



Michael J. Pencina, PhD, is Duke Health's chief data scientist and serves as vice dean for data science, director of Duke AI Health, and professor of biostatistics and bioinformatics at the Duke University School of Medicine. His work bridges the fields of data science, health care, and AI, and builds upon Duke's national leadership in trustworthy AI. Dr. Pencina partners with key leaders to develop data science strategies for Duke Health that span and connect academic research and clinical care. As vice dean for data science, he develops and implements quantitative science strategies to support the School of Medicine's missions in education and training, laboratory and clinical science, and data science. He co-founded and co-chairs Duke Health's Algorithm-Based Clinical Decision Support (ABCDS) Oversight Committee and serves as co-director of Duke's Collaborative to Advance Clinical Health Equity (CACHE). He spearheads Duke's role as a founding partner of the Coalition for Health AI (CHAI) whose mission is to increase trustworthiness of AI by developing guidelines to drive high-quality health care through the adoption of credible, fair, and transparent health AI systems. Dr. Pencina is an internationally recognized authority in the evaluation of AI tools and algorithms. Guideline groups rely on his work to advance best practices for the application of algorithms in clinical medicine. He is actively involved in the design, conduct, and analysis of clinical studies with a focus on novel and efficient designs and applications of machine learning for medical decision support. He interacts frequently with investigators from academic and industry institutions as well as regulatory officials from the U.S. Food and Drug Administration. Widely noted as an expert on risk prediction models, Dr. Pencina has authored or co-authored 400 peer-reviewed publications that have been cited over 111,000 times. Thomson Reuters/Clarivate Analytics has recognized him as a "highly cited researcher" in clinical medicine from 2014-2021 and social sciences from 2014-2022. He serves as deputy editor for statistics at JAMA-Cardiology and associate editor for Statistics in Medicine. Dr. Pencina joined the Duke University faculty in 2013, and served as director of biostatistics for the Duke Clinical Research Institute until 2018. Previously, he was an associate professor in the Department of Biostatistics at Boston University and the Framingham Heart Study, and director of statistical consulting at the Harvard Clinical Research Institute. He received his PhD in Mathematics and Statistics from Boston University in 2003 and holds master's degrees from the University of Warsaw in actuarial mathematics and business culture.



Nicoleta J Economou, PhD, serves as the Director of Governance and Evaluation of Health AI Systems for Duke AI Health. She is also the founding director of the Algorithm-Based Clinical Decision Support (ABCDS) Oversight leading the operations and framework design effort for the governance, evaluation, and monitoring of ABCDS software at Duke. She also leads all Duke AI Health initiatives relevant to evaluation and governance of health AI technologies, along with leading operations of the Coalition for Health AI (CHAI), a coalition establishing the guidelines and guardrails for health AI technologies.



Dr. Michael P. Cary, Jr., PhD, RN, FAAN, is an accomplished healthcare professional and scholar whose work has advanced the fields of nursing, health services research, and artificial intelligence (AI). He currently holds the distinguished Elizabeth C. Clipp Term Chair of Nursing at the Duke University School of Nursing. Being one of the few nurses in the US dually trained as a health services researcher and applied data scientist, Dr. Cary uses AI and machine learning approaches to advance health equity and improve care delivery to older adults susceptible to poor health outcomes in post-acute rehabilitation and skilled nursing facilities. His research has been supported by the National Library of Medicine, National Institute of Nursing Research, and the Duke

Clinical and Translational Sciences Institute. He has published more than 50 manuscripts and book chapters. In recognition of his significant contributions to improve health and healthcare, Dr. Cary was honored with induction as a Fellow of the American Academy of Nursing in 2022.

Further solidifying his role as a trailblazer in the field, Dr. Cary was selected by Duke AI Health to serve as the inaugural Equity Scholar. In this groundbreaking position, he spearheads an interdisciplinary team tasked with detecting and mitigating bias in clinical algorithms that perpetuate racial and ethnic health inequities. This leadership position at Duke Health underscores the organization's recognition of the pressing need for system-wide standards to prevent the harmful discriminatory effects of clinical algorithms on patients and Dr. Cary's commitment to translating research findings into real-world strategies that drive positive change within healthcare systems.

Dr. Cary received a bachelor's degree in health services administration from James Madison University. He also earned a bachelors, masters, and doctoral degree in nursing from the University of Virginia.