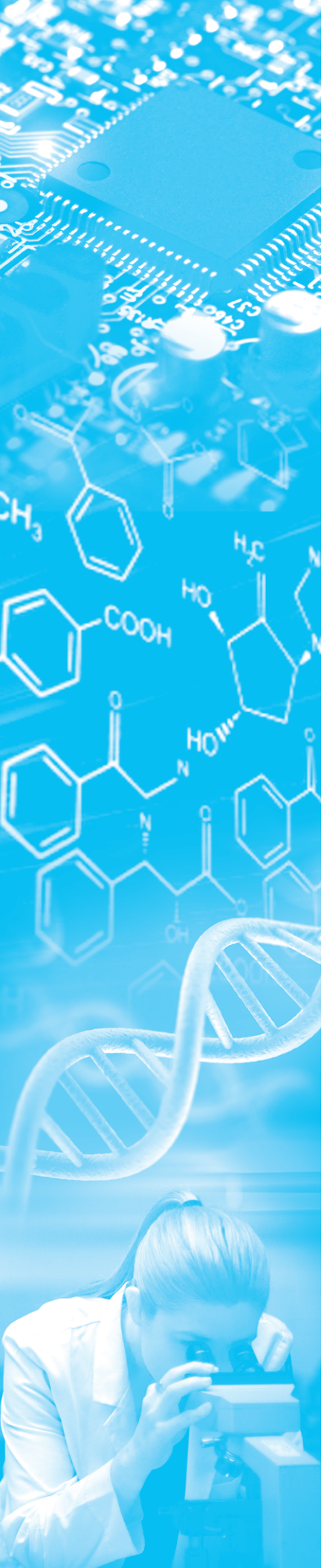

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Method of Delivering Personalized Healthcare Information Based on Patients' Levels of Health Literacy

Providing patients with healthcare information about health problems is critical for their understanding and adherence to treatment recommendations.

One major challenge in delivering the required information is the varying literacy and health care related knowledge of the target audience. It is well documented through multiple studies that a substantial proportion of the U.S. population lacks the knowledge and skills needed to understand therapeutic procedures, manage health issues and efficiently interact with healthcare professionals. Currently, all Large Electronic Healthcare Record (EHR) providers do not consider this and offer their subjects/patients healthcare related educational material in the form of generic simple printable handouts. Studies have shown this approach to have minimal positive effect on the patients' ability to comprehend healthcare information, and most importantly, has minimal impact on their adherence to treatment and health outcomes. NSU researchers have developed a brief questionnaire assessing a patients' health literacy. Responses to the questionnaire, combined with basic demographic information allows us to accurately identify patients with low health literacy who are at risk to treatment nonadherence and poor (often-costly) outcomes.

Technology

Dr. Raymond Ownby from the Department of Psychiatry and Behavioral Medicine at Nova Southeastern University has designed a ten-item computer-administered questionnaire that will allow providers to quickly and accurately assess patients' ability to read, understand, and act on information about their health. Performance on the questionnaire and demographic information can be fed into a patent-pending device that assigns each patient to a specific level of health literacy. These findings will allow providers to communicate more efficiently with patients and will increase the likelihood that patients adhere to treatment recommendations. The entire system, based in Internet standards HTML5/CSS and JavaScript, can be readily integrated into any major EHR's patient assessment or patient portal modules. It can quickly efficiently address standards for meaningful use of electronic health records, satisfying criteria for providing individually-tailored health information to patients. This tailored approach of delivering personalized healthcare information is a major improvement over current practice of offering only generic information, which has been shown to have a minimal impact on patient behavior and health outcomes. Preliminary studies conducted by Dr. Ownby's research team show that the system will make it possible to virtually automatically offer patients personalized healthcare information with corresponding improvements in understanding, treatment adherence, improved outcomes, and reduced costs.

Application

This system of delivering individually-tailored medical information can be applied to the following:

- Any healthcare setting such as hospitals and extended care facilities that cater to patients from diverse backgrounds
- For offering relevant medical information to subjects registered in clinical studies
- Medical insurance providers can utilize this system to provide a better-targeted/ tailored healthcare information to their clients

Advantages/Benefits

- Offering medical information tailored to a patient's medical information literacy will lead to better implementation of therapeutic procedures, compliance to regimen and hence more positive health outcomes for the therapeutic intervention.
- It can be easily incorporated in the systems being currently used by large Electronic Healthcare Record (HER) providers

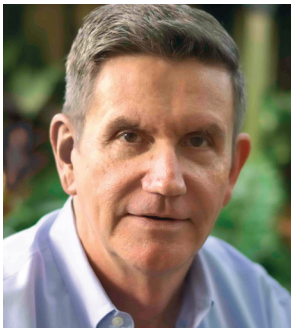
Status of Development

Dr. Ownby and his research team has developed the algorithm for the array of questions and conducted initial clinical studies that resulted in peer-reviewed publications. Implementation of this system to a HIV clinical study has also proven that applying this method is a more cost-effective strategy to improve adherence to therapy. The researchers are planning to conduct a larger clinical study to further confirm the efficacy of this system.

Patent Status

Provisional Patent Application Filed on 27th July, 2017.

Information on Inventors



- Dr. Raymond Ownby is the Chair of Psychiatry at NSU's Dr. Kiran C Patel College of Osteopathic Medicine. His research interests include Biomedical Informatics, Public Health, Psychiatry, and Behavioral Medicine.
- Dr. Amarilis Acevedo is an Associate Professor at the Department of Clinical and School Psychology at NSU. Dr. Acevedo is also a Clinical Associate Professor of the Department of Psychiatry & Behavioral Medicine of NSU College of Osteopathic Medicine. Her research focuses on cognitive assessment of individuals of heterogeneous ethno-cultural/linguistic backgrounds and the early detection and treatment of Alzheimer's disease and other dementias.
- Dr. Drenna Waldrop-Valverde is currently a tenured Associate Professor at Emory University's Nell Hodgson Woodruff School of Nursing (NHWSN). She is also the co-chair of the Brain: Cancer and Neurocognition Initiative of the Winship Cancer Institute of Emory University.

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