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From Real-world Data to Real-world Evidence: An Upstream Bespoke EHR Strategy

Dr. Zhang is Vice President and Chief Data Scientist for UTHealth. He is a Professor in the Department of Neurology, at McGovern Medical School and Co-Director, Texas Institute for Restorative Neurotechnology. Prior to joining UTHealth, he was a Professor of Internal Medicine and Computer Science at the University of Kentucky, where he also served as the university's inaugural Director for the Institute for Biomedical Informatics, and Associate Director for the Center for Clinical and Translational Science. His longest career stretch has been spent at Case Western Reserve University, where his role included Division Chief of Medical Informatics, Co-Director of Biomedical Research Information Management Core of the Case Western CTSA, and Associate Director for Case Comprehensive Cancer Center.

Dr. Zhang received his Ph.D. from the University of Cambridge. His earlier research interests included theoretical computer science and the semantics of programming languages. In the last decade, his research has revolved around Human-Data Interaction (HDITM), achieved through the development of innovative software and web-based applications spanning the biomedical data lifecycle. Software tools include query interface for clinical research, data management software for clinical trials and biomedical research and tools for multi-site data integration. He led the development of data infrastructures and manages data resources, following the vision of NIH Data Commons, for the National Sleep Research Resource and for the Center for Sudden Unexpected Death in Epilepsy Research, the largest and most comprehensive, well-annotated clinical data sets in the two disease areas. He also has a track record of research in biomedical metadata including ontologies and terminology systems, to bring them to bear on HDI. Dr. Zhang effectively brings cutting-edge computer science and informatics methodology to addressing biomedical data/big data challenges through the translation of theory, algorithms, methods, and best practices to functional and usable tools impacting the clinical research data lifecycle.