

# HIMSS NCA Chapter – September 20, 2018

## Artificial Intelligence within Federal Healthcare – Where are we today and Where Will We Be Tomorrow

### Panelists:

#### **Dina Demner-Fushman, MD, PhD, Investigator, Lister Hill National Center for Biomedical Communications (LHNCBC), National Library of Medicine (NLM)**

Dina Demner-Fushman is an Investigator at the Lister Hill National Center for Biomedical Communications, NLM. Dr. Demner-Fushman leads several NLM projects in the areas of Information Extraction for Clinical Decision Support, EMR Database Research and Development, and Image and Text Indexing for Clinical Decision Support and Education. The outgrowths of these projects are the evidence-based decision support system in use at the NIH Clinical Center since 2009, an image retrieval engine, Open-i, launched in 2012, and an automatic question answering service launched in 2018. Dr. Demner-Fushman earned her doctor of medicine degree from Kazan State Medical Institute in 1980, and clinical research Doctorate (PhD) in Medical Science degree from Moscow Medical and Stomatological Institute in 1989. She earned her MS and PhD in Computer Science from the University of Maryland, College Park in 2003 and 2006, respectively. She earned her BA in Computer Science from Hunter College, CUNY in 2000. She is the author of more than 190 articles and book chapters in the fields of information retrieval, natural language processing, and biomedical and clinical informatics. She has co-authored a textbook in Biomedical Natural Language Processing published in 2014.

Dr. Demner-Fushman is a Fellow of the American College of Medical Informatics (ACMI), an Associate Editor of the Journal of the American Medical Informatics Association, and a founding member of the Association for Computational Linguistics Special Interest Group on biomedical natural language processing. As the secretary of this group, she has been an essential organizer of the yearly ACL BioNLP Workshop since 2007.

Dr. Demner-Fushman has received twelve staff recognition and special act NLM awards since 2002. She is a recipient of the 2012 NIH Award of Merit, a 2013 NLM Regents Award for Scholarship or Technical Achievement and a 2014 NIH Office of the Director Honor Award.

#### **Jesus J. Caban, PhD, Chair of the DHA Enterprise Intelligence and Analytics (EI&A) IPT / Chief, Clinical and Research Informatics, NICoE, Walter Reed National Military Medical Center**

Jesus Caban is the Chief of Clinical and Research Informatics at the National Intrepid Center of Excellence (NICoE) at the Walter Reed National Military Medical Center (WRNMMC). He manages a team of scientists, engineers, and developers that provide enterprise applications, BI, metrics, data, and analytical support to the NICoE and the Intrepid Spirit Network across 10 MTFs. Dr. Caban also serves as the Chair of the DHA Enterprise Intelligence and Analytics IPT -- a tri-service advisory team responsible for providing guidance and endorsing enterprise-level analytical requests and capabilities. Dr. Caban is an adjunct faculty at the Uniform Services University where he leads the graduate informatics training program. He is also an adjunct faculty at Johns Hopkins University - Applied Physics Lab.

#### **Steve Bernstein, Senior Advisor for Health IT and Project Officer, Division of Health IT, Center for Evidence and Practice Improvement (CEPI), Agency for Healthcare Research and Quality (AHRQ)**

Steve Bernstein is a senior advisor for health information technology (IT) and project officer for various clinical informatics and health IT initiatives, some of which are evaluating use of artificial intelligence tools to improve healthcare. Mr. Bernstein works in the Division of Health IT within AHRQ's Center for Evidence and Practice Improvement (CEPI). Mr. Bernstein previously served as AHRQ's Chief Information Officer (CIO). Prior to working at AHRQ, Mr. Bernstein was a Director of Information Systems for Logistics and Fleet Support with the Department of Navy's Naval Air Systems Command where he managed numerous large-scale IT programs and systems. Mr. Bernstein graduated from Cornell University with a degree in Engineering and Operations Research with a focus on Computer Science.

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#### Moderators:

#### **Janusz Wojtusiak, PhD, Associate Professor of Health Informatics in the George Mason University's Department of Health Administration and Policy, and the Chief of Mason's Health Informatics Program**

Dr. Wojtusiak is an Associate Professor of Health Informatics in the George Mason University's Department of Health Administration and Policy, and the Chief of Mason's Health Informatics Program. He also serves as the Director of the Mason's Machine Learning and Inference Laboratory, and the Director of Center for Discovery Science and Health Informatics.

Dr. Janusz Wojtusiak obtained with honors his Master's degree in Computer Science from Jagiellonian University in 2001, and Ph.D. in Computational Sciences and Informatics (concentration in Computational Intelligence and Knowledge Mining) from George Mason University in 2007. After completing his PhD he became a post-doctoral fellow in the Mason's Department of Health Administration and Policy, after which he became faculty in the department.

Dr. Wojtusiak's research interests include development and use of intelligent systems in medical, healthcare and health applications, with the specific focus on their ability to learn. He focuses on data analysis and machine learning methods for creating artificial intelligence algorithms for clinical decision support and knowledge discovery in medical data. Specific methodologies include machine learning, evolutionary computation, agent-based systems, and knowledge mining. He authored or co-authored about 100 research publications and presentations in these areas. Dr. Wojtusiak teaches data mining, health computing, intelligent systems and related topics in Mason's Health Informatics MS and PhD programs.