

Economic Impact Report 2023



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Angelou Economics:

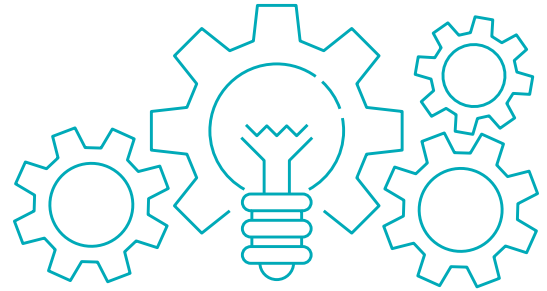
Angelou Economics utilized several data sources and prior works to guide data analysis and contextual importance of the findings. In particular, the 2021 UMass Donahue Institute economic impact report provided a framework of understanding of the magnitude of Mass General Brigham and its related entities.

The research team also made use of data from the Federal Reserve, the Bureau of Economic Analysis, the Bureau of Labor Statistics, the Census Bureau, the Boston Business Journal, Pitchbook, Crunchbase, CBRE, and IMPLAN.

This report was also supported by work from the following departments within Mass General Brigham:

- Government Affairs
- Finance
- Human Resources
- Innovation
- Marketing and Communications
- Office of the General Counsel/Legal
- Real Estate
- Supply Chain/Contracts

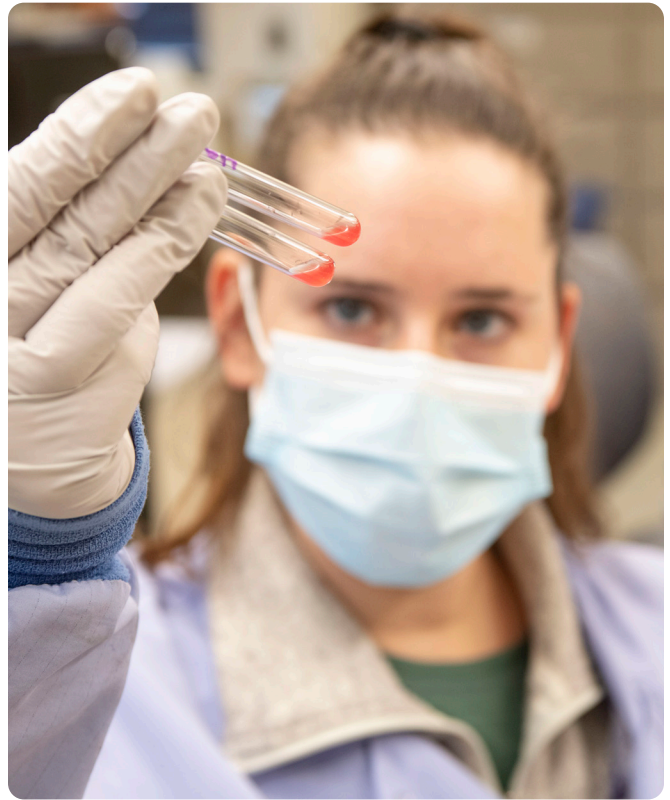
Engine for Impact & Progress



At Mass General Brigham, we are so much more than a system of hospitals and healthcare centers. For over 200 years, we have been one of the world's foremost engines of scientific innovation, knowledge, and medical progress.

Our singular focus today is on making an impact on patients and communities in Massachusetts and across the world – through the treatments and cures our doctors research and deliver themselves, businesses inspired by our discoveries, and our outreach to the communities we serve and support.

The economic impact that Mass General Brigham has in the Massachusetts economy – through employee compensation, capital expenditures and research & development – is significant in both measurable dollars and intangible factors.



From 2017 through 2021, Mass General Brigham's overall economic impact to Massachusetts was \$53.4 billion – more than the annual state budget.

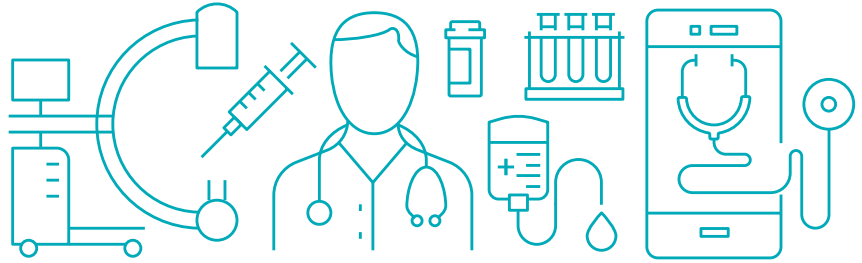
\$53.4
billion

"The economic impact that Mass General Brigham has in the Massachusetts economy is significant in both measurable dollars and intangible factors."

– Angelou Economics



Who We Are



Created from some of the first and most prestigious hospitals in the world, today Mass General Brigham includes 16 member institutions that encompass a range of healthcare organizations. With two of the world's best known academic medical centers — Massachusetts General Hospital and Brigham and Women's Hospital — our system also features top-tier specialty hospitals, community hospitals, a respected rehabilitation network, a health insurance plan and physician network, a teaching organization, and numerous locations for urgent and community care and care at home.

With the most Harvard-trained doctors in the world, and as the United States' top healthcare system for National Institutes of Health (NIH) funding, we offer millions of patients local access to large numbers of clinical trials and an unmatched network of specialists to diagnose, treat and cure diseases other clinicians may have never seen — from gene therapies to organ transplants to cutting-edge advanced cancer treatments.

Founding members

- Brigham and Women's Hospital
- Massachusetts General Hospital

Members

- Brigham and Women's Faulkner Hospital
- Community Physicians
- Cooley Dickinson Hospital
- Health Plan
- Healthcare at Home
- Martha's Vineyard Hospital
- Mass Eye and Ear
- McLean Hospital
- MGH Institute of Health Professions
- Nantucket Cottage Hospital
- Newton-Wellesley Hospital
- Salem Hospital
- Spaulding Rehabilitation
- Urgent Care
- Wentworth-Douglass Hospital



Massachusetts General Hospital and Brigham and Women's Hospital are the only hospitals in New England to rank on the U.S. News & World Report Honor Roll of America's Best Hospitals.



Mass General Brigham at-a-glance



\$250 Million
Commitment to
Community Health



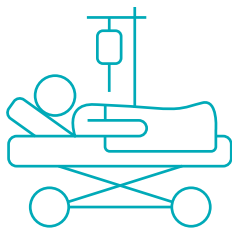
>\$2 Billion
Annual Research
and Academic
Funding



Mass General
Brigham System

- | | |
|---|----------------------------------|
| 12 | 4 |
| Acute and
Specialty
Hospitals | Ambulatory
Surgery
Centers |
| 5 | 22 |
| Harvard-
affiliated
Teaching
Hospitals | Urgent
Care
Centers |
| 28 | 5 |
| Rehabilitation
Locations | Community
Health
Centers |

Our patients



2.6 Million
Patients

140
Different
Countries

Largest private
employer in
Massachusetts

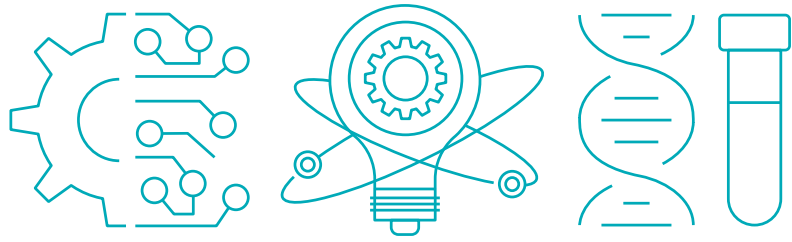


7,500
Physicians

15,020
Nurses

82,000
Total
Employees

Impact on Research & Innovation



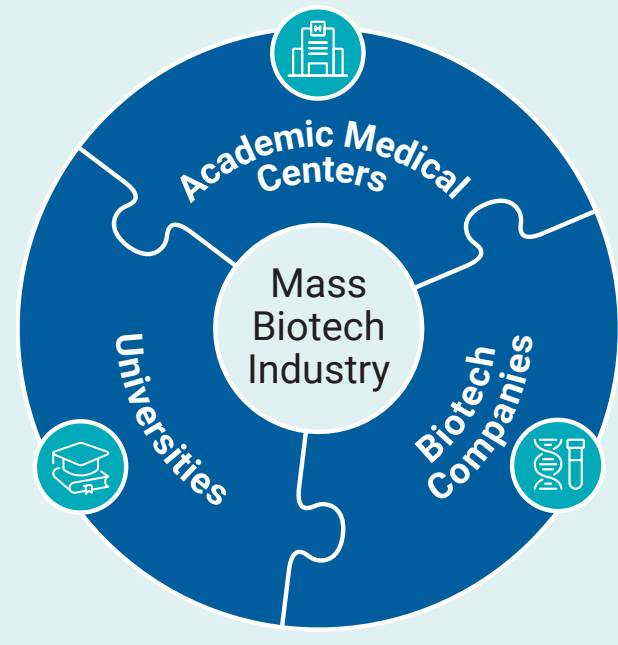
As a world-recognized leader in research, and home to one of the largest hospital system-based research enterprises in the U.S., our discoveries have created hundreds of new companies that have spurred scientific innovation and economic growth across the Commonwealth, nation, and globe. These companies enable patients around the world to benefit from Mass General Brigham discoveries.

#1 Mass General Brigham is the largest hospital system-based research enterprise in the nation.

Billions of Dollars in Research Funding

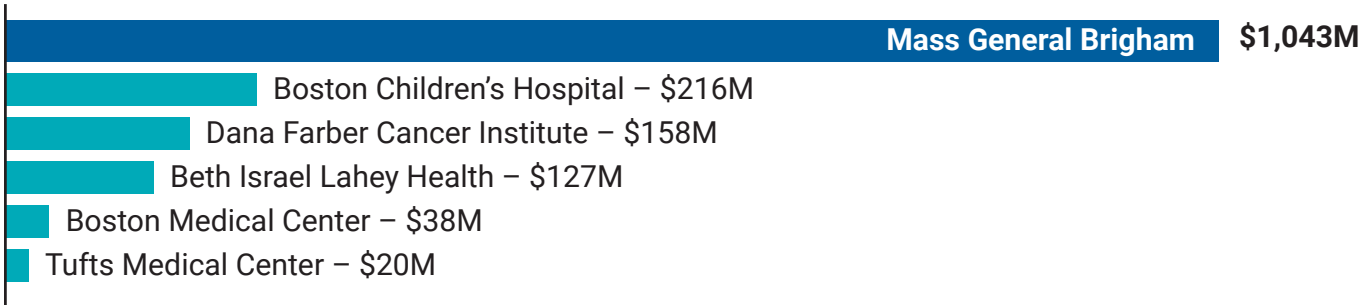
- Mass General Brigham represents the largest hospital system-based research enterprise in the U.S, with an annual research budget exceeding \$2 billion.
- Mass General Brigham is the top system for National Institutes of Health (NIH) funding in the world. For fiscal year 2022, our system received \$1.04 billion from NIH – equal to nearly 1/3 of all NIH funding coming into the Commonwealth.
- Research funding has grown, increasing from \$1.5 billion in FY2012 to \$2.3B in FY2022, an increase of approximately 53%. Nearly 2/3 of the research funding comes from outside Massachusetts.

Biotechnology constitutes a critical part of the Massachusetts economy, and there are more than 1,000 biotech companies based in Boston alone. But the sector could not thrive without the support of the area's universities and the research, development and innovation that Mass General Brigham, its Academic Medical Centers and other healthcare enterprises contribute.

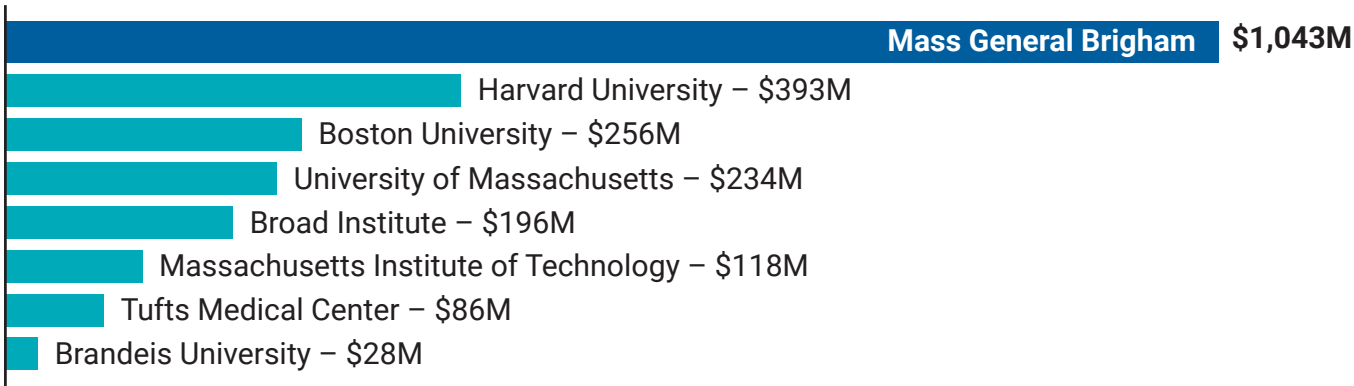


NIH Funding (for FY '22)

Mass General Brigham vs. Area Healthcare Organizations



Mass General Brigham vs. Area Research Organizations



Research Powerhouse

- There are 18 Nobel Laureate winners affiliated with Mass General Brigham institutions, dating as far back as 1934. Discoveries range from treatment for blood anemia to identifying cancer genes to the first successful organ transplant.
- Our research has inspired hundreds of accessible, lifesaving treatments and technologies brought to market by such brands as Johnson & Johnson (Type 2 diabetes), Labcorp (lung cancer), Sanofi (blood coagulation), Novartis (blood cancer), and Philips (imaging).

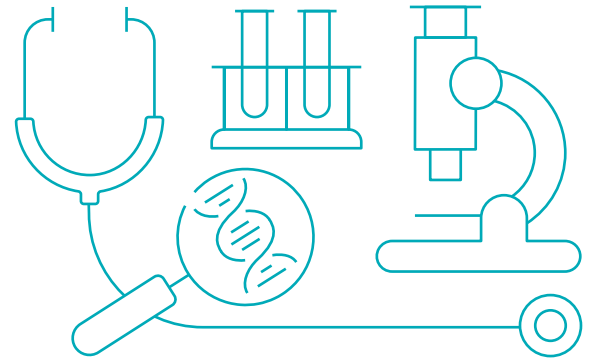
- been created as a result of Mass General Brigham research, nearly half of which (>130) are based in Massachusetts.
- From 2007 to 2022, Mass General Brigham has been issued more than 10,000 patents for lifechanging technology and treatments.

New Businesses & Patents

- More than 300 spin-off health, biotech and medical device companies have

>130
Massachusetts spin-off health, biotech and medical device companies created based on Mass General Brigham research.

Impact on Access to Research-Infused Patient Care



No other hospital system employs as many researchers changing the world who are also the physicians delivering care to patients. Our physician-scientists — in the lab, in the clinic, and at the bedside — work tirelessly to understand the effects of debilitating diseases and our patients' needs to help guide our studies and improve patient care.



Millions of Patients Seeing the Best-Trained Providers

- Mass General Brigham serves 2.6 million patients annually, giving them access to thousands of providers — many of whom are doctors personally conducting the research for new treatments and therapies.
- We employ the most Harvard-trained doctors in the world, giving patients access to the most cutting-edge care.

Access to Thousands of Clinical Trials

- We offer patients access to more than 2,700 ongoing clinical trials to help accelerate new treatments and therapies for our patients and the world.
- Currently we have nearly 100 COVID-19 trials underway, as well as research into treatments for breast cancer, celiac disease, osteoarthritis and mental health, among hundreds of others.

Mass General Brigham has over 2,700 ongoing clinical trials — more ongoing clinical trials than any other healthcare system in Massachusetts — to accelerate bringing new treatments and therapies to our patients and the world.

BAUSCH+LOMB**Visudyne®**

- Wet macular degeneration (AMD)
- 11 million affected in U.S.
- Untreated, AMD can result in blindness

AMGEN**Enbrel®**

- Rheumatoid arthritis
- 110,000 new diagnoses each year
- Among the most widely prescribed drugs in the world

SANOFI**Eloctate®, Alprolix®**

- Hemophilia
- Afflicts more than 33,000 patients in the U.S.
- Among the very limited treatments for this disease

ZIMMER BIOMET**Durasul®, Longevity, E1®, Vivacit-E®**

- Total joint replacements
- 7 million Americans with hip and knee replacements
- Eliminates threat of osteolysis and extends implant longevity

**Entyvio®**

- Crohn's Disease
- Afflicts 800,000 in U.S.
- Also treats the nearly 1M suffering from ulcerative colitis

Global Innovation

Research from Mass General Brigham has led to the development of treatments that have touched millions of lives. Here is an example of some of those bench-to-bedside innovations.

Impact on Our Economy



As the largest private employer in the Commonwealth — employing 82,000 people — Mass General Brigham has consistently created good, high-paying jobs for families. It has been one of the most powerful engines for our state’s economy and businesses as well as a key driver of Massachusetts’ quality of life.

A Reliable Engine for Creating Good-Paying Jobs

- As of 2021, Mass General Brigham employs 1/3 of full-time healthcare employees (FTEs) in Massachusetts.
- Over the last five years, Mass General Brigham has been responsible for the creation and maintenance of more than half a million jobs (522,000). With a job multiplier effect of 1.2x, that’s an estimated 625,000 additional jobs.
- Each year, total economic output as a result of Mass General Brigham employee compensation increases. In the last five years, the output has increased 26% to \$9.83 billion in 2021.
- Each year, total FTE creation and maintenance, as a result of Mass General Brigham’s employee compensation, increases. For every full time job created or maintained by Mass General Brigham, another is created or maintained in the Commonwealth.

Industries Impacted by Mass General Brigham’s Research & Development Efforts

\$936M Scientific research and development services	\$35M Management of companies and enterprises	\$31M Management consulting services
\$102M Other real estate	\$33M Legal services	\$25M Employment services
\$59M Owner-occupied dwellings	\$32M Monetary authorities and depository credit intermediation	\$20M Insurance carriers, except direct life
\$39M Hospitals		

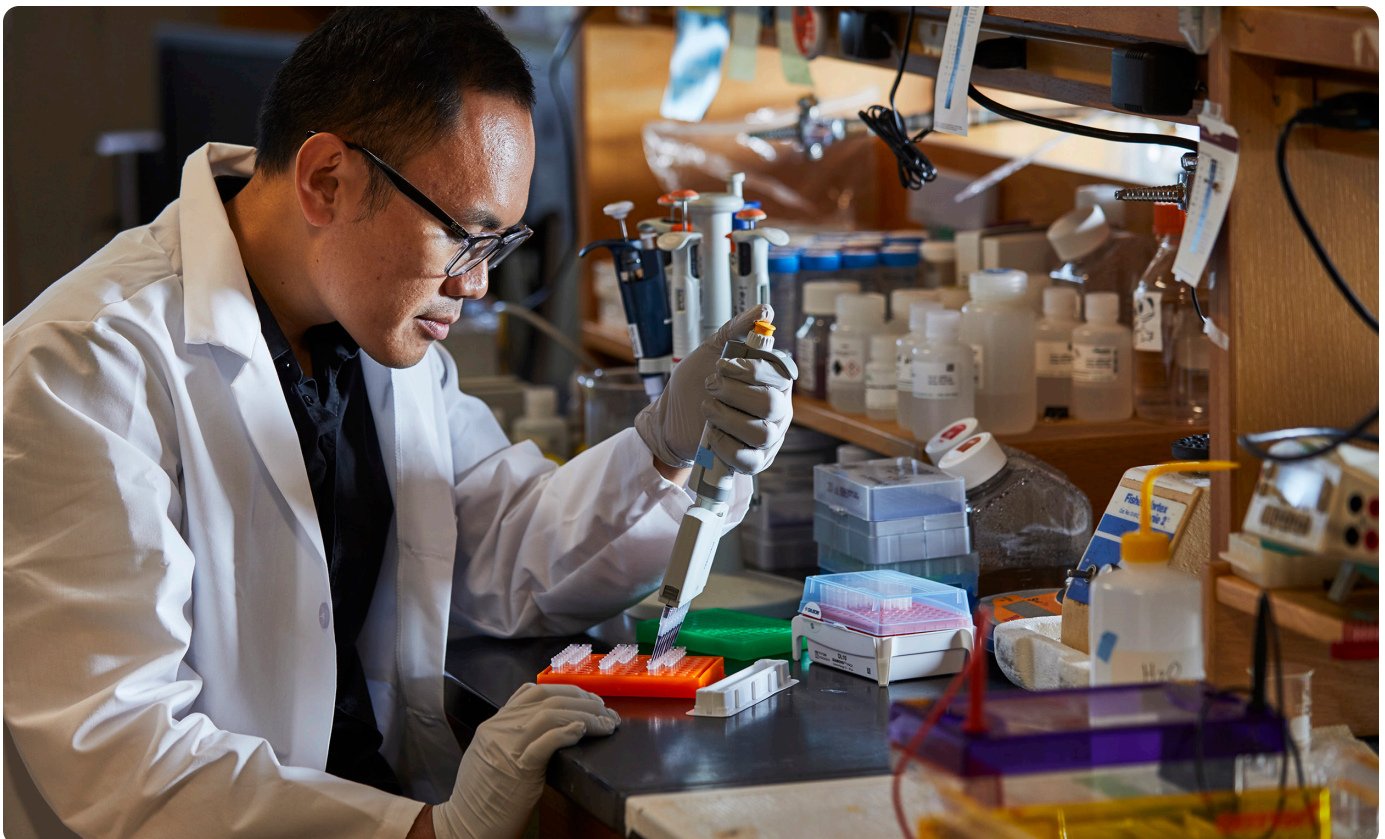
Angelou Economics

- We employ the most researchers in Massachusetts – nearly 16,000 people. Additionally, 40% of Mass General Brigham’s research population are women, an increase of 77% since 2012.
- Over the past 10 years, the number of Mass General Brigham research employees grew by nearly 1/3 – more than double the rate of growth (14%) in the Education and Health Services sector, according to the Bureau of Labor Statistics.
- Mass General Brigham’s research and development (R&D) engine utilizes goods and services from 88% (481 of 545) of total sectors in the Massachusetts economy.
- Mass General Brigham leases or owns nearly 3 million square feet of space in Massachusetts, more than half of which is comprised of research space.

Support for Massachusetts Businesses & Economy

- Mass General Brigham’s annual economic impact represents 3% of the entire Massachusetts economy (~\$10 billion), including annual tax revenues in excess of \$2 billion.

Mass General Brigham’s research and development engine utilizes goods and services from 88% of total sectors of the state economy.



Impact on Our Community



Mass General Brigham invests hundreds of millions of dollars to improve health in the communities we serve by providing accessible, lower-cost, and innovative community-based care.

Expanding, Integrating and Improving Community Health Services

- We are building new capabilities in our Community Health Centers and Primary Care Practices in communities with some of the highest rates of cardiometabolic disease and substance use disorders in Massachusetts. These include Chelsea, Revere, and Everett, as well as the Boston neighborhoods of Charlestown, Mission Hill, Jamaica Plain, and Roxbury.

Significantly Increasing Access to Behavioral Health

- Mass General Brigham is supporting and training a new generation of diverse mental health professionals by providing scholarships, loan repayment, and salary supplements to a number of educational and community-based organizations.
- With more than 500 mental health beds, more than any other non-profit in the state, our system is committed to immediately increasing the pipeline of new mental health staff in the Commonwealth over the next several years.

Supporting Community Health Centers and Community-Based Organizations

- We partner with organizations that have strong track records in Boston's Blue Hill Avenue Corridor, the North Shore and Merrimack Valley to provide Medication for Addiction Treatment and address the social vulnerabilities that many patients with substance use disorders face on the road to recovery.

At a moment when Massachusetts mental health is in crisis and facing a dangerous shortage of resources, Mass General Brigham has more than 500 mental health beds to serve our community.



- We work closely with community-based organizations to increase access to fresh, healthy food for people with food insecurity and expand mobile health efforts to bring care to patients who have difficulty accessing a hospital or a community health center.

Aggressively Targeting the Most Devastating Community Health Conditions

- We are focusing on reducing chronic disease, improving heart health, and addressing substance use disorders that lower life expectancy and disproportionately burden racial and ethnic minority populations.
- We hope to make measurable improvements in Massachusetts by



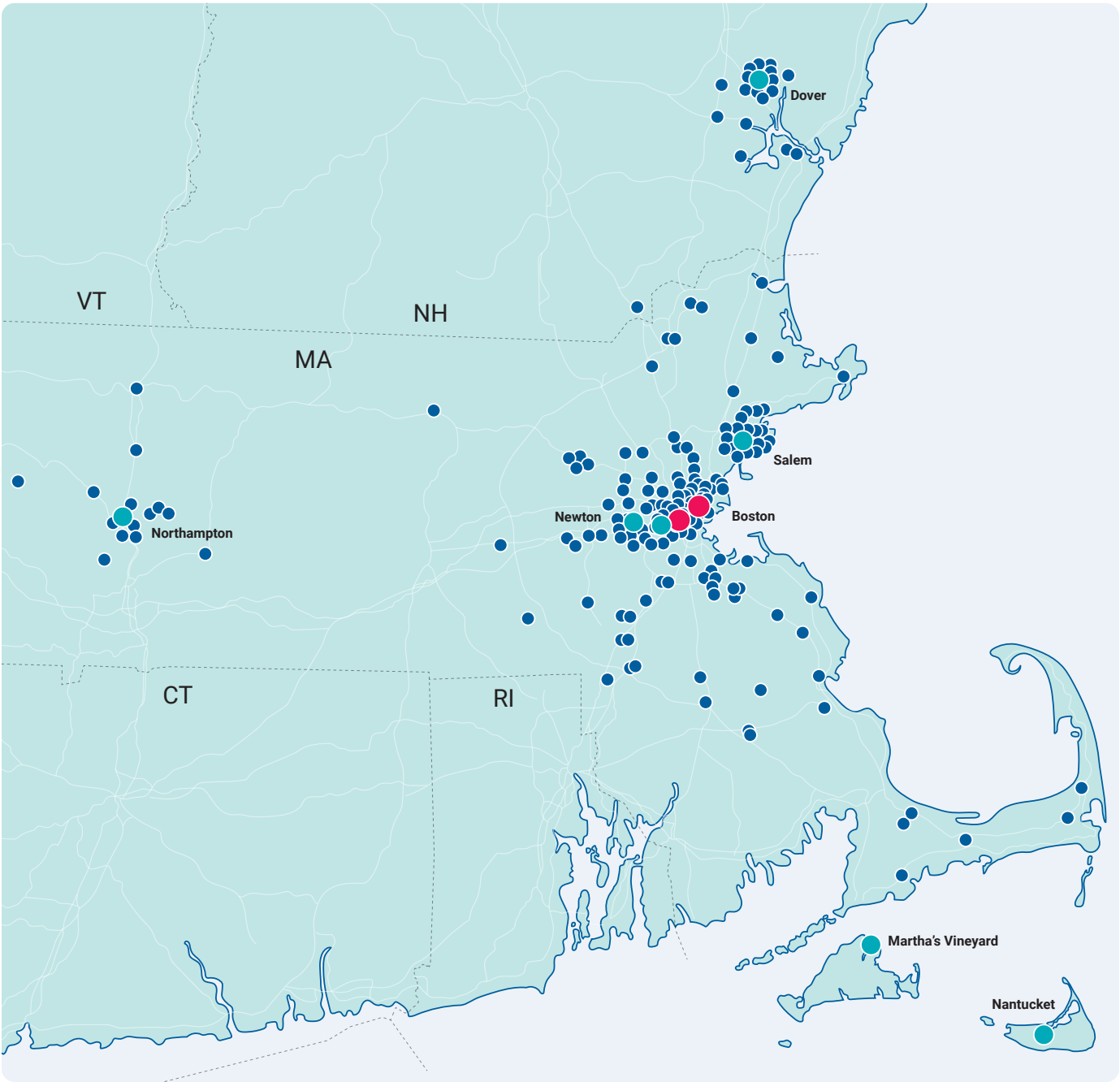
highlighting diseases disproportionately borne by Black and Brown communities—as well as expanding access to mental health.

Becoming a Greater Force for Equity and Inclusion

- We have established systemwide leadership roles and committed new data analytic resources devoted to anti-racism work to more effectively address inequity in patient care and remove the inappropriate use of race in clinical decision tools and policies.
- As part of our *United Against Racism* platform, we are increasing the diversity of the Boards in our system and hospitals through targeted recruitment efforts.

Impact on Our Region

Mass General Brigham is proud to serve communities throughout the region, with hospital and physician practices that span from Cape Cod to Western Mass. to New Hampshire and Maine.



● Academic Medical Center ● Community Hospital ● Other

Impacting All of Us. Every Day.



Whether it is delivering cutting edge treatments to millions of patients, breaking down barriers to care in our communities, or supporting the people and businesses that make Massachusetts one of the best places to live in America, at Mass General Brigham we are proud to serve our communities, our state and our world.





Mass General Brigham

massgeneralbrigham.org