simulation education.

- **Interprofessional education:** Integrate interprofessional education into health-related schools to develop students who can “learn about, from and with each other” to develop effective teams and, thereby, improve health outcomes.

“Rutgers was already an outstanding institution. Now, it is going to be a powerhouse.”

Gov. Chris Christie, shortly after signing the legislation at the student center on Rutgers’ main campus in New Brunswick

https://www.nj.com/politics/2012/08/gov_christie_signs_nj_higher_e.html

- **Joint degree programs:** Recognizing their ability to enhance training opportunities and attract the very best health professions students, joint degree programs are encouraged.
- **Integration among schools and across Rutgers:** On July 1, 2014, the Rutgers College of Nursing (Newark and New Brunswick) and the Rutgers School of Nursing (legacy UMDNJ) merged to form one Rutgers School of Nursing (SON). The goals of this merger were to: serve the citizens of the State of New Jersey with high quality care more efficiently; contribute more effectively to improving health outcomes through preparation of nurses, research on health matters, and service to communities; become one of the nation's leading nursing schools by enhancing its depth and breadth and offering a comprehensive array of academic programs; develop greater capacity to participate in interprofessional training and practice and provide high quality of care for the citizens of New Jersey; and develop the resources required to contribute significantly to nursing science. Complicating this merger were two separate unions, two separate calendars, two promotion processes and the need to consolidate to one dean, one curriculum, etc.

Other foundational elements of the RBHS Strategic Plan included: building depth and strength in developing signature and complementary programs in areas of critical importance, need and/or opportunity; faculty development; clinical initiatives; and consideration for greater levels of integration within RBHS departments. Of relevance:

We are pursuing the reorganization and integration of several programs in order to create academic strength and greater efficiency within RBHS and across Rutgers.

Building an Academic Health Center for the 21st Century, RBHS Strategic Plan, 2014, p. 8, 9

- **Joint Clinical Chairs:** The plan embraced the concept that on an ad hoc basis, consideration should be given to: joint recruitment of highly regarded leaders when concurrent chair vacancies occur in the same department in both medical schools; or filling a chair in one school by appointing the chair in the other school as chair of both departments.
- **RBHS Centers and Institutes:** The plan identified a series of areas for significant development as signature or complementary programs with the institutional home for these being RBHS—the rationale being that this provides a greater ability to promote interdisciplinary research and training, and overcome challenges posed by geographic and structural impediments.

“While focusing on a mission, a vision, and priorities appropriate for an academic health center, the RBHS strategic plan embraces the ambition to be recognized as among the nation’s leading public research institutions. The plan targets Rutgers’ integrating themes, endorses Rutgers’ five foundational elements, supports Rutgers’ strategic priorities, and seeks to build academic strength within RBHS and across Rutgers.”

Building, p .19

Since the development of the 2014 plan, many aspects have been implemented, including: the establishment of multiple institutes that cut across schools (the Brain Health Institute, Rutgers Global Health Institute and the Rutgers Institute for Translational Medicine and Science); recruitment of institute directors for new and existing institutes; recruitment of faculty at all levels; significant expansion of clinical research, due in large part to the Clinical and Translational Sciences Award; and the evolution of clinical departments that have come together with a single leader. Currently under way are the integration of the clinical enterprise under RWJBarnabas Health (RWJBH) and the integration of Graduate Medical Education (GME) programs under RBHS, which are currently sponsored by NJMS, RWJMS and RWJBH.



While four departments share the same chair, the two allopathic medical schools—RWJMS and NJMS—remain as independent entities within RBHS and are individually accredited by the Liaison Committee for Medical Education (LCME).

The unexpected departure of Sherine E. Gabriel, MD, MSc, dean of the Robert Wood Johnson Medical School, in winter 2019, provided an opportunity to consider and assess whether the medical schools would benefit from closer alignment or integration.



Since January 2019, **Robert L. Johnson, MD, FAAP**, The Sharon and Joseph L. Muscarelle Endowed Dean of New Jersey Medical School, has served in the additional role of interim dean of Robert Wood Johnson Medical School. Over the ensuing nine months, the administrative leadership of the two schools has worked together to seek greater levels of integration and share best practices to the mutual benefit of both institutions. This alignment has occurred across mission areas, including the expansion of the roles of the senior associate deans for Clinical Affairs to include responsibilities on both campuses, and greater integration of research initiatives, among others. Additionally, the finance teams from both schools have worked to align budgeting and financial planning practices.



The Future of Academic Medicine Committee was created and charged to assess options and recommend ways in which additional integration or consolidation might be advantageous for the medical schools and their students, and what the optimal structure might be and why.



The Committee Charge

On Jan. 2, 2019, Chancellor Brian Strom charged The Future of Academic Medicine Committee (Appendix, p. 43) with developing recommendations regarding the optimal future organization and structure of the two medical schools and their programs that would enhance excellence and maximize the impact and reach of the academic medical campuses at Rutgers.

Dr. Strom suggested that increased integration would be beneficial to both student and faculty recruitment. He noted that prospective students use the rankings of medical schools by *U.S. News and World Report* and currently the schools are ranked separately, putting them in the bottom third (72nd for RWJMS and 78th for NJMS in 2019) of medical schools. Additionally, though both schools are part of Rutgers University, they are counted separately in regard to NIH rankings for research support. Combining the schools would move the new entity into the top third in terms of NIH funding and probably into the top half of *U.S. News and World Report* rankings. Joint MD/PhD degree programs currently granted and administered separately by each school would likely benefit from a combined entity by eliminating duplication of services and by facilitating optimal research growth opportunities.

Dr. Strom emphasized to the Committee that it had the **freedom to explore options with no pre-ordained outcome**. He stressed that there are a wide range of options that could be considered by the Committee across a continuum, starting from maintaining the status quo of two independent medical schools, to enhanced collaboration between the schools, to full integration of the medical schools.

Chancellor Strom did make clear that even if full integration was the final recommendation of the committee, it would have to be in the context of two co-equal campuses. Integration in whatever its final form could not result in the closing of a campus or the designation of a “main” campus and a “satellite” campus.

Critical to the success of any proposed new organizational structure is ensuring that it complies with the standards set forth by the Liaison Committee on Medical Education (LCME). During telephone discussions, LCME staff indicated that there is flexibility in how medical schools are organized, citing various possibilities, including a model from Northern Ontario School of Medicine with two co-equal campuses under one school.



In its work, the Committee should explore and recognize that RWJMS and NJMS are two different schools with different histories, strengths, and cultures, serving different communities and working with different clinical organizations. The schools complement each other, driven by differences in practice plans, differences in research strength, and the differences between University Hospital in Newark and Robert Wood Johnson University Hospital in

New Brunswick. The Committee should consider how the uniqueness of one institution might benefit the other and vice versa, as well as how they benefit RBHS as a whole.

Chancellor Strom requested that, in conducting its review, the Committee solicit and **consider the views of a wide range of stakeholders**: students, alumni, faculty, chairs, chiefs, institute directors, other deans, and staff. It should also seek out people who have had experiences at both schools. Consultation with LCME and with organizations that have different structures is also appropriate. As it does its work, the Committee is encouraged to hold public meetings and to communicate about its proceedings.

In developing its recommendations, the Committee should consider the impact of each model on each of the five missions of the medical schools, recognizing that the extent of integration will likely have a variable effect on each of the missions:

- **Education**
- **Graduate Medical Education**
- **Clinical Service**
- **Community Service**
- **Research**



Finally, Chancellor Strom asked that the Committee present its best conceptual and organizational recommendations without consideration of the implementation strategies (organizational, financial, administrative, legal) that would be required to effect the optimal model.

The Committee Process

The Committee for the Future of Academic Medicine applied multiple strategies in its planning process. Chancellor Strom initiated its work by sending a letter to faculty (Appendix, p. 43) with information on the Committee and its charge and emphasizing that no decisions about future organization had been made. Recognizing the strong views of both schools, and to solicit input from colleagues across NJMS and RWJMS, the Committee held town hall meetings at both schools; participants included faculty, staff, administrators, students and trainees, and community representatives (Appendix, p. 45-46).

The Committee agreed that it would not devote significant effort to Graduate Medical Education (GME), since reorganization was already under way. It did acknowledge the importance of GME on undergraduate medical education (UME). Likewise, given the affiliation of RWJBH and Rutgers and the planned re-alignment of clinical care through RWJBH management (begun in July 2019 at RWJMS and planned for July 2020 at NJMS), this part of the Schools' mission would not be a primary focus of the Committee's efforts unless specific issues had bearing on the key questions under review. Equally noted was the importance of the clinical mission and the impact it has on both the quantity and quality of medical education.





To concentrate its efforts on the educational and research missions, the co-chairs established two subcommittees:

- **Education subcommittee to explore UME**
- **Research subcommittee to explore the research mission**

The subcommittees met monthly and reported their progress at the monthly Committee meetings.

To understand the range of options available, the Committee Co-chairs spoke with representatives at LCME and conducted telephone interviews with Catherine Cervine, MD, the vice dean for academic affairs at Northern Ontario School of Medicine.

Finally, to create a transparent process, the Committee agreed to develop and launch a Sakai page, dedicated to Committee communications, documents, etc. [<https://sakai.rutgers.edu/portal>]

Town Halls: Key Community Input

There were two town halls, hosted by Drs. Soto-Greene and Hecker, that were held at RWJMS (one in New Brunswick and one in Piscataway) on Feb. 14, 2019, and two were held at NJMS on Feb. 26, 2019.

Some of the comments and concerns raised included:

- What is the **vision of a possible merger** of the two schools? What does it mean? What is the fundamental goal/driver? Will a merger improve rankings? And, if so, what is necessary to accomplish that goal? Will it produce a stronger student body, higher quality education and more impactful residency programs and continuous improvements?
- Each of the schools has identities that are valued by faculty, staff and communities, and there is a **fear of losing each school's identity**—i.e., the components that are distinctive, special and inclusive of the different communities served.
- While there is some interaction between the schools' faculty, there is little sense of community. We need to develop mechanisms to **build a stronger sense of community** and to help groups feel more comfortable with each other.
- There is a strong sentiment that **schools are not receiving similar investments**.
- A **competition exists** between NJMS and RWJMS.
- Given the number of simultaneous changes (RWJBarnabas Health affiliation, GME changes, etc.), **is this the right time** to implement a major change such as this?
- Communicate often and clearly. There are so many simultaneous changes that **people are anxious, confused, and trying to connect the dots**. **Communication will reduce anxiety**.
- Need to be cognizant of any **unintended and unexpected changes/consequences**.
- There is **concern around the logistics**. Will faculty be required to commute back and forth between campuses? Distances and traffic would make this time-consuming, burdensome and take them away from other core responsibilities.
- Will there be a **positive impact for patients** and reduce the number of patients that leave our systems and go for care to NYC or Philadelphia?
- Organize recommendations in two categories (recommendations for if we merge the schools and recommendations if we keep them independent), and **seek faculty feedback**. **Recommendations should include timeframes** to institute any proposed changes.

In addition, in Newark, there were numerous representatives of the unions and the community, expressing great support for NJMS and significant concern regarding any changes. It is clear that the community has great pride in having NJMS in Newark, and it is concerned about having the medical school or University Hospital taken away or changed.

Finally, a second round of Town Hall Meetings was conducted to solicit additional faculty feedback about the Committee's deliberations. The first of these occurred at NJMS on Monday, Oct. 28, 2019, and the second occurred at RWJMS on Wednesday, Oct. 30, 2019.



Committee Deliberations

Guided by the Chancellor's charge, the Committee conducted its work with a goal of determining best outcomes for students and faculty, enhancing the schools' reputation and competitiveness, and the schools' ability to recruit the very best students and faculty. While the committee recognized that the schools complement each other, it was evident that there are different cultures; different physician practice plans; differences in research strength; and different experiences in clinical training. On a mission-by-mission basis, the Committee considered: what is the best level and extent of integration, what are the opportunities, and what are the challenges? The Committee concentrated its work on undergraduate medical education and research missions.

Graduate Medical Education

GME is being unified under RBHS. An application was submitted to the Institutional Review Committee of the Accreditation Council for Graduate Medical Education (ACGME) in June 2019 to designate RBHS as the sponsoring institution for existing and future training programs at NJMS, RWJMS and RWJBH. RBHS received notice of initial accreditation in October 2019 from the Institutional Review Committee of the ACGME. Although this was not discussed in depth because the consolidation under RBHS was already in process, the Committee did reference GME during its deliberation.





Clinical

While the affiliation agreement with RWJBarnabas Health is being implemented with changes to the physician practice, clinical funds flow, practice operations, and workforce development, the Committee noted the important role that the clinical enterprise has in the support of the academic mission. During the Association of American Medical Colleges (AAMC) 2019 annual meeting, Lilly Marks (AAMC Board of Directors) stated, “We have a duty to ensure that the integration of the clinical enterprise does not lead to the disintegration of the academic enterprise. We must ensure that our necessary efforts to evolve do not inadvertently compromise the essence of who we are and the unique role we play in American medicine.”

With the transition of the faculty practice to RWJBH, the Committee raised questions about how the medical schools would be supported financially in the future. **Without direct access to the clinical revenue generated by the faculty, how will the school ensure sufficient ongoing investment in undergraduate medical education and other mission areas, including research? Will there be opportunity to access resources in support of programmatic development in education and research at the school level?** These questions are pressing, as funds flow from RWJBH to RBHS and ultimately to the medical schools lacks specificity at this time.

An additional financial concern revolves around **Responsibility Centered Management (RCM)** that can be viewed, as currently implemented, as a **disincentive** to growth, since there is a continuous linear relationship between growth and payment, i.e., all costs are treated as variable. There is added concern that there will be unattainable goals for RVUs, impacting the clinical faculty's effort toward education. This would be alleviated if a dollar (or RVU-reimbursed) value were placed on teaching.

Community Service

NJMS and RWJMS have **strong, established community-based programs**, which should continue. As noted during the Town Halls, the Newark community has particularly strong feelings about the importance of NJMS to the community. **Any significant change would need to engage our local community leaders**, including University Hospital, which serves as a major provider to vulnerable populations. Similarly, the Eric B. Chandler Health Center in New Brunswick is the core of the RWJMS community health mission and plays a critical role in the health of medically underserved populations in the greater New Brunswick area.





Education

With an overarching goal of considering what would be best for students, the Education subcommittee set its agenda to **examine the comparability of the mission, vision, values, and educational experiences of both medical schools**. It reviewed the current curricula to identify the differences and similarities and also reviewed LCME accreditation requirements with specific focus on what would be needed to achieve greater alignment or a merger, and what the pros and cons of those changes would be. What would a cross-campus curriculum look like? What would the benefits be from a student and faculty standpoint?

Recognizing that identity and reputation are critical to all stakeholders, the subcommittee articulated the need for these elements to be carefully considered in all deliberations. The subcommittee also noted that students care about outcomes, including board scores and the residency Match. Meaningful metrics include preparation for residency, career trajectory, and career satisfaction.

The subcommittee also reported that the evolving collaborations and mergers of the GME and clinical enterprises between RBHS and RWJBH will likely create undergraduate medical educational opportunities, especially with electives.

Mission, Vision and Values:

The vision statements are similar and align with the main pillars of the medical schools (education, clinical care, research, community), although the emphasis given to each pillar differs. Vision statements would need to be reconciled and unified into a single version. The mission statements are also strikingly similar with key elements in a differing order. Given the partnership with RWJBarnabas Health, the mission statement of both schools may further evolve.

Mission, Vision and Value Statements

Robert Wood Johnson Medical School

Mission:

Robert Wood Johnson Medical School is dedicated to transforming health care for New Jersey and the nation through innovation and excellence in education, research, patient- and family-centered care, and addressing the health of our diverse community.

Vision:

Robert Wood Johnson Medical School will become the academic engine driving a new healthcare paradigm in New Jersey; the state's first and largest academic high-value health care system.

Values:

Respect, dignity and humanism for the diverse population we serve.

Wellness and resilience.

Joining learners hand in hand with care delivery.

Making patients first with safe, compassionate, high-quality care.

Science to advance human health.

New Jersey Medical School

Mission:

To prepare humanistic leaders in global healthcare and pioneering science by building upon our strengths of diversity, educational innovation, immersive clinical training, and transformative research.

Vision:

NJMS aspires to optimize health and social well-being by:

- Providing cutting edge tertiary and quaternary medical care of distinction and serving all patients.
 - Enhancing our position as the top biomedical research institution in the state of New Jersey.
 - Creating a culture of intellectual curiosity and lifelong learning in a welcoming and inclusive environment.
 - Advancing the health, education and care of all people whom we serve, including underserved and vulnerable populations, by preparing an educated and diverse workforce.
-

Values:

In pursuit of our mission and vision, we value:

- Integrity & Professionalism
- Diversity & Inclusion
- Humanism & Equity
- Leadership & Collaboration
- Innovation & Intellectual Rigor
- Wellness & Balance

LCME Standards:

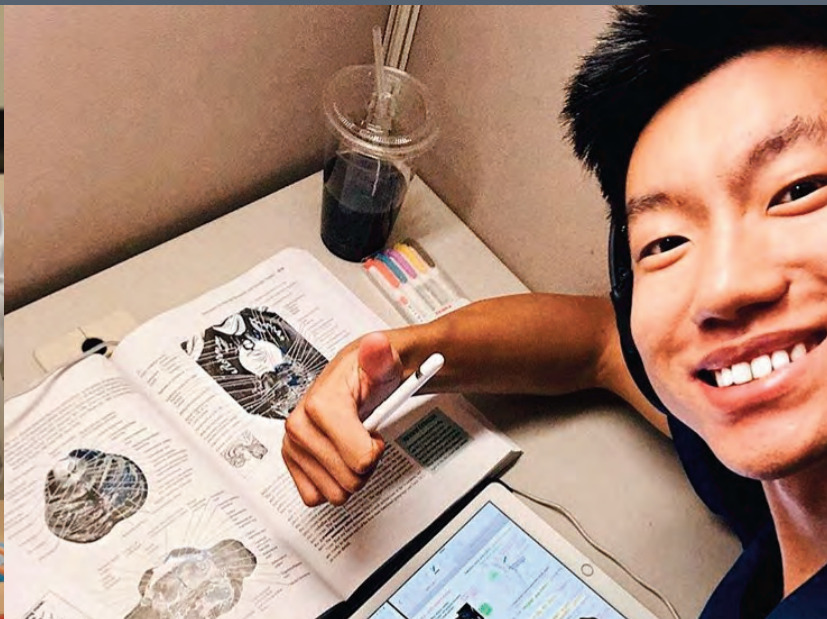
The Subcommittee discussed standards specifically tied to the MD program. LCME Standard 6, in particular, is critical as it dictates competencies, curricular objectives and curricular design. The overall competencies or goals dictate the MD curriculum for any school, and while delivery of the competencies can differ, the competencies themselves need to be the same for a single school. NJMS articulates six goals around competencies and subcompetencies, while RWJMS follows the ACGME's six competencies; these are mappable to each other. **Outcome measures and objectives are slightly different, and if there were a merger, outcome measures would need to be aligned.**

For LCME, an issue of concern would be if objectives and measures are not consonant. Comparability of experiences and assessments is another topic the LCME pays close attention to (especially if more than one campus exists), and these would need to be carefully considered, mapped, and monitored.

Admissions Processes:

Admissions processes differ in the screening and interview of applicants. However, no significant differences were noted in the pre-requisite courses or in the number of applications and the number interviewed. In addition, the number of matriculants is not significantly different.

While RWJMS and NJMS both have a rolling admissions process, NJMS also has early decision, and can notify these applicants of their acceptance as early as July of the application year. NJMS offers a three-year parallel Primary Care track; RWJMS also has a Primary Care track and applicants are asked to identify their interest prior to admission. RWJMS uses the mission-based review, undergraduate GPA and MCAT as the tools for its first-pass screening of applicants. NJMS, also driven by mission-based review, incorporates experiences, attributes and other metrics in its first round of screening. Pre-requisites differ slightly, with 1) RWJMS allowing one organic and one biochemistry course in place of two semesters of organic chemistry, while NJMS requires two semesters of organic chemistry and recommends one semester of biochemistry, and 2) NJMS recommends mathematics, while RWJMS requires it. RWJMS asks applicants to use Computer-based Assessment for Sampling Personal Characteristics (CASPer), an online situational judgment test. NJMS expects to implement CASPer in 2020. Both interview a similar number of candidates, but the interview process differs. RWJMS has multiple mini-interviews (MMI) and develops an MMI score, while NJMS utilizes single faculty interviews and optional medical student interviews. **These differences would need to be reconciled.**



Curriculum/Pedagogy:

In 2015, NJMS moved to an organ system, integrating the abnormal and normal curricula, consistent with the national trend, while RWJMS handles them separately, divided into normal and abnormal based on year 1 and 2, and is in the process of curriculum renewal. Clerkships are generally handled similarly, although the length of each rotation may vary.

Combined Programs:

Both RWJMS and NJMS support a number of interprofessional programs, including MD/PhD, BA/MD, MD/MPH, MD/MS and MD/MBA. RWJMS also has a PharmD/MD program. In addition, as described on page 31, the RWJMS MD/PhD program is a joint program with Princeton University.

Pre-clerkship education (M1/M2):

Integration of the pre-clerkship curriculum would be both a challenge and an opportunity. Nationally, schools are moving toward a shorter pre-clerkship phase. As noted above, NJMS has a curriculum structured around fully integrated organ systems (including anatomy, pathophysiology/management, etc.), while RWJMS organizes year 1 around normal systems and Year 2 around abnormal.

Clerkships (M3/M4):

Each school requires seven core clinical clerkships. Length of the clerkships varies at NJMS, while those at RWJMS were more recently changed to be of an equal length of six weeks. Students at NJMS have a six-week elective and two weeks selective time, and RWJMS students have a nine-week elective time. In year four, both RWJMS and NJMS require Emergency Medicine. RWJMS also requires a rotation in the Intensive Care Unit (ICU) and a two-week specialty-specific transition to residency, and NJMS requires Physical Medicine and Rehabilitation (PMR), an Acting Internship, and a four-week Transition to Residency.



Class Size:

NJMS class size is 178 and RWJMS class size is 165, with slight year to year variations. If the two schools were to merge into one LCME-accredited institution, the class size would be **amongst the largest in the country**. The current “clinical sandbox” is challenged to train current students, and the expectation is that, with the growth of the RWJBH and Rutgers clinical enterprise, expanded learning opportunities will be available to our students across specialties.

Signature Areas:

A review of NJMS and RWJMS reflects that they are more similar than not. However, there are clearly signature areas for each school, including:

- **NJMS:** fully integrated organ systems-based curriculum; robust opioid education; ultrasound integration; clerkship in physical medicine and rehabilitation; two-year course in health equity and social justice; and more recent education in *Stop the Bleed* (a national campaign focused on preventing victims from bleeding to death, which is the No. 1 preventable cause of death after injury).
- **RWJMS:** TeamSTEPPS (an evidence-based set of teamwork tools, aimed at optimizing patient outcomes by improving communication and teamwork skills among health care professionals); global health; improvisation; home visit program; Project ECHO (an evidence-based model of collaborative, case-based learning between an interdisciplinary team of specialists and community-based primary care providers); and narrative medicine.

Evolution as one LCME-accredited school should enable students from one campus to have the opportunity to take advantage of offerings at the other campus. This would require careful coordination based on the availability of electives across our affiliated sites. Would there be sufficient bandwidth to successfully implement this?

Pre-requisites:

The pre-requisites are similar, except for small differences in mathematics and organic chemistry; these differences are not insurmountable.



Faculty Resources:

Currently both schools have the number and quality of faculty they need to support their curriculum.

Enhanced collaboration and/or integration would leverage existing talent across the two schools and make it easier to address emerging needs due to retirement and departures. Leadership can also work more closely to develop and implement faculty development programs.

Appointment and Promotion:

The criteria for appointment and promotion are set by RBHS, and therefore identical at both schools. However, the administrative processes of appointment and promotion at RWJMS and NJMS are different. Currently, the schools are working together to achieve greater alignment and share best practices.

Medical Student Match:

Both RWJMS and NJMS enjoy highly successful match rates for primary care and specialty residencies. This success is a direct result of the reputation that each school and its students have established over many years. Any integration of the schools should include marketing and branding our graduates to ensure our historically high match rates. Concerns were raised, if we were to be in a fully integrated model (i.e., one school), as to whether the same number of students would be accepted into competitive residencies from one school as compared to the present, where we have two schools.





Challenges:

- Today, people still speak of Legacy UMDNJ and Legacy Rutgers. If we are to move forward, labeling and branding will be extremely important, so that **the unique identities and histories of each campus are acknowledged and preserved while simultaneously fostering an environment that facilitates a true coming together and a unified, cohesive identity.**
- There are significant **differences in admission processes**, and these will need to be aligned for LCME accreditation as one institution.
- Integrating **curricula** would require special attention to the transition plan and to the extra load that running two parallel curricula would entail during that transition.
- **Pre-clerkship and clerkship schedules and rotations** would need to be aligned, and identifying sufficient clinical resources for rotations will be critical.
- There is a fair amount of overlap in **signature areas**, which will allow for a single institution to develop a cohesive identity. Non-overlap of signature areas reflects unique faculty and institutional strengths that need to be recognized and maintained.



Research

The Research Subcommittee developed a list of key questions to guide its overall discussions. They included:

- Would an integrated medical school make us more competitive nationally to recruit and retain the very best faculty?
- What changes would help with recruitment of trainees?
- Would an increase in ranking make a significant impact on recognition in NJ or nationally?
- Would a merger help our faculty be more competitive to attract more research funding? Would this increase resources and support for research?
- Which options would place the medical schools in the best position to obtain competitive training grants?
- Which model would have significant impact on increasing collaborations?
- Would any change in the organization of the medical schools impact the functions of the institutes?
- Would this impact eligibility for limited-submission funding opportunities?

Rankings:

The Research subcommittee delved into the rankings, particularly the Blue Ridge Institute for Medical Research's ranking of medical school by D-U-N-S® federal identification number (Dun & Bradstreet number), and the *U.S. News and World Report*. Having one federal identification number (D-U-N-S) will make a difference for RBHS. RWJMS ranked 79th (if we include faculty in RBHS institutes) and NJMS ranked 71st in the most recent Blue Ridge Institute for Medical Research [<http://www.brimr.org/>]. **RBHS has decided to combine under a single D-U-N-S number (including Institutes); this decision has not yet been implemented. This action could potentially move RBHS into approximately ranking 53rd in the Blue Ridge rankings.** However, the Committee is uncertain whether RBHS will be eligible for ranking by Blue Ridge because it includes multiple non-medical school units. A single D-U-N-S number is unlikely to affect the *U.S. News and World Report* rankings, because they also depend on other factors, such as LCME accreditation, faculty-to-staff ratio, and reputation.



Enhancing Research:

To date, there has been no explicit merger or integration of research; however, newly formed centers and institutes, CINJ's comprehensive reach and the Clinical and Translational Science Awards program grant (CTSA) are encouraging trans-RBHS coordination and collaboration. Each school has programs that are unique and substantive with strong leaders. Stellar examples include: the Child Health Institute of New Jersey, Institute for Health, Public Health Research Institute (PHRI), Center for Emerging Pathogens, and the Center for Immunity and Inflammation. Some are broad and reach across campuses or across RBHS, while others are school-based and focused, and could be enriched by additional collaboration and joint programs. **Research, overall, will be strengthened by the continued development of the RBHS Strategic Plan's signature and complementary programs, and the hiring of additional nationally recognized researchers.**



Additional questions raised by the Research subcommittee involve whether structural changes would positively impact research. Specifically, how will resources be allocated with additional integration? Would this significantly increase institutional investment to support research, comparable to other leading institutions? Would this enhance research infrastructure, including state-of-the-art core facilities and quality research space, to allow our investigators to be competitive with aspiring peer institutions? Would this help increase philanthropy to support research? Would the processes for administering grants and contracts be improved?

Clinical Research:

Closer collaboration or merger could have an impact on clinical research. The patient populations are diverse, and the schools complement one another. This could facilitate opening trials at both institutions to accrue more patients and consistently be more successful at the trials we undertake. New Jersey is home to many pharmaceutical and biotechnology companies, and it is possible that being a single school with unified processes, rather than the current fragmented approach, would make us a more attractive site for clinical studies. RBHS is currently developing an RBHS-



wide Clinical Trials Office (CTO), designed as a one-stop shop for clinical trial feasibility and scientific reviews (as well as budgeting, contracting, and general oversight), which to a large extent is done by the Office of Clinical Research Administration (OCRA) at NJMS. The CTO will combine OCRA's functions with those currently undertaken by the Office of Corporate Contracts in the Office of Research and Economic Development (ORED) and those regarding trial feasibility, meeting subject recruitment goals and streamlining envisioned by the CTSA proposal.

Role of the Deans in Research:

At most medical schools, Deans are responsible in concert with the chair for the development and growth of research programs. The development of centers and institutes that are trans-RBHS and report directly to the Chancellor makes the role of the Deans vis-a-vis this core mission diminished and unclear.

Research Faculties across Campuses:

With integration or merger, would it be possible to allow some faculty to relocate labs, if programatically justified and space permitting, from one campus to the other? Currently, this is not possible. Perhaps, some labs could be allowed to relocate if they desired and if space was available to allow the creation of centers/pockets of excellence around specific research questions. This option should only be explored on a case-by-case basis and if agreed to by the school and the campus leadership, and the department chairs and the faculty involved.

Limited-Submission Funding Opportunities:

As noted on page 28, the committee was in the process of exploring the impact of one LCME-accredited school when we were informed that RBHS would be moving to one D-U-N-S number. As of the writing of this report, that decision has not yet been implemented. Certain foundations and programs within NIH and other federal agencies allow only a limited number of submissions for any funding cycle. As separate schools, NJMS and RWJMS monitored this for their faculty, but did not need to coordinate with one another. A question is whether as a merged school, grant opportunities would be lost or increased. The Research subcommittee determined that to date there have been applications for limited submission opportunities from RWJMS and NJMS, and none to date have resulted in simultaneous awards to both schools.





Joint Degree:

NJMS and RWJMS have MD/PhD programs. RWJMS has a successful MD/PhD program in conjunction with Princeton University. There is a 94 percent retention rate for this program. A recent application to have a Medical Science Training Program (MSTP) was submitted jointly with Princeton; its outcome is pending. The program currently has 40 students, with five to six new students added annually. Approximately 50 percent of the students in the PhD and M3-M4 phase receive external fellowships, and matriculants are expected to publish prior to graduation.

The NJMS program averages 25-30 students, adding three to four new students annually. Between 20 and 25 percent of students receive external fellowships, and some (not all) students author papers by the time they graduate medical school.

Both programs have challenges in recruiting mentors; there is optimism that the recently awarded CTSA and the additional recruitment of physician scientists will provide additional potential mentors. There might be an opportunity to expand the MD/PhD programs by including NJMS in the joint program with Princeton. **Merging the programs would require aligning multiple issues, including:**

curriculum; clinical rotations and their timing; number of credit transfers toward the PhD; additional credits needed; required courses; timelines for qualifiers; and graduate program tracks.

For example, RWJMS and NJMS offer similar tracks, but NJMS also offers Oral Biology and RWJMS offers Anthropology, Public Health, Public Policy and Toxicology. For NJMS to apply for federal funding or to become part of a merged program, it would require NJMS' tracking of students and collection of historical data on the students to determine if they are still "engaged in research," a process that is already in place at RWJMS.



Whether a merger occurs or not, a discussion regarding combining the MD/PhD programs is warranted. Benefits might include: creating a larger program; attracting students (Princeton, as a partner, is a draw); increasing mentor options; and the possibility of additional support through philanthropy. There would also be challenges. **There is currently no collaboration between the two programs. The distance creates challenges for one-on-one meetings; developing joint workshops, programs or social events; and creating a cohort with active participation.**

Importantly, the distribution of MD/PhD students across the campuses would need to be vetted. Integrating the two programs would also require negotiating a new Memo of Understanding (MOU) with Princeton University, aligning the two MD/PhD programs and developing a mechanism to track past and current students at NJMS. Also required would be offering the same curricular options across schools, the same courses (e.g., Methods for Enhancing Reproducibility), and the same qualifying exam at the same time.

It is essential that any potential merger be handled with careful consideration to not compromise the training and education of current students and not compromise the ability to compete successfully for a Medical Scientist Training Program (MSTP). This requires a detailed transition plan, strong program leadership, and sufficient resources.

Illustrations of Organization: Another LCME-Accredited Medical School

There was only one current example of a co-equal campus under the LCME.

Northern Ontario School of Medicine:

Drs. Hecker and Soto-Greene spoke with Catherine Cervin, MD, vice dean of the Northern Ontario School of Medicine (NOSM). The LCME had suggested Northern Ontario as an example of two equal campuses under a single medical school. NOSM has as its goal to provide medical training and care in areas of great need in rural, northern Ontario, using a distributed, learning-centered, community-engaged approach to education and research. Its two campuses are 800 miles apart: one campus is hosted by Lakehead University in Thunder Bay, and the second is hosted by Laurentian University in Sudbury. Affiliation agreements are in place with the host institutions, supported by a governing charter and governing boards. Its 64 students learn not only at its two campuses but at more than 90 communities across Northern Ontario. Large investments in technology make coordination across the campuses and with the communities possible.

Unfortunately, due to the size of the student body and the distance between the campuses, this model is not sufficiently comparable to provide a path forward that could be replicated for RWJMS and NJMS.

Conclusion

Addressing Chancellor Strom's charge to the Future of Academic Medicine Committee challenged its members to think boldly, but to also consider the elements that have shaped and continue to make New Jersey Medical School and Robert Wood Johnson Medical School distinctive and appealing to faculty, students, staff and trainees. The scope of the review—to examine the impact of remaining two medical schools, continuing the collaborations and integration that are already occurring, or combining into a single medical school with two co-equal campuses—was broad, requiring a deep examination into the differences and similarities of the two medical schools as it pertains, in particular, to undergraduate medical education. Our Committee acknowledges that clinical consolidation is already in progress. By working together, GME is already being re-imagined, including the incorporation of NJMS, RWJMS, and the RWJBH training programs under RBHS. Having a single dean has allowed the schools' systems to pursue integration opportunities. Given this, the Committee believes that, under the leadership of Chancellor Strom, individual schools, and especially NJMS and RWJMS, will continue to find ways to work more closely together, collaborate programmatically in education and research, and find innovative synergies.

We must, however, pay careful attention to how these changes impact the academic mission of both schools. Furthermore, in keeping with the RBHS vision of collaboration, which fosters inter-professional collaborations and growth through faculty-led research, institutes and interdisciplinary centers, and implementation of a single D-U-N-S number, our Committee focused on the opportunities, and challenges, associated with the various levels of integration or complete integration as one LCME-accredited school.





Regardless of how we move forward, the goal must be to provide the best possible education to our learners and to create the best environment in which our faculty and our missions can flourish. This will require **a critical review of the resource allocation necessary to address infrastructure and system impediments that currently challenge our ability to fully reach our potential. The mere act of merging the schools will not lessen the challenges, without significant institutional commitment and investment at a level sufficient to solve existing and new challenges.** We cannot overstate how important this is to the success of any future planning. It is not the scope of this Committee's work or the purpose of this report to document the significant systemic and infrastructure limitations, but we strongly recommend that these, along with plans to remedy them, need to be part of any planning process for the future.

In considering how to move forward, the following are among the critical questions to consider:

- Whose perspective is the most important to consider, or in what order (students, faculty, applicants, alumni, staff, administrators, the community)?
- Does the naming/branding of a single school and of the two campuses make a difference, and if so, does this achieve the most positive outcome?
- Would a one-school model increase recognition and/or school competitiveness?
- Does one school create the best teaching or clinical rotations for students? Does it create a better quality of education?
- What are the commonalities and what are the unique aspects of each school that should be retained?
- What impact would be important for our partner institutions?
- What impact would a merger have on the success of our residency Match?
- What impact would a merger have on research programs, investigators and grant awards?

Overall, consideration should be given to what will make Rutgers the most attractive to the recruitment, retention and success of faculty and students. For faculty, top factors include: financial resources, quality of faculty colleagues; availability of first-class, state-of-the-art research facilities and core facilities; and an environment that is committed to ongoing professional development and fosters a strong sense of community. Students are most concerned about reputation, teaching methods and curricula, residency placements, community service, research opportunities, and faculty mentorship.

Given our charge, recommendations for each option follow.

I. Remain two separate schools and continue our current collaborative and integrative efforts

Remaining two schools, whether under a single dean or two, remains a viable option. Were the schools to remain separate, there are synergies and alignments that could be recognized. Both schools could be strengthened by further collaboration, encouraging additional research collaborations and sharing of facilities, greater clarity regarding the unique strengths and programs of each school and identifying opportunities for greater educational alignment. The question is whether as individual schools, we can improve our quality and our reputations, enabling the schools to recruit and retain strong faculty and the most promising students.

Current opportunities for incremental positive change are:

- Continue to foster research collaborations.
- Adopt common pre-clerkship curriculum.
- Align strategic plans.
- Increase the use of technology to increase the pool of expert faculty who can broadcast lectures while providing on-site small-group discussions.
- Extend the Rising Star Program to help address student indebtedness and the retention of the very best trainees.
- Expand student financial aid and explore ways in which loan forgiveness could attract and retain undergraduates as medical students and residents.
- Bolster alumni outreach and fundraising.
- Continue sharing of best practices between the leadership teams at both schools to improve service to faculty and students.

II. One combined school with two co-equal campuses

The concept of merging RWJMS and NJMS into a single medical school with co-equal campuses is a bold and essentially unprecedented initiative. Strong brand identity and clear vision is necessary to compete nationally and locally with emerging competitors. Importantly, ample thought needs to be given to naming, branding, messaging and recognition for the school overall, and the campuses individually. Currently, each school is recognized as offering unique strengths and distinctive programs, resulting in applicants choosing one over the other. How would the campuses retain their special qualities, while being part of a single school?

Merging the two medical schools into a single one, albeit with distinctive programs and differing strengths at each campus, could be very unique. **If Rutgers is to create a new, single entity, there needs to be greater clarity regarding the vision of what can be achieved.** What would distinguish the new medical school? What is it that the newly imagined entity would do that reaches beyond what the two medical schools currently do? What would the state-of-the-art undergraduate medical education and first-rate research programs look like? To transform the institution for the next century, what are the educational and research resources that will attract and retain the best faculty and students?

The most important factor would be ensuring our ability to develop an organizational, administrative, curricular and financial framework that satisfies LCME requirements for accreditation.





As we move forward, today's identified challenges can also serve as a framework of key elements that should be addressed if we were to consider one institution:

- Develop a strong brand and clear vision.
- Retain each campus' own proud culture.
- Achieve LCME accreditation as a single school.
- Boost faculty and staff morale with careful attention to the rate and impact of change in our current environment. Create an environment in which faculty can thrive, as they are the foundation on which the educational, research and clinical missions depend.
- Eliminate curriculum differences.
- Align admissions processes.
- Expand financial support and resources.
- Maintain the ability to secure residency training at the very best institutions.
- Enhance the infrastructure on both campuses, which includes the physical plant, and by investing in state-of-the-art medical education, more seamlessly link the two campuses, providing additional simulation facilities, and resources for faculty development in pedagogy.
- Continue the investment in research and in the expansion of the faculty, and invest in the development of state-of-the-art core facilities, quality research space, and the research support necessary for our schools and investigators to be competitive with leading institutions.
- Articulate the role of the dean in leading the academic mission.
- Attend to the clinical mission so that it does not adversely impact the other missions.
- Engage the Newark and New Brunswick communities, understanding their issues and considering their reactions/receptiveness. Ensure appropriate support for the community health mission.



If a merger into a single medical school with two co-equal campuses is ultimately the path most favored, the immediate question is: with the lack of comparable examples, what would it take to gain LCME accreditation as a single school? Moreover, on what time frame? Determining the best time should take into consideration the current schedules for LCME re-accreditation to allow the maximum time to develop the merged infrastructure, curriculum governance, etc.

There are a number of incremental actions that can be undertaken in the short-term that would be valuable regardless of which path is chosen, and a schedule for tackling these should be established.

Despite the considerable challenges that merging would entail, it would ultimately be worthwhile if the result were **transformative**, embodying a vision that benefits the State of New Jersey, Rutgers, the students and the faculty. However, without significant investment, the vision of enhanced national prominence could not be realized. A merger could provide an opportunity for reconceptualizing the brand, making this new entity one of the “crown jewels” of Rutgers and the State, and using that to fundraise for the new school, which would fund curricular changes, new courses, technology, physical plant improvements, teaching and simulation labs, research infrastructure, new core facilities, research program support, and other programmatic development.

As noted above, undergraduate medical education and research are central to the mission of an academic medical center. A significant endowment providing a fund annually devoted to education and research would undoubtedly be transformative and help lift the school to national prominence. A naming opportunity could be very attractive. Investing in medical education simultaneously invests in people who will—with appropriate alumni outreach—contribute back and create a unique opportunity to retain talent for the advancement of the State of New Jersey and its people.

Although we do not make a single recommendation regarding which option should be embraced, we identified some practical suggestions for addressing “low-hanging fruit” that can be pursued regardless of which model is selected and which also provide the opportunity for future integration as a single medical school with co-equal campuses.

Whichever option is pursued, it is clear that there is much work ahead of us. Essential to moving forward is an open and transparent process that provides regular communication with the faculty, current students, alumni and staff, and planning that is done collaboratively and collectively. We believe that if full integration is chosen as the path forward, it represents an optimal time for a capital campaign and naming opportunity.

In closing, the decision to become one school must be a **bold, transformational change** that requires a **significant investment** in both schools, with communication, cooperation and collaboration **at every level**.

We thank Chancellor Strom for the opportunity to have engaged in this review, and trust that this report will serve as the foundation from which Rutgers will sculpt a compelling vision for the future.



Appendices

<https://integration.rutgers.edu/>

Entities integrated into RBHS:

From UMDNJ:

Cancer Institute of New Jersey
Graduate School of Biomedical Sciences
New Jersey Dental School
New Jersey Medical School
Robert Wood Johnson Medical School
School of Health Related Professions
School of Nursing
School of Public Health
University Behavioral Health Care

From Rutgers:

College of Nursing
Ernest Mario School of Pharmacy
Institute for Health, Health Care Policy and Aging Research

Joint Centers and Institutes:

Center for Advanced Biotechnology and Medicine
Environmental and Occupational Health Sciences Institute

Appendix A: Committee Roster

Co-Chairs:

Thomas Hecker, PhD, Co-chair

Executive Vice Dean

Robert Wood Johnson Medical School

Maria L. Soto Greene, MD, MS-HPed, FACP, Co-chair

Executive Vice Dean

New Jersey Medical School

Members:

XinQi Dong, MD, MPH

Director, Institute for Health, Health Care Policy
and Aging Research

Henry Rutgers Distinguished Professor of
Population Health Science

Research Subcommittee Member

Céline Gélinas, PhD

Senior Associate Dean for Research

Professor and Chair, Department of Biochemistry
and Molecular Biology

Robert Wood Johnson Medical School

Research Subcommittee Co-Lead

Manuel Jimenez, MD, MS

Assistant Professor of Pediatrics & Family Medicine
and Community Health

Robert Wood Johnson Medical School

Research Subcommittee Member

Marc Klapholz, MD, MBA, FACC, FSCAI

Professor and Chair, Department of Medicine

Chief of Service and Director, Division of Cardiology

New Jersey Medical School

Education Subcommittee Member

Sangeeta Lamba, MD, MS-HPed

Vice Chancellor for Diversity and Inclusion

Rutgers Biomedical and Health Sciences

Education Subcommittee Lead

Chen Liu, MD, PhD

Chair & Professor, Department of Pathology, Immunology,
and Laboratory Medicine

New Jersey Medical School and Robert Wood Johnson
Medical School

Research Subcommittee Member

Archana Pradhan, MD, MPH

Associate Dean for Education

Robert Wood Johnson Medical School

Education Subcommittee Member

Nikolaos Pyrsopoulos, MD, MBA

Professor of Medicine and Chief of Gastroenterology and Hepatology
New Jersey Medical School

Research Subcommittee Member

Laura Willett, MD, FACP

Associate Director, Internal Medicine Residency Program

Robert Wood Johnson Medical School

Education Subcommittee Member

Teresa Wood, PhD

Professor of Pharmacology, Physiology, and Neuroscience

New Jersey Medical School

Research Subcommittee Co-Lead

Staff:

Judith Argon, MA, MTS

Communications Specialist and Consultant

New Jersey Alliance for Clinical and Translational Science

Rutgers Biomedical and Health Sciences

John Hemphill

Administrative Assistant

Child Health Institute of New Jersey

Simon Kramer

Business Analyst

Office of Tech Commercialization

Appendix B: Chancellor Strom's Announcement to the RBHS Community on the Committee Formation

Committee on the Future of Medical Education at Rutgers



Chancellor Brian Strom <chancellorrbhs@rbhs.rutgers.edu>

Thu 12/20/2018 5:11 PM

RBHS_ALL@RAMS.RUTGERS.EDU ✉



RUTGERS
BIOMEDICAL AND
HEALTH SCIENCES

Office of the Chancellor

Dear RBHS Colleagues:

Since the inception of Rutgers Biomedical and Health Sciences (RBHS) five years ago, we have seen a pattern of increasing collaboration and cooperation among our constituent schools and institutes. The New Jersey Medical School (NJMS) and the Robert Wood Johnson Medical School (RWJMS) have collaborated on various clinical and research initiatives in response to federal funding opportunities, patient needs, and larger forces in the New Jersey health care marketplace. For example, Radiation Oncology, Pathology, Neurology, and Neurosurgery, are successfully operating with joint chairs between the two medical schools. Continuing medical education is another joint activity that has leveraged the strength of both schools to reach a broader audience. Our clinical practices and graduate medical education are also coming together, but other activities remain separate, e.g., student admission and curriculum.

The departure of a leader provides an institution with a natural opportunity to conduct an in depth review of the structure, function, strategic positioning, and future of an academic unit. The recent announcement of Dean Sherine Gabriel's departure from RWJMS to serve as the President of Rush University, provides Rutgers with just such an opportunity. Now is the perfect time for a rigorous, structured exploration of the optimal level of integration between our two medical schools that will best achieve our missions of research, education, patient care, and community service and fulfill their potential for greater national recognition and accomplishment.

To conduct this review, I am convening a special Committee on the Future of Medical Education at Rutgers. The committee can fully assess the pros and cons of a wide range of options for medical education at Rutgers from maintaining the status quo, to fostering greater strategic collaborations, to a full restructuring and integration. This committee will be co-chaired by Maria Soto-Greene, MD, Executive Vice Dean at NJMS and Thomas Hecker, PhD, Executive Vice Dean at RWJMS and will convene for an organizational meeting early in the New Year. The twelve members of the committee are listed below; I thank them in advance for their commitment to achieving excellence in teaching, research, and patient care and fulfilling the missions of medical education.

Sincerely,

Brian L. Strom, MD, MPH
Chancellor

Committee on the Future of Medical Education at Rutgers:

Thomas Hecker, PhD; Co-chair
Maria Soto-Greene, MD; Co-chair
XinQi Dong, MD, MPH
Celine Gelinas, PhD
Manuel Jimenez, MD, MS
Marc Klapholz, MD
Sangeeta Lamba, MD, MBBS
Chen Liu, MD, PhD
Archana Pradan, MD, MPH
Nikolaos Pyrsopoulos, MD, MBA
Laura Willett, MD
Teresa Wood, PhD

Appendix C: Email Update from Committee Co-Chairs

Emailed on Jan. 15, 2019:



Future of Academic Medicine Committee
Chancellor's Office
Rutgers Biomedical and Health Sciences

**This is being sent on behalf of Dr. Maria Soto-Greene and Dr. Thomas Hecker, Co-Chairs,
"The Future of Academic Medicine RBHS Committee"**

Dear RWJMS and NJMS Faculty and Staff,

As Co-chairs of the Committee, we are writing to update you on the committee's activities.

- On January 2, 2019, Chancellor Brian L. Strom of Rutgers Biomedical and Health Sciences charged our committee with the penultimate goal of providing recommendations on what structure amongst the two medical schools should we consider that maximizes excellence based on internal and external rankings in our mission areas centered on research and education.
- Among the range of options to be explored, while keeping the Liaison Committee on Medical Education accreditation requirements at the forefront, will be maintaining the status quo, expanding levels of integration between RWJMS and NJMS and the possibility of a restructuring to have one Dean and two co-equal campuses.
- We will **NOT** consider one school becoming a regional campus of the other. We thank Dr. Strom for his strong endorsement of eliminating this option, which recognizes the culture, legacy and accomplishments of each school.

In order to accomplish the charge before us, our committee plans to:

- Review national and school specific data to include mission specific information, organizational structures and other key benchmarks.
- Engage faculty, students, staff, alumni, deans from other RBHS schools, and the overall Rutgers community in order to explore their input on strengths, opportunities and challenges as we explore our future organizational structure.
- Maximize the input and feedback from faculty, students and staff through the use of town hall meetings on both campuses.
- Set-up an electronic communication vehicle.
- Distribute the final report University-wide.

The committee values your input, and is aware that there are many questions and concerns among our faculty, staff, students, and alumni that need to be heard. We encourage you to make every effort to attend town hall and other meetings and share your thoughts so the committee can make the most informed recommendation on the future of our medical schools. We thank you for your ongoing commitment and dedication to RWJMS, NJMS, RBHS and Rutgers University. We will learn much through the work ahead and are confident that together, we can reach new heights.

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RUTGERS

Robert Wood Johnson
Medical School

You are cordially invited to attend a

Town Hall Meeting
to discuss the
**Future of Academic Medicine
at Rutgers Biomedical and
Health Sciences**

Maria Soto-Greene, MD, and Thomas Hecker, PhD, co-chairs of the committee to determine the Future of Academic Medicine at RBHS, invite all members of the medical school community to a **Town Hall Meeting** to discuss the future of medical education at Rutgers.

Thursday, February 14, 2019

11 a.m.

Clinical Academic Building
Room 1302
New Brunswick

2 p.m.

East Lecture Hall
Piscataway

The committee values the input of our entire community and the Town Hall meetings are intended to be a forum for us to listen to your ideas and questions. We encourage you to make every effort to attend and share your perspective so the committee can make the most informed recommendations on the future of our medical schools.

Rutgers, The State University of New Jersey



YOU ARE CORDIALLY INVITED TO ATTEND A

TOWN HALL MEETING

Future of Academic Medicine at Rutgers Biomedical and Health Sciences

Maria L. Soto-Greene, MD, and Thomas Hecker, PhD, co-chairs of the committee to determine the Future of Academic Medicine at RBHS, invite all members of the medical school community to a Town Hall Meeting.

The committee values the input of our entire community and the Town Hall meetings are intended to be a forum for us to listen to your ideas and questions. We encourage you to make every effort to attend and share your perspective so the committee can make the most informed recommendations.

**TUESDAY,
FEBRUARY 26, 2019**

**12-1 P.M.
MSB
B-552**

**2-3 P.M.
MSB
B-556**



FIGURE 1. 2018 Blue Ridge Medical Schools Ranking

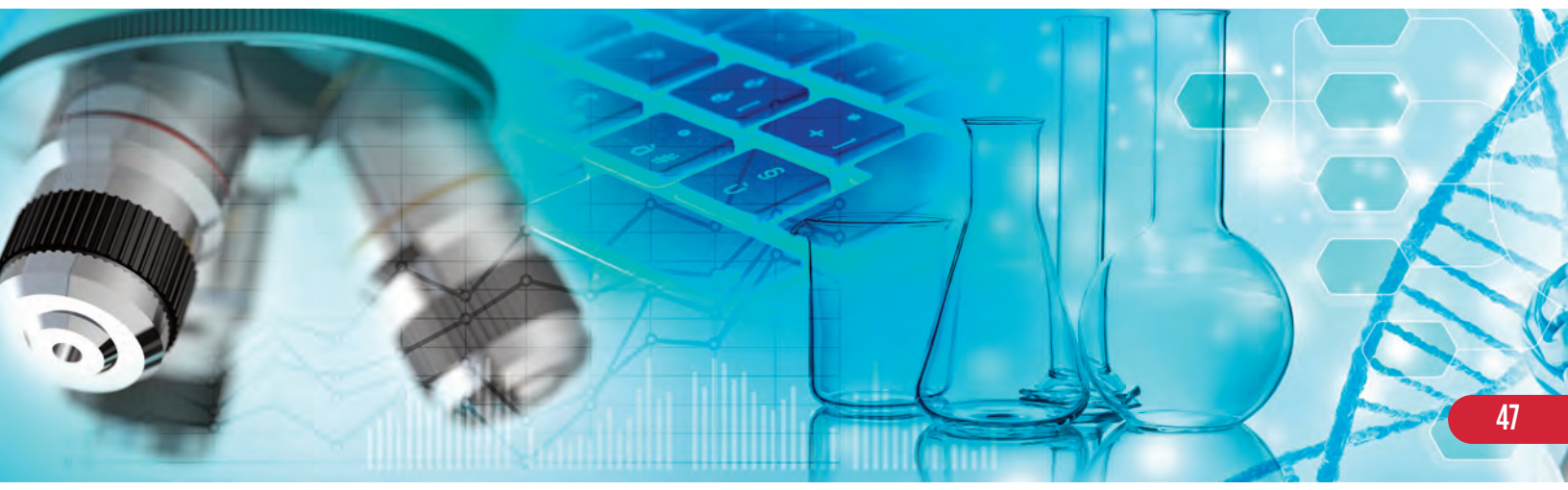
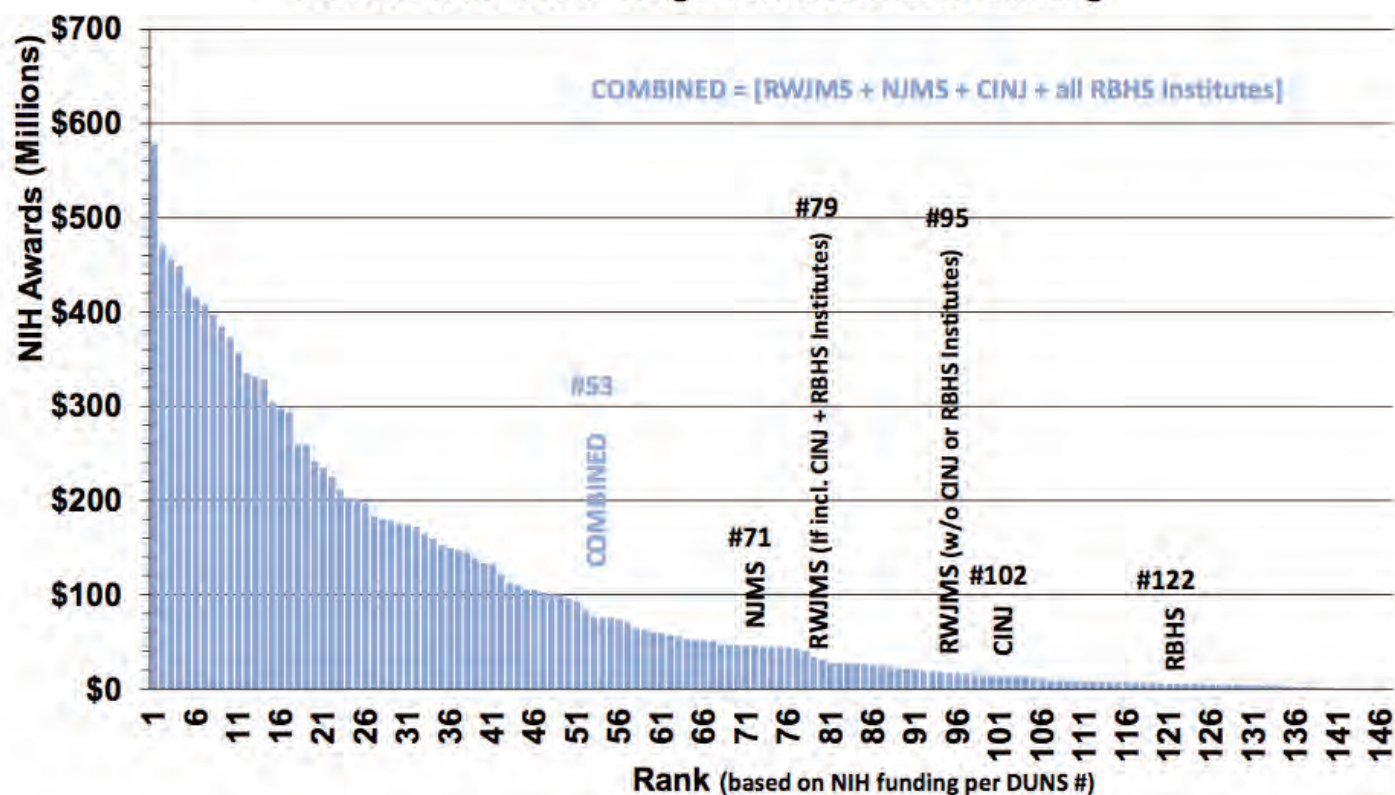




FIGURE 2. 2020 US News & World Report Medical Schools Ranking Methodology for RESEARCH

Indicators	Weight	Comments
Quality Assessment	0.30	Subjective assessment for quality of research and primary care programs by peers (0.15) and by residency directors (0.15)
Research Activity	0.40	NIH grant \$ averaged for 2017 & 2018 (0.25) Average NIH grant \$/FT faculty (0.15)
Student Selectivity	0.20	Admissions Stats for 2017 entering class: Median MCAT score (0.13) Median undergrad GPA (0.06) Acceptance rate (of students offered admission) (0.01)
Faculty Resources	0.10	Ratio of FT faculty/FT medical student in 2017 (0.10)

2020 Ranking of 185 Schools: [152 LCME-accredited Med Schools + 33 SOMs] based on 2018 survey data

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2020 Ranking of 185 Schools: [152 LCME-accredited Med Schools + 33 SOMs] based on 2018 survey data

➔ Integrating the schools would not change these indicators without impactful investment in research infrastructure & resources



CURRENT STATUS of MD/PhD Programs:

	RWJMS	NJMS
Program Size:	~40 students	~25-30 students
Average enrollment/year:	5-6 new students/year (mean GPA: 3.72)	3-4 new students/year (mean GPA not available)
# Publications/student: (by time of MD graduation)	Avg. 3.5 papers/student	0 up to 3-4 papers/student
Extramural fellowships:	50% of PhD, MD3-4 phase (mostly NIH, some from State)	20-25% of PhD, M3-4 phase (NIH, State, Foundations, T32)
Rotations:	2-3 (Summer before M1 & between M1-2)	2-3 Option of 3rd rotation after Step1, if needed
Opportunities:	CTSA	Recruitment of physician scientists in Center for Emerging Pathogens; possible MD/PhD program co-director
Challenges:	Finding mentors (Is improving with CTSA and new hires)	Same





DIFFERENCES that would need to be addressed if schools were to be integrated:

	RWJMS	NJMS
Princeton University partnership: (% students doing PhD at Princeton)	Yes 50%	No N/A
Medical Scientist Training Program (NIH – MSTP):	Submitted to NIH May 2019 (joint with Princeton)	Application planned in 2020
Tracking of student outcomes and graduates' career development:	15 years of historical tracking 73% of graduates match in research-intensive or research-track residencies 63.6% alumni continue to publish (avg. 2.4 papers/alumnus)	No tracking
M1-M2 credit transfer toward PhD:	24 credits	30 credits
Additional credits required:	Up to 9 credits; depends on specific PhD program requirements. Most RU programs require 7 credits; Princeton requires 2 additional courses	10 credits
Graduate Program Tracks:	Similar at both schools, but also offering: Anthropology Public Health Public Policy Toxicology Princeton: Molecular Biology program	Similar at both schools, but also offering: Oral Biology
PhD Curriculum:	Depends on graduate program chosen	Depends on graduate program chosen
Required Courses:	– Responsible Conduct of Research – Methods for Enhancing Reproducibility	– Responsible Conduct of Research
Qualifier (written & oral):	– Within 9 months from start of PhD – NIH-style written grant proposal – Oral defense <i>Except for the following programs:</i> * Anthropology (Field Statements) * Public Policy (Methods, Theory & Field Exams) * Public Health (4 parts covering coursework)	– Timeline not strict (ideally 6 mos. to 1 year) – Students encouraged to write NIH F30 proposal and use as qualifier – Oral defense



Integrating the two MD/PhD programs would REQUIRE:

Princeton University partnership:

New MOU with Princeton

Medical Scientist Training Program: (NIH – MSTP)

Complete alignment of the two MD/PhD programs
(including same program offerings, and with Princeton)

Student outcomes and tracking:

Historical tracking (10-15 years) of student outcomes
(NJMS)

Would need to run the two MD/PhD programs in parallel
until aligned, and until sufficient historical tracking for
MSTP application. In the meantime:

a) If RWJMS MSTP awarded:

Run two programs in parallel until MSTP competing
renewal

b) If RWJMS MSTP to be resubmitted:

Resubmit MSTP for program at RWJMS, and run both
programs in parallel until fully aligned and until required
historical tracking of NJMS student outcomes is achieved;
then submit for expanded MSTP as one combined program
at time of renewal

Credit transfer:

Alignment of credit transfers, if a combined medical school

Curriculum:

Would need to offer students the same options to join PhD
programs across campuses, including Princeton

Required courses:

Would need to also require for students on NJMS campus:
– Methods for Enhancing Reproducibility

Qualifying exam:

Would require same qualifier timeline



POTENTIAL BENEFITS:

- | | | |
|----------------------|---|---|
| Increased visibility | ➔ | Would create a larger program |
| Attracting students | ➔ | If done right, could potentially make the programs more attractive, might increase overall enrollment of accepted students; Princeton is a draw |
| Broader offerings | ➔ | Would increase mentor choices for students

Would increase graduate program and course options for students |
| Program support | ➔ | Could potentially help increase support for the overall program (w/Princeton) |

CHALLENGES and RISKS:

- No current collaboration between the two MD/PhD programs at RWJMS and NJMS
- Distance/geography logistics ➔
 - Challenge for:
 - Structured monthly MD/PhD program meetings and courses
 - Program workshops and events
 - Individual meetings of the overall program director with students on all campuses
 - Risk of decreased participation
- Financial, administrative and IT support to integrate and develop a combined high-quality program ➔
 - To run two parallel programs until fully integrated
 - To allow complete program integration for eventual successful MSTP application by the combined program
- Student distribution across campuses ➔
 - Mechanism(s) would need to be developed to achieve roughly equal and fair student distribution across campuses. Currently, students self-select.
- Admissions process ➔
 - Would need to combine for all campuses
- Mentoring ➔
 - Robust mentoring for students and MD/PhD mentors equivalent on all campuses
- If not handled correctly, could compromise ability to secure NIH MSTP award (by individual program, and by future combined program)



IMPORTANT CONSIDERATIONS:

Integration of the programs would need to be done right and with careful consideration to not compromise the training and education of current and future MD/PhD students, and also to not compromise ability to secure MSTP

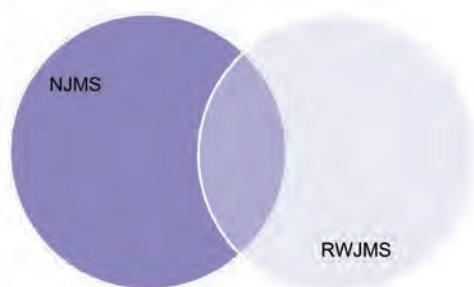
Integrating the two programs would require:

01	SUFFICIENT RESOURCES	Sufficient financial, administrative and IT resources to facilitate alignment, to administer both programs in parallel, and eventually a combined program.
02	PROGRAM LEADERSHIP	Co-directors at each campus, including Princeton, modeled after joint program with Princeton (including for MSTP).
03	APPROPRIATE COMMITTEES	Appropriate committees composed of faculty with sufficient knowledge and understanding of the MD/PhD programs, along with some MD/PhD student representatives, to address and advise on all aspects of program alignment to ensure successful and smooth program integration.
04	TRANSITION PLAN	Running the two programs in parallel until completely aligned and MSTP-required historical tracking achieved.
05	FOR A FUTURE JOINT MSTP	Complete program alignment (including new research tracks, initiatives and program administration). 15 years of historical tracking of student outcomes/career development (NJMS). History of the two MD/PhD programs working together.

RUTGERS

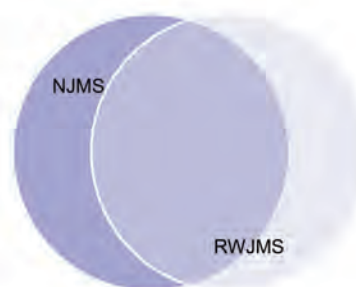
Admissions Processes and Signature Areas

Admissions



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Signature Areas



RUTGERS

Admissions Processes: Pre-reqs

RWJMS

- Biology or Zoology (with Laboratory): 2 semesters
- Inorganic or General Chemistry (with laboratory): 2 semesters
- Two semesters of organic chemistry (but accept one organic and one biochem)
- Physics (with laboratory): 2 semesters
- College Mathematics: 2 semesters (One semester may be statistics or biostatistics)
- English: 2 semesters

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• NJMS

- Similar pre-req except
 - Organic Chemistry: 2 semesters
 - Biochemistry: 1 semester
- Math recommended not required

Admissions: Combined and Articulated Programs

- RWJMS
 - MD/PhD
 - PharmD/MD
 - BA/MD
 - MD/MPH
 - MD/MBA
 - MD/MS
- Combined programs at both schools
- Some variations exist e.g., Pharm D/MD at RWJMS
- MCAT requirements or benchmarking differences

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Signature Areas for Curriculum

RWJMS

- Pipeline Programs
- PACCE
- Dual Degree Programs
- Distinction Programs
- Boot Camps
- On-line EPA assessments in year 3/4
- Summative 8 Station OSCE
- Health Systems Sciences Thread
- Promise Clinic
- Hip Hop Program
- Longitudinal PCM (IPE-Service Learning)
- Evidence Based Medicine Thread
- Team STEPPS
- Global Health Program
- Improvisation Curriculum
- Home visit Program
- Project ECHO
- Narrative Medicine Program

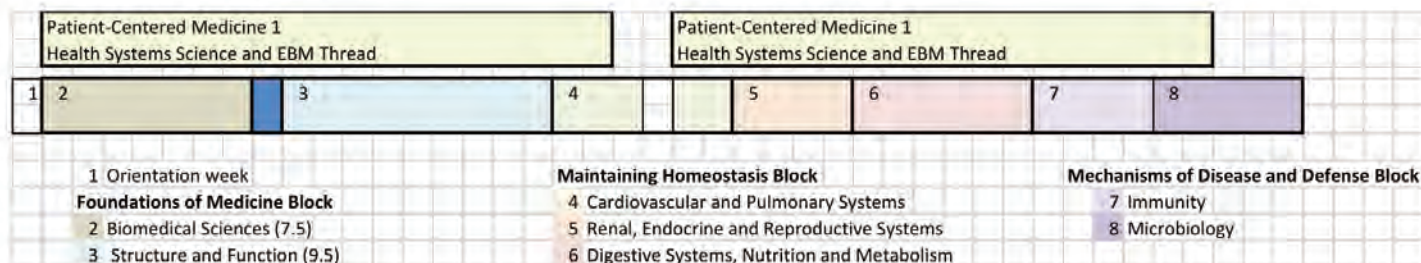
NJMS

- Pipeline programs
- 3-Year MD Primary Care parallel track
- Dual degree programs
- Distinction programs
- Transition to residency and Boot camps
- EPA-based integrative OSCEs Year 1-4 with ILP
- Summative 6 station OSCE
- IHI patient safety certification
- Student run SFHCC clinic
- Community Engaged Service Learning requirement
- Patients as Educators and IPE collaborative dental clinic practice
- Evidence Based Medicine Thread
- Fully integrated organs systems based
- Opioid DATA 2000 waiver training
- Ultrasound integration
- Physical Medicine and Rehab clerkship
- Health Equity and Social Justice longitudinal thread
- Trauma/Stop the Bleed training

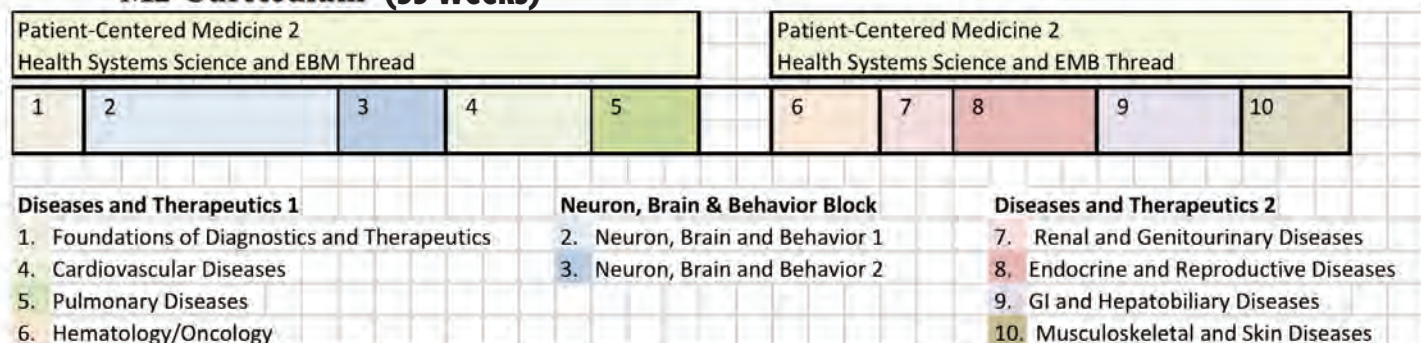
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Rutgers RWJMS Curriculum Map

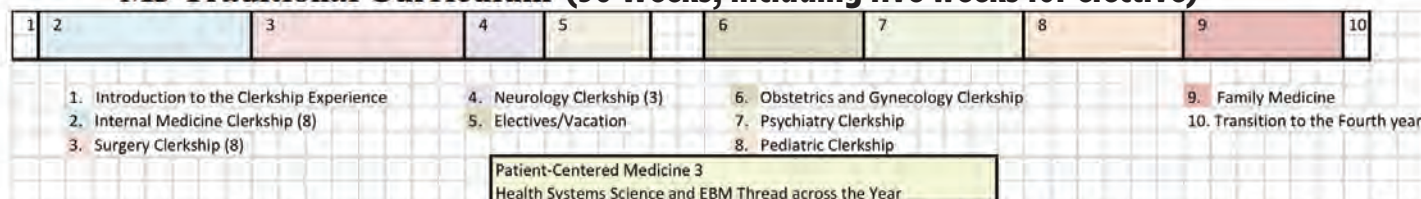
M1 Curriculum (42 Weeks)



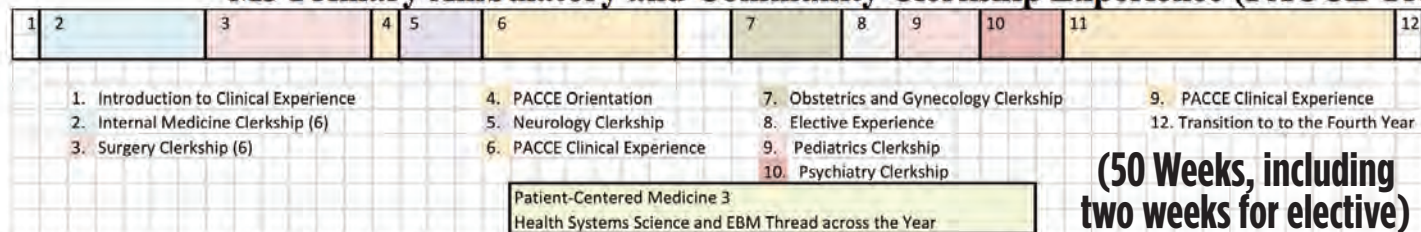
M2 Curriculum (35 Weeks)



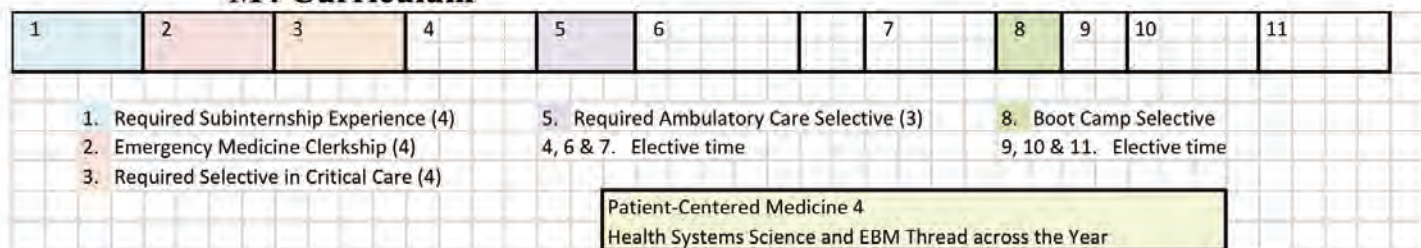
M3 Traditional Curriculum (50 Weeks, including five weeks for elective)



M3 Primary Ambulatory and Community Clerkship Experience (PACCE Track)

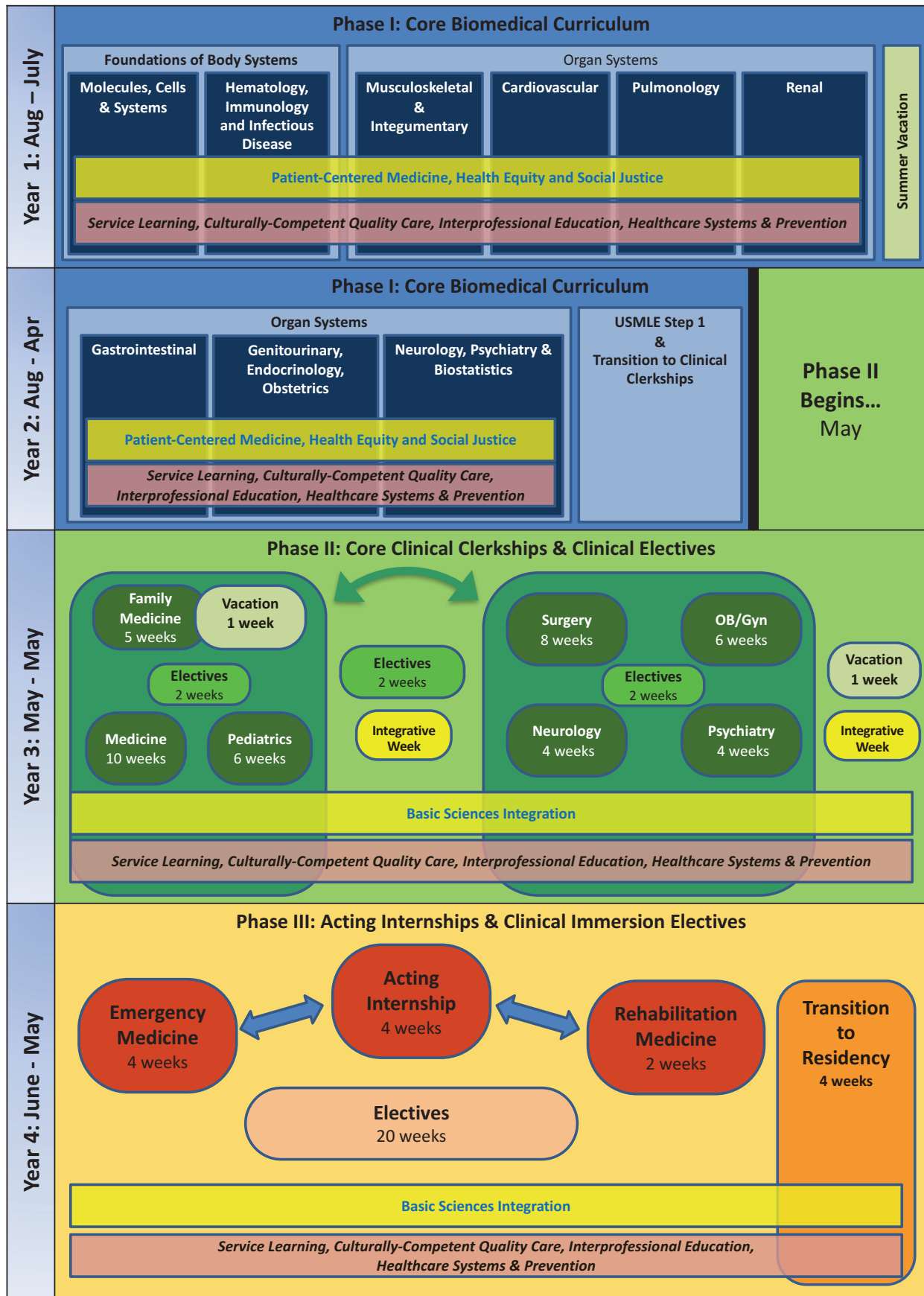


M4 Curriculum



(14 weeks of required activity; 21 weeks of elective [including ambulatory selective time] must be completed across the M3 and M4 years)

NJMS Curriculum



M1 M2 (Phase 1) Pre-clerkship Curriculum Comparison

NJMS

- Time: August to June
- Structure: Foundations for Fall and then fully integrated organ systems (including anatomy, pathophysiology/management etc.)

RWJMS

- August to June
- Organ systems blocks: Normal in Year 1 and Abnormal in Year 2

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M3/M4 (Phase 2 and 3) Curriculum Comparison

NJMS

- 7 core clinical clerkships
- Length of clerkships-variable
- 6 weeks elective + 2 week selective time
- Year 4: EM, PMR, AI, 4 week transition to residency (includes service learning)

RWJMS

- 7 core clinical clerkships
- Length of clerkships-6 weeks
- 9 week elective time
- Year 4: EM, ICU, AI, 2 week bootcamp

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Goals and Objectives

NJMS	RWJMS	What would it mean for integration?
Six Goals Competencies and sub-competencies	Follow the six ACGME competencies with sub competencies	The competencies are mappable to each other
Outcomes to show attainment of competencies vary by goal	Outcomes to show attainment of competencies vary by goal	Outcome measures may vary for each competency and will need to be defined for a "1-school" model
		The first task of the education team of a "1-school" model would be to set the overall "new" school's Goals and Objectives and set assessments/outcomes

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Pros and cons of 1 school versus 2 co-campus model

- What are the commonalities/differences and what would it mean for:
 - Admissions/recruiting
 - Evaluations
 - Curriculum (M1/2 and M3)
 - Modalities/Pedagogy
 - Signature areas
 - Innovation
 - Philosophy and mission
 - Comparability across sites
 - LCME

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How Applicants Choose A Medical School Once Accepted

- 2018 AAMC Matriculating Student Questionnaire n=15,447, 71.8% response rate
- Percentages below include number of students who report these factors as very important/important on 5 point Likert scale, only factors >70% reported:
 - Interviews/Meetings with Students, 82%
 - Quality of Medical School Facilities, 82%
 - School's Teaching Methods/Curricula, 81%
 - General Reputation of School, 80%
 - Ability of School to Place Residents, 79%
 - Geographic Location of School, 78%
 - Personal Experience with School, 76%
 - Financial Considerations, Cost of Attending, 70%
- Other factors queried: Dual degree opportunities (23%), Research Experience (63%), Community Based Opportunities (65%), Diversity of Student Body (58%), etc.
- **RBHS** Students from racial and ethnic backgrounds place greater emphasis on diversity

Zhang, Students' Top Factors in Selecting Medical Schools, Academic Medicine 2015

Top 10 "Positive" or "Very Positive" Factors in Choosing a Medical School*

1. General reputation of school (91%)
2. Interviews/meetings with students (90%)
3. Interviews/meetings with faculty (88%)
4. The school's teaching methods and/or curricula (87%)
5. Geographic location of school (81%)
6. Ability of school to place residents (79%)
7. Interviews/meetings with administrators (76%)
8. Community-based medicine (73%)
9. Faculty mentorship (71%)
10. Opportunity for research experience (68%)

✓ The majority of students seem strongly influenced by the general reputation of the school.

✓ Interviews or meetings held with veteran students, faculty, and school administrators weighed particularly heavily on students' choice of medical schools.

✓ A school's ability to place residents also emerged as a top priority.

* These data are derived from question 14 of the AAMC's 2012 Matriculating Student Questionnaire: "In choosing the medical school you now (or will) attend, what were the key positive and negative factors you weighed?" These are the top 10 (out of 29) factors that students (n = 14,112) rated either "very positive" or "positive."

US News and World Report Rankings -Education

- Overall, based on 120 responding schools out of 185 schools (152 MD and 33 DO)
- The "primary care" ranking is based on 4 major fields: gestalt quality assessment (40% vs 30%); primary care match rate (30% vs 0%); student selectivity (15% vs 20%); and faculty resources (15% vs 10%). Research is 0% vs 40%. The vs is compared to the research ranking.

Gestalt quality assessment (40%)

25% is based on survey of dean and/or academic/admissions dean, internal med chair with only a 32% response rate (!), ranking for primary care on 1-5 scale.

15% is based on survey of residency directors in family medicine, peds, internal medicine also ranking schools for primary care on 1-5 scale. The wording is unclear whether it is just for primary care internal medicine vs categorical internal medicine, for example.

Primary care match rate (30%)

- Based on the percentage of the grads entering "primary care residencies in the fields of family practice, pediatrics, and internal medicine".

Student Selectivity (15%)

- 9.75% based on median MCAT
- 4.5% based on median GPA
- 0.75% based on proportion of applicants accepted for admission

Faculty resources (15%)

- ratio of faculty FTE to student numbers, logarithmically transformed due to skewed distribution

It does not look at USMLE scores or "prestige" of residency placements, which is probably what is important to students.

We aren't listed here, so we must be in the lowest 25% on this.

There are also "specialty rankings" based solely on ratings by deans and/or "senior faculty". Each respondent listed up to 15 schools felt to offer the best programs in peds, IM, anesthesiology, ob/gyn, psych, radiology, surgery, and family med. We are unlikely to be in anyone's top 15 was the thought.

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2019 US News & World Report Medical School Ranking Methodology 144 LCME accredited Med schools in 2017 + 33 SOMs = 177 schools total 124/177 schools responded to ranking survey

Weight	Indicators for Medical School Research Model	Comments
Quality assessment (0.30)		
0.15	Peer assessment score	(Rating by Deans, Deans of Academic Affairs or Directors of Admissions for quality of research and primary care programs)
0.15	Assessment score by residency directors	(Rating for research by residency directors in fields outside of primary care including surgery, psychiatry and radiology; Rating for primary care by residency directors involved in primary care field of family practice)
Research Activity (0.40)		
0.15	Total NIH research activity	(NIH grant \$ averaged for 2016 & 2017)
0.15	Average NIH research activity per full-time faculty	(Includes both basic science and clinical faculty)
0.03	Total non-NIH federal research activity	(e.g. grant \$ from DOD, NSF, AHRQ, DHSS etc)
0.03	Average non-NIH federal research activity per full-time faculty	(Includes both basic science and clinical faculty)
0.03	Total nonfederal research activity	(grant \$ from corporations, associations, foundations, state and local government funds)
0.03	Average nonfederal research activity per full-time faculty	(Includes both basic science and clinical faculty)
Student selectivity (0.20; admissions statistics)		
0.13	Median MCAT total score	(2017 entering class)
0.06	Median undergraduate GPA	(2017 entering class)
0.01	Acceptance rate	(Proportion of applicants for the 2017 entering class who were offered admission)
0.01	Faculty resources	(Ratio of full-time Faculty (basic science and clinical)/full-time MD students in 2017)
Overall rank		Indicators were standardized about their means and standardized scores were weighted, totaled and rescaled so the top school received 100. Other schools received their percentage of the top score.



