



Saint
Louis
Mental
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Board

NEWSLETTER



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Welcome

**Brooke Sehy,
MHB Board member**



Welcome to the Fall 2006 issue of "How's *YOUR* Mental Health?" The St. Louis Mental Health Board (MHB) developed this quarterly e-zine to help St. Louis residents become better informed about issues surrounding mental health and substance abuse.

Devastating disorders such as schizophrenia, depression and bipolar disorder, Alzheimer's disease, the mental and behavioral disorders suffered by children, and a range of other mental disorders affect nearly one in five Americans, including many in our own city. But while the lifespan of the average American has nearly doubled since 1900, mental health was often an afterthought and illnesses of the mind remained shrouded in fear and misunderstanding

Today mental health has emerged as one of the most exciting arenas of scientific activity and human inquiry. The US Congress declared the 1990s the Decade of the Brain. We learned much through research, and those advances continue to accelerate into this new decade through studies such as the Human Genome Project and clinical trials that test new medications.

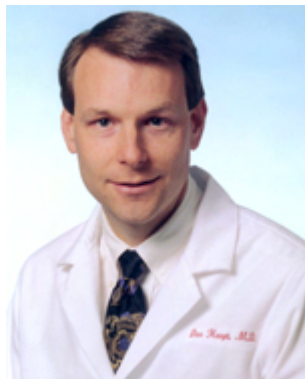
Each edition of "How's *YOUR* Mental Health?" focuses on a topic that impacts the lives of many St. Louisans. This issue is devoted to exploring advances in treatment, and even the future prevention, of mental illnesses.

In this e-zine you will find:

- Information on exciting research being done at Washington University School of Medicine
- A first-hand accounting by a schizophrenia patient who was helped by a new medication
- An explanation of a clinical trial and what it accomplishes
- Information on the Human Genome Project
- A report by the Surgeon General on the state of Mental Health research in the US
- Information on a gene that has been discovered that is linked to mental illness
- Findings from a government studies comparing the effectiveness of five schizophrenia drugs
- A link to MHB's board and staff
- Links to useful web sites and other sources of information

Special Commentary: Advances in Medicine at Washington University

Dr. Dan Haupt, Assistant Professor of Psychiatry at Washington University School of Medicine



We have come a long way in the treatment of mental illness since the early days, and much of that progress is due to clinical trials and studies. Today we have better medications with less side effects. Unfortunately, some of the newer medicines we are using – especially those for the treatment of schizophrenia - can have some fairly serious *medical* side effects.

One example of a large study underway at the National Institute of Mental Health is the CATIE study. Its main goal is to compare the effectiveness of five different medications used to treat schizophrenia.

The results are starting to come in, and there are not large differences in the effectiveness of different treatments for schizophrenia. All seem to do a pretty good job with signs and symptoms.

Of interest is the reinforcement the study provided to the difference in the medical side effects of the drugs. Primarily, they are associated with weight gain, some with small amounts, others with large amounts.

The Department of Psychiatry at Washington University School of Medicine is extremely active in performing research. At any one time there are literally dozens of studies going on at the same time. Most of the research is funded by the National Institute of Health.

I spend most of my time performing studies that look at the medical side effects of medication. For example, we are very interested in how mental health drugs affect changes in weight and how those changes in weight can put individuals at risk for diabetes and heart disease. One of the concerns we have is that schizophrenia patients die of heart disease at twice the rate of the general population. This gets into multiple lifestyle issues associated with the illness. We are looking at whether medications may also be increasing this risk.

Typically studies are designed to see how effective medicine is, and they can take several months. Studies we are doing in our own lab at Washington University look at side effects of medication don't run quite as long because you can see side effects quite rapidly with some medications.

The number of people participating in a study will vary. If there is a big difference in medications you will see that fairly quickly with a smaller group of people, but if you are looking at more subtle differences you need to look at larger numbers of people using the medication.

Study participants can run into a couple of issues. Many people with mental illness don't believe they are sick, so it can be harder to recruit them. These medications are also so effective that sometimes people are lulled into a false sense of security. They are doing so well they don't feel they need the medication any more, and that can lead to relapses.



Dr. Gabriel de Erausquin,
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Most people that suffer from depression respond very well when they first begin medication and psychotherapy. After four to six weeks about 75 percent show a marked improvement and the disappearance of the most severe symptoms.

While 3 out of 4 people will respond favorably, that fourth person will have trouble finding medication that works. Those are the people that we are interested in finding and trying to help with our studies at Washington University School of Medicine.

Vagal nerve stimulation: Vagal nerve stimulation was approved in 2005 by the U.S. Food and Drug Administration to treat severe treatment-resistant depression. A vagal nerve stimulator is similar to a cardiac pacemaker and is implanted in the chest with leads that run under the skin to the vagal nerve in the neck. The device emits electrical pulses to simulate the brain, and also is used to treat epilepsy.

Over the months, it stimulates the brain. We have found it to be very successful in about one-third of people who do not do well with medication. It's not the perfect treatment in that it doesn't help everyone, but it gives them a significant chance for improvement. If they do improve, the response never goes away, at least as far as we can tell 2.5 years out from the first implant. And, just as importantly, whatever benefit they get tends to improve over time.

In our research we are interested in understanding who is most likely to benefit from the procedure so we do not have to submit people to unnecessary surgery.

Transcranial magnetic stimulation: Transcranial magnetic stimulation is another form of stimulating the brain, though it is done from the outside of the body rather than from the inside.

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A very powerful magnet is placed outside of the brain on the part called the frontal lobe – the area that is association with the control of emotion. It appears to have the same effect as vagal nerve stimulation on people with treatment-resistant depression, and lacks some of the side effects of older forms of stimulation.

It has not yet been approved by the FDA, and it is currently being used in a study conducted at Washington University School of Medicine.

Individuals in either of these studies have the unique opportunity to develop finer treatments for those who have no glimmer of hope for relief from their condition.

If you are interested in being a part of one of these studies, or for more information on other studies being done within the Department of Psychiatry at Washington University School of Medicine, call 314-362-1819.

A First-Person Account of a Clinical Study Participant

Bill had been diagnosed as a young man with schizophrenia, an illness that completely changed the course of his life. It required a rearrangement of his dreams and ambitions. Bill found a medication that's been very effective for him through a research study. This is his story.



Before I began taking the new medication I was completely disoriented and had trouble keeping track of time. I had tried all kinds of older medicines and they didn't work. They also caused bad side effects, like muscle cramps. I was referred by Barnes-Jewish Hospital to a doctor who was conducting a study on a new drug and he reviewed me for the study. I told that man I would take anything he could give me. I really was looking for some help.

My requirements for being in the study were very simple: keep my doctor appointments, and take the medicine to the best of my ability. Things like showing up on time and keeping doctor appointments are very hard to do when you have a mental illness. With the medications you've got to take them very accurately for them to work for you. If I missed a dose it threw me off for a couple of days, and took me that long to get back on track.

At first I got my medications on cards and they had them dated to help me take them correctly. I took some in the morning and some in the evening. I then had pill reminder containers, and they are good if you can fill them accurately.

I soon noticed I was able to function better. Before I was all wrapped up in my own world, and could spend the whole day fantasizing. After three months I wanted to be more social.

I have been with this medication for 10 years, and it put me where I am today. I'm now self sufficient and in the real world rather than in my own world.

Understanding Clinical Trials

A clinical trial is a scientific experiment that is done with people who volunteer to participate where conditions are carefully controlled and closely monitored.

Clinical trials are crucial to medicine as they are research studies designed to answer questions about new drugs, devices, therapies, or new ways of using known treatments.

Often a clinical trial is designed so that neither the study volunteer nor the medical staff knows if the study volunteer is actually receiving the experimental drug. This would be called a "blinded study." A study is blinded in order to eliminate the possibility of unfairness in the assessment of the effectiveness of the study drug.

A **Phase I** trial involves giving the experimental treatment to healthy people in order to generate preliminary information on safety.

A **Phase II** trial is generally carried out on people having the disease or condition for which the experimental treatment has been developed. The main purpose is to provide preliminary information on effectiveness of the drug and to provide additional information on safety and side effects.

Usually the **Phase III** trial is the third and final stage in testing a new drug in people. The Phase III trial is concerned with assessment of dosage effects, effectiveness, and safety and aimed at providing information for labeling in relation to use by the general public.

A **Phase IV** trial is performed after the drug has been FDA approved for and is typically done under circumstances approximating real world conditions instead of carefully controlled conditions. Often it measures the long-term effects of a new drug.

Once the clinical trial begins, the FDA closely monitors its progress. In addition to approval by the FDA, every clinical trial requires approval and monitoring by the *Institutional Review Board (IRB)*. The IRB is a committee made up of doctors and community representatives. The purpose of the IRB is to review research and determine if the rights and welfare of research volunteers are adequately protected.

Each clinical trial is different, therefore the benefits vary. Some clinical trials offer volunteers the opportunity to try treatments that appear to be promising but are not yet available. Often patients meet with the study staff on a regular basis and as a result, become motivated to take better care of themselves. And you are giving of yourself and helping society make medical progress.

Data from Johns Hopkins University School of Medicine

Future Treatment and Prevention of Mental Illness through Genetics

The Human Genome Project (HGP), sponsored by the US Department of Energy and the National Institutes of Health, is playing an increasingly important role in the diagnosis, monitoring, and treatment of diseases, including those in the field of mental health.

All diseases have a genetic component, whether inherited or resulting from the body's response to environmental stresses like viruses or toxins. The goal is to use this information to develop new ways to treat, cure, or even prevent the thousands of diseases that afflict humankind. Researchers are even able to pinpoint errors in genes--the smallest units of heredity--that cause or contribute to disease.

Treatment failures occasionally happen today with drugs for certain anti-depressants. In the next 15 to 20 years, more effective drugs will be developed, and doctors will test individual genetic profiles against panels of drugs available for a specific condition and choose the treatment with the greatest potential benefit.

Today, some 100,000 people die each year from reactions to drugs, and millions of others must bear uncomfortable or even dangerous side effects. We see nervous system effects with certain types of anti-depressant medications. As genes and other DNA sequences that influence drug response are identified, we can expect most side effects to be eliminated.

Data from doegenomes.org

A Report by the Surgeon General on Mental Health

The message of the report is that **mental disorders are real health conditions** that have an immense impact on individuals and families throughout this Nation and the world. Appreciation of the clinically and economically devastating nature of mental disorders is part of a quiet scientific revolution that not only has documented the extent of the problem, but in recent years has generated many real solutions.

Today, a strong consensus among Americans in all walks of life holds that our society no longer can afford to view mental health as separate and unequal to general health. This consensus resonates with the Surgeon General's conviction that mental health should be part of the mainstream of health.

On the strength of these findings, the single, explicit recommendation of the report is to *seek help if you have a mental health problem or think you have symptoms of a mental disorder.*

Increasingly effective treatments for mental disorders promise to be the most effective antidote to the stigma of mental illness. Effective interventions help people to understand that mental disorders are not character flaws but are legitimate illnesses that respond to specific treatments, just as other health conditions respond to medical interventions.

Mental Disorders Are Disabling

The World Health Organization, in collaboration with the World Bank and Harvard University, mounted an ambitious research effort in the mid-1990s to determine the "burden of disability" associated with the whole range of diseases and health conditions suffered by peoples throughout the world. Possibly the most striking finding of the landmark Global Burden of Disease study is that the impact of mental illness on overall health and productivity in the United States and throughout the world is profoundly under recognized.



Today, in established market economies such as the United States, mental illness is the second leading cause of disability and premature mortality. Mental disorders collectively account for more than 15 percent of the overall burden of disease from *all* causes and slightly more than the burden associated with all forms of cancer (Table 1). These data

underscore the importance and urgency of treating and preventing mental disorders and of promoting mental health in our society.

Disease burden by selected illness categories in established market economies, 1990

	Percent of Total DALYs*
All cardiovascular conditions	18.6
All mental illness**	15.4
All malignant disease (cancer)	15.0
All respiratory conditions	4.8
All alcohol use	4.7
All infectious and parasitic disease	2.8
All drug use	1.5

*Disability-adjusted life year (DALY) is a measure that expresses years of life lost to premature death and years lived with a disability of specified severity and duration (Murray & Lopez, 1996).

**Disease burden associated with “mental illness” includes suicide.

Adults and Mental Health

Research has improved our understanding of mental disorders in the adult stage of the life cycle. Anxiety, depression, and schizophrenia, particularly, present special problems in this age group. Anxiety and depression contribute to the high rates of suicide in this population. Schizophrenia is the most persistently disabling condition, especially for young adults, in spite of recovery of function by some individuals in mid to late life.

Research has contributed to our ability to recognize, diagnose, and treat each of these



conditions effectively in terms of symptom control and behavior management. Medication and other therapies can be independent, combined, or sequenced depending on the individual’s diagnosis and personal preference.

Substance abuse is a major co-occurring problem for adults with mental disorders. Evidence supports combined treatment, although there are substantial gaps between what research recommends and what typically is available in communities.

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As the life expectancy of Americans continues to extend, the sheer number of persons experiencing mental disorders of late life will expand, confronting our society with unprecedented challenges in organizing, financing, and delivering effective mental health services for this population. An essential part of the needed societal response will include recognizing and devising innovative ways of supporting the increasingly more prominent role that families are assuming in caring for older, mentally impaired and mentally ill family members.

Condensed from: U.S. Department of Health and Human Services. Mental Health: A Report of the Surgeon General—Executive Summary. Rockville, MD: U.S. Department of Health and Human Services, Substance Abuse and Mental Health Services Administration, Center for Mental Health Services, National Institutes of Health, National Institute of Mental Health, 1999.

New Findings: Older Antipsychotics can be as Good as New Ones

A major government study recently pitted a new generation of schizophrenia drugs against one another with no clear winner. The results came from a five-year study funded by the National Institute of Mental Health (NIMH) and appeared in the Sept. 22, 2005 issue of *The New England Journal of Medicine*.

The CATIE, or Clinical Antipsychotic Trial of Intervention Effectiveness, study enrolled 1,493 schizophrenia patients at 57 medical centers. Participants were randomly assigned to take one of five drugs -- Zyprexa, Seroquel, Risperdal, Geodon or perphenazine -- for 18 months, a period picked because therapy duration is a marker for schizophrenia control. Neither patients nor their doctors knew what medication they were taking.

Zyprexa was found to be the most effective of the drugs, but its use comes with a price due to its greater number of side effects.

Zyprexa users gained an average of 2 pounds a month, and 30 percent gained a significant amount -- 7 percent or more of their baseline weight -- accompanied by increases in cholesterol and diabetes-threatening high blood sugar.

Weight gain is a risk with all antipsychotics, but just 7 percent to 16 percent of users of Zyprexa's competitors gained the larger amount. No one knows why these drugs spur weight gain -- they could affect appetite, or the body's sensitivity to the diabetes-related hormone insulin.

Coming in a surprise second was perphenazine -- a little-known older drug that almost didn't make it into the study. It was found to be comparable to at least three of the new medications and not much worse than Zyprexa. Contrary to expectations, the old drug did not cause more Parkinson's symptoms than the new drugs. Perphenazine can cost no more than \$50 a month compared with more than \$600 for Zyprexa, depending on dose.

Before the development of antipsychotics 50 years ago, most patients with schizophrenia -- characterized by hallucinations and disordered thinking -- were institutionalized. While the drugs have improved patients' care greatly, they aren't a cure, and side effects can affect how likely someone is to continue treatment. There had never been a direct comparison of all the leading treatments to see which works best long-term.

Data from my.webmd.com and The Associated Press

Where to Call for Mental Health Help:

American Academy of Child and Adolescent Psychiatry www.aacap.org	1-202-966-7300
Behavioral Health Response (BHR) 24-hour crisis hotline staffed by professional counselor www.bhrstl.org	1-800-811-4760 314-469-6644
Council for Exceptional Children http://ericec.org	1-866-915-5000
Federation of Families for Children's Mental Health www.ffcmh.org	1-240-403-1901
Life-Crisis Service 24-hour hotline staffed by trained volunteers www.lifecrisis.org	314-647-4357
Missouri Department of Mental Health Eastern Region Office dmhmail@mail.dmh.state.mo.us	1-800-364-9687 314-877-0370
National Clearinghouse on Family Support and Children's Mental Health www.rtc.pdx.edu/	1-503-725-4040
National Information Center for Children and Youth with Disabilities www.nichcy.org	1-800-695-0285
National Mental Health Association www.nmha.org	1-800-969-NMHA

Web Sites

The following web sites can provide more information about advances in the treatment of mental health:

www.vfh1.wustl.edu - Sponsored clinical research is currently in progress in many areas of healthcare at the Washington University Medical Center and affiliated sites. This is a link for more information.

www.clinicaltrials.gov – Provides regularly updated information about federally and privately supported clinical research, giving information about the purpose, who may participate, locations and phone numbers for more details.

www.nimh.nih.gov/healthinformation/schizophreniamenu.cfm - A link to information on research funded by the National Institute of Mental Health

www.narsad.org – The mission of the Mental Health Research Association (formerly known as NARSAD) is to raise funds for psychiatric brain disorder research, in an effort to find the causes, better treatments, and eventual cures for these disorders. It lists top news stories on mental health disorders.