<u>Appendix</u>

A: TEAAM-I Organizing Committee

John Kane, Chair,
The Zucker Hillside Hospital/Hofstra Northwell School of Medicine

Danielle Schlosser, Co-chair,
Verily / University of California, San Francisco

Susan Azrin,
National Institute of Mental Health

Mary Giliberti,
National Alliance on Mental Illness

Robert Heinssen,
National Institute of Mental Health

Thomas Insel,
Verily Life Sciences

Linda Rosenberg,
National Council for Behavioral Health

B: TEAAM-I Sponsors

Northwell Health

Verily Life Sciences

The Zucker Hillside Hospital

Donald and Barbara Zucker

The National Alliance on Mental Illness

The National Council for Behavioral Health

October 13th & 14th, 2016 in NYC

Thursday, October 13, 2016

9:15 - 9:45 PM	**From Transactional to Integrated: New Directions Sought** Helen Christensen, Black Dog Institute and University New South Wales
9:45 -10:15 PM	**Challenges and Opportunities of Digital Mental Health Services: The Australian MindSpot Clinic** Nick Titov, MindSpot/MacQuarie University

Friday, October 14, 2016

8:30 - 8:45 AM	**Welcome & Introductions** John Kane, Hofstra Northwell School of Medicine and The Zucker Hillside Hospital
8:45 - 9:00 AM	**The Promise of Technology** Danielle Schlosser, Verily
9:00 AM – 12:00 PM	**Invited Talks**
1:15 - 2:45 PM	**Breakout Groups** **Group I: Getting the Attention of the Target Audience (those with unidentified psychiatric and/or addictive disorders).** Co-chairs: Helen Christensen, Black Dog Institute and University New South Wales Theresa Nguyen, Mental Health America **Group II: Proactive Identification of Psychiatric Symptoms (for those not identified before) Using Digital Data (e.g. social media postings/passive sensing/semantic analysis/search histories, etc.).** Munmun De Choudhury, Georgia Tech Justin T. Baker, McLean Hospital, Harvard Medical School **Group III: What do we do After Identifying People to be in a Potentially "at need" Group?** David Mohr, Northwestern University Nick Titov, Mindspot/ MacQuarie University
3:15 - 4:45 PM	**Final Panel: Summary and Recommendations** John Kane, Hofstra Northwell School of Medicine and The Zucker Hillside Hospital Danielle Schlosser, Verily

4:45 - 5:00 PM   **Wrap Up and Next Steps**
                     John Kane, Hofstra Northwell School of Medicine and The Zucker Hillside
                     Hospital
                     <u>**D: TEAAM-I Participant List and Affiliations**</u>

Name	Job Title	Relevant Professional Interest
Steve Adelsheim	Clinical Professor & Associate Chair for Community Engagement, Department of Psychiatry and Behavioral Sciences, Stanford University	Developing and implementing early detection/intervention programs.
Patricia Areán	Professor in the Department of Psychiatry and Behavioral Sciences, University of Washington	Effectiveness of technology based behavioral interventions for mood disorders in adults.
Francisca Azocar	Vice President of Research and Evaluation, Optum	The scientific merit of new programs and services using digital technology.
Susan Azrin	Program Chief of the Primary Care Research Program, National Institute of Mental Health.	Reduction of premature mortality in individuals with severe mental illness and reduction of the duration of untreated psychosis.
Justin Baker	Assistant Professor of Psychiatry in the Department of Psychiatry, Harvard Medical School Scientific Director of the Institute for Technology in Psychiatry, McLean Hospital	Digital phenotyping and computational assessment of dyadic interactions. Primarily focused on schizophrenia and bipolar disorder.
Amit Baumel	Assistant Professor, Northwell Hofstra School of Medicine Co-Founder, FriendsOfMind	The use of technology to empower people within the community to support one another. Heuristic evaluation of e-Health intervention programs.
Anita Bechtholt	Program Director in the Division of Treatment and Recovery Research, National Institute on Alcohol Abuse and Alcoholism	Technology, mHealth, and translational projects relating to the treatment of alcohol use disorder.
Cyntrice Bellamy	Director, Division of State and Community Systems Development within the Substance Abuse and Mental Health Services Administration.	Ten Percent Set Aside, First Episode Psychosis program oversight.
Dror Ben Zeev	Associate Professor in the Departments of Psychiatry and Biomedical Data Science at Dartmouth Medical School Director of the Mobile Health for Mental Health Program	Development and evaluation of technology-based approaches in the study, assessment, and treatment of mental illness.
Michael Birnbaum	Assistant Professor, Center for Psychiatric Neuroscience, The Feinstein Institute for Medical Research Program Director for Northwell Health's Early Treatment Program (ETP)	Clinical and research initiative for adolescents and young adults in the early stages of psychosis.
John Boyd	CEO, Sutter Solano Medical Center & Sutter Center for Psychiatry Commissioner, Mental Health Services Oversight & Accountability Commission	Policy, advocacy, and working with the public and private sector to tackle healthcare challenges, including mental health. Implementing programs for prevention and early intervention, and housing for individuals with mental illness.
Guillermo Cecchi	Research Staff Member, IBM Research	The use of a computational linguistics approach to quantify psychiatric conditions from short speech samples.
Tanzeem Choudhury	Associate professor in Computing and Information Sciences, Cornell University Co-founder of HealthRhythms	Technology-assisted wellbeing.

Helen Christensen	Director & Chief Scientist, Black Dog Institute Professor of Mental Health at the University of New South Wales	Integration of websites, apps, sensors, social media and Smartphone tools into large scale prevention and intervention programs for anxiety, depression and suicide.
Barbara Cornblatt	Professor of Psychiatry, The Hofstra Northwell School of Medicine Director of the Recognition and Prevention Program, The Zucker Hillside Hospital	Identification of predictors of psychosis in at-risk adolescents and development of early interventions to prevent illness from progressing.
Christoph Correll	Professor of Psychiatry, Hofstra Northwell School of Medicine Medical director of the Recognition and Prevention program at the Zucker Hillside Hospital	Identification, characterization and management of adults and youths with the prodrome, first episode, multiepisode and refractory illness of severe psychotic and mood disorders.
Munmun De Choudhury	Assistant Professor at the School of Interactive Computing, Georgia Tech	Computational social science, with a focus on reasoning about personal and societal well-being from social digital footprints.
Steven Dettwyler	Public Health Analyst, SAMHSA	Data analysis of the Mental Health Block Grant.
Michael Diefenbach	Professor and Director of Behavioral Research in the Department of Medicine, Northwell Health Director, Behavioral Research, Department of Medicine & Urology, Northwell Health	Cognitive and affective factors underlying health behavior.
Lisa Dixon	Professor of Psychiatry, Columbia University Medical Center Director of the Division of Behavioral Health and Services Research, Department of Psychiatry	Improving the quality of care, reducing the negative impact of co-occurring addictions and medical problems, and improving treatment engagement and adherence.
Daniel Eisenberg	Professor, Department of Health Management & Policy, University of Michigan	Effective investments in mental health of young people, particularly college age populations.
Nicole Ellison	Professor, School of Information at the University of Michigan	Interpersonal communication processes in online contexts and the use and implications of social media to request information and for social support.
Deborah Estrin	Professor of Computer Science, Cornell Tech	Development of algorithms, systems and applications to support health and life management.
Bob Filbin	Data Scientist at Crisis Text Line	Application of behavioral psychology to questions of data collection, analysis, and reporting.
Chantel Garrett	Founding Director, Partners for StrongMinds	Connecting individuals to early psychosis treatment through public education.
Adam Gazzaley	Professor in Neurology, Physiology and Psychiatry at the UCSF Founder and Executive Director of Neuroscape	Design and development of novel brain assessment and optimization tools to impact education, wellness, and medicine practices.
Paul Gilbert	Chief Executive Officer and Co-Founder, MedAvante	Technology-enabled signal detection solutions in treatments for central nervous system disorders.
Mary Giliberti	Chief Executive Officer, National Alliance on Mental Illness (NAMI)	Expanding access to First Episode Psychosis programs through information and advocacy for state and federal resources.
Jesse Gritton	Education Specialist, Seattle-King County Public Health Social Media and Adolescent Health Research Team (SMAHRT), Seattle Children's Research Institute	Displays of harm to self or others, and marijuana advertising on social media.

Darcy Gruttadaro	Director of Advocacy, National Alliance on Mental Illness (NAMI)	Expanding access to First Episode Psychosis programs; Raising broader awareness about these programs and the importance of reducing the duration of untreated psychosis.
Anna Hasselblad	Director of Public Policy, Steinberg Institute	Behavioral and mental health policy, program development, and strategic communications; ensuring affordable health coverage and access to care for underserved children and families.
Hakon Heimer	Founder/Editor, Schizophrenia Research Forum Program Advisor for Cognitive Disorders, Cold Spring Harbor Laboratory Co-Founder, Cure Alliance for Mental Illness	Central nervous system disorders
Robert Heinssen	Director of the Division of Services and Intervention Research, National Institute of Mental Health (NIMH).	Prodromal schizophrenia research, first episode psychosis, and neuroscience approaches for improving assessment and remediation of cognitive deficits in schizophrenia.
Thomas Insel	Director of Clinical Neuroscience, Verily Life Sciences	The use of digital tools to overcome the barriers to better outcomes in people with serious mental illness.
Nev Jones	Director of Research, Felton Institute (San Francisco)	Racial disparities, engagement, and functional recovery from psychosis.
Emily Kagen	Associate Vice President of Digital & Innovations Strategy, Northwell Health	Design and development of digital ecosystems to connect patients with physicians.
John Kane	Professor and Chairman of Psychiatry, The Hofstra Northwell School of Medicine. Senior VP for Behavioral Health Services, The Northwell Health System	The pharmacologic treatment of schizophrenia, with an emphasis on early identification and treatment as well as relapse prevention and the management of treatment refractory individuals.
Nitya Kanuri	Open Data Collaborations Manager, Crisis Text Line	Facilitation of bridges between academics, technologists, and community stakeholders to increase access to evidence-based mental healthcare.
Vikram Krishnamurthy	Professor at the Electrical & Computer Engineering, Cornell University	Signal processing and control and their applications in sensors, social networks, natural language processing and biomedical applications.
Sanjiv Kumar	Research Scientist, Google	Big Data, Large Scale Machine Learning, Computer Vision, Graphical Models, Medical Imaging, Robotic
Rachel Loewy	Clinical psychologist and Associate Professor of Psychiatry, UCSF	Early psychosis- screening and early detection, computerized cognitive remediation, stress and trauma-related risk factors and implementation of evidence-based practices in community services.
Steven Lopez	Professor of Psychology and Social Work ,USC	The study of psychopathology, assessment, and intervention among Latinos and other ethnic minority groups.
Husseini K. Manji	Global Therapeutic Head for Neuroscience, Janssen Research & Development	Discovery and development of new therapeutics for major neurologic, psychiatric and pain-related diseases with a high unmet need for effective treatments.

Mark Matthews	Research Associate with the People Aware Computing Group, Cornell University CTO, HealthRhythms	Biological rhythms (especially circadian rhythms) involved in mental health and productivity, and personalizing the measurement and treatment of mental wellbeing.
Maggie Merritt	Executive Director, Steinberg Institute	Advancing sound public policy and inspiring leadership on the issues of brain/mental health.
David Mohr	Professor, Preventive Medicine, Northwestern University Director of The Center for Behavioral Intervention Technologies (CBITs)	The design, development and evaluation of digital health tools, and recommender systems for health apps.
Don Mordecai	Director of Mental Health and Addiction Medicine Services, The Permanente Medical Group (TPMG). Adjunct Clinical Associate Professor of Psychiatry, Stanford University Medical School.	Developmental disorders and ADHD
Jon Morgenstern	Director of Addiction Services, NorthWell Health Professor of Psychiatry, Hofstra Northwell School of Medicine, Hofstra University	Development of effective treatments for SUD and ensuring that such treatments are widely available in the healthcare system.
Frederick Muench	Director of Digital Health Interventions, Northwell Health Adjunct Professor, NYU Interactive Telecommunications Program	Development and evaluation of interventions for physical and mental health problems with a special emphasis on addictive and appetitive behaviors using technology based mediums.
Keris Myrick	Director of Consumer Affairs for the Center for Mental Health Services (CMHS) of the Substance Abuse and Mental Health Services Administration (SAMHSA)	Consumer perspectives on treatment, services and supports, recovery oriented systems of care, and use of technology by people diagnosed with schizophrenia.
Vaibhav Narayan	Senior Director and Head, Integrative Solutions, Neuroscience Therapeutic Area, Johnson & Johnson	The utilization of advanced analytics and digital technologies to develop markers of early diagnosis, disease progression and relapse prediction in Alzheimer's Disease, Mood Disorders and Schizophrenia.
Camille Nebeker	Assistant Professor of Behavioral Medicine, UC San Diego Founder/Director of the Collaborative for Advancing Professional and Research Integrity (CAPRI).	Ethics education pedagogy and empirical research on the ethical, social and legal implications/dimensions of emerging technologies used in biomedical research.
Theresa Nguyen	Senior Director of Policy and Programs, Mental Health America	Using consumer services and technology to reduce untreated mental illness.
Jeffrey Olivet	Chief Executive Officer, Social Innovation (C4, Boston-based Center).	Harnessing innovative technologies to improve the lives of vulnerable and marginalized people.
Timothy Peters-Strickland	Senior Director in Global Clinical Development, Otsuka Pharmaceuticals Development & Commercialization	
Stephanie Pfister	Director of Clinical Management, Otsuka Pharmaceutical Development & Commercialization (OPDC)	Clinical/operational management of CNS trials.
Barbara Ricci	Director on NAMI Board of Directors Co-board President of NAMI-NYC Metro	
Delbert Robinson	Associate Investigator, Center for Psychiatric Neuroscience, The Zucker Hillside Hospital Professor, Molecular Medicine & Psychiatry, Hofstra Northwell School of Medicine	First episode (psychosis) treatment studies

Linda Rosenberg	President and CEO, National Council for Behavioral Health	Health literacy, access to effective mental health and addictions care, leveraging technology solutions that have the potential to radically change the way people are diagnosed and treated.
Jose Rubio-Lorente	Psychiatry Chief Resident for Research, The Zucker Hillside Hospital,	Improving access to evidence based treatment for the public struggling with mental illness.
Danielle Schlosser	Research Scientist, Verily Life Sciences Assistant Professor of Psychiatry at UCSF	Development and testing of neuroscience-informed digital therapeutics for young people with psychosis.
Lloyd Sederer	Chief Medical Officer, NYS Office of Mental Health Adjunct Professor, Columbia/Mailman School of Public Health	Improve the understanding of mental illnesses, addictions, their prevention and treatment
Vinod Srihari	Associate Professor, Yale School of Medicine Founder of the Program for Specialized Treatment Early in Psychosis (STEP)	Development of a model of care (in community settings) to promote the functional recovery of individuals with psychotic illnesses.
Brandon Staglin	Director of Marketing Communications, Staglin Family Vineyard and IMHRO	Improvement of recovery prospects for people with mental illness and preventing illness in those at risk.
Nick Titov	Associate Professor, Psychology, Macquarie University Project Director, MindSpot Clinic Co-Director, eCentreClinic	Development and evaluation of strategies for reducing barriers to treatments for people with high prevalence psychological disorders.
John Torous	Clinical Informatics Fellow, Division of Clinical Informatics at Beth Israel Deaconess Medical Center, Harvard Medical School	The delivery and advancement of high caliber patient care through healthcare technology and medical education, and improving understanding of patient-physician relationship.
Collin Walter	Mental Health Platform Manager, Verily	
Kristina West	Policy Analyst at the Office of the Assistance Secretary for Planning and Evaluation, HHS.	Child and adolescent behavioral health prevention, and early intervention for first episode psychosis.
Janis Whitlock	Research Scientist at Bronfenbrenner Center for Translation Research, Cornell University	Non-suicidal self-injury, the role of technology in sexual health and violence and the relationship between social media and mental health

E: Abstract of *Lessons from MHA Screening* Talk
Theresa Nguyen, Mental Health America

Increasingly, individuals are turning to the internet to find mental health information and support. In 2014, Mental Health America (MHA) provided individuals with free, anonymous, and confidential mental health screens including: depression, anxiety, bipolar, PTSD, substance and alcohol use, youth, parent, and psychosis screen. To date, we provide over 2,800 screens daily and over 1.6 million screens since we started. Our data offers an opportunity to understand what is happening for young people who are experiencing mental health problems, who are not yet connected to treatment, and what they want for follow up and support. From screens we know that: 1) Most screeners are ages 11-34, 2) Most screeners score "positive" (moderate to severe range of symptoms for each screen), 3) Most of those who screen positive report that they have never been diagnosed with a mental health condition. To create user-guided solutions to address these concerns, we asked individuals to tell us how MHA could help them post-screening. The top three responses were (~45-50%): Provide additional information about mental health; Offer an online or mobile program or app that can help you track or manage your symptoms; Provide worksheets or coping skills to use at home.

Technology's Promise	Challenges	Key Areas for Future Research
Public Awareness - Getting the Attention of the Target Audience Online		
Access to information	The reasons and context of informational website utilization within pathways to care are unclear. Online screening initiatives have yet to show efficacy in facilitating early engagement with therapeutic activities of any sort.	User centered research: Investigating (both on- and off-line) the context in which users are utilizing websites. Rigorously examine the difference (with/without online screening) in engagement with traditional and non-traditional care. Focus should be on clear understanding of users' attributes (demographics/diagnosis; not derived only from self reports).
Meeting the Needs of People Who Have Not Sought Support in a Clinical Setting		
Early / preventive interventions	It is not certain whether mental illnesses are defined in a way that also can enable the understanding and addressing of people's needs at an earlier stage.	Establishing models that support the understanding of people's current state and needs. Examining models' applicability in guiding how to engage people appropriately.
	People identify their needs based on functional concerns and not emerging symptoms.	Developing evidence-based solutions that are inclusive of functional recovery as a goal.
Proactive Identification of Mental States in Need of Treatment Using Digital Signatures		
Early identification of psychiatric symptoms (before people first engaged with service)	People are not used to actively enrolling into monitoring initiatives for the purpose of mental-health-self-care.	Investigating the feasibility of "healthy" individuals opting in as part of regular care.
	It is difficult to inform reliable mental state/illness solely from raw data (without self-reports).	Investigating the combination of different digital footprints and signatures as a method to reduce uncertainty. Testing models that define the exact nature and extent of self-reported information that is necessary for identification.
	It difficult to identify relapse patterns for the first time since there is no possible comparison with a previous event that could serve as an indicator.	Initiating a collaborative project to gather large amounts of user data (e.g., search terms, sensors, social media posts) combined with future/concurrent diagnosis (hospitalization, treatment, subjective needs). This may allow researchers to characterize human behavior objectively with respect to major sources of variance and identify common/typical patterns of change.