

TARGET MENTAL HEALTH ... and the facts are ...

The Early Light of a Long Sunrise

By Bill Wilkerson,

Executive Chairman, Mental Health International

Chairman, TARGET Mental Health (Europe)

It is like the early light of a long low sunrise. Night is ebbing. Dawn has awakened. But a tough, long day lies ahead. That's how the fight against mental illness looks and feels. Yet, we can see streaks of progress across the morning sky.

- **For the first time**, science is closing in on the causes of mental illnesses thanks to major gains in neuroscience and the mapping of the human genome.
- **For the first time**, science believes that major brain disorders – such as depression and even dementia – begin early in life before symptoms appear. This insight will open the door to preventing the graduation of these disorders.
- **For the first time**, neuroscientists are working with psychiatrists and family physicians to 'personalize' treatments of mental disorders through genetic and brain data that can predict with higher levels of accuracy which drugs will work and which drugs will not.
- **For the first time**, successive nations have embarked upon 'brain projects' to map the circuitry and complexity of the human brain and to understand how brain dysfunction, disorder and disquiet happens and how these can be resolved.

Genetic Cause Coming into View

Dr. Daniel Weinberger, a world-celebrated psychiatrist and director of the Lieber Institute at Johns Hopkins University in the United States says that, 'through genetic discoveries, science now has its first 'absolute, objective clues to what these illnesses are at a very, very basic cellular level. In mental illness.'

‘And like all common medical illness – genes provide the clues to causation’, he says. ‘As a result, we have the first objective clues to predict individual risk’. That said, now we need a better way to find new treatments because not one treatment in psychiatry today – not one - is based on understanding the causes of mental illness.

Dr. Weinberger continues: ‘Like all medical disorders, mental illnesses are based on genes that determine one’s risk, not one’s fate, and this provides the opportunity to reverse the probabilities of risk.’

‘Genes do not cause hallucinations and illusions, depression, panic attacks or anxiety, although they can be associated with these.’ He says ‘genes form a blueprint for moment-to-moment function of all the cells in the body to store information’.

Just over a year ago, scientists in the United States discovered that disorders traditionally thought to be distinct – autism, ADHD, major depression, bipolar disorder and schizophrenia – share the same genetic risk factors, helping scientists to move toward classifying disorders informed by actual cause.

What is understood is that mental disorders are brain disorders and according to Dr. Thomas Insel, former Director of the National Institute for Mental Health, now head of Health Sciences for Alphabet, Google’s corporate parent, ‘we should no more blame ourselves or others for a malfunctioning brain than for a malfunctioning pancreas, liver or heart’.

Dr. Weinberger foresees real progress in the next 5-10 years in how physicians diagnose and treat mental disorders if and when new knowledge about the brain transfers clues to causation and causation to cures.

One thing is not plausible: physicians can’t keep basing diagnosis solely on described symptoms with no support from biomarkers. Leaders in brain science are trying to move psychiatry beyond the symptoms-based system of diagnosis.

There again, a light of hopefulness shines through.

Neuroscientists are now working with family physicians and psychiatrists to improve treatments of mental disorders through genetic and brain data testing to predict which drugs will be effective and those that will not.

A team of scientists at the Institute of Psychiatry at Kings College discovered the first solid evidence that genetic variations may cause depression. According to the lead scientist, this provides the first genetic focus for treating depression.

The Hope for Depression Research Foundation in New York formed a committee of neuroscientists who found that:

- A single protein regulates the ability of people to be resilient to depression;

- Chronic stress leads to impaired regulation of the flow of information in the brain and this can lead to depression;
- Early childhood trauma can damage the normal function of the brain and increase the chances of major clinical depression.

Brain projects are sprouting up across the world like flowers in spring and one of the most significant is the European Union's 'Human Brain Project'.

A 2005 European Union report concludes that the advancement of mental health is an appropriate vehicle to achieve social goals. The same is true in meeting 'economic objectives'. Testifying to this, the World Economic Forum's Global Agenda Council on Mental Health is targeting depression as 'a deliverable' to improve productivity.

Depression, Kings College researchers conclude, has progressed steadily through the 20th century and threatens to do the same in the 21st century. Depression reaches across whole generations, and has a real scale. If depression was a country, it would be among the top ten most populous in the world today.

Its cause is not known, but genes play a big role and the experiences and environments of work and life contribute for good and ill. Chronic job stress and sudden trauma can trigger the onset of depression.

'Treatment Gap'

A recent report funded by European Commission programs analyzed workplace mental health (MATRIX, May 2013) and pegged the 'total costs of depression in the European Union at €610B over one year.

- Heaviest burden – business €270B/year through employee lost work time and the economy, €240B/year through reduced output.
- Healthcare costs €60B/year and social welfare costs (disability payments) €40B/year.
- In summary:
 - Business and Economic costs are 84% of the EU depression burden;
 - Healthcare and Social Welfare costs are 16% of the EU depression burden.

This reflects the lack of access to adequate care, and looking ahead, more effective antidepressant medication, increased use of primary care, wider use of talk therapies, and better workplace-based support and education will together drive the costs of treatment down and the benefits of care up.