

Toward More Objective Measures in Psychiatry

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EDITORIAL

The National Institute of Mental Health (NIMH) Director, Joshua A. Gordon, has emphasized the need for biomarkers in psychiatry (Gordon, 2018). A biomarker is an objective biological... are obvious-a biomarker provides a clue to addressing underlying pathology. For example, in Alzheimer’s disease, beta amyloid... research, and accumulation of these substances in asymptomatic individuals may have predictive value (National Institute of Health, 2018). Considering this, it is not surprising that Alzheimer’s disease is currently one of the leading neuroscience conditions for research investment (Sperling, et al., 2014). Other examples of biomarkers are found in depression, where one “Biotype” was recently associated with better response to transcranial magnetic stimulation (Drysdale, et al., 2017) and where the cingulate cortex was associated with a differential response to medication and psychotherapy (Dunlop, et al., 2017).

These biomarkers are among the latest developments in descriptive psychiatry, an approach which was distinguished from dynamic psychiatry in the early 20th century (Compton, et al., 1995). Following the work of pioneers such as Kraepelin and Bleuler in schizophrenia (Andreasen, et al., 1993), generations of experts have contributed in this way to the evolution of the diagnostic and statistical manual. The NIMH’s Research Domain Criteria, RDoC, were formulated beginning in 2009 to provide a... medicine for mental disorders, thus re-orienting psychiatric... illness (Cuthbert, 2015). Previous NIMH Director Thomas Insel has portrayed the current diagnostic system as a mixed blessing which may hamper treatment progress, pointing as evidence to relatively stable suicide rates over decades (Insel, 2014).

Improved tools for diagnosis and treatment are driving change in today’s descriptive psychiatry. Where the functioning brain once was largely inaccessible for study, we can now apply a multitude of approaches, including fMRI, PET, and SPECT. Remarkably, these technologies have even facilitated assessment of the effects of psychodynamic therapy, e.g., Psychodynamic therapy for depression was associated with resolution of limbic and

subcortical hyperactivity (e.g., In the amygdala and basal ganglia) in depression as seen on fMRI (Wiswede, et al., 2014). The science of genetics has also rapidly advanced, yielding more sophisticated psychiatric epidemiology, e.g., Large rare recurrent deletions and duplications at certain chromosomal “hotspots” (e.g., 22q11.2, 38r3304. 37s33/s35. 3s4303. 37s3505+“ ceeqwpv” hqt” c” ukiplkLecpv” minority of intellectual disability, autism spectrum disorder, and schizophrenia (Lowther, et al., 2017). All of these developments are currently being promoted by the Brain Initiative (Markoff, 2013).

Rating scales constitute another form of objective measurement. Scales such as the PHQ-9 are being increasingly implemented to address the rising costs of care. As the role of mental health in the cost of such physical illness as diabetes is more apparent, the... al., 2016). These measures assess progress, promote quality care,

revolution in psychiatric diagnosis. *Eur Arch Psychiatry Clin Neurosci*, 245: 196-201.

Cuthbert, BN. (2015). Research domain criteria: Toward future psychiatric nosologies. *Dialogues Clin Neurosci*, 17: 89-97.

Drysdale, AT., Grosenick, L., Downar, J., Dunlop, K., Mansouri, F., Meng, Y., et al., (2017). Resting-state connectivity biomarkers... 23:28-38.

Dunlop, BW., Rajendra, JK., Craighead, WE., Kelley, ME., McGrath, CL., Choi, KS., et al., (2017). Functional connectivity of the subcallosal cingulate cortex and differential outcomes to treatment with cognitive-behavioral therapy or antidepressant medication for major depressive disorder. *Am J Psychiatry*, 174

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- Johnson, JA., Lier, DA., Soprovich, A., Al-Sayah, F., Qiu, W., & Majumdar, SR. (2016). Cost-effectiveness evaluation of collaborative care for diabetes and depression in primary care. *Am J Prev Med, 51*: e13-20.
- Lowther, C., Costain, G., Baribeau, DA., & Bassett, AS. (2017). Genomic disorders in psychiatry-what does the clinician need to know? *Curr Psychiatry Rep, 19*:82.
- Markoff, J. (2013). Obama seeking to boost study of human brain. *New York Times*. February 17, 2013.
- National Institute of Health. Estimates of Funding for Various Research, Condition, and Disease Categories (RCDC). accessed February 19, 2018.
- Sperling, R., Mormino, E., & Johnson, K. (2014). The evolution of preclinical Alzheimer's disease: Implications for prevention trials. *Neuron, 84*: 608-22.
- Wiswede, D., Taubner, S., Buchheim, A., Münte, TF., Stasch, M., Cierpka, M., et al., (2014). Tracking functional brain changes in patients with depression under psychodynamic psychotherapy using individualized stimuli. *PLoS One, 9*:e109037.