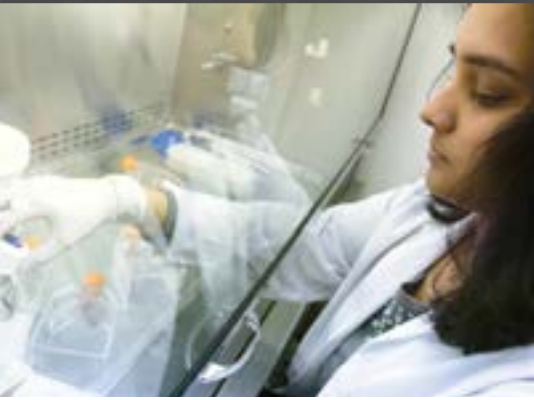
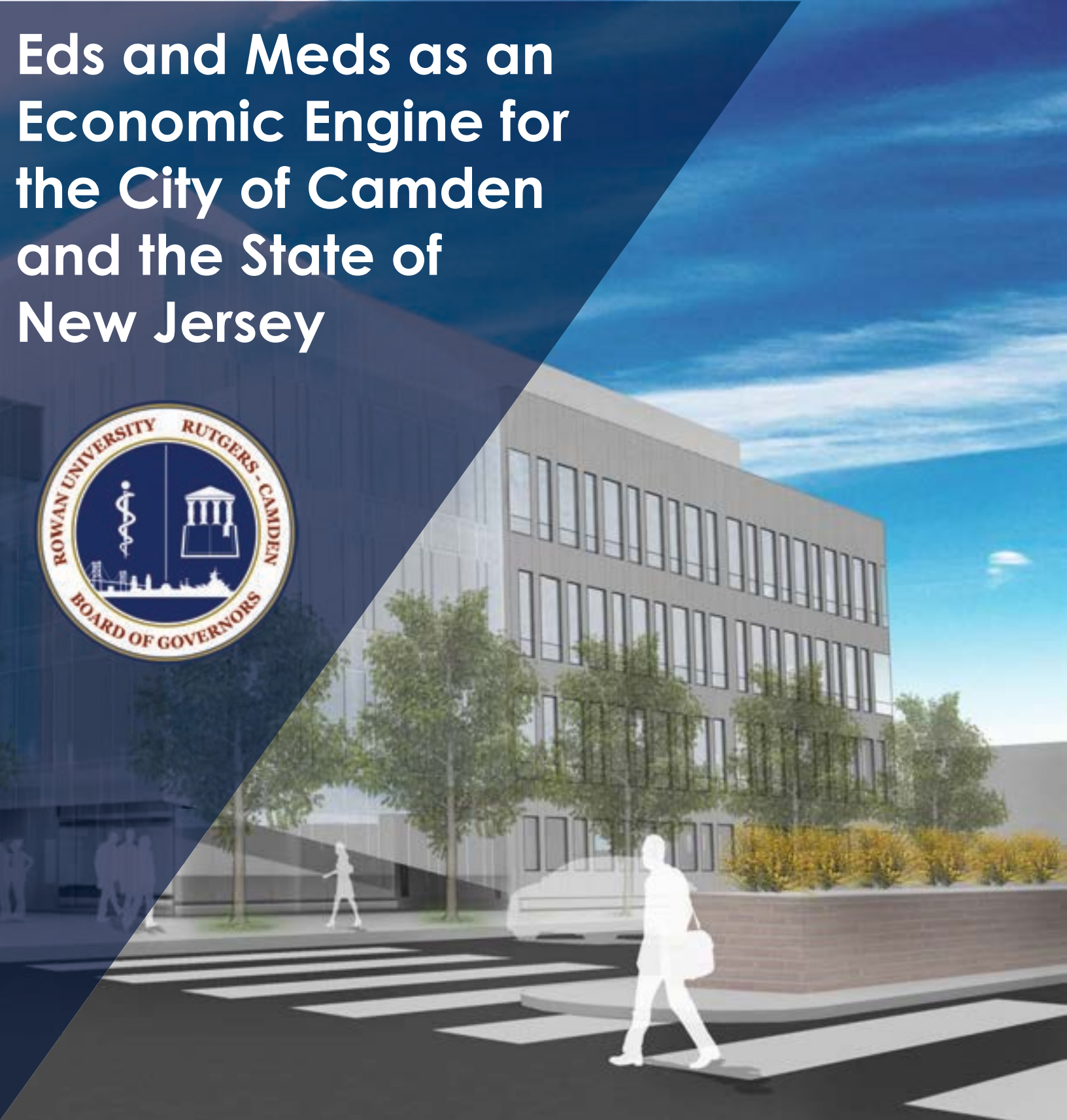


Eds and Meds as an Economic Engine for the City of Camden and the State of New Jersey



New Jersey Medical and Health Science Education Restructuring Act

On August 22, 2012, Governor Chris Christie signed into law, the New Jersey Medical and Health Science Education Restructuring Act. This law represents the most significant and sweeping reform and restructuring of higher education institutions in the history of the State of New Jersey. It will “promote long-term, sustainable economic growth and high academic achievement by fostering three hubs of higher education excellence in the northern, central, and southern parts of the state.” Under the law, all schools, institutes and centers of the University of Medicine and Dentistry of

*“This is a transformative and historic day for higher education in New Jersey... we have again come together in a bipartisan way to put our state’s students, our long-term economic viability and our future generations first.”
– Hon. Chris Christie, Governor*



New Jersey (UMDNJ), with the exception of the School of Osteopathic Medicine and University Hospital, were transferred to Rutgers University and at the same time Rowan University was given a public research institution status. With the restructuring, Rutgers University became a top-25 research institute based on the combined outside funding sources of the merged universities. An important part of the law was the creation of the Rowan University/Rutgers-Camden Board of Governors.

The Rowan University/Rutgers-Camden Board of Governors

A strong bipartisan effort between Governor Chris Christie and the legislative leadership led to the creation of the **Rowan University/Rutgers-Camden Board of Governors (RURCBOG)**. Its primary purpose is to facilitate joint development of curricular offerings, produce significant positive economic development outcomes, and engage the Camden community on health related issues. Its seven-member board consists of two members appointed by the Rowan University Board of Trustees, two members appointed by the Rutgers-Camden board of directors, and three members appointed by the Governor with the advice and consent of the Senate. The fulfillment of its mission will come through the development of health sciences programming and the creation of a vibrant health sciences corridor anchored by and in partnership with Rowan University, Rutgers-Camden, Cooper University Health Care, Cooper MD Anderson Cancer Center, Coriell Institute for Medical Research, and Camden County College.



"We are talking about [RURCBOG] playing a pivotal role in educating the next generation of health care workers. We need to provide an economic lifeline for our residents here in South Jersey."

*– Hon. Donald W. Norcross,
Congressman (1st Congressional District)*



Rowan University is a state-designated public research institution with campuses in Glassboro, Camden, and Stratford. In the past three years, Rowan has opened the Camden-based Cooper Medical School of Rowan University and incorporated the School of Osteopathic Medicine, making it only the second university in the nation to grant both M.D. and D.O. medical degrees. Rowan offers bachelor's through doctoral programs to 16,100 students, up 68 percent in the past decade.

Rutgers-Camden is the southernmost campus of Rutgers, New Jersey's flagship public research university. Its 40-acre Camden campus enrolls more than 6,400 students (a 19 percent increase in the past decade) in 36 undergraduate and 28 graduate programs, including three doctoral programs and South Jersey's only law school. Located in the heart of the University District on the Camden Waterfront, it is a rapidly emerging national model for the civically engaged urban university. Its recent strategic plan states that a primary objective of the institution is "playing a leadership role in revitalizing Camden."

INTRODUCTION

RURCBOG is an innovative partnership between two world-class institutions that will create meaningful shared research and education opportunities, serve as a significant economic engine for the State of New Jersey, and produce numerous benefits for the City of Camden. Work on RURCBOG's first building, the Joint Health Sciences Center, is already underway in Camden, thanks to a \$50 million investment made by the Christie Administration.

This report is the first in a series commissioned by RURCBOG to articulate the potential economic gains of its efforts at both a local and statewide level. This initial report, as well as subsequent reports, will act as a guide for the Board and its partnering institutions to help develop and implement successful programs.

Eds and meds are an important economic catalyst for Camden and New Jersey. It is increasingly understood that universities, health systems, and research institutions, are important providers of educational offerings, medical services, and breakthrough research. As such, they are essential participants in any state's aim to compete for economic growth and for the knowledge work and innovation activity that drives that growth in today's modern economy. Many institutions in turn understand the importance of "being a good neighbor," and work to ensure that their physical presence

confers many layers of economic gains and social benefits to their immediate neighborhoods.

Concentrating this kind of activity on RURCBOG's burgeoning Camden campus enhances New Jersey's participation in the nation's occupations and strengthens its ability to attract knowledge work, research funding, and corporate presence. And, since a growing proportion of Americans seek high-amenity, knowledge-rich regions with high-quality health care resources, the establishment and growth of RURCBOG in southern New Jersey improves the State's new business attraction and new resident attraction efforts.

Subsequent reports will delve more deeply into the magnitude and composition of RURCBOG's economic impact and broader social benefits within the City of Camden and the State of New Jersey. The purpose of this first report is to provide background information on RURCBOG and to convey broader national and statewide trends that highlight the importance of investing in "Eds and Meds" as an effective economic development strategy. Collaborative efforts between quality institutions hold the

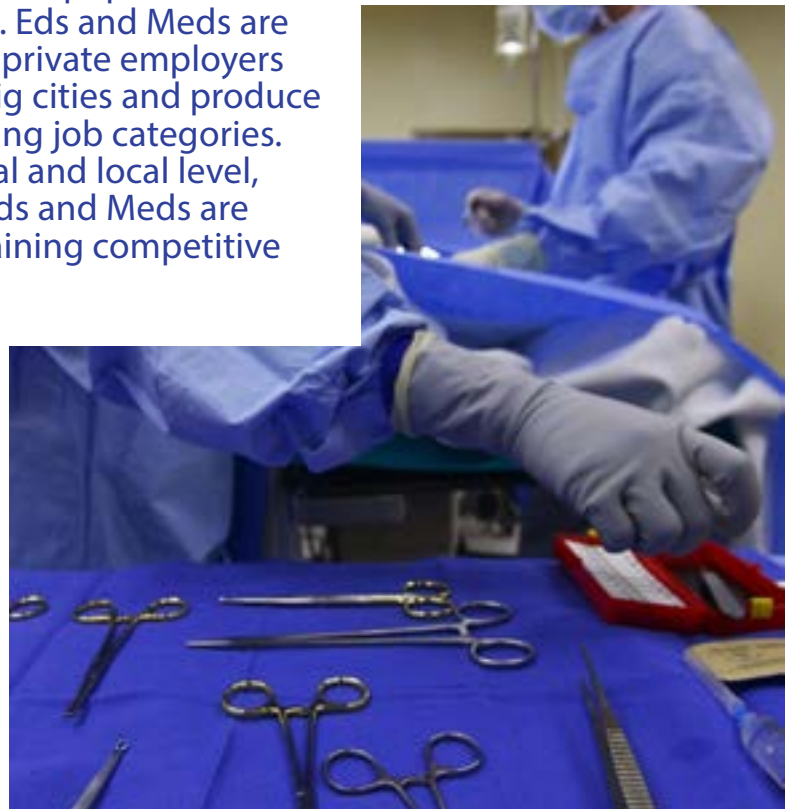
promise of unlocking significant gains at both a very local and more broadly regional level, and it is the intention of RURCBOG to do so for Camden, southern New Jersey, and the entire State of New Jersey.

"RURCBOG will play a central role in leveraging the 'Eds and Meds' assets...to establish a strong research and economic footprint in South Jersey"
-Hon. Jack Collins, Chairman of RURCBOG

The Importance of Eds and Meds to a Strong National, State, Regional, and Local Economy

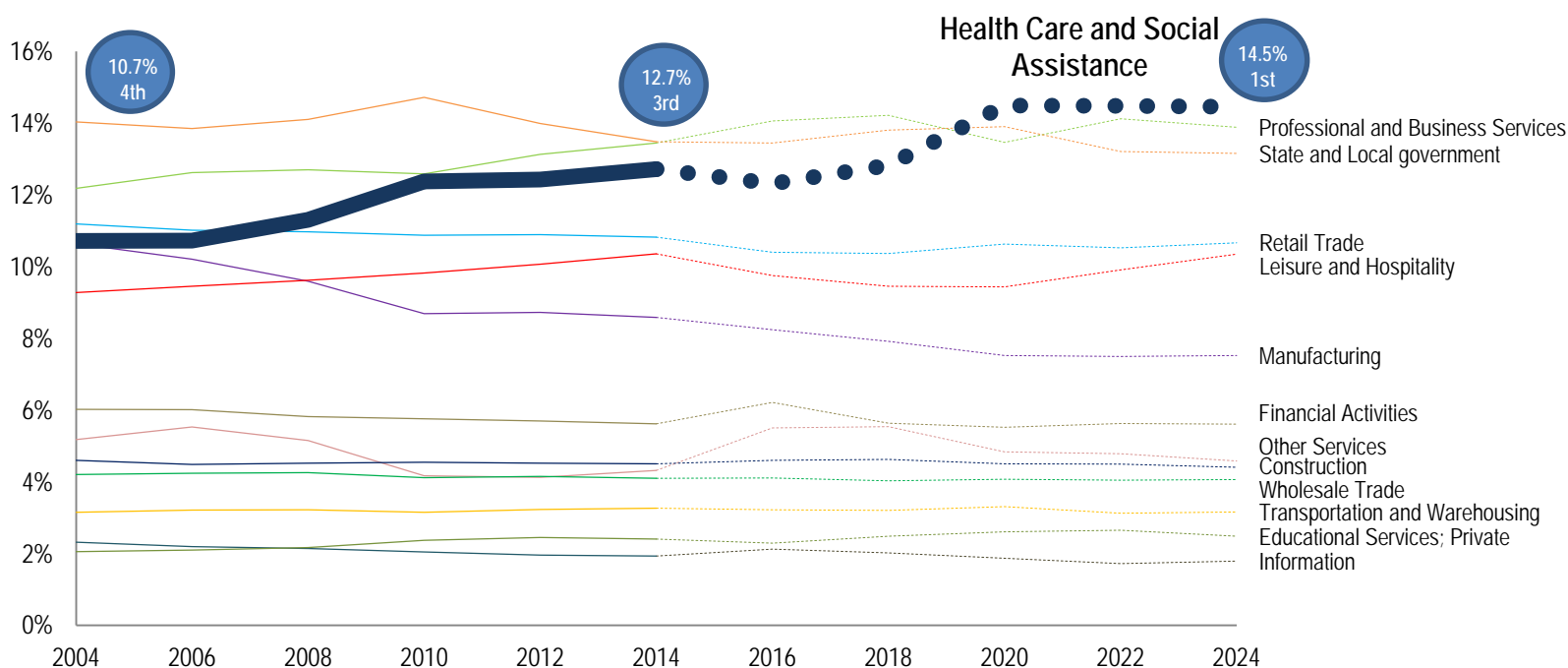


The importance of educational institutions and medical centers to a strong national, state, regional, and local economy cannot be overstated, particularly as we compete in an increasingly knowledge-based economy and as our population continues to age. Eds and Meds are now the biggest private employers in many of our big cities and produce the fastest-growing job categories. At both a national and local level, investments in Eds and Meds are essential to remaining competitive and innovative.



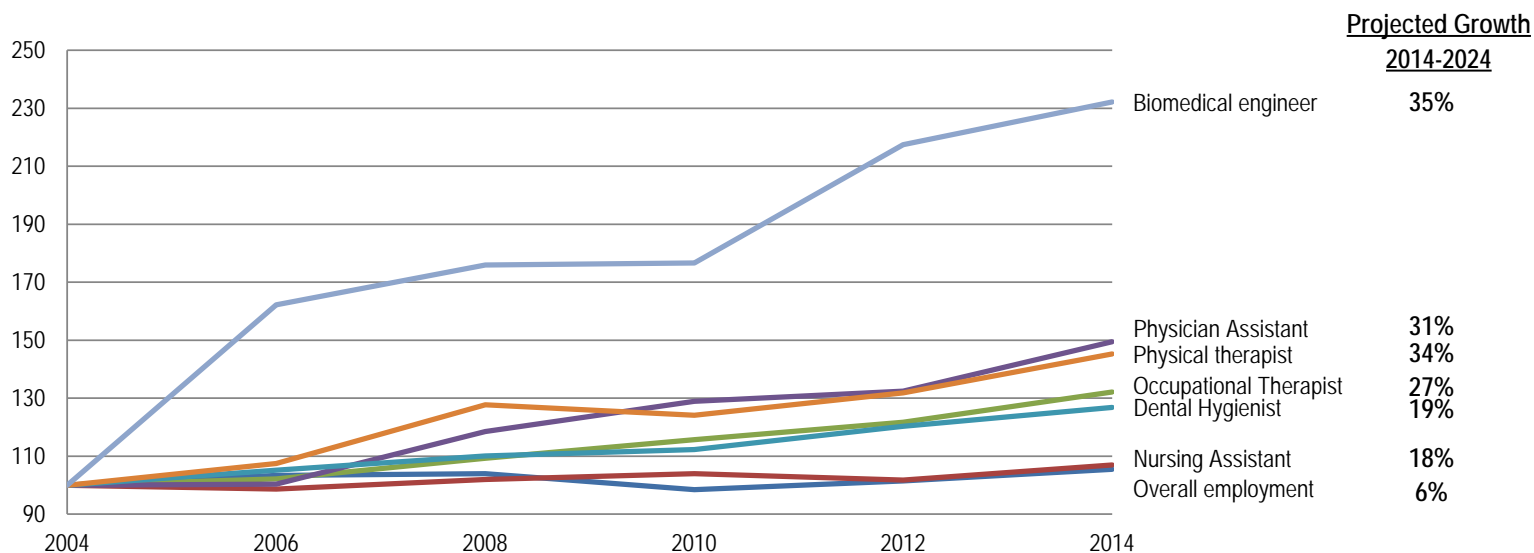
The Importance of Eds and Meds to the National Economy

Share of US Employment by Industry



The health care industry has experienced the fastest growth by far and will soon be the nation's largest employer, representing almost 15% of US employment by 2024.

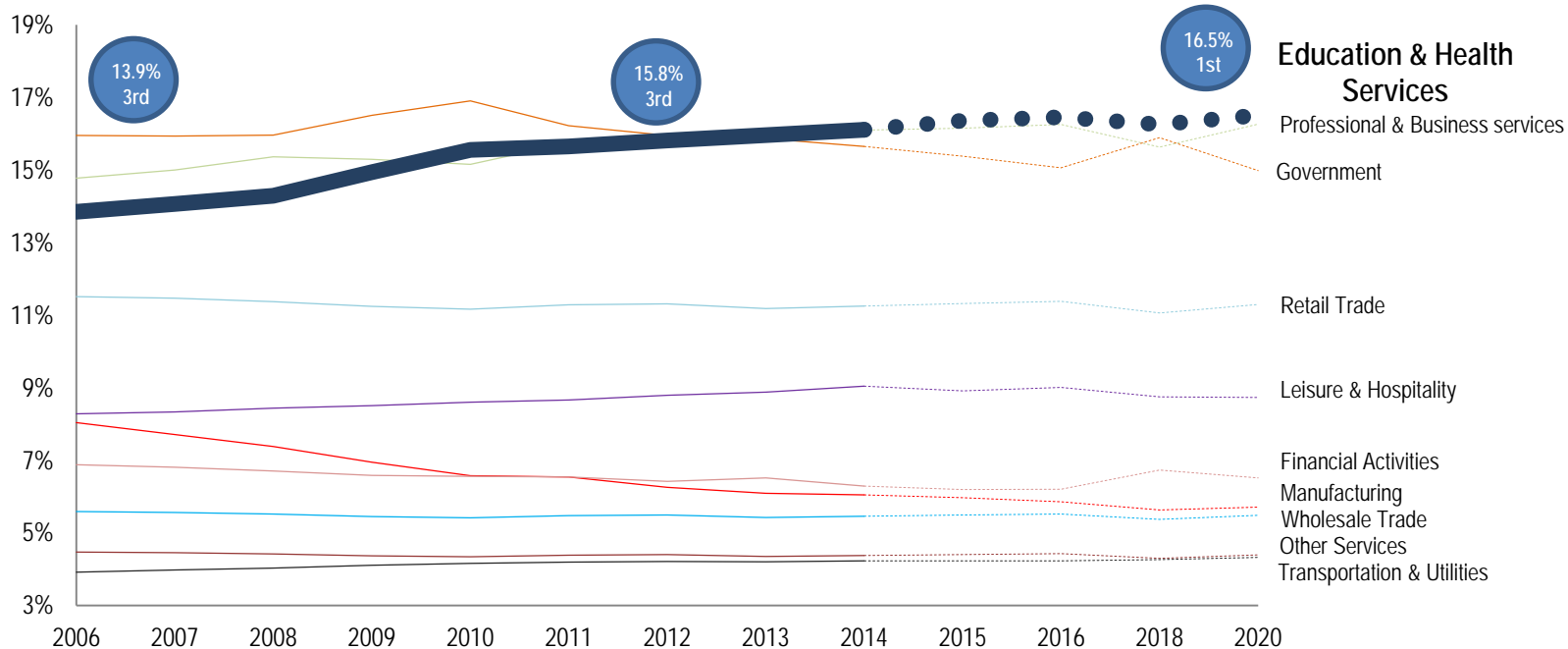
Growth in Overall US Employment and in Selected Health Care Jobs (Indexed: 2004 = 100)



Key Eds and Meds jobs are growing far faster than overall US employment, having grown by as much as 130% in just the past 10 years.

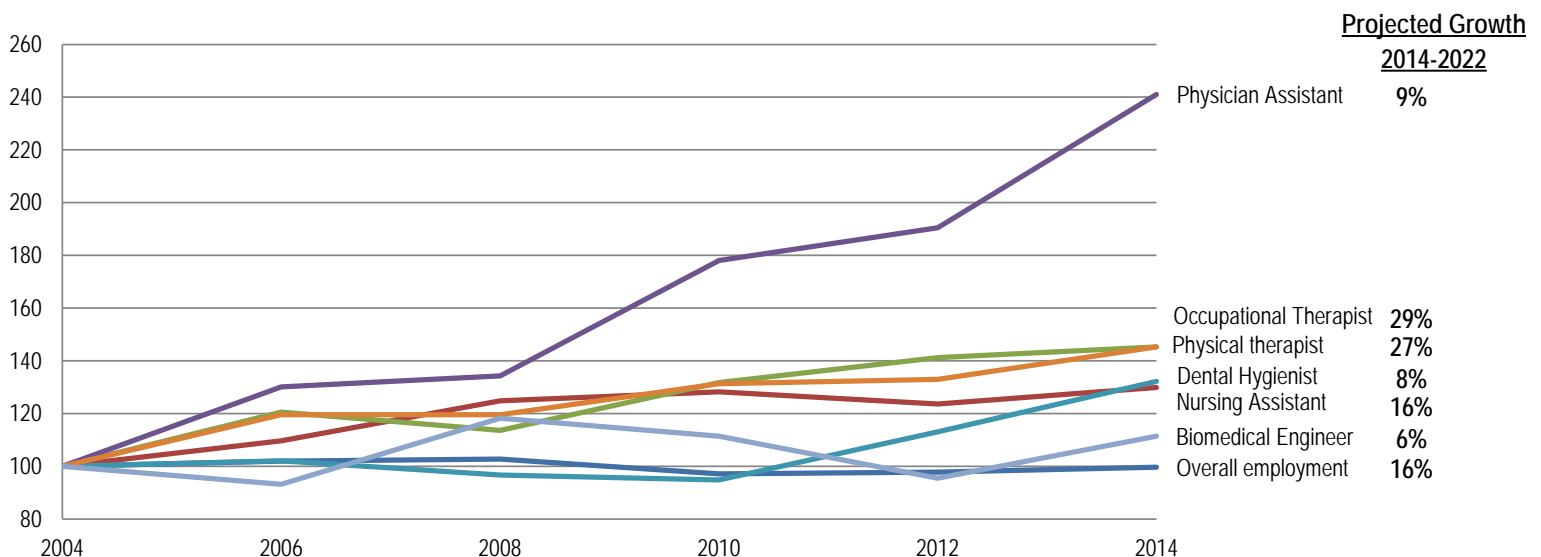
The Importance of Eds and Meds to the New Jersey State Economy

Share of NJ Employment by Industry



Eds and Meds is the largest and fastest growing industry in NJ and will represent 1 in 6 jobs in the state by 2020.

Growth in Overall NJ Employment and in Selected Health Care Jobs (Indexed: 2004 = 100)



Key Eds and Meds jobs are among the fastest growing in New Jersey, having grown as much as 140% in the past 10 years.

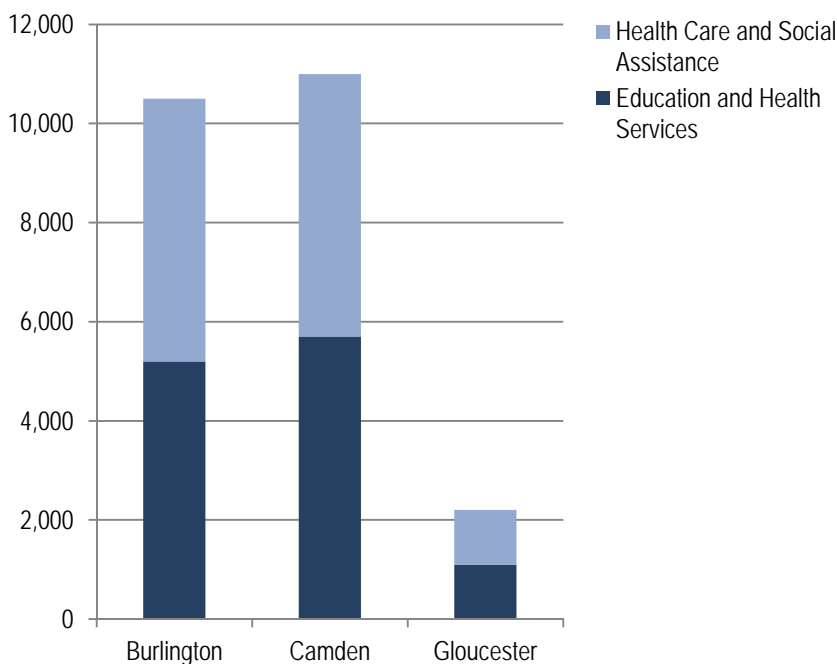
The Importance of Eds and Meds to the Camden Region

The Camden Metropolitan Division of the Philadelphia-Camden Wilmington Metropolitan Statistical Area consists of Burlington, Camden, Gloucester counties. Eds and Meds have seen significant growth in this region and now account for 1 out of every 8 jobs in these 3 counties.

"We are committed to making a generational investment in education and research to ensure economic and employment security."
- Fred Graziano, RURCBOG

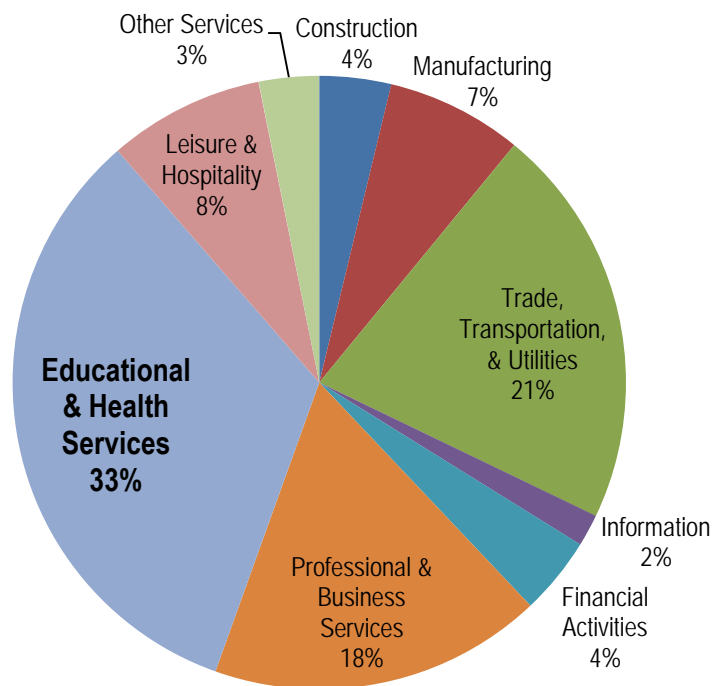


**Estimated Job Growth by County
2008-2018**



There is a combined projection of 24,000 new Eds and Meds jobs expected over the next decade.

**Employment Share by Industry
Camden Metropolitan Division**



Eds and Meds represent 1 out of 3 jobs in the entire Camden region.

The Importance of Eds and Meds to the City of Camden Economy

There is a rich history of Eds and Meds in the City of Camden. These industries serve as a significant economic engine, as is evidenced by the high concentration of jobs and activity at universities and medical centers within the city. According to a recently released economic impact report, "The Camden Higher Education and Healthcare Task Force," Eds and Meds accounted for over \$2 billion in economic impact in 2014.



Top Employers in the City of Camden










Of the 30, 000 jobs in the City of Camden,

over
12,000,
or almost
40%,

represent Eds and Meds institutions.

While population and employment has declined by approximately 3% and 10% respectively, Eds and Meds employment has grown by

67%

over the span of 13 years.

*"Camden is fortunate to have a strong
"eds and meds" asset class...it is critical to our future
growth and sustainability."*

- Hon. Dana Redd, Mayor - Camden

The Importance of Eds and Meds is Increasing

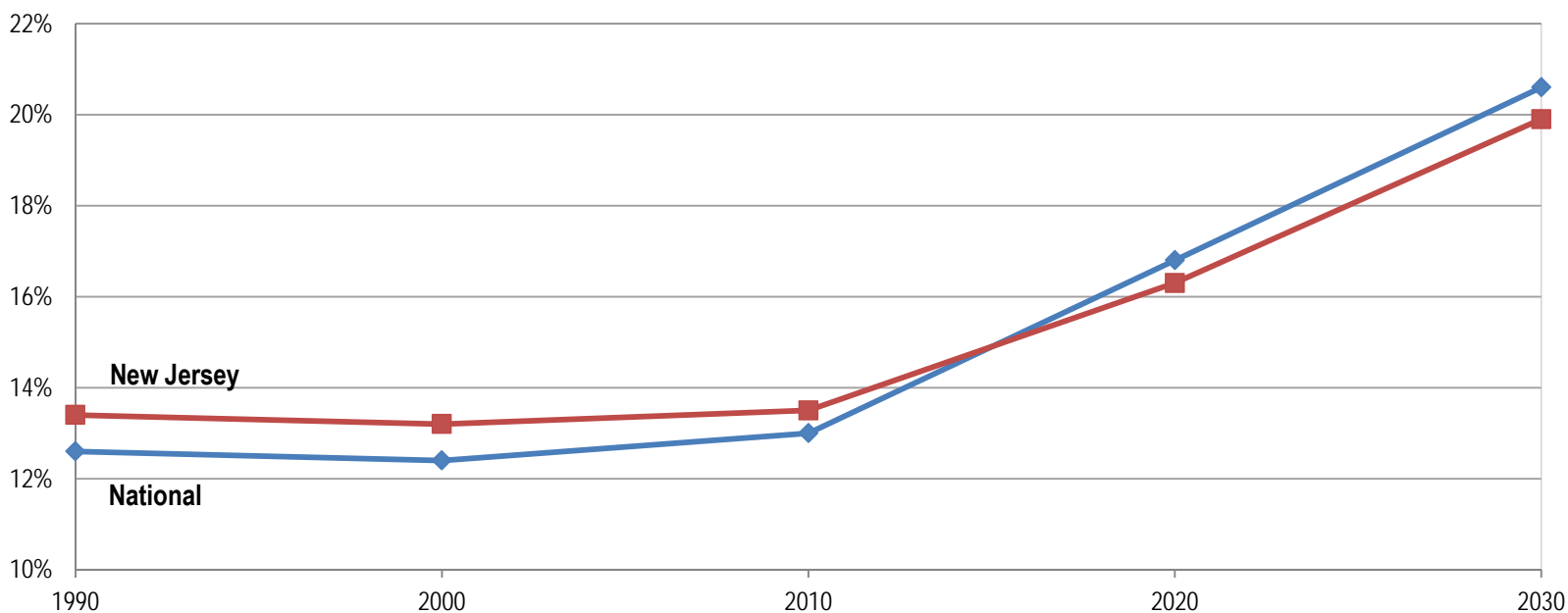
Top 5 Private Employers in Selected Metro Regions

Philadelphia/Camden	Boston	Washington	Baltimore
 	 	 	 
 	 	 	 
 	 	 	 
 	 	 	 
 	 	 	 

 Health Care  Education

Eds and Meds dominate the list of biggest employers in the Northeast.

Percentage of Population 65+

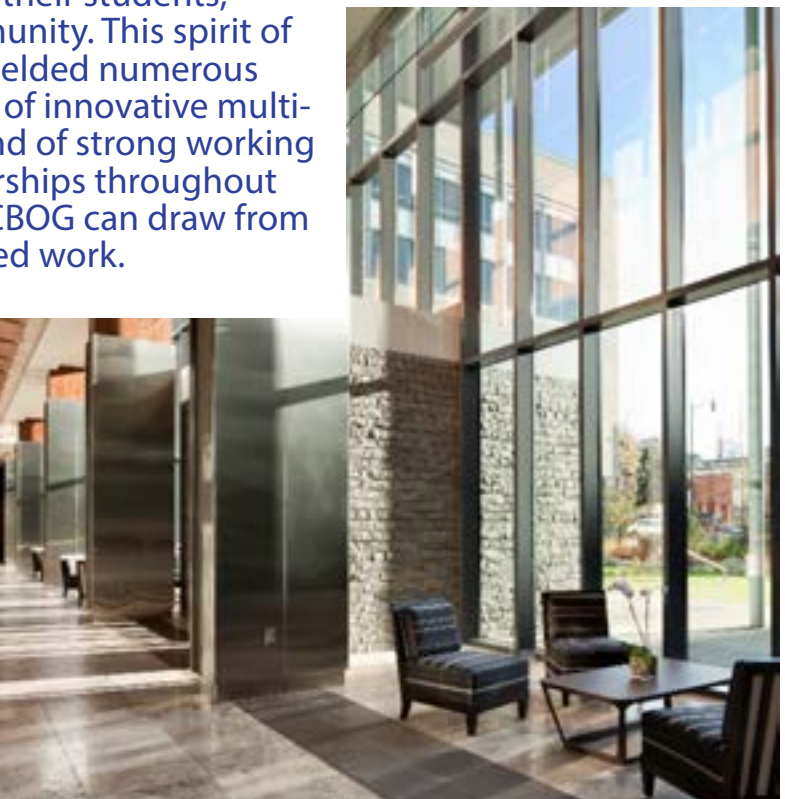
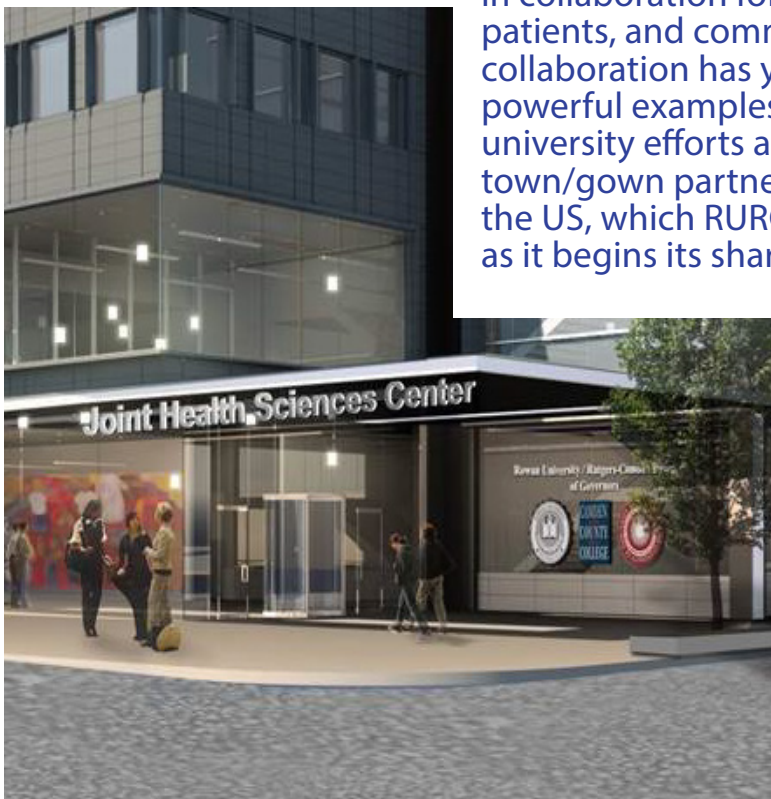


A growing elderly population will continue to stimulate demand for health care jobs.

The Power of Collaboration



In order for Eds and Meds to fulfill their promise as economic agencies at the national, state, regional and local levels, they must believe in the power of collaboration. This is the foundation for RURCB OG, that two great institutions can come together to achieve more in collaboration for their students, patients, and community. This spirit of collaboration has yielded numerous powerful examples of innovative multi-university efforts and of strong working town/gown partnerships throughout the US, which RURCB OG can draw from as it begins its shared work.



The Power of Collaboration Across Institutions

The incredible partnership between Rowan University and Rutgers-Camden is illustrative of a national movement for collaboration across multiple educational institutions to spur innovative research and create dynamic learning environments.

OREGON

The Collaborative Life Sciences Building (CLSB) brings together Oregon Health & Science University (OHSU), Oregon State University (OSU), and Portland State University (PSU) in a shared space. CLSB houses OHSU's M.D., Doctor of Dental Medicine, Physician Assistant, and Radiation Technology programs; OSU/OHSU's Doctor of Pharmacy program, research laboratories, and medical simulation center; and PSU's chemistry, biology, and biochemistry research programs. The 650,000-square foot complex provides classrooms, lecture halls, labs, and specialty research centers where students from different health care professions learn alongside one another and work collaboratively in inter-professional education courses. It was designed to foster spontaneous interactions between disciplines, and spur formal research collaborations.

"This sets an example for the rest of the country to follow – how different institutions can come together ... to help rewrite the economy of a region."

*- Dr. Ali Houshmand,
President of Rowan University*

*"We have two great universities coming together to improve this region's economy."
– State Senate President
Stephen Sweeney*

"This will create an entity between two universities...a bridge creating health care delivery and education."

*- Dr. Robert Barchi, President
of Rutgers University*

NORTH CAROLINA

Duke and UNC created a joint program that encourages inter-disciplinary and inter-institutional collaboration. Each institution funds the program through the National Institute of Health's Clinical and Translational Science Award (CTSA), awarding up

to \$50,000 per collaborative project. Eligible projects must involve a lead investigator from each institution and apply or accelerate novel testing in clinical or population settings for the purpose of improved health policy, health outcomes, and the health of populations. The initial grants award through the collaborative program include research into muscle-tropic AAV vectors, repurposing and identifying new heart disease drugs, premature infant health, and intestinal physiology. All are intended to develop basic scientific discoveries into improved patient care.

The Power of Collaboration Between Town and Gown

INNOVATION DISTRICTS

Universities are increasingly attuned to the importance of having strong relationships with their host communities. These “town/gown” relationships are fraught with the potential for both possibilities and problems. RURCBOG is emblematic of the positive and proactive kind of town/gown intersection that is already practiced by Rowan University and by Rutgers-Camden. It also promises to be a shining example of what Brookings Institution calls “innovation districts,” which are physically compact, transit accessible, technology driven urban areas with strong anchor institutions. Their confluence of research work, corporate presence, start-up activity, and knowledge workers creates a rich ecosystem for innovation to flourish.

Importantly, they are often near low- and moderate-income neighborhoods and as such generate employment and educational opportunities for local residents. They are also dynamic regional economic engines, producing spillover economic activity, rising property values, and stronger tax bases. And, given the growing importance of “place” in the site selection preferences of knowledge workers and the workplaces that employ them, innovation districts create neighborhood economic opportunities by supporting retail and restaurants. They also yield increased foot traffic and in doing so produce a safer and livelier street-level experience.

“This is about creating new knowledge through research...it's about revitalizing the city of Camden.”

– Louis Bezich, Vice Chairman of RURCBOG

SUCCESSFUL MODELS

Beginning in the 1990's, University of Pennsylvania pioneered an anchor-led neighborhood revitalization of West Philadelphia that is regarded as the guiding example for other schools hoping to engage with community partners and improve town/gown relations. Penn has invested in new retail especially on the western portion of its campus, and its efforts were matched by private developers who brought additional retail and real-estate development. Increased walkability,

street lighting, and updated retail have increased job opportunities for neighborhood residents and boosted sales at neighborhood business.

University City has flourished, improving the quality of life for students, employees, and residents as the neighborhood has transformed into a vibrant place to live, work, and play.

Johns Hopkins University has been a major participant in an effort to revitalize East Baltimore, one of the city's poorest and most blighted neighborhoods. As a result, Hopkins established the East Baltimore

Development Corporation to lead neighborhood planning and revitalization efforts.

Together, they have worked to increase market rate and subsidized housing, decrease resident displacement, provide supportive services and job training. In addition, they have partnered to open a public school in the neighborhood. The next phase of development includes the creation of a central park that will span the length of the neighborhood.

Revitalization in Baltimore has emphasized the turnaround of public and open spaces to make the area more attractive for retail and future private development.

The Promise of RURCBOG: Joint Health Science Center

Camden is at an inflection point. Public safety is improving, city finances are stabilizing and the business environment is rebounding. RURCBOG has the resources and mandate to become a meaningful contributor in Camden and to the region's efforts to build a platform for stability and sustained economic growth in the health sciences sector. Developing the Joint Health Science Center ("Center") is a first step towards achieving this objective.

The Christie Administration's commitment of \$50 million will advance the Center project, which is the first phase of a comprehensive health sciences campus development located in downtown Camden. The Center is going to be integral to the "Eds and Meds" corridor; it is located within walking distance from a consortium of educational institutions such as Camden County College, Rutgers University, and The Cooper Medical School of Rowan University. This location also coalesces synergies with healthcare services within Camden such as Cooper University Hospital, MD Anderson Cancer Center at Cooper, Coriell Institute for Medical Research, Lourdes Health systems and Virtua Health Camden, creating a potential workforce to support local demand at healthcare facilities, amalgamating education with medical practice. The Center will become the epicenter where education and the medical field can congregate and reinforce their shared resources.

"This is more than an infrastructure project...the Center is designed to be a platform to educate and train the next generation of health care workers and help build research and health care delivery expertise..."
- Robert E. Mortensen
RURCBOG



The 65,000 gsf Center is being designed based on the Mesh Economy model. The model is predicated on meshing of talents, goods and services. In an academic environment, this model co-locates students at various academic aspirations to share assets ranging from laboratories, equipment, and classrooms while at the same time exposing students to a broader field and depth of educational rigor. Secondly, this environment is a catalyst for students in a two-year program, to make the transition to a four-year degree, or higher for vertical expansion through the State education system.

At the Center diverse programs will accommodate shared biomedical research, biomedical and biomechanical clinical, simulation laboratories and instructional spaces in support of a range of degree programs. The two universities collaborated to create an integrated health science related program, focused on

teaching students the latest techniques in medicine.

The Center's objectives in facilitating such research are not just to foster collaboration, but to support: (1) initiatives that may lead to the development of products and bring those products to market; (2) attracting research-based businesses which in turn will help build the economy of South Jersey; and (3) developing solutions to problem sets that will identify pathways to improve population health programs.

The Promise of RURCBOG: Objectives and Programs



RURCBOG's stated vision is to leverage existing education, research, and medical assets in Camden to create and sustain economic growth and civic engagement in Camden and South Jersey. It will oversee the development of curricula for the joint program, which will include both relocating existing Rowan University and Rutgers-Camden initiatives as well as birthing new collaborative efforts. Three interlocking objectives will guide its efforts going forward:

1. Education. RURCBOG has been given a clear mandate by its enabling legislation to establish or expand any schools, programs, or departments in the health sciences field that are proposed by either institution. It will be a platform for integrated learning at a unified facility where opportunities for collaborative research and interdisciplinary learning can be created.

2. Economic Development. RURCBOG represents a great opportunity to assist Camden in its growth arc, especially where there is a health nexus. The enabling legislation gives RURCBOG a broad mission here, commensurate with the many determinants of health outcomes, including housing, employment, education, and public safety.

3. Civic Engagement. RURCBOG is an extension of each institution's existing commitment to generating a net positive effect by engaging its local community. Given the health sciences focus, this will manifest itself in particular on addressing health related issues and advancing community based projects.

PROGRAMS INITIATED

1. Collaborative Diabetes Research Project. RURCBOG has funded phase I of an interdisciplinary collaboration project comprised of scientists in synthetic chemistry, purification of biomolecules, ethnobotany and animal physiology. The objective is to tackle the problems of diabetes by supporting the timely development of ways to cure diabetes using two approaches: (1) natural bioproducts and (2) new synthetic molecules.

2. Doctorate in Occupational Therapy (DrOT). Rowan University sought and received approval from the RURCBOG to develop and offer a DrOT program.

3. Medical Legal Partnership. RURCBOG provided seed funding to begin the creation of partnerships between legal and medical providers to give low-income patient/clients access to free legal services.

4. Medical Assistants Training Program. RURCBOG funds a program in conjunction with the New Jersey Education Association and Camden County One Stop to recruit current high school students with the goal of training, educating and employing them as Medical Assistants at area healthcare organizations.

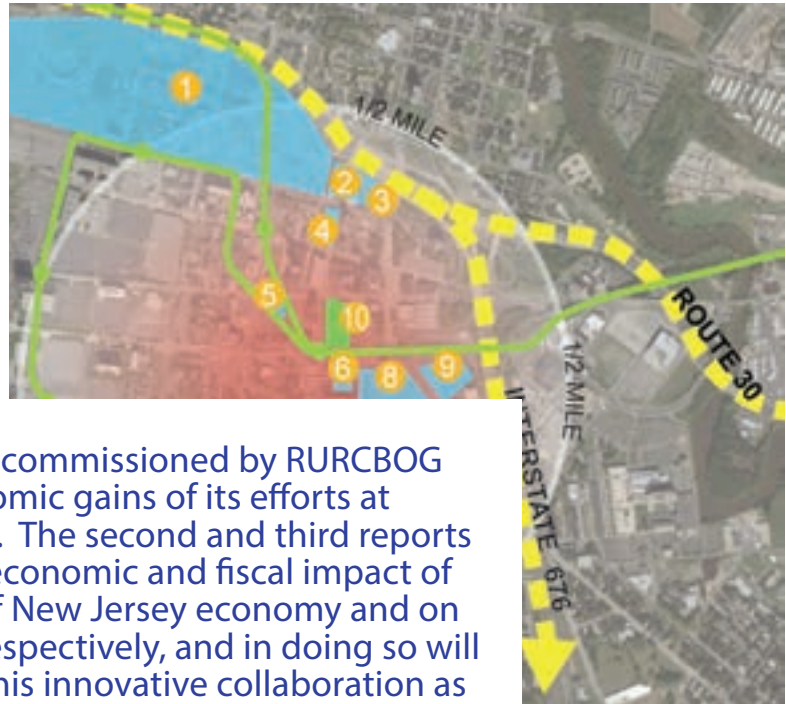
"Camden Teens Embrace Medical Job Opportunity"

Courier Post
- March 9, 2016

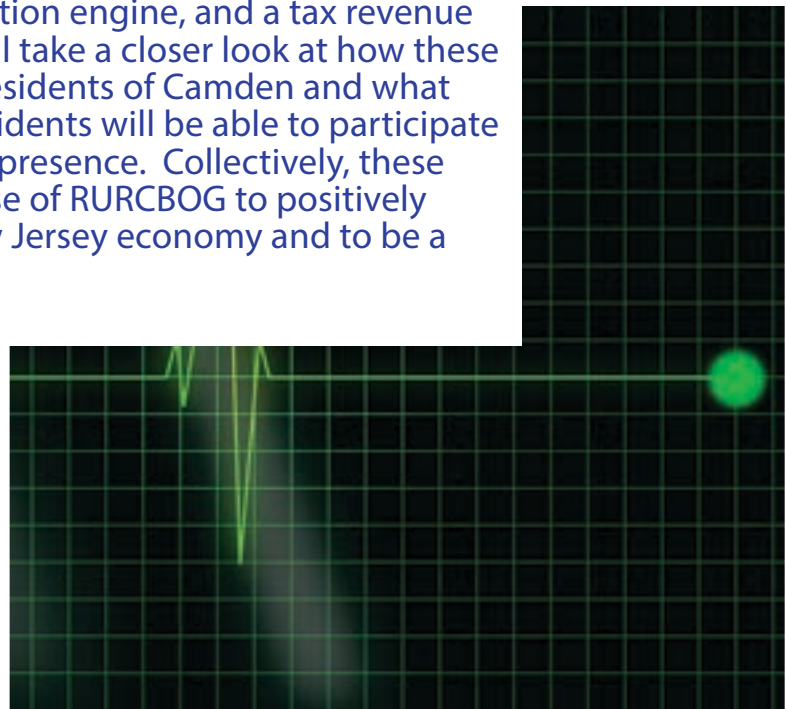
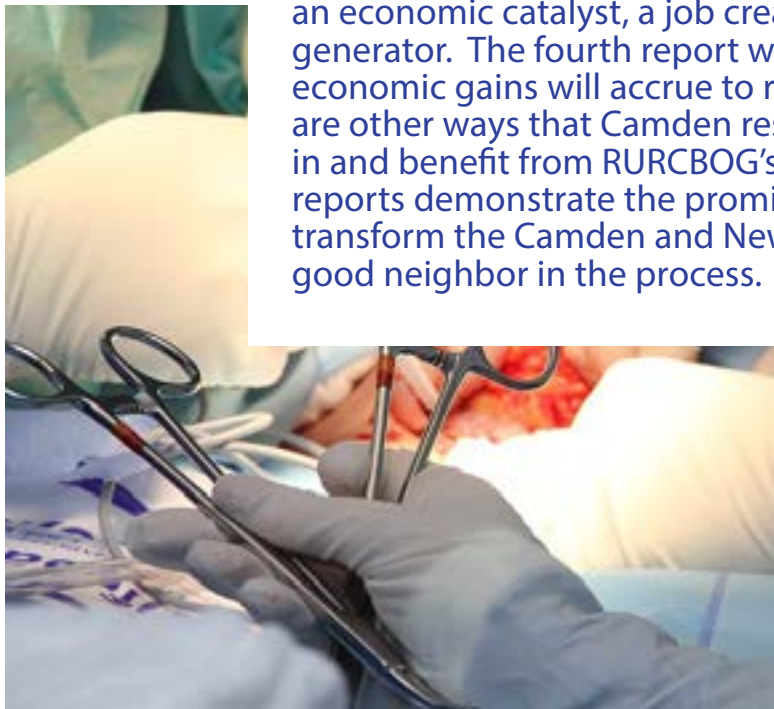
"Health Sciences Corridor to Rise in Camden"

Philadelphia Inquirer
- December 14, 2015

The Impact of RURCBOG on the State of New Jersey and the City of Camden



This report is the first in a series commissioned by RURCBOG to articulate the potential economic gains of its efforts at both a local and statewide level. The second and third reports will provide an estimate of the economic and fiscal impact of RURCBOG's work on the State of New Jersey economy and on the City of Camden economy, respectively, and in doing so will underscore the importance of this innovative collaboration as an economic catalyst, a job creation engine, and a tax revenue generator. The fourth report will take a closer look at how these economic gains will accrue to residents of Camden and what are other ways that Camden residents will be able to participate in and benefit from RURCBOG's presence. Collectively, these reports demonstrate the promise of RURCBOG to positively transform the Camden and New Jersey economy and to be a good neighbor in the process.



Rowan University/Rutgers-Camden Board of Governors



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Chairman



Mr. Louis S. Bezich
Vice Chairman



Mr. Chad M. Bruner
Board Member



Hon. Dana L. Redd
Board Member



Mr. Fred Graziano
Board Member



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Board Member



Mr. Kris Kolluri
Chief Executive Officer

