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Five-Year Study Demonstrates that Telemedicine Combined with Biomedical Informatics Improves HgbA1c, LDL Cholesterol, and Blood Pressure Levels for At-Risk Populations with Diabetes

Bethesda, MD, July 14, 2009 – The *Journal of the American Medical Informatics Association (JAMIA)* has published the results of a randomized trial to study the effectiveness of telemedicine in an intervention designed to help clinicians manage key health indicators associated with diabetes mellitus. The IDEATel project, funded by the Centers for Medicare and Medicaid Services (CMS) and carried out in New York State, focused specifically on elderly Medicare recipients living in federally designated medically underserved areas who had difficulty managing their personal health. To examine the clinical utility of a combined home telemedicine and informatics intervention with associated nursing care, the study followed 1,665 diabetic patients over a five-year period. The study compared outcomes in the telemedicine group to similar diabetic patients who received traditional clinical care.

As a result of the largest federal grant for telemedicine, the study showed that over five years the group randomized to received telemedicine-supported care had clinically significant improvements relative to the comparison group in the three main clinical outcomes of the trial, namely hemoglobin A1c, low density lipoprotein (LDL) cholesterol, and blood pressure. Thus the study showed that, by the 5th year, the group randomized to received telemedicine-supported care had clinically significant improvements relative to the comparison group in the three main clinical outcomes of the trial. The authors found no significant difference between the two groups in mortality rates.

“Work in clinical informatics and telemedicine provides some major challenges in formally demonstrating clinical or economic benefits,” said Edward H. Shortliffe, MD, PhD, AMIA President and CEO. He added, “This impressive multi-year study of the IDEATel effort has overcome many of those challenges and provides solid evidence that their telemedicine intervention has had a positive influence on key metrics for the monitoring of diabetic care.” The primary author of this multi-institutional study, Steven Shea, MD, commented that “the findings of the IDEATel trial show that telemedicine as an approach to providing case management services for patients with diabetes can improve clinical outcomes that are targeted by care

guidelines and that we know predict hospital admissions and clinical endpoints. It remains to be shown whether, with technology available today such as cell phones, blue tooth, and portable self-monitoring devices, telemedicine-based clinical services for chronic disease management can be delivered in a cost effective way. It will be a challenge for the health care provider community to be prepared to receive self monitoring data and to provide services electronically and asynchronously. The rapid progress nationally towards electronic medical records is a necessary step in creating the infrastructure so that the potential benefits of medical informatics and communications technologies can improve health care for patients.”

The authors of the IDEATel study include clinicians and biomedical informatics researchers from Columbia University and NewYork-Presbyterian Hospital, Syracuse University, VA Medical Center Syracuse, Hebrew Home at Riverdale, and Marshfield Clinic. This article is published in Volume 16, Issue 4, July/August, 2009 issue of *JAMIA*. AMIA's bimonthly journal, *JAMIA*, presents peer-reviewed articles that assist physicians, informaticians, scientists, nurses, and other health care professionals develop and apply healthcare and translational informatics to patient care, teaching, research, and healthcare administration.

About AMIA

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