

Autism Diagnosis:

- Oberleitner, R, Laxminarayan, S, Suri, J, Harrington, J, Bradstreet J, The Potential of a Store-and-forward Tele- Behavioral Platform for Effective Treatment and Research of Autism , IEEE – Engineering in Medicine and Biology Proceedings, Sept, 2004
Abstract: This paper describes the justification and the design principles of a behavioral medicine store & forward telemedicine platform to facilitate the capturing and communication of spontaneous patient behaviors for the improved evaluation, diagnosis and ongoing treatment of people with autism.
- Demir, S., Oberleitner, Talking to the Autism Community, IEEE Engineering in Medicine and Biology Magazine, Jan/Feb 2005
Excerpt: With an identifiable network now created, we are now focused on developing a telehealth service and data management platform to help families communicate health and behavioral issues remotely, while providing better health and educational data to accelerate research.
- Oberleitner, R, Wurtz, R, Popovich, M, Moncher, T, Laxminarayan S, Reischl, U, Health Informatics: A Roadmap for Autism Knowledge Sharing, Medical and Care Compunetics - 2, ed: Bos, Laxminarayan, Marsh, June 2005
Abstract: This paper outlines recommended principles and approaches for utilizing state-of-the-art information systems technology and population-based registries to facilitate collection, analysis, and reporting of autism patient data. Such a platform will increase treatment options and registry information to facilitate diagnosis, treatment, and research of this disorder.
- Oberleitner, R, Elison-Bowers P, Harrington, J, Hendren, R, Kun, L, Reischl, U, Merging Video Technology with Personal Health Records to Facilitate Diagnosis and Treatment of Autism, JD2H2 Conference, IEEE, Washington DC, April, 2006
Abstract: Improved imaging techniques and an increased demand for a personal health record platform indicates that a telehealth based system has an excellent potential for improving patient care, providing a high capacity for information storage and retrieval, and for reducing healthcare costs. A video-capture technology is presented that will allow parents, schoolteachers, and other caregivers to capture a child's behavior for subsequent evaluation by an appropriate specialist worldwide.
- Reischl, U., Oberleitner, R., Development of a Telemedicine Platform for the Management of Children with Autism, Zeitschrift für Nachwuchswissenschaftler (German Journal for Young Researchers) 2009/1(1)
Abstract: Development of a new video capture and personal electronic health record platform has been undertaken which will allow autism families to document their child's abnormal behavior and share this information confidentially with remotely located healthcare providers who can then provide each family with guidance regarding their child's behaviors and health condition.
- Oberleitner, R, Reischl, U, Lacy, T, Goodwin, M, Spitalnick, J, Emerging Use of Behavior Imaging for Autism, Commun Med Care Compunetics, Springer-Verlag Berlin Heidelberg, December 2010

Abstract: Commercially available “behavior imaging” technology is effectively assisting the diagnosis and management of children with neurodevelopmental disorders, including autism. This technology offers a unique way of capturing behavior data in natural environments on video clips, and is complemented by a comprehensive information storage and retrieval platform.

- Angjellari-Dajci, F., Lawless, W. F., Agarwal, N., Oberleitner R., Coleman, B., Warsi, S., & Kavooosi, M. Telehealth-based systems for diagnosis, management and treatment of autism spectrum disorders: Challenges, opportunities and applications. In I. M. Miranda & M. M. Cruz-Cunha (Ed.), Handbook of Research on ICTs for Healthcare and Social Services: Developments and Applications. Hershey, PA: IGI Global. 2013

Abstract: The prevailing system for diagnosis, treatment, and management of Autism Spectrum Disorders (ASDs) in the US-the in-person service delivery-has been unable to address the increase in the demand for services and societal costs for those served, and the unattained societal benefits for those not diagnosed early enough or not offered early and intensive behavioral interventions. The authors discuss new developments in telehealth for diagnostic evaluation and ASD treatment in the US.

- Oberleitner, R., Abowd, G., Suri, J.S. Behavior Imaging®’s Assessment Technology: A Mobile Infrastructure to Transform Autism Diagnosis and Treatment. In M.F. Casanova et al (eds.), Imaging the Brain in Autism. Springer Science+Business Media, New York, NY 2013

Abstract: Behavior Imaging gives researchers and clinicians tools to collect rich, environmentally contextual data, enhancing diagnosis and treatment of individuals with autism spectrum disorder and related developmental disabilities. We will define Behavior Imaging and explain its development, its uses in treatment, and especially due to recent advances to include mobile devices, what the technology means for the future of autism diagnosis, treatment, and research.

- Nazneen, Rozga, A., Smith, C.J., Oberleitner, R., Abowd, G., Arriaga, R. A Novel System for Supporting Autism Diagnosis using Home Videos: Iterative Development and Evaluation of System Design, JMIR mHealth and uHealth, 2015; 3(2): e68

Abstract: The study’s objective was to develop and evaluate the design of an asynchronous system that allows parents to easily collect clinically valid in-home videos of their child’s behavior and supports diagnosticians in completing diagnostic assessment of autism. The system that resulted through the iterative design process includes NODA smartCapture and NODA Connect.

- Nazneen, Matthews, N., Smith, CJ Agata Rozga, Gregory D. Abowd, Ron Oberleitner, Uwe Reischl, Rosa Arriaga. Use of a Novel Imaging Technology for Remote Diagnosis of Autism: A Reflection on Experience of Stakeholders. 6th International Conference on Applied Human Factors and Ergonomics (AHFE 2015), July 2015, Las Vegas, USA

Abstract: To address the need of parents of children with autism to obtain on-time access to appropriate diagnostic services, an imaging technology, NODA® (Naturalistic Observation Diagnostic Assessment), has been successfully developed and field tested. This paper is a reflection on the firsthand experience of key stakeholders (parents and diagnosticians) using NODA® in the field.

- Nazneen, N., Rozga, A., Smith, C.J., Abowd, G.D., Oberleitner, R., Arriaga, R.I., Iterative Design of a System to Support Diagnostic Assessments for Autism Using Home Videos. 2014 International Meeting for Autism Research, May, 2014

Abstract: The present goal is to iteratively design a system that will enable parents to record video examples of their child's behavior in the home under the guidance of a clinician, and share these recordings with the clinician for the purpose of diagnostic assessment for autism. Families of children ages 3- 6 years with an autism spectrum diagnosis tested a prototype of such a system and were interviewed about their experiences with it.