“At Johns Hopkins Medicine, we talk about excellence and discovery because both are firmly embedded in our more than 125-year history. The modern medical education was born and revolutionized here and countless advances in medicine were made by Johns Hopkins physicians and scientists. We have evolved into an internationally recognized medical system built to deliver evidence-based medicine with cutting-edge innovation.

Paul Rothman, M.D.
Dean of the Medical Faculty
CEO, Johns Hopkins Medicine

Watch a video highlighting some of our accomplishments from 2015.
# Table of Contents

- About Johns Hopkins  
  Slide 4
- The Founding Physicians  
  Slide 7
- Facts and Major Components  
  Slide 9
- Strategic Affiliation Highlights  
  Slide 19
- Notable Research and Clinical Milestones  
  Slide 23
- Facilities  
  Slide 28
- Medical Education  
  Slide 37
- Basic and Translational Research  
  Slide 41
- Diversity and Education  
  Slide 49
- Community Relations  
  Slide 52
Mission

The mission of Johns Hopkins Medicine is to improve the health of the community and the world by setting the standard of excellence in medical education, research and clinical care.

Diverse and inclusive, Johns Hopkins Medicine educates medical students, scientists, health care professionals and the public; conducts biomedical research; and provides patient-centered medicine to prevent, diagnose and treat human illness.

Vision

Johns Hopkins Medicine pushes the boundaries of discovery, transforms health care, advances medical education and creates hope for humanity.

Together, Johns Hopkins Medicine will deliver the promise of medicine.
Core Values

- Excellence & Discovery
- Leadership & Integrity
- Diversity & Inclusion
- Respect & Collegiality
Johns Hopkins, the Quaker merchant, banker and businessman, left $7 million in 1873 to create The Johns Hopkins University and The Johns Hopkins Hospital, instructing his trustees to create new models and standards for medical education and health care.

He was named for his great-grandmother, Margaret Johns, her last name becoming his first (and confusing people ever since).
The Founding Physicians

- William Henry Welch
- William Stewart Halsted
- William Osler
- Howard Kelly
Founding Physicians

William Henry Welch (1850–1934)

Created the first graduate training program for physicians.

Founded nation’s first (and currently largest) school of public health.

William Stewart Halsted (1852–1922)

Started first formal surgical residency training program.

Pioneered the use of surgical gloves.

Radical mastectomy, hernia repair and thyroidectomy were among his innovations.

11 students went on to lead departments of surgery around the country

William Osler (1849–1919)

Was first physician-in-chief at The Johns Hopkins Hospital (1889).

Established first medical residency program as backbone of physician training.

Pioneered practice of bedside teaching (medical rounds).

Authored *The Principles and Practice of Medicine*, the most influential medical textbook of the 20th century.

Howard Kelly (1858–1943)

Established gynecology as a true specialty.

Invented numerous medical devices, including a urinary cystoscope and absorbable sutures, at Johns Hopkins.
About Johns Hopkins Medicine

The Johns Hopkins Hospital opened in 1889, and the Johns Hopkins University School of Medicine opened four years later.

In 1986, the hospital trustees created The Johns Hopkins Health System Corporation to serve as the parent of the hospital and future subsidiary entities.

In 1996, the health system and the school of medicine joined together to become Johns Hopkins Medicine.
Organization Structure

* These entities are 100% owned by The Johns Hopkins Health System Corporation
** These entities are 50%/50% joint ventures between The Johns Hopkins Health System Corporation and The Johns Hopkins University
Johns Hopkins Medicine (FY 2016)

- $8 billion in operating revenues
- 42,000-plus combined full-time equivalent employees; among largest private employers in Maryland
- 2.8 million-plus annual outpatient visits
- 360,000-plus annual Emergency Department visits
- 115,000-plus annual hospital admissions
- At over $2 billion, The Johns Hopkins University is, for the 35th straight year, the leading U.S. academic institution in total research and development spending, according to the National Science Foundation’s rankings.
- M.D./Ph.D. program—largest NIH medical science training program in the country
- M.D./M.P.H. and M.D./M.B.A. joint degree programs
- M.A. in medical and biological illustration
- Annually ranked second in National Institutes of Health (NIH) funding for U.S. medical schools (more than $420 million)
- Medical and doctoral students: over 1,200
- Full-time faculty: over 2,800
- Part-time faculty: over 1,200
The Johns Hopkins Hospital
The Johns Hopkins Hospital is the only hospital in history to have been ranked first in the nation for 22 years by *U.S. News & World Report*.

1,194 licensed beds, over 2,000 full-time attending physicians

**Johns Hopkins Children’s Center**
Consistently ranked by *U.S. News & World Report* as one of the top centers in the nation.

**Johns Hopkins Sidney Kimmel Comprehensive Cancer Center**
National Cancer Institute-designated cancer center; consistently ranked among the top in the nation by *U.S. News & World Report*.

Johns Hopkins Bayview Medical Center
440 licensed beds, over 678 attending physicians

*Note: all licensed bed counts are 2016, including NICU*
Facts and Components
Other Johns Hopkins Hospitals

Johns Hopkins All Children's Hospital
St. Petersburg, Florida

- 259 licensed beds, over 285 active medical staff
- Received the Healthgrades Pediatric Patient Safety Award.

Howard County General Hospital
Columbia, Maryland

- 282 licensed beds, over 440 physicians
- Received the Healthgrades Distinguished Hospital Award for Clinical Excellence

*Note: all licensed bed counts are 2016, including NICU*
Facts and Components  
Other Johns Hopkins Hospitals

Sibley Memorial Hospital  
Northwest Washington, D.C.  
- 318 licensed beds, 938 active medical staff  
- Ranked among the top 100 hospital programs in the country for hip replacement and is a benchmark hospital for successful hip replacement surgeries.

Suburban Hospital  
Bethesda, Maryland  
- 222 licensed acute beds, more than 660 active medical staff  
- Has a joint cardiac surgery program with NIH.  
- Focuses on open-heart surgical procedures.

Note: all licensed bed counts are 2016, including NICU
Other Johns Hopkins Health System Highlights

Johns Hopkins HealthCare
Managed care plans covering more than 390,000 lives

Johns Hopkins Community Physicians
With 40 primary and specialty care outpatient sites, Johns Hopkins Community Physicians handles than 900,250 annual patient visits

Johns Hopkins Home Care Group
A full-service home care provider with over 158,000 patients served

Note: Figures are for 2016
Strategic Affiliation Highlights
Johns Hopkins Medicine International Highlights

- Facilitates the global expansion of the Johns Hopkins Medicine mission
- Provides personalized care for patients from outside Maryland and the U.S., and for local patients with interpretation needs
- Works to improve health care delivery through high-impact, sustainable collaborations around the world

Watch a video about our international patient services.
### Johns Hopkins Medicine Affiliates

<table>
<thead>
<tr>
<th>ANNE ARUNDEL HEALTH SYSTEM</th>
<th>GREATER BALTIMORE MEDICAL CENTER</th>
<th>MT. WASHINGTON PEDIATRIC HOSPITAL</th>
<th>EXTENDED SERVICES</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Anne Arundel County</strong></td>
<td><strong>Towson</strong></td>
<td><strong>Baltimore</strong></td>
<td></td>
</tr>
<tr>
<td>AAHS’s DeCesaris Cancer Institute is closely aligned with Johns Hopkins Medicine through:</td>
<td>Johns Hopkins physicians manage and supervise:</td>
<td>Jointly owned by the Johns Hopkins Medicine and University of Maryland Medical System, the Mt. Washington Pediatric Hospital is a 102-bed non-profit children's hospital that provides long-term care for children with complex health problems.</td>
<td>Patient First at Johns Hopkins Bayview Medical Center, Howard County General Hospital, Green Spring Station, Towson and Odenton; owned by Johns Hopkins Medicine, managed and operated by Patient First.</td>
</tr>
<tr>
<td>• Breast Reconstruction Program</td>
<td>• All heart-related inpatient and outpatient testing</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Expanded cancer clinical trials available to Anne Arundel Medical Center patients</td>
<td>• Pediatric surgery and an enhanced pediatric surgery practice</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Jointly held tumor conferences</td>
<td>• Head and neck cancer surgery and voice centers</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Notable Milestones

- First major medical school in the U.S. to admit women (1893)
- Popularized the use of rubber gloves during surgery
- Pioneered surgery for breast cancer (1889)
- First to develop renal dialysis (1912)
- Isolated and crystallized insulin (1926)
- Developed cardiopulmonary resuscitation—CPR (1958)
- Invented first implantable, rechargeable pacemaker for cardiac disorders (1972)
- Discovered restriction enzymes—“biochemical scissors”—that gave birth to genetic engineering
- Developed first and only effective treatment for sickle cell disease (1995)
- Pioneered exchange of kidneys among incompatible donors (2003-2009)
- An initial catalog of more than 80 percent of the proteins in the human body (the “proteome”) was unveiled as a resource for scientists in every biomedical field (2014)
21 current/former school of medicine scientists are Nobel laureates

29 members of the school of medicine’s current faculty have been elected to the National Academy of Sciences; 60 faculty elected to Institute of Medicine

10 school of medicine faculty have received the Lasker Award ("American Nobel")

4 school of medicine faculty/alumni have received the Presidential Medal of Freedom (Denton Cooley, Arnall Patz, Benjamin Carson and Donald Henderson)
Nobel Prizes

2009 Nobel Prize in Physiology or Medicine
Carol Greider, Ph.D.
Daniel Nathans Professor and Director of Molecular Biology and Genetics, Institute for Basic Biomedical Sciences

2003 Nobel Prize in Chemistry
Peter Agre, M.D.
Professor of Biological Chemistry, Director of the Johns Hopkins Malaria Institute

1978 Nobel Prize in Physiology or Medicine
Hamilton Smith, M.D., professor of microbiology, Johns Hopkins University School of Medicine

Daniel Nathans, M.D., professor of molecular biology and genetics, Johns Hopkins University School of Medicine
# Awards & Honors

<table>
<thead>
<tr>
<th>Year</th>
<th>Award Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>2015</td>
<td>Howland Medal in pediatrics: Catherine DeAngelis, M.D.</td>
</tr>
<tr>
<td>2008</td>
<td>MacArthur “Genius Award” winner: Peter Pronovost, M.D., Ph.D.</td>
</tr>
<tr>
<td>2007</td>
<td>National Physician of the Year Award for Clinical Excellence; King Faisal</td>
</tr>
<tr>
<td></td>
<td>International Prize in Medicine: Patrick Walsh, M.D.</td>
</tr>
</tbody>
</table>

Watch a video in which Peter Pronovost discusses our commitment to patient safety.
Patient- and Family-Centered Care

The Johns Hopkins Hospital’s newest clinical buildings reflect Johns Hopkins focus on providing the best in patient- and family-centered care.

696 private patient rooms:
  491 for adults
  205 for children

33 new, state-of-the-art operating rooms
Remodeled Nelson/Harvey Building Provides Healing Environment

- 136 private patient rooms
- Family features, such as lounges and in-room sleep furniture

Watch a video that offers a virtual tour of the remodeled Nelson/Harvey Building.
Sheikh Zayed Tower

- 23 operating rooms
- 35 obstetrical rooms
- 224 acute care rooms
- 96 intensive care rooms
- Adult Emergency Department

Watch a video that offers a virtual tour of the Sheikh Zayed Tower and the Charlotte R. Bloomberg Children’s Center.
The Charlotte R. Bloomberg Children’s Center

Building Includes:

- 205 private inpatient rooms
- 45-bed neonatal intensive care unit, 40-bed pediatric intensive care unit
- 10-bed research unit
- 10 surgical suites
- Pediatric Emergency Department,
- Level I Pediatric Trauma Center
- 10-bed research unit
- Pediatric burn care
Wilmer Eye Institute
Robert H. and Clarice Smith Building and
Maurice Bendann Surgical Pavilion

- 6 outpatient operating rooms
- Additional research facilities
- Designed to foster collaborative research
Anne and Mike Armstrong Medical Education Building

- State-of-the-art building designed around the Genes to Society curriculum
- High-tech classrooms offering simulations labs, MRI images, CT scans and surgical videos
Science + Technology Park and Around Eager Park

- A project of the city and private developers in collaboration with the community and Johns Hopkins
- Redevelopment of 88 acres in East Baltimore
- 1.1 million square feet of lab and office space
- New housing, shops, restaurants, parking and other amenities
John G. Rangos Sr. Life Sciences Building

Tenants include:

- Johns Hopkins Institute for Basic Biomedical Sciences
- Johns Hopkins Diabetes Research Center
- Cangen Biotechnologies
- Howard Hughes Medical Institute
- Siemens
- FastForward Innovation Hub
Pioneered new Genes to Society curriculum, which teaches to an “individualized medicine” model based in genetic variability, interdisciplinary diagnostics and treatment, evidence-based care, health disparities and safety.

- The framework is based on the precepts of individuality and systems biology.
- Reframes the context of health and illness so that students consider all aspects impacting an individual’s health—social, cultural, psychological, environmental and genetic.
- The linchpin is called Scientific Foundations of Medicine. Course required in year one, with topics ranging from principles of protein structure to clinical research.
- First graduating class was in 2013.

Watch a video about our innovative medical education program.

Watch a profile of Amanda Edwards, a Ph.D. candidate in the Biomedical Engineering Program at the Johns Hopkins University School of Medicine.
Magnet Certification: In 2003, The Johns Hopkins Hospital was the first health care organization in Maryland to receive Magnet® Designation for excellence in nursing practice from the American Nurses Credentialing Center. Received third consecutive Magnet Designation in 2013.

Clinical Advancement—PACE: The five-level advancement program, PACE (Professional Accountability and Clinical Excellence), recognizes and rewards nurses for their experience, competencies and good bedside manner, and gives them opportunities for increased clinical responsibility.

Research: Johns Hopkins encourages research by nurses (e.g., a fellowship in outcomes management allows two nurses each year to devote 16 hours per week for six months to develop outcomes management skills).

Global Reach: Johns Hopkins nurses volunteer at community health centers, join medical relief missions in the U.S. and abroad, and have both a national and international presence in nursing education, research, practice and service.
Reducing preventable harm, improving clinical outcomes and experiences and reducing waste in health care delivery by:

- Eliminating medical errors
- Ensuring clinical excellence
- Improving efficiency and value
- Eliminating health care disparities
- Creating a culture that values collaboration, accountability and organizational learning
Institute for Basic Biomedical Sciences

Combines the school of medicine’s nine basic science departments to foster research programs in emerging and promising fields.

Conducts over $100 million in fundamental research.

- Biological Chemistry
- Molecular and Comparative Pathobiology
- Biomedical Engineering
- Biophysics and Biophysical Chemistry
- Molecular Biology and Genetics
- Cell Biology
- Neuroscience
- Pharmacology and Molecular Sciences
- Physiology

Watch a video about our research to develop a liquid biopsy to detect and track cancer.
Interdisciplinary Technology Hubs

- High Throughput Biology Center (HiT Center)
- ChemCORE Facility
- Ross Flow Cytometry Core Facility
- Genetics Resources Core Facility
- Mass Spectrometry Laboratory
- Microarray Core Facility
- Microscope Core Facility
- NMR Spectroscopy and Imaging Facility
- Protein/Peptide Sequencing Facility
- Proteomics Facility
- Transgenic Core Facility
Institute for Cell Engineering

- Focuses on stem cell (including embryonic stem cell) therapies, safety and basic research.
- Ongoing work includes emphasis on Parkinson's disease, cancer, Lou Gehrig's disease (ALS), diabetes and heart failure.
McKusick-Nathans Institute of Genetic Medicine

- Organized to integrate research and clinical care based on understanding of human heredity and genetic medicine, multigenic, widespread diseases.
- Named for Victor A. McKusick and Daniel Nathans.
The university’s intellectual property administration center, serves researchers and inventors as a licensing, patent and technology commercialization office.

- Total revenue: $18 million
- Total invention disclosures: 516
- Number of license and option agreements: 171
- Active issued patents (U.S. and international): 2,478; 112 were newly issued U.S. patents

Note: above figures are for FY2016

Watch a video about innovative collaborations in our Informatics Research Lab.
Brings together Johns Hopkins faculty and students using nanotechnology to generate new diagnostic and therapeutic tools, including biosensors and DNA nanoparticles.

Watch a video highlighting some of our research accomplishments from 2015.
**Goal:** To accelerate bench-to-bedside medical innovations and new translational treatments for patients.

- Supports the work of more than 100 faculty members from the schools of medicine, engineering, nursing and public health.

Watch a video to learn about our clinical trials program.
Diversity and Inclusion
Our Patient Demographic

“The hospital must care for “the indigent sick of this city and its environs, without regard to sex, age, or color, who may require surgical or medical treatment.”

— Mr. Johns Hopkins to Johns Hopkins Hospital trustees, 1873

January–October 2015
Our Diverse Workforce

Read the 2015 Diversity and Inclusion Annual report at hopkinsmedicine.org/diversity

Watch our "People Behind the Promise" video series profiling a few of our amazing staff members.

Johns Hopkins Medicine (All Entities)
$20 million in building contracts going to minority-owned, women-owned or disadvantaged businesses

40 percent of new hires in targeted jobs will be from distressed communities

$6 million increase in goods and services purchased from Baltimore businesses
Community Relations: Health Care

- **Johns Hopkins Adolescent Clinic**: Serves over 3,000 youngsters, ages 10 to 21.

- **Breast Care Initiative**: Offers free clinical breast exams and mammogram screenings.

- **JHCP East Baltimore Medical Center**: Serves over 19,000 patients.

- **Community Care-A-Van**: A free mobile medical unit provides primary care, immunizations, acute care, physicals and education.

- **The Access Partnership**: Improves access to effective, compassionate, evidence-based primary and specialty care for uninsured and underinsured patients.

- **Center for Promoting Health/Salud and Opportunity for Latinos**: Enhances the health of Latinos in Baltimore.
Community Relations: Outreach

- **Community of Caring Campaign:** Encourages staff involvement and provides support for revitalization and redevelopment initiatives.

- **INROADS Baltimore:** Offers summer internships and career development training for minority undergraduate students in business and allied health.

- **Operation PULSE (People United to Live in a Safe Environment):** Provides residents with crime prevention training programs.

- **Johns Hopkins Injury Prevention and Community Outreach Collaborative:** Prevents violence through education and outreach.

---

#TimeForBaltimore

Video Series Spotlights Employee Volunteers

When her neighborhood playground fell into disrepair, Ede Taylor took on the project of reviving the spot as a place for kids to play and learn. A project coordinator with the Johns Hopkins Medicine Office of Community Health, Taylor is active in her northeast Baltimore neighborhood and led a huge team of volunteers to rebuild the Sinclair Lane Elementary School playground. Watch all of our #TimeForBaltimore videos.
Community Relations: Outreach

Urban Health Institute

- Improves collaboration between Johns Hopkins and the community in research, community projects, program planning and implementation.

Community Health Partnership

- Catalyzed by a $19.9 million Centers for Medicare and Medicaid Services grant, the Community Health Partnership (J-CHiP) is an innovative approach to improve health outcomes, deliver better care, and reduce costs and disparities in care using multidisciplinary teams for inpatients and patients in the community.

Watch a video to learn more about our JCHiP program.
Community Relations: Education

• Summer Jobs Program: Offers paid internship to area students in either the Johns Hopkins Health System or The Johns Hopkins University.

• Medical Education Resources Initiative for Teens (MERIT) helps Baltimore teens prepare for medical careers. MERIT Scholars devote summers and school-year Saturdays to activities that prepare them for health careers.

• Adopt-a-Class Program: Tench Tilghman Elementary Middle School

• Alternative Career Programs: Exposes students to health care career options.

Watch a video to learn about our Summer Jobs Program.

Guided by mentor Oliver Rogers, MERIT Scholar Savannah Tripp adjusts the pH level in material where cells are growing.
Community Relations: Education
Elmer A. Henderson: A Johns Hopkins Partnership School

Opened in 2013, the K–8 school is operated by The Johns Hopkins University’s School of Education, in partnership with Morgan State University’s School of Education and Urban Studies, and is viewed as a bedrock of East Baltimore’s ongoing revitalization.

Students and faculty from the Johns Hopkins University School of Nursing help oversee the health suite and work with families on issues related to health and nutrition.

Johns Hopkins Hospital employees Marlen and Keith Foster were thrilled when their son Kaden, 6, was accepted to the first new school built in E. Baltimore in 20 years.
Community Relations: Education

- **Dunbar High School Health Partnership**: Helps prepare students through school-to-career transition initiatives.

- **Food Re-Education** for Elementary School Health: An innovative nutrition education program available to elementary schools.

- **CARES—Summer in the Lab**: A program for undergraduate and high school interns who spend summer exploring different fields of research.

- Paid **internships** in allied health professions

- Summer **tutorial program** for elementary school students

- Full-tuition Johns Hopkins **scholarships** for Baltimore City Public Schools students

Watch a video about our [2015 Adopt-a-Class Career Day](https://example.com).