

Healthcare and educational institutions account for 37% of all jobs in Philadelphia, the largest sector in the city, while downtown, "eds & meds" provide 19.8% of all jobs. From 2005 to 2015, Philadelphia's higher education sector experienced modest job growth of 9%, while the healthcare and social assistance sector grew by 23%.

The Thomas Jefferson University and Health system, Center City's largest private employer, employed 13,778 people in 2016, a 15% increase over the previous year. Jefferson continued to expand in 2016 through several mergers and partnerships. The Aria-Jefferson Health merger was completed in 2016, and Jefferson Health acquired a controlling interest in the Rothman Orthopaedic Specialty Hospital in Bensalem, N.J., Jefferson's ninth hospital in the region. Jefferson Health and Kennedy Health, based in Voorhees, N.J., signed a binding agreement to merge, while Jefferson Health established a new kidney transplant center at Ninth and Chestnut Streets and, in partnership with Rothman Institute, created a multimilliondollar "spine center of excellence" in South Philadelphia. In addition, Thomas Jefferson University and Philadelphia University expect to complete their merger in 2017. Magee Rehabilitation Hospital recently entered into a preliminary

agreement to become part of Thomas Jefferson University as well.

Penn Medicine, Drexel University and Children's Hospital of Pennsylvania (CHOP) increased their combined number of jobs in Center City to 8,148, while nine smaller institutions employed more than 3,100 employees.

Net patient revenue at Center City hospitals — Thomas Jefferson University Hospital, Pennsylvania Hospital, Wills Eye Hospital and Hahnemann — totaled \$2.43 billion in 2015, a slight increase from \$2.30 billion in 2014. In January 2017, Vybe Urgent Care opened a new facility in Center City, joining Jefferson Hospital and the myDoc chain as the only urgent care centers located downtown.

In fall 2015, Center City's 15 institutions of higher education reported enrollment of more than 32,500 students. Immediately adjacent to downtown, Drexel University, University of Pennsylvania (Penn), University of the Sciences, and Temple University enrolled an additional 75,431, for a total population of more than 107,000 students in or adjacent to downtown. Students rent apartments, shop, frequent bars and restaurants, and enjoy the many amenities of Center City.

Of the 27,872 degrees conferred by Philadelphia-based educational institutions in 2015, 50% were bachelor's degrees (13,914) and 42% were at the master's or doctoral level (11,799). These schools produced a 13% increase in technology and engineering graduates between 2013 and 2015, providing a new cohort of potential employees for Science, Technology, Engineering and Math (STEM) occupations. Philadelphia also has experienced a 69% increase in international students in the past decade. At the same time, 64% of all graduates stayed in the region in 2015.

This year, Drexel University expects to open the Thomas R. Kline Institute of Trial Advocacy at 12th and Chestnut Streets. CHOP's 23-story research tower, the Roberts Center, on the western edge of Center City near the South Street Bridge, is expected to open with 855 employees, as the first phase of a multi-year, 466,000-square-foot development.

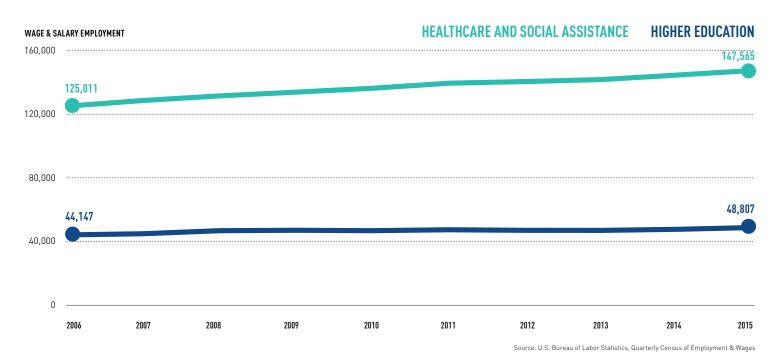
According to the National Science Foundation's Higher Education Research and Development Survey, combined research spending at Drexel, Temple, Thomas Jefferson, and Penn totaled \$1.34 billion in 2015, up from \$1.30 billion in 2014. These institutions launched 27 startups in 2015, applied for a total of 330 patents, and generated income from active licenses totaling \$44.5 million. Patent applications were up 38% in 2015, compared to the previous year.

The city's medical and academic research institutions received \$857 million in National Institutes of Health grants in 2016, putting Philadelphia fourth nationally, behind Boston, New York, and Seattle. The Brookings Institution named Philadelphia one of the world's Knowledge Capitals, defined as "19 mid-sized, highly productive innovation centers in the United States and Europe with talented workforces and elite research universities." These centers of innovation can serve as generators of new firms and expanded employment opportunities for the region.



# EDUCATION AND HEALTH SERVICES EMPLOYMENT IN PHILADELPHIA GREW STEADILY BY 16% BETWEEN 2006 AND 2015, HELPING BUFFER THE CITY FROM THE GREAT RECESSION.

#### PHILADELPHIA EDUCATION AND HEALTH SERVICES EMPLOYMENT



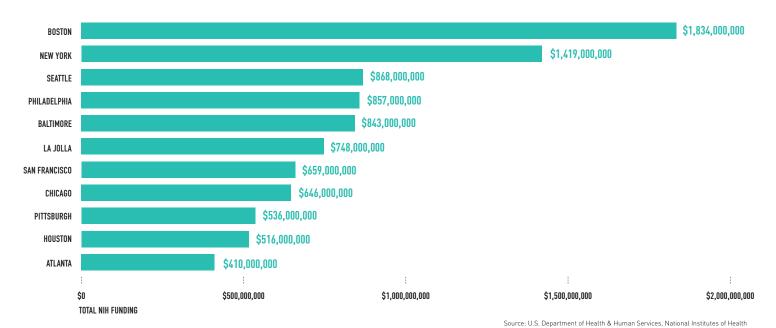
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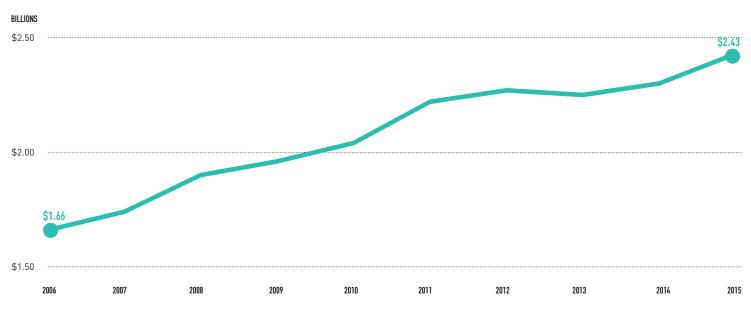
## HEALTHCARE AND EDUCATION PROVIDES **58,500 JOBS IN CENTER CITY** AND DRAWS 32,550 STUDENTS INTO DOWNTOWN.

#### NATIONAL INSTITUTES OF HEALTH FUNDING, 2016

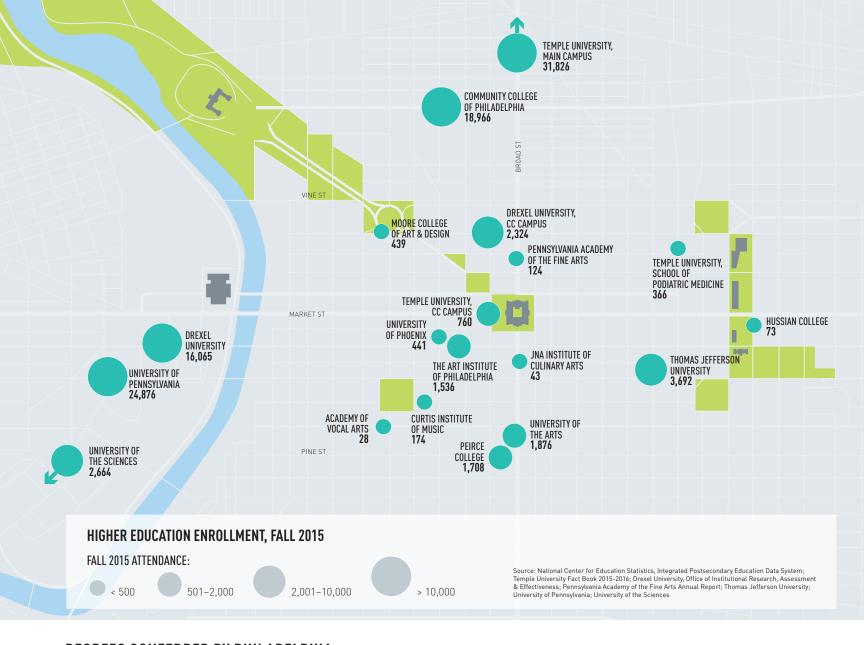


## PHILADELPHIA RANKS 4TH NATIONALLY, SECURING \$857 MILLION IN NIH GRANTS IN 2016.

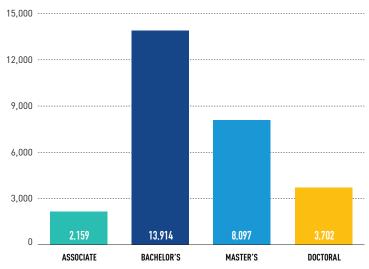
#### CENTER CITY HOSPITAL NET PATIENT REVENUE



Source: Pennsylvania Healthcare Cost Containment Council



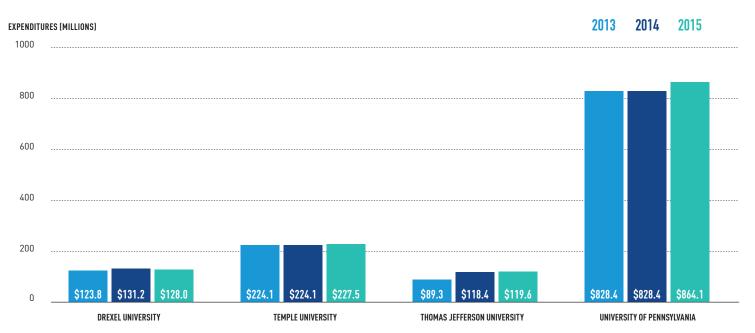
### DEGREES CONFERRED BY PHILADELPHIA COLLEGES AND UNIVERSITIES, 2015



Source: U.S. Department of Education, National Center for Education Statistics



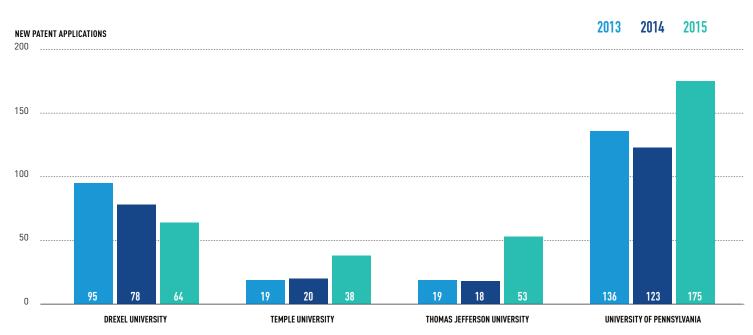
#### RESEARCH EXPENDITURES AT CENTER CITY AND ADJACENT UNIVERSITIES



Source: National Science Foundation, National Center for Science & Engineering Statistics, Higher Education R&D Survey

### RESEARCH EXPENDITURES AND PATENTS DRIVE INNOVATION AND CAN CREATE THE NEXT ECONOMY FOR PHILADELPHIA.

#### NEW PATENT APPLICATIONS AT CENTER CITY AND ADJACENT UNIVERSITIES



Source: Association of Technology Managers, Licensing Activity Survey FY2015