



Geisinger and Boehringer Ingelheim collaborate to create a predictive model to help improve health outcomes for people with type 2 diabetes at greatest risk of serious long-term complications, including cardiovascular death

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DANVILLE, Pa., RIDGEFIELD, Conn. and INDIANAPOLIS, Sept. 25, 2017 /PRNewswire/ -- In an effort to improve health outcomes of people with type 2 diabetes, Geisinger and Boehringer Ingelheim, on behalf of its diabetes alliance with Eli Lilly and Company (NYSE: LLY), today announced a major collaboration to develop a risk-prediction model for three critical health outcomes commonly associated with type 2 diabetes that have long-term impact and cost-of-care implications: cardiovascular death, kidney failure and hospitalization for heart failure.

The new model will allow healthcare professionals to predict which adults with type 2 diabetes are most at risk for developing these serious – and costly – health consequences. The model will be created using Geisinger de-identified electronic health record data (i.e., demographics, vital signs, medical history, current medications and laboratory tests). Ultimately, a successful model should allow for the development of more precise treatment pathways for people with type 2 diabetes; pathways that align with quality guidelines aiming to improve patient outcomes, quality and total cost of care.

Approximately 30 million Americans have diabetes, and nearly 24 percent of Americans with diabetes are undiagnosed. People with diabetes are two to four times more likely to develop cardiovascular disease than people without diabetes. Approximately 68 percent of deaths in people with type 2 diabetes in the U.S. are caused by cardiovascular disease.

"Our partnership with Boehringer Ingelheim will use real-world data and predictive modeling to deploy precision healthcare strategies to bring the most value to the people we care for," said Brent Williams, Geisinger assistant professor of epidemiology. "We hope the knowledge gained from this predictive model can help healthcare providers better target their treatment recommendations for people with type 2 diabetes and, as a result, lower their risk for these serious diabetes-related consequences."

Despite recent advances in treatment, cardiovascular disease remains the leading cause of death associated with diabetes, and diabetes is the number one cause of kidney failure in the U.S. The financial burden of healthcare for cardiovascular conditions in people with diabetes is also immense, costing the U.S. upwards of \$23 billion per year. Efforts such as this partnership may offer long-term savings and solutions that improve outcomes and lower total cost of care.

"Since people with diabetes are two to four times more likely to develop cardiovascular disease than people without diabetes, novel approaches to mitigate cardiovascular risk and improve patient care continue to be a priority," said Christine Marsh, vice president, Market Access, Boehringer Ingelheim Pharmaceuticals, Inc. "We believe this initiative to develop a predictive risk model is very timely, as recent research has provided more practical knowledge about how to reduce cardiovascular risk in people with type 2 diabetes. Boehringer Ingelheim and Lilly are proud to be a part of this collaboration, which will address a pressing need of people with type 2 diabetes and the healthcare community that cares for them."

About Geisinger

Geisinger is an integrated health services organization widely recognized for its innovative use of the electronic health record and the development of innovative care delivery models such as ProvenHealth Navigator®, ProvenCare® and ProvenExperience®. As one of the nation's largest health service organizations, Geisinger serves more than 3 million residents throughout 45 counties in central, south-central and northeast Pennsylvania, and also in southern New Jersey at AtlantiCare, a Malcolm Baldrige National Quality Award recipient. In 2017, the Geisinger Commonwealth School of Medicine became the newest member of the Geisinger Family. The physician-led system is comprised of approximately 30,000 employees, including nearly 1,600 employed physicians, 13 hospital campuses, two research centers, and a 551,000-member health plan, all of which leverage an estimated \$10.5 billion positive impact on the Pennsylvania and New Jersey economies. Geisinger has repeatedly garnered national accolades for integration, quality and service. In addition to fulfilling its patient care mission, Geisinger has a long-standing commitment to medical education, research and community service. For more information, visit www.geisinger.org, or connect with us on [Facebook](#), [Instagram](#), [LinkedIn](#) and [Twitter](#).

Boehringer Ingelheim and Eli Lilly and Company

In January 2011, Boehringer Ingelheim and Eli Lilly and Company announced an alliance in diabetes that centers on compounds representing several of the largest diabetes treatment classes. This alliance leverages the strengths of two of the world's leading pharmaceutical companies. By joining forces, the companies demonstrate commitment in the care of patients with diabetes and stand together to focus on patient needs. Find out more about the alliance at www.boehringer-ingelheim.com or www.lilly.com.

Given the critical connection between diabetes and cardiovascular disease, Boehringer Ingelheim and Lilly are committed to providing a wide range of diabetes therapies along with programs and support to raise awareness, understanding and action toward reducing the impact of cardiovascular disease in people with type 2 diabetes.

About Boehringer Ingelheim

Boehringer Ingelheim Pharmaceuticals, Inc., based in Ridgefield, CT, is the largest U.S. subsidiary of Boehringer Ingelheim Corporation.

Boehringer Ingelheim is one of the world's top 20 pharmaceutical companies. Headquartered in Ingelheim, Germany, the company operates globally

with approximately 50,000 employees. Since its founding in 1885, the company has remained family-owned and today creates value through innovation for three business areas including human pharmaceuticals, animal health and biopharmaceutical contract manufacturing.

Boehringer Ingelheim is committed to improving lives and providing valuable services and support to patients and their families. Our employees create and engage in programs that strengthen our communities. Please visit our [website](#) to learn more about how we make more health for more people through our Corporate Social Responsibility initiatives.

In 2016, Boehringer Ingelheim achieved net sales of about \$17.6 billion (15.9 billion euros). R&D expenditure corresponds to 19.6 percent of its net sales.

For more information please visit www.boehringer-ingelheim.us, or follow us on Twitter @BoehringerUS.

About Lilly Diabetes

Lilly has been a global leader in diabetes care since 1923, when we introduced the world's first commercial insulin. Today we are building upon this heritage by working to meet the diverse needs of people with diabetes and those who care for them. Through research and collaboration, a wide range of therapies and a continued determination to provide real solutions—from medicines to support programs and more—we strive to make life better for all those affected by diabetes around the world. For more information, visit www.lillydiabetes.com.

About Eli Lilly and Company

Lilly is a global healthcare leader that unites caring with discovery to make life better for people around the world. We were founded more than a century ago by a man committed to creating high-quality medicines that meet real needs, and today we remain true to that mission in all our work. Across the globe, Lilly employees work to discover and bring life-changing medicines to those who need them, improve the understanding and management of disease, and give back to communities through philanthropy and volunteerism. To learn more about Lilly, please visit us at www.lilly.com and www.lilly.com/newsroom/social-channels.

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The Lilly logo is rendered in a vibrant red, flowing script font. The letters are interconnected, with the 'L' being particularly large and stylized, leading into the 'i', 'l', 'l', 'e', and 'y'. The overall impression is one of elegance and tradition.

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SOURCE Eli Lilly and Company