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PSYCHIATRIC NEWS

The First and Last Word in Psychiatry

ISSN 0033-2704

Joan Arehart-Treichel

This building serves as headquarters for a farm in western Massachusetts that for 100 years has been helping individuals with serious mental illnesses recover. The farm has been a model and inspiration for treatment facilities throughout the world. See story on page 8.

Medicare Quality Program Adds Stick to Its Carrot

Clinicians can earn a reimbursement bonus if they report quality measures on at least 50 percent of their Medicare patients, but they face a penalty if they don't meet a reporting requirement by the end of this year.

BY MARK MORAN

Psychiatrists treating Medicare patients and receiving Medicare reimbursement will need to file at least one quality reporting measure before the end of 2013 to avoid a 1.5 percent penalty on their future Medicare reimbursements.

That penalty will be imposed on Medicare reimbursements beginning in 2015. The quality reporting measures are the key component of Medicare's Physician Quality Reporting System (PQRS), the government's "pay-for-performance" program to link physician payment to measurements of evidence-based practice rather than just paying a standard fee for every procedure with a CPT code.

Established in 2006, the PQRS has been an incentive program that paid a premium on all Medicare claims to providers who met the PQRS requirements. But now the government is transitioning to a set of incentives and disincentives—a fairly small carrot and a (for now) fairly light stick—in an effort to enlist participation in the program. Thus, to earn the .5 percent premium incentive for 2013 and 2014,

see ***Quality Program*** *on page 42*

New Data Add to Evidence For Genetic Causes of Schizophrenia

As scientists scan and analyze thousands of DNA samples from patients, a picture of the "genetic architecture" of schizophrenia finally begins to emerge.

BY JUN YAN

Recent genomic discoveries are converging on several heritable risks that contribute to the development of schizophrenia. One such discovery arises from a new genomewide association study (GWAS) that identified 22 chromosomal regions with genetic variations that are linked to schizophrenia. Thirteen of these regions had not been identified before, while the rest confirmed findings of previous studies.

The multinational study, including researchers and funding from the United States, Sweden, and the Netherlands, was published online August 25 in *Nature Genetics*.

The single-nucleotide polymorphisms (SNPs) identified in this study cluster in four genetic regions (known as loci) that appear to harbor risk variations for schizophrenia: the calcium channel signaling pathway, which has already been implicated in psychotic disorders in a previous GWAS (*Psychiatric News*, April 5); areas on chromosome 6 that code for major histocompatibility complex (MHC), which plays a critical role in the immune system; the MIR137 gene coding for microRNA-137; and the long intergenic noncoding RNAs (lincRNAs), which are involved in the regulation of gene expression and epigenetics.

"This is still a tip of the iceberg," Patrick Sullivan, M.D., a professor of genetics and psychiatry at the University of

see ***Schizophrenia*** *on page 42*

PERIODICALS: TIME SENSITIVE MATERIALS

PSYCHIATRIC NEWS

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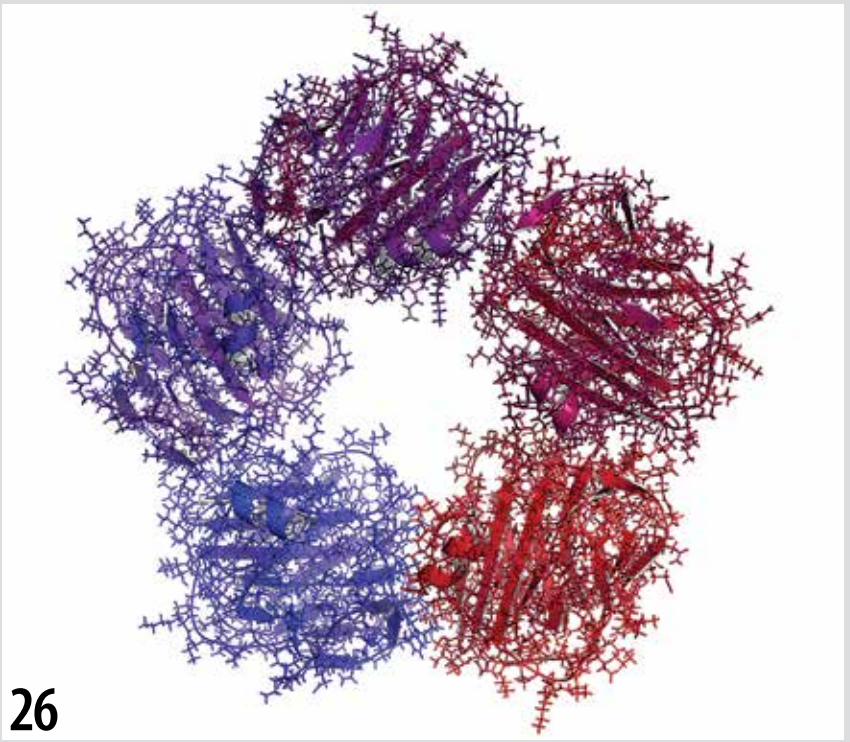


PROFESSIONAL NEWS

ASSOCIATION NEWS

CLINICAL & RESEARCH NEWS

Are You an APA Member?

If so, you have an exclusive opportunity to register for APA's 2014 annual meeting in New York City and reserve your hotel room

between **November 1** and **November 15**. Save on fees by taking advantage of the early-bird registration rates, not increased for APA members this year. Registration information can be accessed at www.annualmeeting.psychiatry.org. (If you don't have your log-in information, call [703] 907-7300.) To reserve your first-choice hotel, reserve through the annual meeting website (above) or call Travel Planners at (800) 221-3531 or (212) 532-1660.

Departments

FROM THE PRESIDENT

Change, Challenge, and Opportunity: Psychiatry Through the Looking Glass of Research

BY STEVEN E. HYMAN, M.D., AND JEFFREY LIEBERMAN, M.D.

Alice: Would you tell me, please, which way I ought to go from here?
The Cat: That depends a good deal on where you want to get to.
—Lewis Carroll
Alice's Adventures in Wonderland

The first two articles in this series addressed the prospect of change in psychiatric medicine and mental health care and the anticipated effects, in this regard, of health care reform. In this article we discuss the current status of biomedical research and how it will impact our field and practice.

The research enterprise has brought clinical psychiatry to an exciting but treacherous juncture. Based on remarkable new tools and technologies in genetics and neuroscience, there has been an explosion of new knowledge about the etiology and neural underpinnings of schizophrenia, bipolar disorder, Alzheimer's disease, autism, addictions, and other serious conditions. Indeed, the fields of psychiatric medicine and mental health care are poised on the brink of transformative advances in diagnostic methods and therapeutic modalities. However, just at the time when biomedical research is gaining significant traction and momentum in understanding the brain and mental disorders, support for all research, and most importantly biomedical research funded by the National Institutes of Health, is painfully contracting, the result of congressionally driven budget cuts. Just as scientific opportunity in our field is waxing, the ability to exploit it is waning.

The recent budget sequestration has had a huge negative effect, but is part of a larger pattern of what has been eroding the support for research in the United States. The decline in research funding affects all of medicine, but psychiatry faces a special problem. Since 2010, the pharmaceutical industry has substantially retreated from research on psychiatric disorders despite years of commercial success with antidepressants and antipsychotic drugs. Payers, and in Europe regulators, are resisting the longstanding pattern of industry marketing new psychiatric drugs that often have milder side-effect profiles but lack significant improvements in efficacy over existing treatments. Leaders in industry recognize the promise of new discoveries being made in psychiatry. However, they see this emerging work as

too early to apply to the development of truly novel treatments, including much-needed treatments for conditions such as the cognitive and negative symptoms of schizophrenia and the core social and communication disabilities of autism that currently lack effective pharmacologic interventions. The retreat of industry further decreases funds for psychiatric research and discourages young scientists from entering the field.

Consequently, it is critical for psychiatrists, neuroscience researchers, and patient advocacy groups to make a case for funding by the government and foundations and to help convince industry to resume psychiatric research, albeit on a new and better scientific footing.

Some of the most exciting scientific research on the brain and mental disorders has been in the areas of genetics and stem-cell technology.

Genetics

Why is it important to discover specific genes that are involved in the etiology of psychiatric disorders? It is because genes encode the information to produce the ribonucleic acid (RNA) molecules and proteins that are the key building blocks of our cells. When a particular variation in the sequence of a person's DNA increases risk for an illness, it is a clue to the cellular process that has gone awry and that might ultimately lead to a therapy. Discovery of genes that produce risk of psychiatric illness allows us to follow the successful lead of other fields of medicine such as oncology. Cancer therapeutics has a long way to go, but there is great excitement in the field; indeed, many companies that have deemphasized psychiatry are highly focused on cancer. This is because a large number of the genetic mutations have been discovered within cancer cells, and some have been shown to play causal roles, for example, by dysregulating cell division. Many new cancer therapies target the biological effects of specific gene mutations in cancer cells. These therapies fail when new mutations occur in cancer cells that make them resistant to the treatment (like bacterial infections in which the organisms develop resistance to antibiotics); eventually, cancer may be treated with combination treatments that make it difficult for the cells to escape—like current treatments for HIV.

Although the path from genes to treatments is being blazed by other fields, psychiatry has a harder problem. The causative de novo mutations in cancer cells are thought to occur as a result of errors in repairing DNA after exposure to environmental toxins such as cigarette smoke. The mutations then exert their disease burden by amplification during active cell division. Since psychiatric diseases are thought to reflect dysfunction of ensembles of nondividing neurons, somatic mutations targeting an individual cell are much less likely to produce a psychiatric disease phenotype the way they would in cancer. The DNA changes associated with mental disorders are those we are born with and are thus in every cell in the body. In addition, they tend not to be harmful mutations that can act alone, but variations that create risk only when they come together in infelicitous combinations. Finally, psychiatric symptoms do not result from the action of rogue cells that can be retrieved by a surgeon and made available for science. Instead they result from patterns of communication in highly distributed neural circuits within our brains. What is exciting is that we can now discover DNA sequence variation in the human genome that creates risk for psychiatric disorders. We can also turn human skin cells into neurons in the lab using recent stem-cell technologies and use these neurons to compare versions of particular genes that do or do not increase risk of psychiatric disorders. Finally there are new tools to study the function of cells and circuits in the brain.

The scientific challenge for psychiatry is that genetic risk for disorders such as schizophrenia or bipolar disorder does not result from one or two damaging

see ***From the President*** *on page 14*

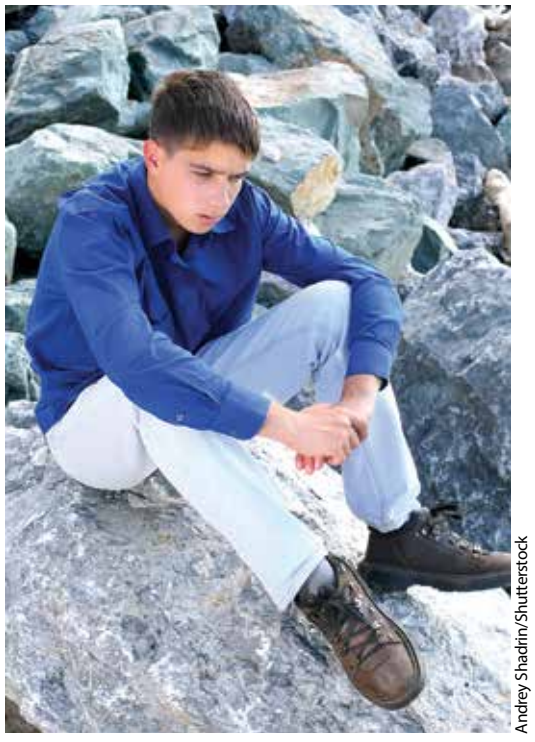
Steven E. Hyman, M.D., is the director of the Stanley Center for Psychiatric Research at the Broad Institute and a Broad Institute core member. He is also the Harvard University Distinguished Service Professor of Stem Cell and Regenerative Biology.

PROFESSIONAL NEWS

CBT Program Helps Some Teens Lower Their Depression Risk

An example of the encouraging results of recent mental illness prevention research comes from a new study showing that a cognitive-behavioral program is effective in preventing depression in some at-risk teens.

BY JOAN AREHART-TREICHEL



Andrey Shadrin/Shutterstock

When teens at risk for depression learn how to deal with unrealistic or negative thoughts, they may be able to keep from becoming depressed over the long haul, suggests a study headed by William Beardslee, M.D., a professor of child psychiatry at Harvard Medical School.

The study included 316 youth aged 13 to 17 with a parent who had been diagnosed with current or prior depressive disorders and who themselves had a history of depression or had current depressive symptoms that did not meet sufficient criteria for a depression diagnosis.

All the teens in the study, which was published September 4 in *JAMA Psychiatry*, were permitted to initiate or continue mental health care services not related to the prevention program being evaluated in the study. Half of the youth were randomly assigned to receive a cognitive-behavioral prevention (CBP) program that included eight weekly group sessions emphasizing cognitive restructuring and problem solving, as well as six monthly booster sessions.

For example, "Youth in the CBP program were taught to pay closer attention to their thoughts or 'self-talk'—the automatic and often unexamined beliefs and interpretations that we all have in response to difficult situations," Beardslee explained in an interview with *Psychiatric News*. "The program particularly focused on unrealistic or highly negative self-talk (for instance, 'If I don't get 100 percent on this test, I'll be a failure for life'). Once teens became skilled at uncovering these beliefs, we taught them to test the accuracy, usefulness, and reasonableness of these beliefs. They asked themselves whether each belief was going to help them now or in the future. What was the evidence supporting the belief? What was the evidence against?"

Once the subjects "identified particular beliefs or self-talk as unrealistic or unhelpful, they were taught to generate alternative, more realistic beliefs to test in place of the original belief," Beardslee said. "Did this new interpretation help them? Did they feel less depressed, anxious, or angry? If their negative belief was in fact accurate (for example, something undesirable did actually happen), then they were taught ways to either change the situation (problem-solving) or manage their reactions to it (secondary control coping)."

The subjects were evaluated for depression at baseline, after the acute intervention (month 2), after the booster sessions (month 9), and again at months 21 and 33.

Over the 33-month follow-up period, and for the sample as a whole, the intervention was significantly effective, with 37 percent of subjects in the CBP group experiencing a depressive episode of at least two weeks compared with 48 percent in the usual-care group. Depression was determined by a score of 4 or higher on the six-point Depression Symptom Rating. The teens also completed the CES-D at each follow-up evaluation.

"We were quite pleased that the effects noted in our earlier analysis nine months after enrollment were sustained at 33 months, as it is difficult to demonstrate longer-term prevention effects," said Beardslee. At the nine-month follow-up, 21 percent of the CBP group had experienced depression symptoms, in contrast to 33 percent in the usual-care group.

When parental depression at baseline was considered, though, it changed the equation. The intervention no longer appeared to be significantly effective. Specifically, where there was no parental depression at baseline, 32 percent of CBP-participating youth experienced depression during follow-up, compared with 52 percent of the youth receiving usual care. But where there was parental depression at baseline, 42 percent of the CBP group experienced depression during follow-up, compared with 43 percent of the usual-care group.

Possible reasons why parental depression eroded the program's effectiveness, Beardslee and colleagues suggested, is that "it directly affected intervention uptake or use or represented a marker of some third variable such as shared genetic vulnerability. . . ."

Beardslee said that "more study is needed to understand why it is that children whose parents are currently depressed do not benefit as much from the intervention and, importantly, what should be done about that (perhaps obtaining treatment for parents or other strategies)." He added that "more work on using these strategies in different cultural and ethnic groups and in different settings—such as schools and community settings—is needed."

Meanwhile, the findings have implications for psychiatric practice, Beardslee believes. "We should pay more attention to the prevention of depression in adolescents as well as to its treatment. In particular, psychiatrists treating depressed patients who are parents should inquire about the health and well-being of the depressed patients' children and help get them connected with services as needed. Similarly, mental health professionals working with children should ask about the mental health of the child's parents."

The study was funded by the National Institute of Mental Health, the National Center for Research Resources, and the National Center for Advancing Translational Sciences. PN

An abstract of "Prevention of Depression in At-Risk Adolescents" is posted at http://archpsyc.jamanetwork.com/article.aspx?articleid=1733254.

Key Points

- In a three-year study, a cognitive-behavioral prevention program was found to reduce the risk of depression in some teenagers who are at high risk for the disorder.
- The program emphasized cognitive restructuring and problem solving, focusing on unrealistic or highly negative self-talk—for example, "If I don't get 100 percent on this test, I'll be a failure for life." Teens were taught to generate alternative beliefs and then to test whether they felt less anxious, depressed, or angry as a result.
- Before the program can be disseminated, it needs to be studied in different cultural and ethnic groups and in different settings.

DSM-5 Mobile App Available

The *DSM-5* Diagnostic Criteria Mobile App, designed to help mental health practitioners, researchers, and students fully integrate the new *DSM* criteria and codes into their practice and study, is now available in both English and Spanish for both IOS- and Android-compatible devices. Users have full offline access to all of the criteria sets as well as online access to supporting videos, commentary, and resources. Powerful search and customization tools aid and enhance assessment of symptom presentations in a variety of clinical and administrative settings.

The app features the following:

- Access to the complete *DSM-5* diagnostic criteria sets on your phone and tablet
- Up-to-date access to *ICD-9-CM* and *ICD-10-CM* codes for clinical and administrative use
- Valuable video commentary from the *DSM-5* Task Force members highlighting changes from *DSM-IV* to *DSM-5*
- Streamlined navigation of the classification hierarchy
- Robust disorder, acronym, code, and symptom search functionality
- Bookmarking allowing customization of the criteria sets most commonly referenced for individual practice and use
- Easy access to recently viewed content

For more information visit www.appi.org/Pages/DSM5Mobile.aspx. As the *DSM-5* Diagnostic Criteria Mobile App is available for sale only through the iTunes and Android stores, traditional APA member and member-in-training discounts are not available on the purchase of this product.

Psychiatrist Finds Rewards In Teaching Collaborative Care

A psychiatrist's role in a collaborative team-based model is in part educational, serving as the source of knowledge for care managers and primary care staff. This is the seventh in a series profiling psychiatrists in integrated care.

BY MARK MORAN

"I have always been interested in interfaces," said psychiatrist Anna Ratzliff, M.D., Ph.D.

This early-career psychiatrist with Ph.D. training in the basic sciences had thought when she finished her training that she might spend her career working at the juncture of psychiatry and research. But as a graduate of the psychiatry residency program at the University of Washington (UW) School of Medicine, which has been a critical incubator of the movement toward integrated care and, specifically, the collaborative-care model, she became drawn to that crossroads where psychiatry and primary and general medical care meet.

Today she is associate director for education in the Division of Integrated Care and Public Health at UW, where she is also at the juncture of education and clinical work, training residents and established practicing psychiatrists in the skills and theoretical outlook necessary to work in a collaborative-care setting.

"In my role I am thinking about how to train a psychiatry workforce to be able to provide evidence-based integrated, collaborative care," she told *Psychiatric News*. "I look at how can we train individual psychiatrists and other clinicians, as well as how can we can disseminate better strategies to health care systems that improve the quality of mental health care and at the same time reach more people.

"When I finished training, I thought I would be a research clinician helping to use basic science to come up with new treatment modalities," she continued. "But at UW I have found two things that I really like—working in teams and the interaction between primary care and mental health care."

INTEGRATED CARE
Putting Together the Puzzle

You Learn By Doing

Ratzliff also has a clinical practice, working in the collaborative-care model developed by Wayne Katon, M.D., and Jürgen Unützer, M.D., at UW. In that model, a psychiatrist works closely with a "care manager" and primary care staff managing the mental health needs of an entire caseload or population.

Teaching, of course, has its own rewards and informs her clinical practice. "Almost everything I do is about education," she said. "The consulting psychiatrist really becomes the source of knowledge for evidence-based practice and treatment for both the care managers and the primary care physicians. I'm seen as a trusted resource."

That an educational component is "built into" the integrated-collaborative care model is one of its strengths, Ratzliff said, because it means that clinicians "learn by doing" and in the context of their own work—which educators know is one of the best ways to learn.

And that principle of learning by doing is incorporated into her work both with residents and with established psychiatrists who seek out training in integrated care through UW's AIMS Center. The center offers individual and group-based learning through in-person and online formats; learning opportunities vary in length from one-hour presentations and webinars to multiday training meetings to a six-month academic certificate program. Ratzliff and colleagues have also offered training seminars at APA meetings.

For residents, lectures on integrated care are introduced in the didactics of the second year. All residents—and practicing psychiatrists who are trained through the AIMS Center—are taught the following core principles of collaborative, team-based care:

Anna Ratzliff, M.D.

The idea behind training clinicians in the integrated care model is that clinicians "really learn best in the context of doing their work, so it's an immersive educational experience," says educator Anna Ratzliff, M.D.

- **Patient-centered care:** Primary care and behavioral health providers collaborate effectively using shared care plans. It's important to remember that co-location does not necessarily mean collaboration.

- **Population-based care:** The care team shares a defined group of patients tracked in a registry. Practices track and reach out to patients who are not improving, and mental health specialists provide caseload-focused consultation, not just ad-hoc advice.

- **Measurement-based treatment to target:** Each patient's treatment plan clearly articulates personal goals and clinical outcomes that are routinely measured. Treatments are adjusted if patients are not improving as expected.

- **Evidence-based care:** Patients are offered treatments for which there is credible research evidence to support their efficacy in treating the target condition.

- **Accountable care:** Providers are accountable and reimbursed for quality care and outcomes.

There is an integrated-care journal club and a "career pathways" program for those interested in pursuing a career in collaborative care. In the fourth year, residents can do a six-month rotation in collaborative care, working with supervision as a consultant to a care manager and primary care staff to help manage the mental health care of a defined population.

"Again, the idea is that people really learn best in the context of doing their work," she said, "so it's an immersive educational experience."

Putting Care 'Back Together'

Ratzliff noted that the Milestone Project, the initiative of the Accreditation Council for Graduate Medical Education to introduce measurement of discrete skills and competencies into residency training, includes among its core physician competencies "systems-based practice" (*Psychiatric News*, August 28).

So collaborative care, she believes, is a trend that will become only more important. And for this clinician-educator who has always wanted to be at the interface of things, the integrated-care movement is a way to return mental health care to its rightful place.

"Collaborative care is at the interface of medicine and psychiatry and works to bring them back together the way they should be," she said. "I think this may draw more people into our profession because it can be attractive to medical students who may have thought they had to choose between one or the other." PN

Resources on integrated care for members are posted on APA's website at http://www.psychiatry.org/practice/professional-interests/integrated-care. A primer on integrated care through a series of FAQs is posted at http://psychnews.psychiatryonline.org/newsarticle.aspx?articleid=1742623.

APA Election Dates to Note

- **November 1:** The names of candidates in APA's 2014 election will be announced on APA's Web site at www.psychiatry.org.
- **November 15:** Deadline for petition candidates. Those who plan to run by petition should send an e-mail to election@psych.org.
- **December 20:** Candidates' photos and website addresses will be published in *Psychiatric News*.
- **January 2:** Instructions and links to members' online ballots and candidate information will be e-mailed to all voting members for whom APA has a valid e-mail address. The remainder will be mailed a paper ballot.
- **January 2:** Online voting begins.
- **January 23:** Deadline for requests for replacement paper ballots. (Contact election@psych.org.)
- **January 31:** Online voting ends at 5 p.m. (EST). Paper ballots must be received by that time as well.

PROFESSIONAL NEWS

Farm Has Spent 100 Years Helping Those With Serious Mental Illness

Before the start of the deinstitutionalization movement, mental hospitals often had farm operations where patients helped with chores. There is still a place, however, where farms are helping people recover.

BY JOAN AREHART-TREICHEL

Even before the fog lifts from the Berkshire Mountains in western Massachusetts, and while the air is redolent with the scent of spruce and pines, adults with severe mental illness are up for breakfast before heading out to gardens, fields, barns, and a bakery. There are cows to be milked, pigs to be fed, and vegetables to harvest and prepare for lunch.

This is the way it has been for the past 100 years—ever since Gould Farm was established by visionary social reformer William Gould and his wife, Agnes, to help those with serious mental illness.

Gould Farm is all about recovery from serious mental illness and was so long before the recovery movement became popular in psychiatry.

"I think Gould Farm is an excellent place—superb!" exclaims Jeffrey Geller, M.D., a professor of psychiatry at the University of Massachusetts and APA's Area 1 Trustee. Geller has also had first-hand experience at the farm, trying his hand at milking cows.

The individuals who come to live and work at Gould Farm and stay for an average of nine months are referred by various sources—New York Presbyterian Hospital, McLean Hospital, the Menninger Clinic, among others. Many are college students who have had their first psychotic break or young adults who have had multiple episodes. In general they have mental illnesses with a psychotic component and have not responded fully to short-term hospital treatment.

The staff at Gould Farm works hard to make patients feel at home and get them involved. For example, they are called guests, not patients. When they arrive, they are asked, "What brought you to the farm?," not "What mental illness do you have?," Phyllis Vine of New York City and a member of the Gould Farm board, points out.

"They are asked to give as well as to receive," says Donna Burkhart, acting director of Gould Farm. Burkhart has been working at Gould Farm for some 30 years, along with her husband, Wayne, who serves as agricultural director.

All the guests work, and they have job choices. "The work is very serious," says Geller. "You are expected to answer to supervisors, follow a schedule, and there are expectations about the quality of your work."

At the same time that guests are working on the farm, they are also living there, as are many staff members and their families. They eat meals, socialize, and go on various outings together. "The Gould Farm staff does an excellent job in creating a community that engages guests, many of whom have great difficulty in successful social interactions," Geller notes.

While the guests are at the farm, their psychiatric needs are carefully tended to. Psychiatrist Jesse Goodman, M.D., supervises their care and their psychotropic medications. Five social workers provide a combination of supportive, cognitive, and psychodynamic therapies. A nurse dispenses the medications. All of the staff members carefully monitor the status of each guest and log their observations.

"The program relies on the old-fashioned work cure of the early part of the century, but not for morality reasons," Goodman explains. "It is because engaging in focused learning and productive

see ***Farm*** *on page 43*

It's dinnertime for the cows on Gould Farm. Milking them is one of the guests' chores.

At this roadside café, Gould Farm guests sell some of their products.

The farm uses modern equipment, such as this combine harvester. It reaps, threshes, and cleans grain crops.

Jesse Goodman, M.D., supervises patient care at Gould Farm. To learn more about his work, see information at end of story.

Photos: Joan Arehart-Treichel

Residential Treatment Takes Many Forms

Gould Farm isn't the only residential treatment facility in the United States designed to further the recovery of individuals with persistent and serious mental illness, Jeffrey Geller, M.D., a professor of psychiatry at the University of Massachusetts and an APA Trustee, told *Psychiatric News*. Each of the others has its special atmosphere and philosophy, he said.

For instance, there is the Academy Street Community Residence in Poughkeepsie, N.Y. It has been caring for individuals with persistent and chronic mental illness since 1970. Another example is CooperRiis Healing Community in Mill Spring, N.C., offering both a healing-farm therapeutic community and an urban campus that feels like a recovery "college." Other programs following the recovery model, he noted, are the Greystone Program in Philadelphia; Hopewell, a therapeutic farm community in Mesopotamia, Ohio; Lakewood Center in Fern Park, Fla.; and Rose Hill Center in Holly, Mich.

More information about such centers is posted on the Web site of the American Residential Treatment Association—http://artausa.org/.

VIEWPOINTS

How Americans' View of Black Men Affects Mental Health Care

BY WILLIAM LAWSON, M.D., PH.D.

The shooting of 17-year-old Trayvon Martin by George Zimmerman in Florida in February generated national outrage, headlines, protests, and demonstrations, particularly in the African-American community. Martin was an African-American high school student carrying no weapon. Zimmerman was a 28-year-old mixed-race Hispanic who was the neighborhood-watch coordinator in the gated community where Martin was temporarily staying.

What happened is a subject of dispute, but the result was that Zimmerman shot and killed Martin. The concern among many African Americans was that he was shot because he was a black male and thus presumed to be dangerous. The media reports and public opinion that followed split heavily along racial lines—many African Americans thought the shooter should be arrested and prosecuted, while the larger community felt the shooter should not be. In fact many thought he was justified in defending himself from someone he thought was a dangerous assailant.

Polls released soon after Zimmerman's trial, in which he was acquitted of manslaughter, revealed a dramatic racial gap in public opinion about the case, with racial disparities on issues ranging from reaction to the verdict to the need for a national discussion on race. According to a Pew Research Center poll, 86 percent of African Americans expressed dissatisfaction with the verdict, compared with 30 percent of whites. A *Washington Post*/ABC News poll reported a similar finding, with just 9 percent of blacks approving of Zimmerman's acquittal, compared with 51 percent of whites. The *Washington Post*/ABC News data also reported that 87 percent of blacks said the shooting was unjustified; only 33 percent of whites held that view.

Many had assumed that the country was now "postracial" because, among other observations, an African American had been elected president. Nevertheless, this issue, as well as the arrest of Harvard University professor Henry Louis Gates Jr., by local police after he had arrived late at night to his home after an overseas trip, showed deep differences in racial views.

These incidents are consistent with a long-held perception that the African-American male is potentially dangerous and violent. This perception has implications not only in isolated interpersonal contacts but may explain many racial disparities in health care that impact the larger society.

In one of my first research projects after my residency, I decided to examine race as a factor in inpatient violence. I found that African Americans in a Veterans Administration hospital were significantly less violent than white patients. Yet the staff and many faculty continued to say that they believed African-American patients were more likely to be violent.

Subsequent studies have shown why African-American patients may be less violent. Staff apparently are less likely to tolerate violent behavior from these patients, and African-American patients, particularly males, are more likely to be placed in seclusion and restraint, receive different medications, get higher doses of medication, and be given antipsychotics.

The literature is full of instances in which African Americans, particularly men, receive differing, often more-punitive and less-optimistic treatments. There is a greater likelihood of use of emergency room visits, hospitalizations, and involuntary admissions rather than use of evidence-based support programs or regularly scheduled clinic visits.

The disparities become especially apparent with diagnosis. African-American males are far more likely to receive a diagnosis of schizophrenia, often at the expense of mood disorders and post-traumatic stress disorder. As a result, the excessive antipsychotic usage and hospitalizations appear justified.

The overdiagnosis has persisted despite the use of more empirically based diagnostic criteria. In a recent study in the *Archives of General Psychiatry,* we showed that the overdiagnosis occurred despite three levels of diagnostic screening. Moreover, the overdiagnosis was more likely in African Americans than in any other ethnic or racial group. In a provocative book, *The Protest Psychosis,* Jonathan Metzl makes the case that the overdiagnosis of schizophrenia in African-American males is a recent phenomenon, emerging out of the civil-rights era of the 1960s, when schizophrenia increasingly became a disorder of violent black men. The schizophrenia diagnosis apparently was a handy way of dealing with black activists who were often sent to psychiatric hospitals and subjected to involuntary psychiatric treatment. Whatever their actual mental status on admission to psychiatric hospitals, forced treatment almost certainly led to mental deterioration over the course of their hospitalization and after release.

The perception of African-American men as violent may also account for a paradox. Multiple studies have shown that they tend to be slow metabolizers of most antipsychotic medications. Thus, plasma levels tend to be higher with usual dosing, suggesting the need for less medication. Yet African Americans, especially males, end up receiving higher and more frequent dosing. Medication dosing seems to be driven not by rational pharmacotherapy but by skin color and perceived ethnicity.

The correctional system is another way in which these disparities are manifest. There has been a 290 percent increase in the population of U.S. jails and prisons in the past 30 years. More than half of this population are minorities, and African-American men in particular. In addition juvenile African Americans are more likely to be placed in correction facilities, while youth of other ethnic groups are more likely to be referred for mental health treatment.

Two key factors have increased the U.S. incarceration rate: the war on drugs and deinstitutionalization. The drug war increased incarceration of black men, partially because penalties related to crack cocaine, which was more likely than powdered cocaine to be used by minorities and the poor, were more severe—often draconian.

With such a large population of African-American men incarcerated, the consequence is that many receive suboptimal treatment and do not have ready access to care.

The Trayvon Martin case is a reminder that in "postracial" America, black men are still being viewed as dangerous and violent. This perception has shifted resources from treatment to punishment and limited the options for recovery from mental and substance abuse disorders in a large segment of our population. PN

William Lawson, M.D., Ph.D., is chair of the Department of Psychiatry and Behavioral Sciences at Howard University College of Medicine.

RESIDENTS' FORUM

Challenges Await IMGs as They Start Residency Training

BY SUBANI MAHESHWARI, M.D.

Starting a residency involves making a major transition from being a medical student to becoming an intern. Residency can be especially overwhelming for international medical graduates (IMGs) such as me, since in the initial few months, we are trying to adapt to a new country, a new culture, and a new work style.

As we proceed in our residency, we will gain knowledge about *DSM*, pharmacotherapy, and structured education. But how do we learn about the multiple issues and dilemmas beyond diagnosis and drugs?

As an IMG, I struggled to understand the local slang used in day-to-day conversation. I remember my first day as an intern when I started my emergency room rotation. I was asked to see a patient with leg pain. During the interview, the patient mentioned he had "a Charlie horse." I had no idea what it meant until I looked it up on the Internet.

Before starting my residency, I did an externship in psychosomatic medicine. I quickly noticed that a few patients named John Doe or Jane Doe were admitted. The nurses had a good laugh when I casually asked if that was a common name.

Many of my resident colleagues and I also had difficulty understanding the levels of behavioral health care, housing programs, and other such issues. In my initial few rotations, I found that the patients knew more about these than I did, and they could sense that I was a "newbie." I learned the most on this subject during work in a dual-diagnosis unit. Some of the patients have been in and out of the hospital and rehab facilities multiple times and know the system well.

I learned not to be frazzled when I saw a patient getting frustrated when I did not have an answer to all of his placement-related questions. My advice in such a situation is to speak with the social worker or your attending to be more prepared when you see that patient again. Once you have a better understanding of the levels of care in the mental health system, you will find yourself more confident when counseling patients and their families.

During my rotation in primary care in the inpatient service, I was asked to counsel a family member of a terminally ill patient regarding hospice and palliative care. I had to defer it to my senior resident, since at that time I had little understanding of what those services entailed. I would strongly advise psychiatry residents to familiarize themselves with the concepts of comfort care, advance directives, and DNR/DNI, as issues and requests for information or advice related to them will likely arise during geriatric psychiatry rotations. Being familiar with these will also help if you are asked to make capacity evaluations during calls or C-L rotations.

As a new intern or resident, there will be many "what if" moments, especially during calls. "What if I order something wrong?" "What if I do not order something important?" My advice is to speak with your attending or seniors. They were new residents not very long ago. Your handbooks, resident's manual, and smartphones are your best friends during residency. Be sure to use them regularly and mark the relevant pages so that you can look up information quickly when needed.

In addition, it is important to be courteous to the nurses, behavioral health assistants, and unit clerks, who have been in the field for a much longer time than you—a lot can be learned from them. Working in the unit can be so much more rewarding with friendly faces around.

All that being said, the first year of residency can be one of the most memorable years of your training, and looking back you will find yourself amused over certain anecdotes. I will never forget a patient I saw for capacity evaluation who repeatedly mentioned, "Lucifer told me to do this, Lucifer wants this." I would not have figured out "who Lucifer was" had I not asked a family member for an explanation.

Last but not least, get ample rest every day, and shut off your brain before bedtime to have a clear mind the next day. Spend time with your loved ones, develop a hobby, and have a life outside the hospital. PN

Subani Maheshwari, M.D., is a PGY-2 psychiatry resident at Einstein Medical Center in Philadelphia.

From the President

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mutations, but rather from the interaction of many—perhaps hundreds—of genes containing sequence variants of modest effect. How would it be possible to detect many small increments of risk against the background of normal human genetic variation? The answer has been the genomic revolution. The cost of determining DNA sequences has declined by a factor of 1 million over the last decade. It is thus possible to examine enormous numbers of people with particular psychiatric disorders. The result is that as recently as 2007, there were no genes known with certainty to increase risk of schizophrenia. Today there are more than 100 regions in the genome of which we have confident associations with schizophrenia, and the pace of genetics research is accelerating. What will it ultimately mean for psychiatric practice? Often it is thought that genetics will provide important tools to improve diagnosis. This will eventually be true, but given the large number of relevant genes that remain to be identified and the fact that some risk genes are shared across disorders, the utility for diagnostics will initially be very limited. The real excitement is that these findings provide clues to what goes wrong in the brain to produce illness. As we build up a picture of the incremental risks for illness in the form of genetic variants, we will be in a far better position to design treatments.

Stem-Cell Technologies

The human brain is protected by the hard and opaque bones of the skull, and for both ethical and pragmatic reasons, biopsies are rare. Moreover, even when obtained, a biopsy of an adult brain is highly resistant to the tissue culture process. More accessible tissues like blood and skin do not necessarily provide information about disturbances in the brain. Animal models of human disease can be useful, but the human forebrain, and especially the human prefrontal cortex, have features that are new in evolution. How then can we learn what disease risk genes are doing in the cells that make up the human brain? This daunting problem is getting an answer from stem-cell technologies. In 2012 a Japanese physician scientist won the Nobel Prize for developing a simple method to transform skin cells (dermal fibroblasts) that can be readily obtained from a punch biopsy into pluripotent cells that can become any cell type in the body. These induced pluripotent cells (iPS cells) can be readily differentiated into neurons. Today many scientists are learning how to turn iPS cells or even skin fibroblasts into different types of neurons including those thought to be affected in schizophrenia, bipolar disorder, and autism. Others are collecting skin cells from patients whose genomes have been studied and turning them into neurons for study. Yet others are attempting to turn engineered neurons into small neural circuits to study their patterns of communication with and without disease risk mutations. Circuits might be assembled on a "chip" using small wells etched into an appropriate support or might be assembled in three-dimensional gels. Such technologies are so new that they are not ready for routine application to drug discovery. They are potentially so powerful, however, that a few companies that had abandoned psychiatry are starting up small exploratory programs.

Psychiatry is fortunate that reprogrammed stem-cell technologies have emerged only a few years after the application of modern genomics has begun to yield genes associated with mental illness. This second enormous technological step has permitted investigations to turn emerging genetic information into biological experiments with implications for therapeutics.

One aspirational view of how a therapeutic discovery program in psychiatry might look in the near future follows. Enough risk-associated genetic variation will be known for some disorders in five years to put much of the genetic jigsaw puzzle of risk together. (Already in schizophrenia, many proteins have been implicated by genetics that act in the specialized postsynaptic structures of neurons that receive excitatory signals from the neurotransmitter glutamate.) Studies of relevant protein networks in neurons will help identify a subset that could usefully be targeted by drugs; characterizing the genes that encode those proteins would become a priority. Human cells encoding selected genes—both risky and healthy versions—would be engineered into iPS cells. These, in turn, would be differentiated into relevant neurons and perhaps assembled into small circuits. The biochemistry and physiology of cells with risky and healthy versions of the genes could be compared, and then drug screens could be developed that would identify compounds that normalized disease-risk-associated changes. Such drugs would still be studied in animals for toxicity and assessment of behavioral effects. The main difference from our current approach to drug development is that instead of having to guess about which proteins to target with drugs (or as is now the case, sticking with existing targets and hoping for better results), we could allow the genes that are in the causal chain of pathogenesis to point the way. There are no guarantees, and certainly not enough funding for this research, but it truly appears to be a new way and a new day. PN

ASSOCIATION NEWS

APA's Election Guidelines Emphasize Dignity, Courtesy, and Fairness

The 2014 APA election cycle has just begun. Members are encouraged to participate in the election and to educate themselves on the applicable rules of conduct approved by the APA Board of Trustees (see box below). Candidates and supporters are advised to be respectful, not to criticize each other, and to show restraint in distributing campaign materials.

Guidelines prescribing members' election-related activities were established by the Board in the early 1970s, when APA began having contested elections. Campaigning restrictions were adopted initially to address four major concerns: (1) massive campaign efforts "buying" an election win, particularly if those efforts were financed by resources from outside the membership; (2) campaign committees and unwelcome bids for public support; (3) the growing distress of the membership at being deluged with campaign materials; and (4) a belief among some members that large-scale campaigning was inconsistent with their conception of APA's professional image.

Since then, the guidelines have evolved incrementally, in keeping with the times and in response to six guiding principles established by the Board in March 2000: (1) **Equity of Access:** The electorate and the candidates should enjoy optimum access to each other, to meet or communicate without unnecessary encumbrances. **(2) Fairness:** Every qualified member should have equal opportunity to run for leadership positions in APA. **(3) Collegiality:** An atmosphere of collegiality should be promoted among candidates and among members. **(4) Candidate Engagement:** Candidates should be involved in interpreting rules that affect their campaign. **(5) Membership Engagement:** The election process should arouse members' interest in and knowledge of APA affairs and foster optimum ballot returns. **(6) Economic Principle:** The candidates and APA should collaborate to find and utilize the most economic means of conducting the election campaign in terms of time and money.

The election guidelines have been significantly revised for improved clarity, simplicity, and support of principles that the guidelines are intended to serve. Social networking for campaign purposes (Facebook, Twitter, blogs, and similar interactive media) is allowed in order to foster communication between candidates and members.

The APA Elections Committee serves to educate candidates and other members about election procedures, suggest improvements to the guidelines for the Board to consider, monitor election activities, and report violations of the guidelines to the Board. Candidates and supporters are strongly encouraged to contact the Elections Committee when uncertain about what campaign activities are allowed according to the new election guidelines. PN

Members can obtain more information on campaigning, report an election violation, or submit suggestions for improving the election process by sending an e-mail to election@psych.org or visiting the election section of the APA Web site at www.psychiatry.org/network/board-of-trustees/apa-national-elections.

APA Election Guidelines for Candidates and Supporters

Based on those approved as amended by the Board of Trustees – July 2013

A. OVERVIEW

The intent of the guidelines is to encourage fair and open campaigning by APA members on a level playing field by (1) specifying permitted and prohibited election-related activities, (2) fostering opportunities for candidates to educate their colleagues about the issues, (3) informing voters about candidate experiences and views, (4) keeping costs down, and (5) maintaining dignified and courteous conduct appropriate to the image of a profession.

Each candidate receives a copy of these guidelines and a statement to sign, certifying that he/she has read the guidelines, promises to abide by them, will immediately report any deviations of which he/she becomes aware to the Elections Committee, and will notify and try to correct any supporter upon learning of an actual or potential deviation. Candidates are to inform members they ask for support about the guidelines by sending a copy or calling attention to the guidelines on the APA Web site.

All APA members are expected to abide by the APA election guidelines in APA elections, including in their capacity as officers and members of other organizations. APA requests that other organizations adhere to the intent of the campaign guidelines and provide fair and equitable coverage of opposing candidates.

When candidates or their supporters are unclear about whether an intended campaign action is permitted, they should seek the opinion of the Elections Committee before taking action. The Elections Committee will respond with a ruling concerning the proper interpretation of the guidelines and inform all candidates in order to maintain a "level playing field."

The Elections Committee investigates any potential violation by a candidate or supporter of which it becomes aware and reports violations to the Board of Trustees. The procedures used by the Elections Committee to investigate and report campaign violations are in Chapter 2 of the APA Operations Manual and will be sent to candidates with these Election Guidelines.

B. CAMPAIGNING

Campaigning is defined as any attempt to influence a potential voter's vote. Campaigning includes mentioning one's candidacy or making any statement that might be interpreted as a position statement reflecting what actions the candidate would take if elected. It does not include appearances made as part of one's normal work activities.

1. GENERAL

- Candidates are to state their own positions on issues and their own plans for the Association directly and positively.
- Candidates/supporters may not make personal attacks against other candidates.
- When "signing" campaign communications, APA/Area/DB organizational titles may not be used, but such titles may be mentioned in the body of the communication.

2. RESOURCES

- Candidates and supporters may communicate with each other and coordinate campaign activities. However, formal campaign committees (entities that can make statements or take other actions on behalf of the candidate) are not allowed, and candidates may not enter into agreements to campaign together.
- Fundraising is not permitted. A goal of these guidelines is to limit campaign activities to a level that all candidates can easily afford.
- Use of APA, Area Council/State Association, or District Branch resources or personnel is generally prohibited, except to support the election process, including communication of candidate statements to members.
- APA, Area Council/state association, or district branch funds, services, stationery, or staff may not be used to endorse, support or promote any candidate; however, Area Council/state association, or district branch funds—not APA funds—may be used to support the expenses of candidates invited to the branch/area meeting for election purposes.

3. CAMPAIGN COMMUNICATIONS

Permitted forms of campaigning include the following; all others are prohibited.

a. Electronic Messages (E-mail, SMS, etc.)
There are no limits on the number of campaign messages sent electronically. However, candidates and supporters are advised to use restraint with electronic messages of all kinds, as these are often ill-received by voters, especially if voters perceive that they are being spammed. Beginning e-mail messages with the conventional "APA Campaigning" in the subject line is a courtesy that can help recipients to quickly sort out campaign e-mail messages. Obtaining e-mail addresses is the responsibility of the candidates and their supporters; they are not to be provided by APA, Area Councils/state associations, or district branches.

b. List servers (Listservs)
- Candidates may create their own list servers to facilitate communication with and among their supporters.
- The APA Member-to-Member list server may be used for campaigning, but no other list servers used for APA, Area Council/state association, or district branch functions.
- List servers of other psychiatric organizations may be used for campaigning if permitted by those organizations.

c. Social Networking Sites, Blogs, and Homepages (Facebook, Twitter, etc.)
Candidates may use social networking sites, blogs, and homepages for campaign purposes.

d. APA Web site
APA will include information on candidates (with links to candidates') homepages and on the election itself (campaign guidelines, ballot mailing, and return dates, etc.) on its Web site. This election information can be accessed through the election logo and linked to other information as appropriate.

e. Candidate Homepage
Each candidate is responsible for setting up and financing his/her own homepage. There will be a disclaimer on APA's Web site stating that candidates' homepages are their own creation and responsibility and that APA takes no responsibility for information posted on them. APA reserves the right to cut the link between its Web site and a candidate's homepage if a candidate violates the campaign guidelines.

f. Phone
Campaign-related phone calls (including calls made through services such as Skype) may be made by candidates/supporters to individual APA members. Use of automatic calling services (robocalls) or hiring personnel to make such calls is prohibited.

g. Letters and Handouts
There are no restrictions on number of campaign letters, postcards, faxes, or handouts.

h. Private Discussion
Spontaneous private election-related communication with colleagues is permitted.

i. Invited Position Statements
Psychiatric organizations may request written position statements or answers to questions for publication in a newsletter or other written medium. Such publication requires that no candidate is endorsed or favored and that all candidates for a given office have been given equal opportunity to respond.

j. Area/State/District Branch Campaigning: Newsletters
Area Council/state association, or district branch newsletters may announce as news items of up to 150 words per candidate the candidacy for national office or Area Trustee of member(s) of that Area Council/state association, or district branch, with pictures. Editorial endorsement of candidates is prohibited, as are letters to the editor in support of (or opposition to) candidates. Newsletters may print other statements or materials by or about a candidate only if they give equal opportunity to opposing candidates. Newsletters may not be distributed beyond the usual newsletter distribution.

k. Mutual Campaign Presentations
A mutual campaign presentation is defined as an event at which all candidates for an APA office appear together to acquaint voters with the candidates and/or to discuss campaign issues. Candidates may appear in person or through electronic media.
- If all candidates have been given equal opportunity to attend and one cannot attend, the other candidate(s) may present.
- Endorsement or favoritism of any candidate is prohibited.

l. Introduction at Professional Presentations
A candidate's candidacy may be mentioned when the candidate is introduced for the purpose of giving a professional presentation, provided that the candidate is not endorsed.

C. PROFESSIONAL PRESENTATIONS

There are no restrictions on professional presentations, defined as events at which no campaigning occurs and a candidate participates in the dissemination of information through any medium. Running for office should not inhibit or prohibit candidates from conducting their usual professional business.

Future of Psychiatric Medication May Lie in Pharmacogenetics

As psychiatric research evolves, highly personalized treatment for mental illness may be possible in the years to come.

BY VABREN WATTS

As pharmaceutical companies strive to develop new therapies to treat mental illness, some clinician scientists say that the focus should be on tailoring treatment to an individual's genetic makeup.

Pharmacogenetics is the study—and technology—that analyzes how genetic factors determine an individual's response to drugs in terms of efficacy and toxicity. It has been applied in different areas of medicine including cancer, cardiovascular disease, HIV illness, and psychiatric research.

Despite what many believe, pharmacogenetics is not a new science, according to David Goldman, M.D., chief of the Laboratory of Neurogenetics at the National Institute on Alcohol Abuse and Alcoholism (NIAAA) and author of *Our Genes, Our Choices*. "It was first noted during the Korean War when a certain population of soldiers developed hemolytic anemia in response to a specific antimalarial drug," Goldman explained. He told *Psychiatric News* that pharmacogenetics did not reach the realms of psychiatry, however, until the 1990s.

Goldman said that some of the initial work in psychiatric pharmacogenetics linked genetic variations to the manner in which certain individuals metabolized alcohol, and "now science allows us to explore the pharmacodynamic differences—differences in the way neurons respond to concentrations of drug therapy."

Clozapine Study Prompts Research

Determining efficacies for medicines used to remedy mental illnesses—such as depression, attention-deficit/hyperactivity disorder, and eating disorders—has played a major role in the advancement of pharmacogenetics. Anil Malhotra, M.D., director of the Division of Psychiatry Research at the Zucker Hillside Hospital in New York, said that he became interested in pharmacogenetics as a research fellow at the National Institute of Mental Health.

David Goldman, M.D., Anil Malhotra, M.D., and Henry Kranzler, M.D., believe that pharmacogenetics will be the most efficacious and cost-effective therapy to offer to patients with psychiatric disorders in the near future.

"We were studying the drug clozapine, which showed superior efficacy for treating schizophrenia, but only in certain patients," Malhotra said. "This prompted us to investigate polymorphisms in particular receptors, such as dopamine receptors, that were suggested at the time to have an association with clozapine response."

Today, Malhotra focuses on understanding the link between antipsychotics such as risperidone and olanzapine and weight gain in a subpopulation of patients with schizophrenia. "It's amazing how a person's genetic makeup can predict a person's susceptibility to certain side effects," he said.

Substance Abuse Is Major Target

Currently NIAAA is funding more than 40 studies that are targeted to personalized treatment for substance abuse disorders—treatment for alcoholism being one of the most studied.

Henry Kranzler, M.D., director of the Center for Studies of Addiction at the University of Pennsylvania, received funding for his project exploring the effectiveness of naltrexone—approved by the Food and Drug Administration for treatment of alcoholism—in European Americans with a single nucleotide polymorphism, Asn40Asp, of the mu opioid receptor OPRM1. "If these studies clearly differentiate responders to naltrexone therapy, it could impact the label for naltrexone and yield a robust

see ***Pharmacogenetics*** *on page 43*

Personalized Medicine May Affect Health Care Costs

The incorporation of pharmacogenetics into clinical practice will have an impact on health care costs in the future, researchers in the field maintain.

Henry Kranzler, M.D., director of the Center for Studies of Addiction at the University of Pennsylvania, believes that personalized medicine will likely reduce costs by eliminating unnecessary treatment and its associated potential for producing adverse effects.

David Goldman, M.D., chief of the Laboratory of Neurogenetics at the National Institute on Alcohol Abuse and Alcoholism, told *Psychiatric News* that "pharmacogenetics technology may be one of our best bargains. . . . Multiple genes can be analyzed at one time using a genotyping array for a few hundred dollars. This would be available as a resource for genetic predictors for the person's whole life—very different from current procedures, which require repeats."

DSM-5 SELF-EXAM

Sexual Dysfunctions

In *DSM-IV-TR*, sexual dysfunctions referred to sexual pain or to a disturbance in one or more phases of the sexual-response cycle. Research suggests that sexual response is not always a linear, uniform process and that the distinction between certain phases (for example, desire and arousal) may be artificial. In contrast to *DSM-IV-TR*, gender-specific sexual dysfunctions have been added, and, for females, sexual desire and arousal disorders have been combined into one disorder (female sexual interest/arousal disorder). To improve precision regarding duration and severity criteria compared with *DSM-IV-TR* and to reduce the likelihood of overdiagnosis, all of the sexual dysfunctions (except substance- / medication-induced sexual dysfunction) now require a minimum duration of approximately six months and more precise severity criteria. This provides useful thresholds for making a diagnosis and distinguishes transient sexual difficulties from more persistent sexual dysfunction. Genito-pelvic pain/penetration disorder is added to *DSM-5* and represents a merging of vaginismus from dyspareunia, which were highly comorbid and difficult to distinguish. The diagnosis of sexual aversion disorder is removed due to rare use and lack of supporting research.

The questions below are from *DSM-5 Self-Exam Questions: Test Questions for the Diagnostic Criteria,* which may be preordered from American Psychiatric Publishing at http://www.appi.org/SearchCenter/Pages/SearchDetail.aspx?ItemId=62467. The book, available in January 2014, contains 500 questions for all the categories of psychiatric disorders and includes Section III. The questions were developed under the leadership of Philip Muskin, M.D., a professor of clinical psychiatry at Columbia University College of Physicians and Surgeons. APA members may purchase the book at a discount.

1. Which one of these *DSM-IV-TR* diagnoses is still included in *DSM-5?*

a) sexual aversion disorder
b) female orgasmic disorder
c) dyspareunia
d) vaginismus
e) none of the above

2. Which of these terms is a valid subtype of sexual dysfunction in *DSM-5?*

a) lifelong
b) secondary to a medical condition
c) due to relationship factors
d) due to psychological factors
e) none of the above

3. Which of these is most accurate with regard to the *DSM-IV-TR* diagnosis of sexual dysfunction due to a general medical condition?

a) This diagnosis is now classified with the somatic symptom disorders.
b) New criteria for this diagnosis specify that the general medical condition must have been present for at least six months.
c) New criteria for this diagnosis specify that the general medical condition must be included in the *ICD-10* diagnostic manual.
d) This diagnosis no longer exists, because this condition had poor diagnostic reliability.
e) This diagnosis no longer exists, because a sexual dysfunction that is better accounted for by a medical condition is no longer given a psychiatric diagnosis. PN

CLINICAL & RESEARCH NEWS

Smoking and Mental Disorders: Which Comes First?

New evidence suggests that educating the public about the dangers of smoking should include warnings about an added risk for new-onset mood and anxiety disorders.

BY AARON LEVIN

First lung cancer, then heart disease. Now mental illness may prove to be another baleful outcome of smoking cigarettes.

Two Johns Hopkins researchers said their findings add a new statistical twist to prior research and help "point to an increased smoking-attributable burden of mental health morbidity and impairment in functioning."

The use of tobacco is usually seen as a form of self-medication in people with mental illness, but perhaps the flow of causation also runs in the opposite direction as well, said Ramin Mojtabai, M.D., Ph.D., an associate professor of mental health, and Rosa Crum, M.D., M.H.S., a professor of epidemiology and of mental health, both at the Johns Hopkins Bloomberg School of Public Health, in the September *American Journal of Public Health.*

The researchers based their study on data from wave 1 (2001-2002) and wave 2 (2004-2005) of the National Epidemiologic Survey on Alcohol and Related Conditions (NESARC). The 33,154 participants were divided into current regular smokers (18 percent), nonsmokers (54 percent), and ex-smokers (28 percent).

The current smokers, especially those lighting up at least a pack a day, were two to three times more likely than the nonsmokers to meet lifetime criteria for mood, anxiety, or substance use disorders.

After adjustment for a number of sociodemographic and psychiatric factors, they found "a statistically significant association between regular smoking and new onset of any mood or anxiety disorder as well as specific disorders, except for generalized anxiety disorder."

However, that association held true only for participants under age 50. Among older smokers, only new-onset manic episodes were associated with smoking.

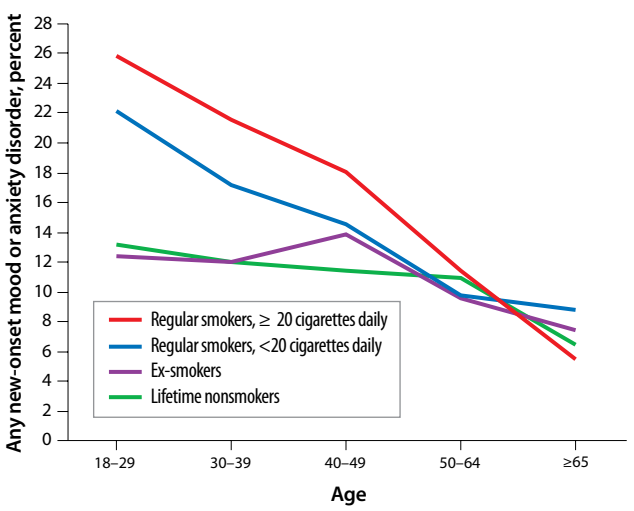
Why younger age had an effect on outcomes was not clear, said Mojtabai and Crum. They speculated that there might be a "risk window" for mood and anxiety disorders among younger participants, or perhaps smokers with mood and anxiety disorders may die younger. Alternatively, there might be some hypothetical protective effect of hormonal changes associated with age. Future research could shed light on these possible explanations, they said.

Another exception to the general pattern was post-

see ***Smoking*** *on page 43*

Smoking Is Also Bad for Your Mental Health

Regular smokers have an increased risk of developing mood or anxiety disorders, but not PTSD and only before age 50, say Ramin Mojtabai, M.D., Ph.D., and Rosa Crum, M.D., M.H.S.



Source: Ramin Mojtabai, M.D., Rosa Crum, M.D., *American Journal of Public Health,* September 2013

FROM THE EXPERTS

What's New in *DSM-5* for Cultural Psychiatry?

BY RUSSELL LIM, M.D., M.ED.

The publication of *DSM-IV* in 1994 was a watershed moment for cultural psychiatry with the manual's new Outline for Cultural Formulation (OCF), glossary of culture-bound syndromes, culturally relevant diagnostic categories, and cultural considerations in the narratives introducing each chapter.

DSM-5 advances the evolution of the practice of cultural psychiatry with the Cultural Formulation Interview (CFI). Based on the OCF, it is a 16-question interview, with 12 supplementary modules (Explanatory Model; Level of Functioning; Psychosocial Stressors; Social Network; Cultural Identity; Spirituality, Religion, and Moral Traditions; Coping and Help Seeking; Patient-Clinician Relationship; Immigrants and Refugees; School-Age Children and Adolescents; Older Adults; and Caregivers), which can be accessed with the CFI at http://www.psychiatry.org/practice/dsm/dsm5/online-assessment-measures. This column will highlight the most useful of the 16 questions, broken down into four sections: (1) Cultural Definition of the Problem (1–3); (2) Perceptions of Cause, Context, and Support (4–10); (3) Cultural Factors Affecting Self-Coping and Past Help Seeking (11–13); and (4) Cultural Factors Affecting Current Help Seeking (14–16). The clinician wanting to perform a culturally appropriate assessment now has sample questions to use to collect the clinical data for the OCF.

Cultural Definition of Problem and Perceptions of Cause, Context, and Support

Question 2 is an extremely effective way of determining how the patient's community sees the patient's illness: "Sometimes people have different ways of describing their problem to their family, friends, or others in their community. How would you describe your problem to them?"

Questions 3 to 5 are extensions from Arthur Kleinman's eight questions about explanatory models (Kleinman, et al., 1978), which ask patients to identify their concerns, why they think it is happening, and what are the causes? (3. What troubles you most about your problem? 4. Why do you think this is happening to you? What do you think are the causes of your problem? 5. What do others in your family, friend, or others in your community think are the causes of your problem?)

Questions 9 and 10, which ask the patient to explain how he or she sees cultural identity as making the patient's problem worse or better, explore the role of cultural identity in the patient's illness. (9. Are there any aspects of your background or identity that make a difference to your problem? 10. [Or] are causing other concerns or difficulties for you?)

Help Seeking

The last six questions focus on how the patient has gotten help in the past and where he or she will get help in the future. Questions 11 and 12 ask the patient what he or she has tried in the past. Not only do the questions show interest in the patient, but they also give the clinician information about the patient's health beliefs that can be used during the discussion of the treatment plan. (11. Sometimes people have various ways of dealing with problems like your problem. What have you done on your own to cope with your problems? 12. Often, people look for help from many different sources, including different kinds of doctors, helpers, or healers. In the past, what kinds of treatment, help, advice, or healing have you sought for your problem?) Question 14 asks the patient what he or she thinks would be helpful, while Question 15 looks at what others have advised, further putting the clinician's advice to the patient in context with the patient's health beliefs.

Question 16 asks the patient if he or she has concerns about the therapist-patient relationship, completing the fourth part of the OCF. The 16 questions of the CFI and its 12 supplementary modules equip any clinician with sample questions to perform a culturally appropriate assessment and create a cultural formulation that will engage the patient in treatment and serve as an important advance in the practice of cultural psychiatry. PN

Russell Lim, M.D., M.Ed., is a health sciences clinical professor in the Department of Psychiatry and Behavioral Sciences at the University of California Davis School of Medicine. He is the editor of the *Clinical Manual of Cultural Psychiatry* from American Psychiatric Publishing. APA members may purchase the book at a discount at http://www.appi.org/SearchCenter/Pages/SearchDetail.aspx?ItemId=62256. The second edition, scheduled for release next year, will include the Cultural Formulation Interview, new chapters on women, gays and lesbians, and religion, as well as video vignettes to illustrate teaching points from the text.

Advisory Group Draws Roadmap For President's BRAIN Initiative

An interim report for President Obama's BRAIN Initiative focuses on new technologies to develop an integrated view of brain circuits and their function.

BY AARON LEVIN

President Obama's Brain Research through Advancing Innovative Neurotechnologies (BRAIN) Working Group should focus on intermediate circuits and activity in the brain—those more complex than individual cells but not yet encompassing the whole brain, said an interim advisory report presented September 16 at the National Institutes of Health (NIH).

"Our goal is to look at the broad impact of this project on neuroscience research by posing problems, not dictating solutions," said committee cochair William Newsome, Ph.D., a professor at Stanford University, in a teleconference.

"The challenge is to map the circuits of the brain, measure the fluctuating patterns of electrical and chemical activity flowing within those circuits, and understand how their interplay creates our unique cognitive and behavioral capabilities," said the committee's written report. "[O]ur ultimate goal is to understand our own brains."

The advisory committee included one psychiatrist, Karl Deisseroth, M.D., Ph.D., a professor of bioengineering and of psychiatry and behavioral sciences at Stanford University.

The committee heard from dozens of invited experts representing a variety of relevant fields: chemistry, molecular biology, electrophysiology, optics, structural neurobiology, data analysis, computation, and human neuroscience.

"The focus is not on technology per se, but on the development and use of tools for acquiring fundamental insight about how the nervous system functions in health and disease," the report stressed.

Once under way, the program should begin by generating a census of neuronal and glial cell types and creating structural maps of the brain, said cochair Cornelia Bargmann, Ph.D., a professor at Rockefeller University in New York.

Work would begin first with animal models, graduating eventually to humans. But human research data could come even now from patients undergoing diagnostic brain imaging or by monitoring those receiving deep brain stimulation and other technological interventions.

"We're seeking an understanding of the dynamics of the brain: where signals come from and how they are related to internal states," said Newsome.

Understanding brain circuits will mean identifying and characterizing their cells, clarifying synaptic connections, observing patterns of activity during behavior, and perturbing these patterns to assess their significance, said the report. Doing so will mean integrating observations of the brain in action across time and space.

*see **BRAIN Initiative** on page 43*

Test Appears to Differentiate Unipolar From Bipolar Depression

While the test needs further research, the tools needed to conduct it are available now.

BY JOAN AREHART-TREICHEL

A test to facilitate differential diagnosis between unipolar and bipolar depression was described in a study reported online in the *British Journal of Psychiatry* August 22. The lead researcher was Jorge Almeida, M.D., Ph.D., then an assistant professor of psychiatry at the University of Pittsburgh and now affiliated with Brown University.

The test is based on pattern-classification analysis, a technique recently applied to analyzing brain-imaging data, Almeida told *Psychiatric News*. "Most importantly, while traditional imaging analysis relates to group means, this new approach relates to a specific subject within the sample. For this reason, it can be considered a breakthrough in neuroimaging studies and in possible clinical applicability."

Also, the test entails a kind of fMRI imaging called arterial spin labeling, in which blood flow in the brain can be measured without using invasive techniques.

Almeida and his colleagues used pattern-classification analysis and arterial spin labeling to measure blood flow in the anterior cingulate cortex—a brain area involved in mood regulation—in 18 subjects with unipolar depression, 18 subjects with bipolar disorder who were in a depressive episode, and 18 healthy controls. They found that the amount of blood flow in this region differentiated individuals with bipolar depression from individuals with unipolar depression with 81 percent accuracy (83 percent sensitivity, 78 percent specificity). In contrast, the amount of blood flow in this region did not accurately distinguish between unipolar depression subjects and healthy subjects.

Almeida believes that these results are encouraging from a clinical point of view because, as he explained, "Clinical psychiatrists are capable of doing a very good job at discriminating between a depressed person and a nondepressed person, so there is no real clinical utility to differentiating a depressed person from a control using neuroimaging. However, this differentiation is still poor when trying to discriminate between unipolar and bipolar depression, especially if a clear history of mania/hypomania is not present. So we have a clear benefit using neuroimaging as a supplemental tool for the differential diagnosis of a depressive episode."

As for the timeline for availability of such a test, he said, "All of the technologies discussed in our manuscript are available in many university-affiliated centers. However, our study had a relatively small sample size and was done only in females, so this limits the generalizability of the results. Thus, before such a test becomes clinically available, the results need to be replicated using independent and larger samples."

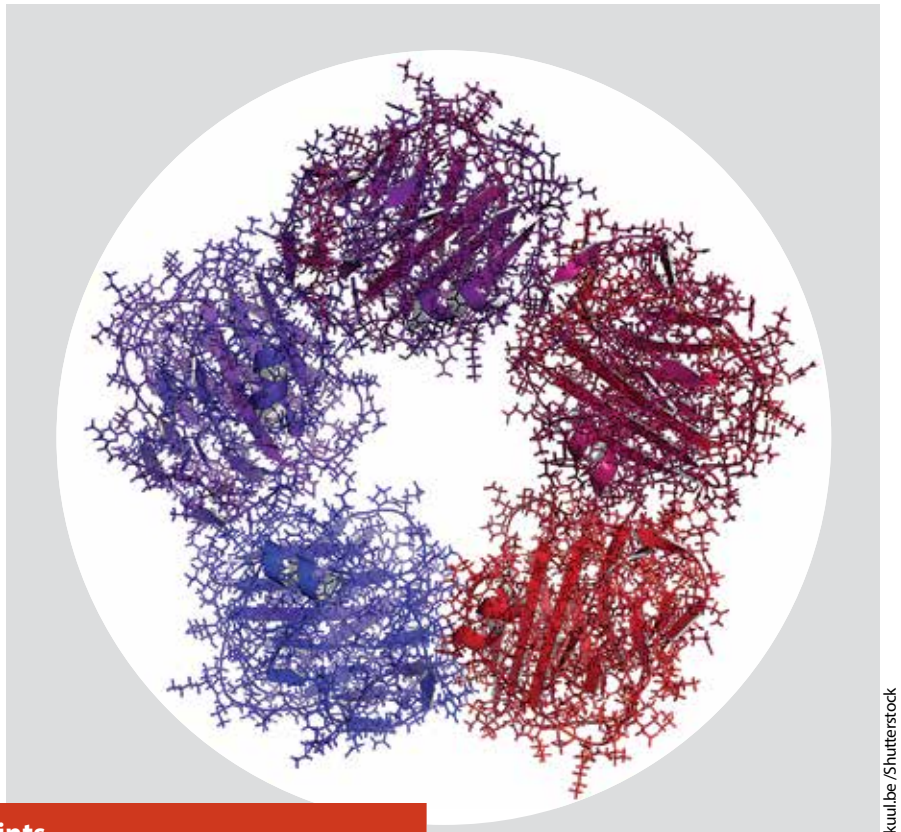
The study was funded by the National Institutes of Health, the Brain and Behavior Research Foundation, and the Wellcome Trust. PN

An abstract of "Pattern Recognition Analysis of Anterior Cingulate Cortex Blood flow to Classify Depression Polarity" is posted at http://bjp.rcpsych.org/content/early/2013/08/10/bjp.bp.112.122838.abstract.

Immune System Protein Could Give Clue To Late-Onset Schizophrenia

An immune system component called C-reactive protein appears to be associated with late-onset schizophrenia, suggesting that immune-system-provoked inflammation contributes to the illness.

BY JOAN AREHART-TREICHEL



molekuul.be /Shutterstock

Key Points

- Researchers have linked a major component in the immune system to late-onset schizophrenia. It is C-reactive protein, which is released by cytokines in reaction to infection and mirrors the amount of inflammation triggered by the immune system.
- C-reactive protein might contribute to the schizophrenia disease process by disrupting the blood-brain barrier and allowing other immune system components, such as pro-inflammatory cytokines, to flood the brain and damage it.
- Assuming that C-reactive protein contributes to schizophrenia, it lends support to the inflammatory pathophysiology hypothesis in schizophrenia.
- Data suggest that autoimmunity might play a role in mood disorders as well as in schizophrenia and may be linked to the same immune system components.

Often, when people think of schizophrenia, they picture it as an illness that tends to strike teens or young adults. But nearly 1 in 4 individuals who develop schizophrenia does so later in life, research by Jilip Jeste, M.D., and others has found.

And now, in what may help explain why some people develop the illness in middle age, researchers have linked a major component of the body's immune response with late-onset schizophrenia.

The senior researcher was Borge Nordestgaard, M.D., a professor and chief physician at Copenhagen University Hospital in Denmark. Study results were published online August 31 in *Schizophrenia Bulletin.*

Individuals with autoimmune diseases and severe infections have been found to have a heightened risk of developing schizophrenia compared with people without such diseases or infections. Moreover, there is increasing evidence that patients with schizophrenia have in their blood elevated levels of pro-inflammatory cytokines—immune system molecules that initiate an inflammatory response to fight disease. This has led some researchers to suggest that the immune system, and cytokine-provoked inflammation specifically, might be involved in the schizophrenia disease process.

Now enter C-reactive protein, an immune system component that is released by the cytokines in reaction to infection and whose role is to bind to bacteria or dying cells and activate the complement-system arm of the immune system. This protein also mirrors the amount of inflammation that is triggered by the immune system. Nordestgaard and his colleagues suspected that elevated blood levels of C-reactive protein might be implicated in late-onset schizophrenia and decided to test this hypothesis.

Their study cohort included some 79,000 individuals aged 20 to 100 whom they followed over a 20-year period. In total, 238 individuals received a diagnosis of schizophrenia during that period; the average follow-up to a diagnosis was seven years.

The researchers found that baseline elevated blood levels of C-reactive protein were associated with a sixfold to 11-fold increased risk of developing late-onset schizophrenia, even after adjusting for several possible confounders. They also found that individuals with schizophrenia had significantly higher levels of C-reactive protein in their blood than did individuals without schizophrenia, again after controlling for possibly confounding factors.

The researchers thus believe that C-reactive protein is implicated in late-onset schizophrenia and suspect that it might contribute to the schizophrenia disease process. One possibility, they suggested, is that the protein disrupts the blood-brain barrier, allowing other immune system players, such as pro-inflammatory cytokines and/or auto-antibodies, to flood the brain and create havoc there. The protein has been shown to disrupt the blood-brain barrier in laboratory studies of animals.

"The association of C-reactive protein with late-onset schizophrenia is very robust, even after health-related confounds are addressed," William Carpenter, M.D., told *Psychiatric News*. Carpenter, a schizophrenia expert, is a professor of psychiatry at the University of Maryland and director of the Maryland Psychiatric Research Center.

However, "The immediate challenge with this report is the causal direction," he pointed out. "Is elevated C-reactive protein causing a porous blood-brain barrier, permitting entry for pro-inflammatory cytokines, for example, or are variables associated with schizophrenia, such as therapeutic or abuse drugs, causing the C-reactive protein elevation?"

But assuming that C-reactive protein is contributing to schizophrenia, he indicated, then it helps support the "inflammatory pathophysiology hypothesis in schizophrenia"—a hypothesis that "is opening new opportunities for etiology and therapeutic discovery."

For example, during the past five years, scientists at the Maryland Psychiatric Research Center, as well as scientists in England, Israel, and Japan, have reported that the antibiotic minocycline countered not just positive symptoms, but negative ones in some schizophrenia patients. Minocycline is known to be capable of fighting inflammation and crossing the blood-brain barrier into the brain. So it might be able to reduce inflammation in the brain (*Psychiatric News,* August 17, 2012).

There is also research evidence suggesting that infection and autoimmune disease can increase the risk for mood disorders, and if so, the mechanism at work might be inflammation created by an activated immune system (*Psychiatric News,* July 23). Indeed, the same immune system components that are associated with an increased risk for schizophrenia—such as C-reactive protein—might also increase risk for mood disorders, Nordestgaard told *Psychiatric News,* since he and his colleagues reported in the February *JAMA Psychiatry* that a high level of C-reactive protein is a strong risk factor for depression.

The study was funded by Herlev Hospital, Copenhagen University Hospital, and the Danish Council for Independent Research, Medical Sciences. PN

An abstract of "Elevated C-Reactive Protein Associated With Late- and Very-Late-Onset Schizophrenia in the General Population: A Prospective Study" is posted at http://schizophreniabulletin.oxfordjournals.org/content/early/2013/08/28/schbul.sbt120.

Nominations Invited

Nominations for APA's Distinguished Service Award are now being accepted. The award was established in 1964 by the Board of Trustees to honor an APA distinguished fellow, fellow, general member, nonmember, or organization that has contributed exceptional meritorious service to the field of psychiatry. Nominations should include the nominee's full name and contact information, as well as a CV and 150-word statement describing the nominee's contributions to psychiatry. PN

Nominations should be submitted by October 31 to ctobita@psych.org.

JOURNAL DIGEST

BY VABREN WATTS

Cholesterol Gene Linked To Anorexia Nervosa

The largest ever DNA-sequencing study of anorexia nervosa (AN) links the eating disorder to genetic variance in epoxide hydrolase 2 EPHX2—a gene that regulates cholesterol metabolism.

Sequencing multiple genes from blood samples of approximately 3,000 patients with and without AN, the researchers found that EPHX2 occurred more frequently in people with AN, in addition to being associated with low body mass index.

The study, published in *Molecular Psychiatry*, noted that previous work has shown an association between high cholesterol levels, weight loss, and improved mood. According to the authors, certain individuals with AN, for genetic reasons, may not eat due to euphoria attributed to high circulating levels of cholesterol. They emphasized that more work must be done to assess the biological effects of EPHX2 variance.

Scott-Van Zeeland, A, Bloss, A, et al. "Evidence for the Role of EPHX2 Gene Variants in Anorexia Nervosa." 2013. Mol Psychiatry. Sep 3 [Epub ahead of print] http://www.nature.com/mp/journal/vaop/ncurrent/abs/mp201391a.html

Electronic Cigarettes Found as Effective as Nicotine Patch

Researchers from the University of Auckland in New Zealand published in the *Lancet* the first trial comparing the efficacy of electronic cigarettes (e-cigarettes) with nicotine patches in achieving smoking cessation.

Broken into three groups, nearly 700 smokers received a 13-week supply of commercially available e-cigarettes, 13 weeks' supply of nicotine patches, or placebo e-cigarettes. After six months, cigarette consumption was markedly reduced in the nicotine e-cigarette group, compared with nicotine-patch and placebo groups. In addition, subjects in both the nicotine and the placebo e-cigarette groups were almost four times as likely to be adherent to treatment as those receiving patch therapy. Though the success rate for absolute cessation was higher in the e-cigarette group, it did not differ significantly from that of those administered nicotine patches.

The authors concluded, "Our study establishes a critical benchmark for e-cigarette performance compared to nicotine patches and placebo e-cigarettes, but there is still so much that is unknown about the effectiveness and long-term effects of e-cigarettes. Given the increasing popularity of these devices in many countries, and the accompanying regulatory uncertainty and inconsistency, larger [and] longer-term trials are urgently needed to establish whether these devices might be able to fulfill their potential as effective and popular smoking-cessation aids."

Bullen C, Howe C, Laugesen M, et al. "First Trial to Compare e-Cigarettes With Nicotine Patches." 2013. Lancet. Sep 9. [Epub ahead of print] http://linkinghub.elsevier.com/retrieve/pii/S0140-6736(13)61842-59

Suicide Attempts More Frequent In Adopted Individuals

A recent study in *Pediatrics* assessed whether adoption status poses a greater risk for suicide attempt among adopted offspring than nonadopted offspring. The study, conducted by the Minnesota Center for Twins and Family Research at the University of Minnesota, investigated suicide-attempt records and suicidal behavioral factors—including psychiatric and substance abuse disorders—in 692 adopted and 540 nonadopted teenagers.

The results showed that adoptees were four times as likely to attempt suicide than nonadopted individuals. The relationship between adoption status and suicide attempt was also influenced by suicidal behavioral factors.

The authors said that the study's results could be useful for clinicians treating adopted individuals who already show other signs of being at risk for suicide.

Keyes, M, Malone, S, Sharma, A. et al. "Risk of Suicide Attempt in Adopted and Nonadopted Offspring." 2013. Pediatrics. Sep 9. [Epub ahead of print] http://pediatrics.aappublications.org/content/early/2013/09/04/peds.2012-3251.long

New Medicaid Beneficiaries Provide Opportunity to Reduce Smoking, Alcohol Use

According to a study published in *Annals of Family Medicine*, characteristics of the Medicaid-eligible population will begin to look quite different at the beginning of 2014 in states that choose to expand the program to millions of their uninsured citizens. Tammy Chang, M.D., an assistant professor in the Department of Family Medicine at the University of Michigan, conducted a national study projecting the demographic and health characteristics of potentially eligible Medicaid beneficiaries.

The study outcome projected that new Medicaid beneficiaries who gain coverage under the Affordable Care Act are more likely to be younger, white, and male and have a diagnosis of substance abuse—particularly alcohol and smoking—than current beneficiaries.

"Based on our analysis, Medicaid expansion represents a key opportunity to improve the health of millions of uninsured individuals and reduce national costs associated with smoking and excessive alcohol use," Chang said. "Coverage for these Americans may be coming at just the right time to provide access to health care that can help keep these Americans healthy through prevention and improving healthy behaviors."

Chang T, Davis M. "Potential Adult Medicaid Beneficiaries Under the Patient Protection and Affordable Care Act Compared With Current Adult Medicaid Beneficiaries." 2013. Annals of Family Medicine. 11(5)406-411. http://www.annfammed.org/content/11/5/406.long

Playing Video Games May Increase Brain Function In Older Adults

While studies have pointed to negative consequences of children's excessive video-game playing, when adults try their hand at these games, it may increase their cognitive control, a recent study in *Nature* suggests.

Researchers at the University of California, San Francisco, created a 3-D race-car video game that measured cognitive control in adults who were instructed to notice specific road signs while driving full speed—virtually. After one month of video-game participation, adults aged 60 to 85 were evaluated for alterations in multitasking, working memory, and attention sustainment.

Results showed that multitasking capabilities, working memory, and attention sustainment were dramatically increased and sustained six months after the video-game training. In addition, multitasking capabilities of seniors surpassed that of young adults who played the game for the first time.

The authors noted that this is the first study to show how custom-designed video games can be used to assess cognitive abilities across the lifespan. If the research is replicated, this could be a beneficial application to other brain-related disorders such as attention-deficit/hyperactivity disorder, depression, and dementia, which are also associated with deficits in cognitive control, the authors concluded.

Anguera J, Boccanfuso J, Rintoul J, et al. "Video Game Training Enhances Cognitive Control in Older Adults." Nature. Sep 5. [Epub ahead of print] http://www.nature.com/nature/journal/v501/n7465/full/nature12486.html

Children With Disabled Siblings Are at Greater Risk Of Functional Impairment

Researchers at the University of Arkansas for Medical Science assessed the well-being of children living in households with disabled siblings. The study divided 6,800 children and adolescents into two groups—those who lived with a sibling with a disability and those who did not. Functional impairment—as reported by parents—was measured by the Columbia Impairment Scale.

After adjusting for demographic characteristics, 20 percent of individuals growing up with disabled siblings were documented as having significant functional impairment, compared with 10 percent in the cohort without disabled siblings.

The researchers noted that functional impairment is a critical indicator of the need for mental health services and that health care professionals need to consider a family-based care approach for those in households with disabled children. PN

Goudie A, Havercamp S. "Assessing Functional Impairment in Siblings Living With Children With Disability." Aug 2013. Pediatrics. 132(2):476-83. http://pediatrics.aappublications.org/content/132/2/e476.long

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ICD Codes for Some *DSM-5* Diagnoses Updated

Unlike the *DSM-5* criteria and text that describes them, which are relatively stable, the *ICD* coding system is subject to revisions at conferences held twice a year.

BY MARK MORAN

Clinicians should be aware of several changes to the codes attached to diagnoses in *DSM-5*.

The changes and updates, and any future ones, can be accessed at APA's *DSM-5* website (www.dsm5.org).

The recently released manual, like all previous versions of *DSM*, uses coding designations from the *International Classification of Diseases, Clinical Modification (ICD-9-CM),* as well as the forthcoming 10th edition (*ICD-10-CM*), to allow clinicians to code for specific mental disorders. The *ICD-CM* is the official system of assigning codes to diagnoses in the United States.

APA Director of Research Darrel Regier, M.D., M.P.H., explained that since the *ICD* system has been created independently of the *DSM* system, it was necessary for *DSM-5* to use the closest approximation of *ICD-CM* codes to classify diagnoses for insurance claims and other research and public-health purposes.

"The benefit of the *DSM* process is that it has been able to provide a level of scientific review of mental disorders that is extensive and beyond that provided by the World Health Organization—which oversees development of the *ICD*—and the Centers for Disease Control and Prevention's National Center for Health Statistics [NCHS]—which, with the Centers for Medicare and Medicaid Services [CMS], oversees revisions to all clinical modifications [CM] of the *ICD* for the United States," he said. "For that reason, *DSM* is widely used by CMS contractors for quality assessment and by insurance companies and federal and state agencies to indicate eligibility for services."

But Regier said that unlike the *DSM-5* criteria and text that describes the criteria—both of which are relatively stable—the coding system is subject to revisions by NCHS and CMS in their review conferences held twice a year.

As of late September, the following changes and refinements to the coding system have been implemented and posted on the www.dsm5.org website:

- ***Intellectual disability (intellectual developmental disorder):*** The new *ICD-9-CM* codes (and *ICD-10-CM* codes, which follow in parentheses) that should be used to indicate severity are 317 (F70) Mild, 318.0 (F71) Moderate, 318.1 (F72) Severe, and 318.2 (F73) Profound.

- ***Language disorder:*** The new *ICD-9-CM* code (and *ICD-10-CM* code) that should be used is 315.32 (F80.2).

- ***Bipolar I disorder, current or most recent episode hypomanic, in partial remission:*** The updated *ICD-9-CM* code (and *ICD-10-CM* code) that should be used is 296.45 (F31.71).

- ***Bipolar I disorder, current or most recent episode hypomanic, in full remission:*** The updated *ICD-9-CM* code (and *ICD-10-CM* code) that should be used is 296.46 (F31.72).

- ***Selective mutism***: The new *ICD-9-CM* code (and *ICD-10-CM* code) that should be used is 313.23 (F94.0).

- ***Trichotillomania (hair-pulling disorder):*** The new *ICD-9-CM* code (and *ICD-10-CM* code) that should be used is 312.39 (F63.3).

- ***Insomnia disorder:*** The new *ICD-9-CM* code (and *ICD-10-CM* code) that should be used is 307.42 (F51.01).

- ***Hypersomnolence disorder:*** The updated *ICD-9-CM* code (and *ICD-10-CM* code) that should be used is 307.44 (F51.11).

- ***Conduct disorder, adolescent-onset type***: The updated *ICD-9-CM* code (and *ICD-10-CM* code) that should be used is 312.82 (F91.2).

- ***Kleptomania:*** The updated *ICD-9-CM* code (and *ICD-10-CM* code) that should be used is 312.32 (F63.2).

In addition, clinicians should be aware of newly implemented coding recommendations for neurocognitive disorders. As currently reflected in *DSM-5*, the diagnoses of major neurocognitive disorder possibly due to Alzheimer's disease, frontotemporal lobe degeneration, Lewy bodies, and Parkinson's disease do not use additional codes to indicate the presence of behavioral disturbances—a major reason for psychiatric and other mental health service interventions for neurocognitive disorder treatment.

Consequently, APA is revising codes for these four disorders to include codes that indicate the presence (294.11 [F02.81]) or absence (294.10 [F02.80]) of a behavioral disturbance—resulting in a recommendation to use the same code for both probable and possible etiologies of these major neurocognitive disorders.

"For these conditions, there is no question about meeting the criteria for a major neurocognitive disorder and the need for intervention if behavioral disturbances are present," Regier explained. "The causal attribution level of evidence for the possible or probable designation is a useful guide for treatment selection, but is not as important as the presence or absence of behavioral disturbances for indicating the need for psychiatric and other behavioral health interventions."

And last month APA presented seven diagnoses that are new to *DSM-5*, along with proposals for new codes that will be used, to the CDC/NCHS and CHS/CMS at their annual *ICD* review conference. The new codes, if approved, would probably not be added to *ICD-10-CM* until 2015. These are among the proposed changes:

- ***Binge eating disorder (BED):*** This disorder is not listed in *ICD-9-CM* or *ICD-10-CM*. In *ICD-9-CM*, it is coded with the same code as bulimia nervosa (307.51). APA is recommending that BED be added to *ICD-10-CM* and temporarily be given the same code as "other" eating disorders (F50.8). APA also has asked the NCHS to consider giving BED its own code in the future, rather than having to continually share the same code as "other eating disorders."

- ***Disruptive mood dysregulation disorder:*** This disorder is not listed in *ICD-9-CM* or *ICD-10-CM*. In *ICD-9-CM*, it is coded with the same code as other specific episodic mood disorder (296.99). APA is recommending that this disorder be added to *ICD-10-CM* and temporarily be given the same code as other persistent mood (affective) disorder (F34.8) until a unique code can be approved in the *ICD* revision conference.

- ***Social (pragmatic) communication disorder:*** This disorder is not listed in *ICD-9-CM* or *ICD-10-CM*. In *ICD-9-CM*, it is coded with the same code as other developmental speech or language disorder (315.39). APA is asking that this disorder be listed under other developmental disorders of speech and language (F80.89). Further, APA is asking that the *ICD-10-CM* note that use of this code excludes use of the code for autism spectrum disorder (ASD), as children with ASD have a presentation different from those with social (pragmatic) communication disorder.

- ***Hoarding disorder:*** This disorder is not listed in *ICD-9-CM* or *ICD-10-CM*. In *ICD-9-CM*, it is coded with the same code as obsessive-compulsive disorders (OCD) (300.3). APA is recommending that hoarding disorder be added to *ICD-10-CM* and temporarily be given the same code as obsessive-compulsive disorder (OCD; F42). However, given that hoarding disorder and OCD are distinct conditions, APA prefers that the NCHS eventually assign unique codes in future revisions for both OCD and hoarding disorder.

- ***Excoriation (skin picking) disorder***: This disorder is not listed in *ICD-9-CM* or *ICD-10-CM*. In *ICD-9-CM*, it is coded with the same code as dermatitis factitia (artefacta) (698.4). APA initially recommended that this disorder be added to *ICD-10-CM* and given the same code as factitial dermatitis (L98.1). However, given that this is an OCD-related disorder, the NCHS officials at the recent revision conference preferred to temporarily assign this to the same F42 code as OCD with an exclusion of the factitial dermatitis (L98.1) code until a separate F42.x code can be assigned in 2015—this is to avoid a one-year trend increase in the L98.1 domain. Since *ICD-10-CM* codes are not yet in use, this issue will be resolved and posted when it is final.

- ***Premenstrual dysphoric disorder (PMDD):*** This disorder is not listed in *ICD-9-CM* or *ICD-10-CM*. In *ICD-9-CM*, it is coded with the same code as premenstrual tension syndromes (625.4). APA initially recommended that PMDD be added to *ICD-10-CM* and given the same code as premenstrual tension syndrome (N94.3). However, given that premenstrual tension syndrome is generally considered a normal physiological state and not a mental disorder, the NCHS officials preferred that this receive a temporary code in the Depressive Disorders section (F33.xx) rather than in the N94.3 section. The decision on this code will be posted when final.

Additionally, APA petitioned for revisions to the *ICD-10-CM* listing for gender dysphoria in adolescents and adults, which is not a new disorder. The previous recommendation for the coding and listing of gender identity disorder in *ICD-10-CM* was to assign it the code of F64.1, which corresponds to dual-role transvestism.

Regier noted that this was an inappropriate designation, as transvestism

see ***Codes Updated*** *on page 42*

LETTERS TO THE EDITOR

Lebanese Psychiatrists Take Stand on Homosexuality

For decades, Lebanon—a small Arab country with a strong clerical tradition—has been in the headlines for all the wrong reasons. However, a refreshing change appeared on July 18. The Lebanese Psychiatric Society (LPS), a body of doctors affiliated with the official Lebanese Order of Physicians and representing the majority of the country's psychiatrists, released a statement favoring homosexual rights. The LPS declared that homosexuality is not a mental illness and that homosexuals do not require treatment for their sexual orientation.

The statement was a response to two prior events in Lebanon. The first was the widespread public denunciation of acts of abuse by semiofficial bodies against LGBT groups. The second was the television broadcast of psychologists and psychiatrists repeatedly asserting that homosexuality was an illness they could cure.

The LPS's statement was noted in the international press, with articles appearing in publications such as the *Los Angeles Times, Huffington Post,* and the *Economist*. Commentaries were widely circulated on the web, with some praising the move, while others questioned its timing and effect.

Lebanese law punishes individuals for homosexual acts, which accords with even harsher punishments inflicted on homosexuals across the Arab and Muslim world. The statement's impact on the attitudes of health professionals toward homosexuals and the human-rights struggles of the wider public in the Middle East is unclear. This is a region where psychiatry and psychology are still in their infancy, struggling for acceptance as means of explaining and shaping social behavior. Indeed, there is hardly unanimity on this political hot potato among psychiatrists in Lebanon and within the LPS, and it is unlikely to go away.

The core debate within the Lebanese psychiatric community is whether they should restrict their public statements to the issuance of scientific facts or assume the role of advocacy. A proposed compromise might be to restrict their advocacy role to support the advocacy campaigns of other specifically dedicated organizations in Lebanon (such as the very active Helem organization). The purpose of such an approach would be to maintain the psychiatrists' credibility as an unbiased source of scientific opinion, which might otherwise be compromised, were they perceived as militant advocates.

Lebanon's diverse population and relatively liberal society are atypical among Arab and Muslim countries. Yet its media and entertainment sectors make it a regional sociocultural beacon, so any debate starting in Lebanon might well be aired in other Middle Eastern countries. The validation and protection of LGBT rights in Lebanon and the region will remain aspirational, for sure, but this intervention by psychiatrists may nonetheless bring immediate benefits. For example, it may curtail attempts to convince a gay person or his family of the benefits of "sexual orientation change efforts," a practice that has been declared ineffective and potentially harmful by APA and flagged by the United Nations as a potential form of human-rights abuse.

The example set by our colleagues in Lebanon holds an example for other psychiatric societies to follow. It highlights the important role of psychiatry as the medical discipline with the broadest sociopolitical influence on the general public. The statement of the LPS not only refutes that homosexuality is a disease, but also it carries implications regarding civil society's definitions of citizenship, equality, and human rights. Since WHO defines health as "complete physical, mental, and social well-being, and not merely the absence of disease or infirmity," our role shouldn't be limited to treating mental illness, but should also include advocating for better mental well-being for all individuals.

People all over the world pay attention to what happens in the United States. The psychiatric community in the United States has a long history of advocating for LGBT rights, and the LPS would benefit from the mutual support of APA and the World Psychiatric Association on this issue. We hope this letter will serve to draw attention to the current situation unfolding in Lebanon.

JOSEPH EL-KHOURY, M.D.
Beirut, Lebanon

ANDRES BARKIL-OTEO, M.D., M.SC.
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Joseph El-Khoury, M.D., is a consultant adult and addiction psychiatrist with the Department of Psychiatry and Clinical Psychology at St. George's University Medical Centre and an assistant professor of psychiatry at the School of Medicine at the University of Balamand in Beirut. Andres Barkil-Oteo, M.D., M.Sc., is an assistant professor of psychiatry at Yale School of Medicine.

Military Knowledge Needed

We could not agree more with the article "Knowledge of Military Life Facilitates Vets' MH Care" in the August 2 issue.

Most civilian psychiatrists have little knowledge of military jargon and culture. Phrases and words like being "down range" (deployed to Southwest Asia) and being around "TPNs," or third-party nationals often contracted to conduct day-to-day maintenance, could be misinterpreted or affect the conduct of the clinical interview. The identification of stressful events other than the obvious combat exposure can sometimes hinge around the knowledge of combat-zone deployment activities other than the usual easily identified firefights and improvised explosive device concussive blast or shrapnel exposure. The conflicts in both Iraq and Afghanistan have required that soldiers be embedded with local national security forces for recruitment, training, and mission completion. These forces can sometimes be infiltrated by enemy combatants. These account for the so-called "green on blue" attacks that can heighten soldiers' experience of constant tension and fear, which can result in nonacute trauma but nevertheless can cause an increase in vigilance and anxiety.

As your article mentions, soldiers often are reluctant to come forward with emotional complaints. The reasons for this vary. Noncommissioned officers are reluctant to volunteer symptoms that would render them "profiled" (limit their ability to either carry or fire a weapon), even if temporary. Most fear not being promoted and/or losing their military careers. Others prefer to "lock it down": this usually means a soldier's voluntary repression of thoughts and/or symptoms of a traumatic event. This term is somewhat akin to what we could call "resilience" and could be utilized to shore up resources to adapt and tolerate stressful situations in the military or veteran patient.

Administrative jargon may call into question a soldier's deployment activity. A DD 2214 may say that the soldier was in Kuwait, reflecting only the soldier's theater entry. This could make a Posttraumatic Stress Disorder Clinical Team suspicious about a history of combat-zone exposure. Service members' activities may not always reflect their "military occupation specialty," since service members are frequently cross-trained or assigned or volunteer to others.

Posttraumatic stress disorder (PTSD) and mood disorders are the most frequent diagnoses among soldiers. PTSD is the most common, present among both combat arms (31 percent) and noncombat arms (20 percent) of combat zone–deployed soldiers. Among noncombat zone–deployed soldiers, mood disorders are the most frequent diagnosis equally present, in about 4 percent of both combat and noncombat arms soldiers.

Community and faculty psychiatrists should learn and teach residents some of the cultural nuances and parlance of military personnel, especially in those states that have a large military presence, such as Virginia, North Carolina, Texas, and California.

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Yorktown, Va.

K. M. STACK, M.D.
Yorktown, Va.

Letters Invited

Readers are invited to submit letters up to 500 words long for possible publication. *Psychiatric News* reserves the right to edit letters and to publish them in all editions, print, electronic, or other media. Receipt of letters is not acknowledged. Letters should be sent by mail to *Psychiatric News*, APA, Suite 1825, 1000 Wilson Boulevard, Arlington, Va. 22209 or by e-mail to cbrown@psych.org. Clinical opinions in letters are not peer reviewed and thus should be independently verified.

Schizophrenia

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North Carolina School of Medicine, and the lead author of the study, told *Psychiatric News*.

Based on their analysis of genomes sampled from tens of thousands of patients and controls, the researchers estimated that approximately 6,000 to 10,000 independent SNPs contribute to at least one-third of the risk for schizophrenia. "There may be 1,000 genes involved," said Sullivan. However, identifying 2,000 or so of the risk loci might be enough to reveal the biological processes that lead to schizophrenia, the researchers suggested.

"In this study, we describe concrete ways to discover more [risk] loci and deliver more robust results," Sullivan noted. As more genomic data are collected from patients, and larger DNA chips are produced, it is only a matter of time before the genetic variants and, in turn, biological pathways surface.

Identifying key biological pathways of schizophrenia can open the door to more precise and successful methods for developing new treatments for the disorder. The researchers noted that clinical studies are already under way to test calcium channel blockers, commonly used for hypertension and heart disease, as a potential treatment for schizophrenia.

In addition, the study findings suggest that at least half, and perhaps most, of the genetic variations contributing to the risk of schizophrenia are common variants, meaning that they are widely inherited throughout the population. Although previous studies have discovered several rare variants and copy-number variants associated with schizophrenia, the data have convinced Sullivan that common variations probably play a predominant role.

Sullivan believes the analyses by his team suggest that schizophrenia is fundamentally similar to other "complex trait" characteristics and diseases, such as height, obesity, and cardiovascular diseases. Complex traits, in genetic terms, refer to phenotypes that result from variations within many genes and their interactions with the environment. Complex traits are not passed through generations in the pattern of Mendelian traits, caused by single-gene variations, such as those that cause Huntington's disease.

"Genetics is really starting to deliver some ideas that will be very helpful in our understanding of schizophrenia," Sullivan said. The rapidly growing GWAS data—more studies from larger samples are on the way—are finally illuminating the "genetic architecture" of schizophrenia.

Nevertheless, the role of nongenetic factors in the pathology of schizophrenia remains to be elucidated. The genetic evidence offers only a hint of the importance of the regulation of gene expression, which interacts with environmental triggers and stressors.

"The results of this mega-collaborative study by Sullivan and colleagues paint an even more complex mosaic than was previously appreciated," APA President Jeffrey Lieberman, M.D., told *Psychiatric News*. "If confirmed, they will have a game-changing effect on our understanding of the genetics of mental illness." He pointed out that the magnitude of SNPs estimated for schizophrenia, and possibly other mental disorders, could be larger than other complex-trait diseases, such as type 2 diabetes, coronary artery disease, and rheumatoid arthritis. "This is the genetic equivalent of death by a thousand cuts and shifts the focus from the rare mutations and CNVs that had previously been thought to be the predominant genetic mechanisms conferring disease risk." Lieberman, who also is chair of psychiatry at Columbia University and director of the New York State Psychiatric Institute, agreed that the identified risk loci offer targets for new treatment development. PN

An abstract of "Genome-wide Association Analysis Identifies 13 New Risk Loci for Schizophrenia" is posted at http://www.nature.com/ng/journal/vaop/ncurrent/abs/ng.2742.html.

Codes Updated

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and gender identity disorder are different phenomena. Further, *DSM-5* has revised its conceptualization and terminology such that the disorder is now called gender dysphoria rather than gender identity disorder. APA is recommending that *ICD-10-CM* list this disorder as gender dysphoria in adolescence and adulthood, using the *ICD-10* code that corresponds to transsexualism (F64.0).

"Although the 11th edition of *ICD* might not be approved by the World Health Organization until 2015 or later, the United States. is unlikely to adopt an *ICD-11-CM* for at least a decade or more following its release," Regier said. "APA wants to ensure changes adopted in *ICD-10-CM* are as accurate and comprehensive as possible, given that this will be the *ICD-CM* code set in use in this country for the foreseeable future." PN

Information about *ICD* coding of *DSM-5* diagnoses is posted at www.dsm5.org.

Quality Program

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clinicians must report PQRS measures for at least 50 percent of their applicable Medicare encounters for both years, but if they don't submit at least one quality reporting measure in 2013 they will be hit with the 1.5 percent penalty in 2015.

And that penalty will increase to 2 percent on all Medicare reimbursement in 2016.

The PQRS has a list of 259 measures that can be used for claims-based reporting. For solo practitioners and psychiatrists in small-group practices, the most likely method will be to report the measures using a designated G or F code (for example, G8126 or 1040F) on Form 1500.

The G or F code is entered on the Form 1500 below the procedure (CPT) code when filing a Medicare claim, either on paper or electronically, listing 0.00 as the charge for the G and F codes (see link below for sample filing forms).

Of the 259 PQRS measures, there are several that are specifically relevant to psychiatrists—five to be used when treating a patient with depressive disorder, four on screening for unhealthy substance use, one on medication reconciliation, and several others that are less specifically related to psychiatry but can be reported with the CPT codes psychiatrists use.

So, for instance, when a patient is seen for treatment of major depressive disorder (MDD), PQRS measure 9 comes into play, Antidepressant Medication During Acute Phase for Patients With Major Depressive Disorder. That measure indicates that a patient was treated with an antidepressant and stayed on the medication for the entire 12-week period of the acute-treatment phase.

The clinician would list the appropriate code (G8126) below the CPT code when submitting a claim to Medicare to indicate that the patient is being treated with antidepressant medication during the entire 12-week acute treatment phase. If the patient was not a candidate for treatment with an antidepressant for whatever reason, or was not being seen for a new episode of MDD, the code would be G8128.

Robert Plovnick, M.D., APA's director of quality improvement and psychiatric services, said he hopes psychiatrists understand that participation in PQRS through reporting of quality measures is not "mandatory" in the sense that physicians will be breaking a law if they don't participate. But they should know that clinicians who don't submit at least one quality measure before the end of 2013 will be hit with the 1.5 percent penalty in 2015 (as well as foregoing the incentive payments they might receive by submitting measures for 50 percent of their applicable Medicare encounters).

And he emphasized that the incentives and disincentives apply only to Medicare. He urged members who treat Medicare patients, however, to participate in the program, emphasizing that pay-for-performance is the future. And since avoiding the penalty requires only the minimum level of participation, it should be a fairly painless way for clinicians to get a taste of what's required.

Plovnick noted that properly reporting the quality measures is an administrative task tied to billing and that the APA website has detailed information about the PQRS—including links to sample reporting forms. "Quality measurement is likely to increase in prominence in the coming years, with a possible impact on reimbursement, board certification, and public accountability," Plovnick pointed out. PN

Information about the PQRS and sample quality measure reporting forms for psychiatry are posted at http://psychiatry.org/FileLibrary/Practice/Managing a Practice/PQRS Measures/2015PQRSpenaltyHSF.pdf.

Key Points

The Physician Quality Reporting System (PQRS) has been an incentive program, but the government is transitioning it to a set of incentives and disincentives to increase participation.

- Any clinician who treats Medicare patients must submit at least one quality reporting measure this calendar year to avoid a 1.5 percent penalty on reimbursement in 2015.
- Of 259 PQRS measures, several are specifically relevant to psychiatrists—five to be used when treating a patient with major depressive disorder, four on screening for unhealthy substance use, one on medication reconciliation, and others that are less specifically related to psychiatry but can be reported with the CPT codes psychiatrists use.
- For solo practitioners and psychiatrists in small-group practices, the most likely method will be to report the measures using a designated G or F code (such as G8126 or 1040F) on the Form 1500.

Bottom Line: Quality measurement will continue to be important in coming years, with a possible impact on reimbursement, board certification, and public accountability.

Farm

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activity facilitates growth, development, independence, and improvement in symptoms."

Robert Patterson, M.D., a psychiatrist at Harvard Medical School and McLean Hospital, served as the program's consulting psychiatrist for many years. The farm "is part of the mainstream in thinking about pharmacologic, behavioral, and social treatment of major mental illnesses," he states.

On Wednesday afternoons, Burkhart runs a community meeting that includes everyone—guests and staff. During the meeting, there are announcements: "There will be a ski trip on Monday," or "We're going to have popcorn and a movie at our house tomorrow night, and all of you are welcome to come." Sometimes there is discussion of issues that arise in the community. And there is a custom of expressing appreciation. Tom might say, "I want to appreciate Joe; he helped me gather eggs today." And Joe might reply, "Thanks, Dude!" And it's not obvious to a visitor whether Tom and Joe are staff members or guests. And whenever a guest is about to leave the farm, the appreciations go on overtime, Burkhart remarks. "There are tears, laughter, encouragement—good therapy."

Guests can also enjoy their free time at the farm. There are spontaneous music gatherings, Berkshire-area performances, Passover seders, Christmas parties, bonfires, skating, skiing, yoga, and checking out a newborn calf.

Good things often come out of guests' stay at Gould Farm. They may make friendships that will endure after they leave. They may acquire skills that will help them get a job. One young guest got so adept at cooking that he was accepted into the Culinary Institute of America. "I was in such a bad place when I got here," he says, "but am now so excited, hopeful, and enthusiastic!"

In 2010, Gould Farm published its first outcomes study, of 450 guests, and learned some valuable information from it. For instance, a comparison of psychiatrist-rated Global Assessments of Functioning (GAF) of the guests at the beginning and end of their treatment showed statistically significant improvements. Former guests also reported what the GAF evaluations had shown—that the farm had helped them with their mental health, physical health, family relationships, and social relationships. And when the guests were asked what had helped them the most during their farm stay, they rated friends, family, and community most highly, followed by work and staff, then by therapy, activities, and safety/structure, and finally by psychotropic medications.

So many former guests cherish their time at the farm that they attended a Gould Farm centennial reunion in August. And as someone pointed out at a Gould Farm centennial symposium in April, "Recovery is a journey of the heart—not an outcome. The goal is to become more connected to what makes us human." PN

More information about Gould Farm is posted at www.gouldfarm.org.

To watch a video interview with Jesse Goodman, M.D., about his work at Gould Farm, scan the QR code at left with your smartphone or go to http://youtu.be/G6RGpOhku2M.

BRAIN Initiative

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Such research will require new or improved technologies to record brain activity, manipulate brain circuits, and then connect neuronal activity to behavior in the organism. That research and the tools to process the immense quantities of data require close collaboration between neuroscientists and computer specialists, statisticians, physicists, engineers, and other scientists.

Rapid dissemination of these tools as they are developed, through training modules and summer courses, would accelerate progress.

"The overarching vision is to combine these approaches into a single, integrated science of cells, circuits, brain, and behavior," said the report.

The committee will present its final report in June 2014.

What will happen then is an open question given the current confusion over federal budgets.

"It's hard to be specific, but this project will need sustained support over many years," said NIH Director Francis Collins, M.D., Ph.D. "We will need to nail down a timeline in June." PN

The advisory committee's report is posted at http://www.nih.gov/science/brain/09162013-Interim%20Report_Final%20Composite.pdf.

National Institutes of Health

The BRAIN Initiative will need sustained support over many years, says NIH Director Francis Collins, M.D., Ph.D.

Pharmacogenetics

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treatment effect for those with alcohol dependence," he told *Psychiatric News*.

Though Kranzler has investigated genetic-based treatment for substance abuse among populations involving multiple ethnicities, he said that findings relevant to populations outside of European Americans are lacking. According to Kranzler, this lack, as well as the limited availability of genetic testing, are limitations that will need to be overcome for personalized medicine to advance therapeutics for psychiatric disorders. "As other medications and their genetic moderators are identified, . . . hopefully, findings will be extended to other population groups."

As the field evolves, psychiatric researchers are optimistic about the fate of pharmacogenetics in clinical practice.

"The 'one drug fits all' concept for very heterogeneous disorders like schizophrenia, depression, and bipolar is not the way of the future," said Malhotra. "Using genetic tools, such as neuroimaging and other modalities, is very attractive in identifying patients who will benefit more from alternative treatment than from current psychotherapies." Malhotra believes that some clinicians are apprehensive about the incorporation of genetics into clinical care because of the lack of information on how to master the skills needed in this developing therapeutic realm.

Goldman agreed. "Clinicians have been hearing for a while that genomics will have something to offer them. The incorporation of new knowledge for genetics or neuroscience into psychiatric diagnosis or guidances for clinical care are scarce. I think that we will see in *DSM-6* and *DSM*s beyond that, the incorporation of genetic predictors that will increasingly come into clinical practice and give clinicians new tools for delivering care to patients." PN

Smoking

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traumatic stress disorder, in which the difference between smokers and nonsmokers was not significant.

The researchers said aspects of the results argued for more than a simple association.

Because regular smokers without mental disorders at baseline recorded a higher incidence of disorders at three years of follow-up, the temporal order of smoking and mental disorders support a causal relationship, said Mojtabai, in an interview. So did the dose-response relationship.

"We found that the association was generally stronger for those who smoked a larger number of cigarettes, and stronger for current smokers than ex-smokers," he said.

Biological mechanisms to explain how smoking might induce mental illness were also speculative, they said, noting one hypothesis suggesting that that "chronic administration of cholinergic agents may lead to indirect inhibition of the nicotinic receptors (functional antagonism) and hence contribute to the prevalence of depression."

Their work provides still more evidence of the need for antismoking efforts, especially those directed at young people, they concluded. Increased public-health education about smoking and its effects, coupled with higher cigarette taxes, could help reduce smoking and save a few more hearts, lungs, and minds.

The study was funded by the National Institute on Drug Abuse and the National Institute on Alcohol Abuse and Alcoholism. PN

An abstract of "Cigarette Smoking and Onset of Mood and Anxiety Disorders" is posted at http://ajph.aphapublications.org/doi/abs/10.2105/AJPH.2012.300911.

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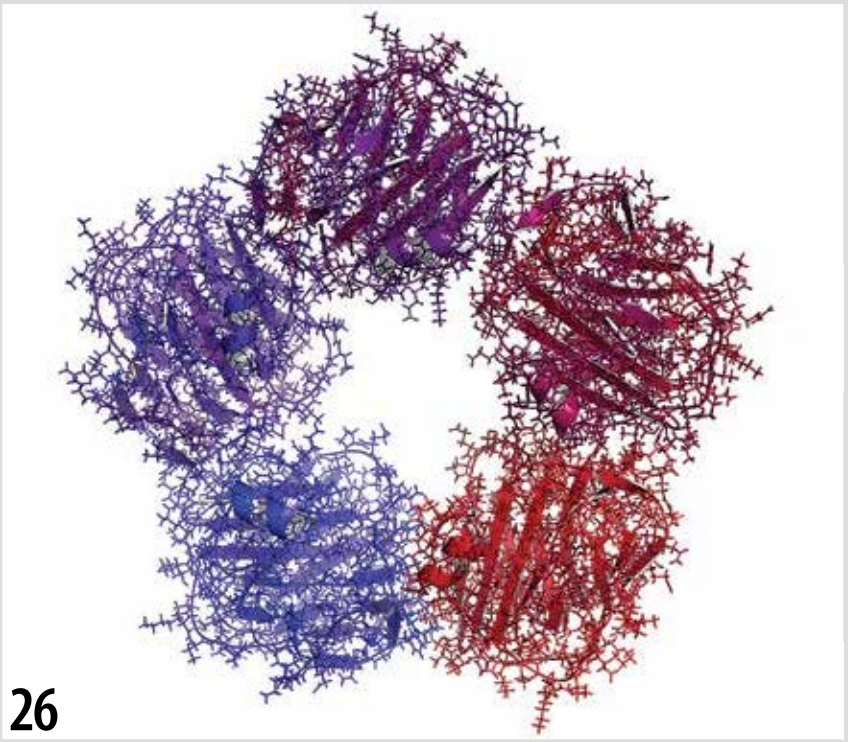

PROFESSIONAL NEWS

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Departments

FROM THE PRESIDENT

Change, Challenge, and Opportunity: Psychiatry Through the Looking Glass of Research

BY STEVEN E. HYMAN, M.D., AND JEFFREY LIEBERMAN, M.D.

Alice: Would you tell me, please, which way I ought to go from here?
The Cat: That depends a good deal on where you want to get to.
—Lewis Carroll
Alice's Adventures in Wonderland

The first two articles in this series addressed the prospect of change in psychiatric medicine and mental health care and the anticipated effects, in this regard, of health care reform. In this article we discuss the current status of biomedical research and how it will impact our field and practice.

The research enterprise has brought clinical psychiatry to an exciting but treacherous juncture. Based on remarkable new tools and technologies in genetics and neuroscience, there has been an explosion of new knowledge about the etiology and neural underpinnings of schizophrenia, bipolar disorder, Alzheimer's disease, autism, addictions, and other serious conditions. Indeed, the fields of psychiatric medicine and mental health care are poised on the brink of transformative advances in diagnostic methods and therapeutic modalities. However, just at the time when biomedical research is gaining significant traction and momentum in understanding the brain and mental disorders, support for all research, and most importantly biomedical research funded by the National Institutes of Health, is painfully contracting, the result of congressionally driven budget cuts. Just as scientific opportunity in our field is waxing, the ability to exploit it is waning.

The recent budget sequestration has had a huge negative effect, but is part of a larger pattern of what has been eroding the support for research in the United States. The decline in research funding affects all of medicine, but psychiatry faces a special problem. Since 2010, the pharmaceutical industry has substantially retreated from research on psychiatric disorders despite years of commercial success with antidepressants and antipsychotic drugs. Payers, and in Europe regulators, are resisting the longstanding pattern of industry marketing new psychiatric drugs that often have milder side-effect profiles but lack significant improvements in efficacy over existing treatments. Leaders in industry recognize the promise of new discoveries being made in psychiatry. However, they see this emerging work as

too early to apply to the development of truly novel treatments, including much-needed treatments for conditions such as the cognitive and negative symptoms of schizophrenia and the core social and communication disabilities of autism that currently lack effective pharmacologic interventions. The retreat of industry further decreases funds for psychiatric research and discourages young scientists from entering the field.

Consequently, it is critical for psychiatrists, neuroscience researchers, and patient advocacy groups to make a case for funding by the government and foundations and to help convince industry to resume psychiatric research, albeit on a new and better scientific footing.

Some of the most exciting scientific research on the brain and mental disorders has been in the areas of genetics and stem-cell technology.

Genetics

Why is it important to discover specific genes that are involved in the etiology of psychiatric disorders? It is because genes encode the information to produce the ribonucleic acid (RNA) molecules and proteins that are the key building blocks of our cells. When a particular variation in the sequence of a person's DNA increases risk for an illness, it is a clue to the cellular process that has gone awry and that might ultimately lead to a therapy. Discovery of genes that produce risk of psychiatric illness allows us to follow the successful lead of other fields of medicine such as oncology. Cancer therapeutics has a long way to go, but there is great excitement in the field; indeed, many companies that have deemphasized psychiatry are highly focused on cancer. This is because a large number of the genetic mutations have been discovered within cancer cells, and some have been shown to play causal roles, for example, by dysregulating cell division. Many new cancer therapies target the biological effects of specific gene mutations in cancer cells. These therapies fail when new mutations occur in cancer cells that make them resistant to the treatment (like bacterial infections in which the organisms develop resistance to antibiotics); eventually, cancer may be treated with combination treatments that make it difficult for the cells to escape—like current treatments for HIV.

Although the path from genes to treatments is being blazed by other fields, psychiatry has a harder problem. The causative de novo mutations in cancer cells are thought to occur as a result of errors in repairing DNA after exposure to environmental toxins such as cigarette smoke. The mutations then exert their disease burden by amplification during active cell division. Since psychiatric diseases are thought to reflect dysfunction of ensembles of nondividing neurons, somatic mutations targeting an individual cell are much less likely to produce a psychiatric disease phenotype the way they would in cancer. The DNA changes associated with mental disorders are those we are born with and are thus in every cell in the body. In addition, they tend not to be harmful mutations that can act alone, but variations that create risk only when they come together in infelicitous combinations. Finally, psychiatric symptoms do not result from the action of rogue cells that can be retrieved by a surgeon and made available for science. Instead they result from patterns of communication in highly distributed neural circuits within our brains. What is exciting is that we can now discover DNA sequence variation in the human genome that creates risk for psychiatric disorders. We can also turn human skin cells into neurons in the lab using recent stem-cell technologies and use these neurons to compare versions of particular genes that do or do not increase risk of psychiatric disorders. Finally there are new tools to study the function of cells and circuits in the brain.

The scientific challenge for psychiatry is that genetic risk for disorders such as schizophrenia or bipolar disorder does not result from one or two damaging

see ***From the President*** *on page 14*

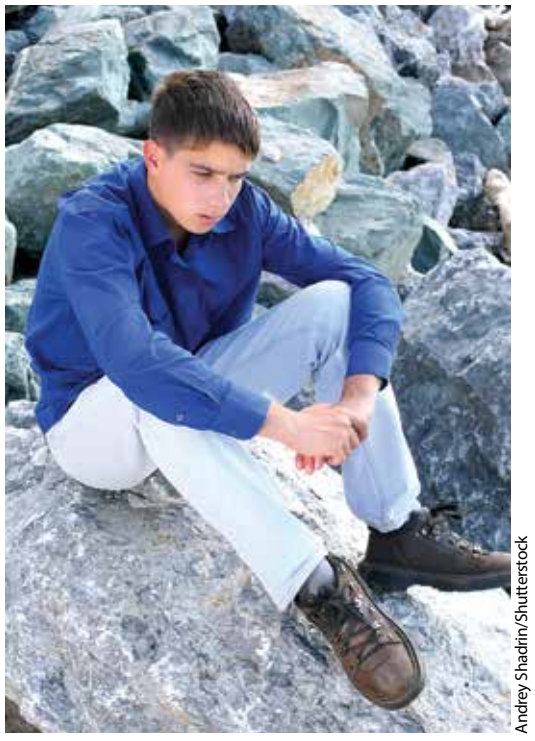
Steven E. Hyman, M.D., is the director of the Stanley Center for Psychiatric Research at the Broad Institute and a Broad Institute core member. He is also the Harvard University Distinguished Service Professor of Stem Cell and Regenerative Biology.

PROFESSIONAL NEWS

CBT Program Helps Some Teens Lower Their Depression Risk

An example of the encouraging results of recent mental illness prevention research comes from a new study showing that a cognitive-behavioral program is effective in preventing depression in some at-risk teens.

BY JOAN AREHART-TREICHEL



Andrey Shadrin/Shutterstock

When teens at risk for depression learn how to deal with unrealistic or negative thoughts, they may be able to keep from becoming depressed over the long haul, suggests a study headed by William Beardslee, M.D., a professor of child psychiatry at Harvard Medical School.

The study included 316 youth aged 13 to 17 with a parent who had been diagnosed with current or prior depressive disorders and who themselves had a history of depression or had current depressive symptoms that did not meet sufficient criteria for a depression diagnosis.

All the teens in the study, which was published September 4 in *JAMA Psychiatry*, were permitted to initiate or continue mental health care services not related to the prevention program being evaluated in the study. Half of the youth were randomly assigned to receive a cognitive-behavioral prevention (CBP) program that included eight weekly group sessions emphasizing cognitive restructuring and problem solving, as well as six monthly booster sessions.

For example, "Youth in the CBP program were taught to pay closer attention to their thoughts or 'self-talk'—the automatic and often unexamined beliefs and interpretations that we all have in response to difficult situations," Beardslee explained in an interview with *Psychiatric News*. "The program particularly focused on unrealistic or highly negative self-talk (for instance, 'If I don't get 100 percent on this test, I'll be a failure for life'). Once teens became skilled at uncovering these beliefs, we taught them to test the accuracy, usefulness, and reasonableness of these beliefs. They asked themselves whether each belief was going to help them now or in the future. What was the evidence supporting the belief? What was the evidence against?"

Once the subjects "identified particular beliefs or self-talk as unrealistic or unhelpful, they were taught to generate alternative, more realistic beliefs to test in place of the original belief," Beardslee said. "Did this new interpretation help them? Did they feel less depressed, anxious, or angry? If their negative belief was in fact accurate (for example, something undesirable did actually happen), then they were taught ways to either change the situation (problem-solving) or manage their reactions to it (secondary control coping)."

The subjects were evaluated for depression at baseline, after the acute intervention (month 2), after the booster sessions (month 9), and again at months 21 and 33.

Over the 33-month follow-up period, and for the sample as a whole, the intervention was significantly effective, with 37 percent of subjects in the CBP group experiencing a depressive episode of at least two weeks compared with 48 percent in the usual-care group. Depression was determined by a score of 4 or higher on the six-point Depression Symptom Rating. The teens also completed the CES-D at each follow-up evaluation.

"We were quite pleased that the effects noted in our earlier analysis nine months after enrollment were sustained at 33 months, as it is difficult to demonstrate longer-term prevention effects," said Beardslee. At the nine-month follow-up, 21 percent of the CBP group had experienced depression symptoms, in contrast to 33 percent in the usual-care group.

When parental depression at baseline was considered, though, it changed the equation. The intervention no longer appeared to be significantly effective. Specifically, where there was no parental depression at baseline, 32 percent of CBP-participating youth experienced depression during follow-up, compared with 52 percent of the youth receiving usual care. But where there was parental depression at baseline, 42 percent of the CBP group experienced depression during follow-up, compared with 43 percent of the usual-care group.

Possible reasons why parental depression eroded the program's effectiveness, Beardslee and colleagues suggested, is that "it directly affected intervention uptake or use or represented a marker of some third variable such as shared genetic vulnerability. . . ."

Beardslee said that "more study is needed to understand why it is that children whose parents are currently depressed do not benefit as much from the intervention and, importantly, what should be done about that (perhaps obtaining treatment for parents or other strategies)." He added that "more work on using these strategies in different cultural and ethnic groups and in different settings—such as schools and community settings—is needed."

Meanwhile, the findings have implications for psychiatric practice, Beardslee believes. "We should pay more attention to the prevention of depression in adolescents as well as to its treatment. In particular, psychiatrists treating depressed patients who are parents should inquire about the health and well-being of the depressed patients' children and help get them connected with services as needed. Similarly, mental health professionals working with children should ask about the mental health of the child's parents."

The study was funded by the National Institute of Mental Health, the National Center for Research Resources, and the National Center for Advancing Translational Sciences. PN

An abstract of "Prevention of Depression in At-Risk Adolescents" is posted at http://archpsyc.jamanetwork.com/article.aspx?articleid=1733254.

Key Points

- In a three-year study, a cognitive-behavioral prevention program was found to reduce the risk of depression in some teenagers who are at high risk for the disorder.
- The program emphasized cognitive restructuring and problem solving, focusing on unrealistic or highly negative self-talk—for example, "If I don't get 100 percent on this test, I'll be a failure for life." Teens were taught to generate alternative beliefs and then to test whether they felt less anxious, depressed, or angry as a result.
- Before the program can be disseminated, it needs to be studied in different cultural and ethnic groups and in different settings.

DSM-5 Mobile App Available

The *DSM-5* Diagnostic Criteria Mobile App, designed to help mental health practitioners, researchers, and students fully integrate the new *DSM* criteria and codes into their practice and study, is now available in both English and Spanish for both IOS- and Android-compatible devices. Users have full offline access to all of the criteria sets as well as online access to supporting videos, commentary, and resources. Powerful search and customization tools aid and enhance assessment of symptom presentations in a variety of clinical and administrative settings.

The app features the following:

- Access to the complete *DSM-5* diagnostic criteria sets on your phone and tablet
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Psychiatrist Finds Rewards In Teaching Collaborative Care

A psychiatrist's role in a collaborative team-based model is in part educational, serving as the source of knowledge for care managers and primary care staff. This is the seventh in a series profiling psychiatrists in integrated care.

BY MARK MORAN

"I have always been interested in interfaces," said psychiatrist Anna Ratzliff, M.D., Ph.D.

This early-career psychiatrist with Ph.D. training in the basic sciences had thought when she finished her training that she might spend her career working at the juncture of psychiatry and research. But as a graduate of the psychiatry residency program at the University of Washington (UW) School of Medicine, which has been a critical incubator of the movement toward integrated care and, specifically, the collaborative-care model, she became drawn to that crossroads where psychiatry and primary and general medical care meet.

Today she is associate director for education in the Division of Integrated Care and Public Health at UW, where she is also at the juncture of education and clinical work, training residents and established practicing psychiatrists in the skills and theoretical outlook necessary to work in a collaborative-care setting.

"In my role I am thinking about how to train a psychiatry workforce to be able to provide evidence-based integrated, collaborative care," she told *Psychiatric News*. "I look at how can we train individual psychiatrists and other clinicians, as well as how can we can disseminate better strategies to health care systems that improve the quality of mental health care and at the same time reach more people.

"When I finished training, I thought I would be a research clinician helping to use basic science to come up with new treatment modalities," she continued. "But at UW I have found two things that I really like—working in teams and the interaction between primary care and mental health care."

INTEGRATED CARE
Putting Together the Puzzle

You Learn By Doing

Ratzliff also has a clinical practice, working in the collaborative-care model developed by Wayne Katon, M.D., and Jürgen Unützer, M.D., at UW. In that model, a psychiatrist works closely with a "care manager" and primary care staff managing the mental health needs of an entire caseload or population.

Teaching, of course, has its own rewards and informs her clinical practice. "Almost everything I do is about education," she said. "The consulting psychiatrist really becomes the source of knowledge for evidence-based practice and treatment for both the care managers and the primary care physicians. I'm seen as a trusted resource."

That an educational component is "built into" the integrated-collaborative care model is one of its strengths, Ratzliff said, because it means that clinicians "learn by doing" and in the context of their own work—which educators know is one of the best ways to learn.

And that principle of learning by doing is incorporated into her work both with residents and with established psychiatrists who seek out training in integrated care through UW's AIMS Center. The center offers individual and group-based learning through in-person and online formats; learning opportunities vary in length from one-hour presentations and webinars to multiday training meetings to a six-month academic certificate program. Ratzliff and colleagues have also offered training seminars at APA meetings.

For residents, lectures on integrated care are introduced in the didactics of the second year. All residents—and practicing psychiatrists who are trained through the AIMS Center—are taught the following core principles of collaborative, team-based care:

Anna Ratzliff, M.D.

The idea behind training clinicians in the integrated care model is that clinicians "really learn best in the context of doing their work, so it's an immersive educational experience," says educator Anna Ratzliff, M.D.

- **Patient-centered care:** Primary care and behavioral health providers collaborate effectively using shared care plans. It's important to remember that co-location does not necessarily mean collaboration.

- **Population-based care:** The care team shares a defined group of patients tracked in a registry. Practices track and reach out to patients who are not improving, and mental health specialists provide caseload-focused consultation, not just ad-hoc advice.

- **Measurement-based treatment to target:** Each patient's treatment plan clearly articulates personal goals and clinical outcomes that are routinely measured. Treatments are adjusted if patients are not improving as expected.

- **Evidence-based care:** Patients are offered treatments for which there is credible research evidence to support their efficacy in treating the target condition.

- **Accountable care:** Providers are accountable and reimbursed for quality care and outcomes.

There is an integrated-care journal club and a "career pathways" program for those interested in pursuing a career in collaborative care. In the fourth year, residents can do a six-month rotation in collaborative care, working with supervision as a consultant to a care manager and primary care staff to help manage the mental health care of a defined population.

"Again, the idea is that people really learn best in the context of doing their work," she said, "so it's an immersive educational experience."

Putting Care 'Back Together'

Ratzliff noted that the Milestone Project, the initiative of the Accreditation Council for Graduate Medical Education to introduce measurement of discrete skills and competencies into residency training, includes among its core physician competencies "systems-based practice" (*Psychiatric News*, August 28).

So collaborative care, she believes, is a trend that will become only more important. And for this clinician-educator who has always wanted to be at the interface of things, the integrated-care movement is a way to return mental health care to its rightful place.

"Collaborative care is at the interface of medicine and psychiatry and works to bring them back together the way they should be," she said. "I think this may draw more people into our profession because it can be attractive to medical students who may have thought they had to choose between one or the other." PN

Resources on integrated care for members are posted on APA's website at http://www.psychiatry.org/practice/professional-interests/integrated-care. A primer on integrated care through a series of FAQs is posted at http://psychnews.psychiatryonline.org/newsarticle.aspx?articleid=1742623.

APA Election Dates to Note

- **November 1:** The names of candidates in APA's 2014 election will be announced on APA's Web site at www.psychiatry.org.
- **November 15:** Deadline for petition candidates. Those who plan to run by petition should send an e-mail to election@psych.org.
- **December 20:** Candidates' photos and website addresses will be published in *Psychiatric News*.
- **January 2:** Instructions and links to members' online ballots and candidate information will be e-mailed to all voting members for whom APA has a valid e-mail address. The remainder will be mailed a paper ballot.
- **January 2:** Online voting begins.
- **January 23:** Deadline for requests for replacement paper ballots. (Contact election@psych.org.)
- **January 31:** Online voting ends at 5 p.m. (EST). Paper ballots must be received by that time as well.

PROFESSIONAL NEWS

Farm Has Spent 100 Years Helping Those With Serious Mental Illness

Before the start of the deinstitutionalization movement, mental hospitals often had farm operations where patients helped with chores. There is still a place, however, where farms are helping people recover.

BY JOAN AREHART-TREICHEL

Even before the fog lifts from the Berkshire Mountains in western Massachusetts, and while the air is redolent with the scent of spruce and pines, adults with severe mental illness are up for breakfast before heading out to gardens, fields, barns, and a bakery. There are cows to be milked, pigs to be fed, and vegetables to harvest and prepare for lunch.

This is the way it has been for the past 100 years—ever since Gould Farm was established by visionary social reformer William Gould and his wife, Agnes, to help those with serious mental illness.

Gould Farm is all about recovery from serious mental illness and was so long before the recovery movement became popular in psychiatry.

"I think Gould Farm is an excellent place—superb!" exclaims Jeffrey Geller, M.D., a professor of psychiatry at the University of Massachusetts and APA's Area 1 Trustee. Geller has also had first-hand experience at the farm, trying his hand at milking cows.

The individuals who come to live and work at Gould Farm and stay for an average of nine months are referred by various sources—New York Presbyterian Hospital, McLean Hospital, the Menninger Clinic, among others. Many are college students who have had their first psychotic break or young adults who have had multiple episodes. In general they have mental illnesses with a psychotic component and have not responded fully to short-term hospital treatment.

The staff at Gould Farm works hard to make patients feel at home and get them involved. For example, they are called guests, not patients. When they arrive, they are asked, "What brought you to the farm?," not "What mental illness do you have?," Phyllis Vine of New York City and a member of the Gould Farm board, points out.

"They are asked to give as well as to receive," says Donna Burkhart, acting director of Gould Farm. Burkhart has been working at Gould Farm for some 30 years, along with her husband, Wayne, who serves as agricultural director.

All the guests work, and they have job choices. "The work is very serious," says Geller. "You are expected to answer to supervisors, follow a schedule, and there are expectations about the quality of your work."

At the same time that guests are working on the farm, they are also living there, as are many staff members and their families. They eat meals, socialize, and go on various outings together. "The Gould Farm staff does an excellent job in creating a community that engages guests, many of whom have great difficulty in successful social interactions," Geller notes.

While the guests are at the farm, their psychiatric needs are carefully tended to. Psychiatrist Jesse Goodman, M.D., supervises their care and their psychotropic medications. Five social workers provide a combination of supportive, cognitive, and psychodynamic therapies. A nurse dispenses the medications. All of the staff members carefully monitor the status of each guest and log their observations.

"The program relies on the old-fashioned work cure of the early part of the century, but not for morality reasons," Goodman explains. "It is because engaging in focused learning and productive

see ***Farm*** *on page 43*

It's dinnertime for the cows on Gould Farm. Milking them is one of the guests' chores.

At this roadside café, Gould Farm guests sell some of their products.

The farm uses modern equipment, such as this combine harvester. It reaps, threshes, and cleans grain crops.

Jesse Goodman, M.D., supervises patient care at Gould Farm. To learn more about his work, see information at end of story.

Photos: Joan Arehart-Treichel

Residential Treatment Takes Many Forms

Gould Farm isn't the only residential treatment facility in the United States designed to further the recovery of individuals with persistent and serious mental illness, Jeffrey Geller, M.D., a professor of psychiatry at the University of Massachusetts and an APA Trustee, told *Psychiatric News*. Each of the others has its special atmosphere and philosophy, he said.

For instance, there is the Academy Street Community Residence in Poughkeepsie, N.Y. It has been caring for individuals with persistent and chronic mental illness since 1970. Another example is CooperRiis Healing Community in Mill Spring, N.C., offering both a healing-farm therapeutic community and an urban campus that feels like a recovery "college." Other programs following the recovery model, he noted, are the Greystone Program in Philadelphia; Hopewell, a therapeutic farm community in Mesopotamia, Ohio; Lakewood Center in Fern Park, Fla.; and Rose Hill Center in Holly, Mich.

More information about such centers is posted on the Web site of the American Residential Treatment Association—http://artausa.org/.

VIEWPOINTS

How Americans' View of Black Men Affects Mental Health Care

BY WILLIAM LAWSON, M.D., PH.D.

The shooting of 17-year-old Trayvon Martin by George Zimmerman in Florida in February generated national outrage, headlines, protests, and demonstrations, particularly in the African-American community. Martin was an African-American high school student carrying no weapon. Zimmerman was a 28-year-old mixed-race Hispanic who was the neighborhood-watch coordinator in the gated community where Martin was temporarily staying.

What happened is a subject of dispute, but the result was that Zimmerman shot and killed Martin. The concern among many African Americans was that he was shot because he was a black male and thus presumed to be dangerous. The media reports and public opinion that followed split heavily along racial lines—many African Americans thought the shooter should be arrested and prosecuted, while the larger community felt the shooter should not be. In fact many thought he was justified in defending himself from someone he thought was a dangerous assailant.

Polls released soon after Zimmerman's trial, in which he was acquitted of manslaughter, revealed a dramatic racial gap in public opinion about the case, with racial disparities on issues ranging from reaction to the verdict to the need for a national discussion on race. According to a Pew Research Center poll, 86 percent of African Americans expressed dissatisfaction with the verdict, compared with 30 percent of whites. A *Washington Post*/ABC News poll reported a similar finding, with just 9 percent of blacks approving of Zimmerman's acquittal, compared with 51 percent of whites. The *Washington Post*/ABC News data also reported that 87 percent of blacks said the shooting was unjustified; only 33 percent of whites held that view.

Many had assumed that the country was now "postracial" because, among other observations, an African American had been elected president. Nevertheless, this issue, as well as the arrest of Harvard University professor Henry Louis Gates Jr., by local police after he had arrived late at night to his home after an overseas trip, showed deep differences in racial views.

These incidents are consistent with a long-held perception that the African-American male is potentially dangerous and violent. This perception has implications not only in isolated interpersonal contacts but may explain many racial disparities in health care that impact the larger society.

In one of my first research projects after my residency, I decided to examine race as a factor in inpatient violence. I found that African Americans in a Veterans Administration hospital were significantly less violent than white patients. Yet the staff and many faculty continued to say that they believed African-American patients were more likely to be violent.

Subsequent studies have shown why African-American patients may be less violent. Staff apparently are less likely to tolerate violent behavior from these patients, and African-American patients, particularly males, are more likely to be placed in seclusion and restraint, receive different medications, get higher doses of medication, and be given antipsychotics.

The literature is full of instances in which African Americans, particularly men, receive differing, often more-punitive and less-optimistic treatments. There is a greater likelihood of use of emergency room visits, hospitalizations, and involuntary admissions rather than use of evidence-based support programs or regularly scheduled clinic visits.

The disparities become especially apparent with diagnosis. African-American males are far more likely to receive a diagnosis of schizophrenia, often at the expense of mood disorders and post-traumatic stress disorder. As a result, the excessive antipsychotic usage and hospitalizations appear justified.

The overdiagnosis has persisted despite the use of more empirically based diagnostic criteria. In a recent study in the *Archives of General Psychiatry,* we showed that the overdiagnosis occurred despite three levels of diagnostic screening. Moreover, the overdiagnosis was more likely in African Americans than in any other ethnic or racial group. In a provocative book, *The Protest Psychosis,* Jonathan Metzl makes the case that the overdiagnosis of schizophrenia in African-American males is a recent phenomenon, emerging out of the civil-rights era of the 1960s, when schizophrenia increasingly became a disorder of violent black men. The schizophrenia diagnosis apparently was a handy way of dealing with black activists who were often sent to psychiatric hospitals and subjected to involuntary psychiatric treatment. Whatever their actual mental status on admission to psychiatric hospitals, forced treatment almost certainly led to mental deterioration over the course of their hospitalization and after release.

The perception of African-American men as violent may also account for a paradox. Multiple studies have shown that they tend to be slow metabolizers of most antipsychotic medications. Thus, plasma levels tend to be higher with usual dosing, suggesting the need for less medication. Yet African Americans, especially males, end up receiving higher and more frequent dosing. Medication dosing seems to be driven not by rational pharmacotherapy but by skin color and perceived ethnicity.

The correctional system is another way in which these disparities are manifest. There has been a 290 percent increase in the population of U.S. jails and prisons in the past 30 years. More than half of this population are minorities, and African-American men in particular. In addition juvenile African Americans are more likely to be placed in correction facilities, while youth of other ethnic groups are more likely to be referred for mental health treatment.

Two key factors have increased the U.S. incarceration rate: the war on drugs and deinstitutionalization. The drug war increased incarceration of black men, partially because penalties related to crack cocaine, which was more likely than powdered cocaine to be used by minorities and the poor, were more severe—often draconian.

With such a large population of African-American men incarcerated, the consequence is that many receive suboptimal treatment and do not have ready access to care.

The Trayvon Martin case is a reminder that in "postracial" America, black men are still being viewed as dangerous and violent. This perception has shifted resources from treatment to punishment and limited the options for recovery from mental and substance abuse disorders in a large segment of our population. PN

William Lawson, M.D., Ph.D., is chair of the Department of Psychiatry and Behavioral Sciences at Howard University College of Medicine.

RESIDENTS' FORUM

Challenges Await IMGs as They Start Residency Training

BY SUBANI MAHESHWARI, M.D.

Starting a residency involves making a major transition from being a medical student to becoming an intern. Residency can be especially overwhelming for international medical graduates (IMGs) such as me, since in the initial few months, we are trying to adapt to a new country, a new culture, and a new work style.

As we proceed in our residency, we will gain knowledge about *DSM*, pharmacotherapy, and structured education. But how do we learn about the multiple issues and dilemmas beyond diagnosis and drugs?

As an IMG, I struggled to understand the local slang used in day-to-day conversation. I remember my first day as an intern when I started my emergency room rotation. I was asked to see a patient with leg pain. During the interview, the patient mentioned he had "a Charlie horse." I had no idea what it meant until I looked it up on the Internet.

Before starting my residency, I did an externship in psychosomatic medicine. I quickly noticed that a few patients named John Doe or Jane Doe were admitted. The nurses had a good laugh when I casually asked if that was a common name.

Many of my resident colleagues and I also had difficulty understanding the levels of behavioral health care, housing programs, and other such issues. In my initial few rotations, I found that the patients knew more about these than I did, and they could sense that I was a "newbie." I learned the most on this subject during work in a dual-diagnosis unit. Some of the patients have been in and out of the hospital and rehab facilities multiple times and know the system well.

I learned not to be frazzled when I saw a patient getting frustrated when I did not have an answer to all of his placement-related questions. My advice in such a situation is to speak with the social worker or your attending to be more prepared when you see that patient again. Once you have a better understanding of the levels of care in the mental health system, you will find yourself more confident when counseling patients and their families.

During my rotation in primary care in the inpatient service, I was asked to counsel a family member of a terminally ill patient regarding hospice and palliative care. I had to defer it to my senior resident, since at that time I had little understanding of what those services entailed. I would strongly advise psychiatry residents to familiarize themselves with the concepts of comfort care, advance directives, and DNR/DNI, as issues and requests for information or advice related to them will likely arise during geriatric psychiatry rotations. Being familiar with these will also help if you are asked to make capacity evaluations during calls or C-L rotations.

As a new intern or resident, there will be many "what if" moments, especially during calls. "What if I order something wrong?" "What if I do not order something important?" My advice is to speak with your attending or seniors. They were new residents not very long ago. Your handbooks, resident's manual, and smartphones are your best friends during residency. Be sure to use them regularly and mark the relevant pages so that you can look up information quickly when needed.

In addition, it is important to be courteous to the nurses, behavioral health assistants, and unit clerks, who have been in the field for a much longer time than you—a lot can be learned from them. Working in the unit can be so much more rewarding with friendly faces around.

All that being said, the first year of residency can be one of the most memorable years of your training, and looking back you will find yourself amused over certain anecdotes. I will never forget a patient I saw for capacity evaluation who repeatedly mentioned, "Lucifer told me to do this, Lucifer wants this." I would not have figured out "who Lucifer was" had I not asked a family member for an explanation.

Last but not least, get ample rest every day, and shut off your brain before bedtime to have a clear mind the next day. Spend time with your loved ones, develop a hobby, and have a life outside the hospital. PN

Subani Maheshwari, M.D., is a PGY-2 psychiatry resident at Einstein Medical Center in Philadelphia.

From the President

continued from page 5

mutations, but rather from the interaction of many—perhaps hundreds—of genes containing sequence variants of modest effect. How would it be possible to detect many small increments of risk against the background of normal human genetic variation? The answer has been the genomic revolution. The cost of determining DNA sequences has declined by a factor of 1 million over the last decade. It is thus possible to examine enormous numbers of people with particular psychiatric disorders. The result is that as recently as 2007, there were no genes known with certainty to increase risk of schizophrenia. Today there are more than 100 regions in the genome of which we have confident associations with schizophrenia, and the pace of genetics research is accelerating. What will it ultimately mean for psychiatric practice? Often it is thought that genetics will provide important tools to improve diagnosis. This will eventually be true, but given the large number of relevant genes that remain to be identified and the fact that some risk genes are shared across disorders, the utility for diagnostics will initially be very limited. The real excitement is that these findings provide clues to what goes wrong in the brain to produce illness. As we build up a picture of the incremental risks for illness in the form of genetic variants, we will be in a far better position to design treatments.

Stem-Cell Technologies

The human brain is protected by the hard and opaque bones of the skull, and for both ethical and pragmatic reasons, biopsies are rare. Moreover, even when obtained, a biopsy of an adult brain is highly resistant to the tissue culture process. More accessible tissues like blood and skin do not necessarily provide information about disturbances in the brain. Animal models of human disease can be useful, but the human forebrain, and especially the human prefrontal cortex, have features that are new in evolution. How then can we learn what disease risk genes are doing in the cells that make up the human brain? This daunting problem is getting an answer from stem-cell technologies. In 2012 a Japanese physician scientist won the Nobel Prize for developing a simple method to transform skin cells (dermal fibroblasts) that can be readily obtained from a punch biopsy into pluripotent cells that can become any cell type in the body. These induced pluripotent cells (iPS cells) can be readily differentiated into neurons. Today many scientists are learning how to turn iPS cells or even skin fibroblasts into different types of neurons including those thought to be affected in schizophrenia, bipolar disorder, and autism. Others are collecting skin cells from patients whose genomes have been studied and turning them into neurons for study. Yet others are attempting to turn engineered neurons into small neural circuits to study their patterns of communication with and without disease risk mutations. Circuits might be assembled on a "chip" using small wells etched into an appropriate support or might be assembled in three-dimensional gels. Such technologies are so new that they are not ready for routine application to drug discovery. They are potentially so powerful, however, that a few companies that had abandoned psychiatry are starting up small exploratory programs.

Psychiatry is fortunate that reprogrammed stem-cell technologies have emerged only a few years after the application of modern genomics has begun to yield genes associated with mental illness. This second enormous technological step has permitted investigations to turn emerging genetic information into biological experiments with implications for therapeutics.

One aspirational view of how a therapeutic discovery program in psychiatry might look in the near future follows. Enough risk-associated genetic variation will be known for some disorders in five years to put much of the genetic jigsaw puzzle of risk together. (Already in schizophrenia, many proteins have been implicated by genetics that act in the specialized postsynaptic structures of neurons that receive excitatory signals from the neurotransmitter glutamate.) Studies of relevant protein networks in neurons will help identify a subset that could usefully be targeted by drugs; characterizing the genes that encode those proteins would become a priority. Human cells encoding selected genes—both risky and healthy versions—would be engineered into iPS cells. These, in turn, would be differentiated into relevant neurons and perhaps assembled into small circuits. The biochemistry and physiology of cells with risky and healthy versions of the genes could be compared, and then drug screens could be developed that would identify compounds that normalized disease-risk-associated changes. Such drugs would still be studied in animals for toxicity and assessment of behavioral effects. The main difference from our current approach to drug development is that instead of having to guess about which proteins to target with drugs (or as is now the case, sticking with existing targets and hoping for better results), we could allow the genes that are in the causal chain of pathogenesis to point the way. There are no guarantees, and certainly not enough funding for this research, but it truly appears to be a new way and a new day. PN

ASSOCIATION NEWS

APA's Election Guidelines Emphasize Dignity, Courtesy, and Fairness

The 2014 APA election cycle has just begun. Members are encouraged to participate in the election and to educate themselves on the applicable rules of conduct approved by the APA Board of Trustees (see box below). Candidates and supporters are advised to be respectful, not to criticize each other, and to show restraint in distributing campaign materials.

Guidelines prescribing members' election-related activities were established by the Board in the early 1970s, when APA began having contested elections. Campaigning restrictions were adopted initially to address four major concerns: (1) massive campaign efforts "buying" an election win, particularly if those efforts were financed by resources from outside the membership; (2) campaign committees and unwelcome bids for public support; (3) the growing distress of the membership at being deluged with campaign materials; and (4) a belief among some members that large-scale campaigning was inconsistent with their conception of APA's professional image.

Since then, the guidelines have evolved incrementally, in keeping with the times and in response to six guiding principles established by the Board in March 2000: (1) **Equity of Access:** The electorate and the candidates should enjoy optimum access to each other, to meet or communicate without unnecessary encumbrances. **(2) Fairness:** Every qualified member should have equal opportunity to run for leadership positions in APA. **(3) Collegiality:** An atmosphere of collegiality should be promoted among candidates and among members. **(4) Candidate Engagement:** Candidates should be involved in interpreting rules that affect their campaign. **(5) Membership Engagement:** The election process should arouse members' interest in and knowledge of APA affairs and foster optimum ballot returns. **(6) Economic Principle:** The candidates and APA should collaborate to find and utilize the most economic means of conducting the election campaign in terms of time and money.

The election guidelines have been significantly revised for improved clarity, simplicity, and support of principles that the guidelines are intended to serve. Social networking for campaign purposes (Facebook, Twitter, blogs, and similar interactive media) is allowed in order to foster communication between candidates and members.

The APA Elections Committee serves to educate candidates and other members about election procedures, suggest improvements to the guidelines for the Board to consider, monitor election activities, and report violations of the guidelines to the Board. Candidates and supporters are strongly encouraged to contact the Elections Committee when uncertain about what campaign activities are allowed according to the new election guidelines. PN

Members can obtain more information on campaigning, report an election violation, or submit suggestions for improving the election process by sending an e-mail to election@psych.org or visiting the election section of the APA Web site at www.psychiatry.org/network/board-of-trustees/apa-national-elections.

APA Election Guidelines for Candidates and Supporters

Based on those approved as amended by the Board of Trustees – July 2013

A. OVERVIEW

The intent of the guidelines is to encourage fair and open campaigning by APA members on a level playing field by (1) specifying permitted and prohibited election-related activities, (2) fostering opportunities for candidates to educate their colleagues about the issues, (3) informing voters about candidate experiences and views, (4) keeping costs down, and (5) maintaining dignified and courteous conduct appropriate to the image of a profession.

Each candidate receives a copy of these guidelines and a statement to sign, certifying that he/she has read the guidelines, promises to abide by them, will immediately report any deviations of which he/she becomes aware to the Elections Committee, and will notify and try to correct any supporter upon learning of an actual or potential deviation. Candidates are to inform members they ask for support about the guidelines by sending a copy or calling attention to the guidelines on the APA Web site.

All APA members are expected to abide by the APA election guidelines in APA elections, including in their capacity as officers and members of other organizations. APA requests that other organizations adhere to the intent of the campaign guidelines and provide fair and equitable coverage of opposing candidates.

When candidates or their supporters are unclear about whether an intended campaign action is permitted, they should seek the opinion of the Elections Committee before taking action. The Elections Committee will respond with a ruling concerning the proper interpretation of the guidelines and inform all candidates in order to maintain a "level playing field."

The Elections Committee investigates any potential violation by a candidate or supporter of which it becomes aware and reports violations to the Board of Trustees. The procedures used by the Elections Committee to investigate and report campaign violations are in Chapter 2 of the APA Operations Manual and will be sent to candidates with these Election Guidelines.

B. CAMPAIGNING

Campaigning is defined as any attempt to influence a potential voter's vote. Campaigning includes mentioning one's candidacy or making any statement that might be interpreted as a position statement reflecting what actions the candidate would take if elected. It does not include appearances made as part of one's normal work activities.

1. GENERAL

- Candidates are to state their own positions on issues and their own plans for the Association directly and positively.
- Candidates/supporters may not make personal attacks against other candidates.
- When "signing" campaign communications, APA/Area/DB organizational titles may not be used, but such titles may be mentioned in the body of the communication.

2. RESOURCES

- Candidates and supporters may communicate with each other and coordinate campaign activities. However, formal campaign committees (entities that can make statements or take other actions on behalf of the candidate) are not allowed, and candidates may not enter into agreements to campaign together.
- Fundraising is not permitted. A goal of these guidelines is to limit campaign activities to a level that all candidates can easily afford.
- Use of APA, Area Council/State Association, or District Branch resources or personnel is generally prohibited, except to support the election process, including communication of candidate statements to members.
- APA, Area Council/state association, or district branch funds, services, stationery, or staff may not be used to endorse, support or promote any candidate; however, Area Council/state association, or district branch funds—not APA funds—may be used to support the expenses of candidates invited to the branch/area meeting for election purposes.

3. CAMPAIGN COMMUNICATIONS

Permitted forms of campaigning include the following; all others are prohibited.

a. Electronic Messages (E-mail, SMS, etc.)
There are no limits on the number of campaign messages sent electronically. However, candidates and supporters are advised to use restraint with electronic messages of all kinds, as these are often ill-received by voters, especially if voters perceive that they are being spammed. Beginning e-mail messages with the conventional "APA Campaigning" in the subject line is a courtesy that can help recipients to quickly sort out campaign e-mail messages. Obtaining e-mail addresses is the responsibility of the candidates and their supporters; they are not to be provided by APA, Area Councils/state associations, or district branches.

b. List servers (Listservs)
- Candidates may create their own list servers to facilitate communication with and among their supporters.
- The APA Member-to-Member list server may be used for campaigning, but no other list servers used for APA, Area Council/state association, or district branch functions.
- List servers of other psychiatric organizations may be used for campaigning if permitted by those organizations.

c. Social Networking Sites, Blogs, and Homepages (Facebook, Twitter, etc.)
Candidates may use social networking sites, blogs, and homepages for campaign purposes.

d. APA Web site
APA will include information on candidates (with links to candidates') homepages and on the election itself (campaign guidelines, ballot mailing, and return dates, etc.) on its Web site. This election information can be accessed through the election logo and linked to other information as appropriate.

e. Candidate Homepage
Each candidate is responsible for setting up and financing his/her own homepage. There will be a disclaimer on APA's Web site stating that candidates' homepages are their own creation and responsibility and that APA takes no responsibility for information posted on them. APA reserves the right to cut the link between its Web site and a candidate's homepage if a candidate violates the campaign guidelines.

f. Phone
Campaign-related phone calls (including calls made through services such as Skype) may be made by candidates/supporters to individual APA members. Use of automatic calling services (robocalls) or hiring personnel to make such calls is prohibited.

g. Letters and Handouts
There are no restrictions on number of campaign letters, postcards, faxes, or handouts.

h. Private Discussion
Spontaneous private election-related communication with colleagues is permitted.

i. Invited Position Statements
Psychiatric organizations may request written position statements or answers to questions for publication in a newsletter or other written medium. Such publication requires that no candidate is endorsed or favored and that all candidates for a given office have been given equal opportunity to respond.

j. Area/State/District Branch Campaigning: Newsletters
Area Council/state association, or district branch newsletters may announce as news items of up to 150 words per candidate the candidacy for national office or Area Trustee of member(s) of that Area Council/state association, or district branch, with pictures. Editorial endorsement of candidates is prohibited, as are letters to the editor in support of (or opposition to) candidates. Newsletters may print other statements or materials by or about a candidate only if they give equal opportunity to opposing candidates. Newsletters may not be distributed beyond the usual newsletter distribution.

k. Mutual Campaign Presentations
A mutual campaign presentation is defined as an event at which all candidates for an APA office appear together to acquaint voters with the candidates and/or to discuss campaign issues. Candidates may appear in person or through electronic media.
- If all candidates have been given equal opportunity to attend and one cannot attend, the other candidate(s) may present.
- Endorsement or favoritism of any candidate is prohibited.

l. Introduction at Professional Presentations
A candidate's candidacy may be mentioned when the candidate is introduced for the purpose of giving a professional presentation, provided that the candidate is not endorsed.

C. PROFESSIONAL PRESENTATIONS

There are no restrictions on professional presentations, defined as events at which no campaigning occurs and a candidate participates in the dissemination of information through any medium. Running for office should not inhibit or prohibit candidates from conducting their usual professional business.

Future of Psychiatric Medication May Lie in Pharmacogenetics

As psychiatric research evolves, highly personalized treatment for mental illness may be possible in the years to come.

BY VABREN WATTS

As pharmaceutical companies strive to develop new therapies to treat mental illness, some clinician scientists say that the focus should be on tailoring treatment to an individual's genetic makeup.

Pharmacogenetics is the study—and technology—that analyzes how genetic factors determine an individual's response to drugs in terms of efficacy and toxicity. It has been applied in different areas of medicine including cancer, cardiovascular disease, HIV illness, and psychiatric research.

Despite what many believe, pharmacogenetics is not a new science, according to David Goldman, M.D., chief of the Laboratory of Neurogenetics at the National Institute on Alcohol Abuse and Alcoholism (NIAAA) and author of *Our Genes, Our Choices*. "It was first noted during the Korean War when a certain population of soldiers developed hemolytic anemia in response to a specific antimalarial drug," Goldman explained. He told *Psychiatric News* that pharmacogenetics did not reach the realms of psychiatry, however, until the 1990s.

Goldman said that some of the initial work in psychiatric pharmacogenetics linked genetic variations to the manner in which certain individuals metabolized alcohol, and "now science allows us to explore the pharmacodynamic differences—differences in the way neurons respond to concentrations of drug therapy."

Clozapine Study Prompts Research

Determining efficacies for medicines used to remedy mental illnesses—such as depression, attention-deficit/hyperactivity disorder, and eating disorders—has played a major role in the advancement of pharmacogenetics. Anil Malhotra, M.D., director of the Division of Psychiatry Research at the Zucker Hillside Hospital in New York, said that he became interested in pharmacogenetics as a research fellow at the National Institute of Mental Health.

David Goldman, M.D., Anil Malhotra, M.D., and Henry Kranzler, M.D., believe that pharmacogenetics will be the most efficacious and cost-effective therapy to offer to patients with psychiatric disorders in the near future.

"We were studying the drug clozapine, which showed superior efficacy for treating schizophrenia, but only in certain patients," Malhotra said. "This prompted us to investigate polymorphisms in particular receptors, such as dopamine receptors, that were suggested at the time to have an association with clozapine response."

Today, Malhotra focuses on understanding the link between antipsychotics such as risperidone and olanzapine and weight gain in a subpopulation of patients with schizophrenia. "It's amazing how a person's genetic makeup can predict a person's susceptibility to certain side effects," he said.

Substance Abuse Is Major Target

Currently NIAAA is funding more than 40 studies that are targeted to personalized treatment for substance abuse disorders—treatment for alcoholism being one of the most studied.

Henry Kranzler, M.D., director of the Center for Studies of Addiction at the University of Pennsylvania, received funding for his project exploring the effectiveness of naltrexone—approved by the Food and Drug Administration for treatment of alcoholism—in European Americans with a single nucleotide polymorphism, Asn40Asp, of the mu opioid receptor OPRM1. "If these studies clearly differentiate responders to naltrexone therapy, it could impact the label for naltrexone and yield a robust

see ***Pharmacogenetics*** *on page 43*

Personalized Medicine May Affect Health Care Costs

The incorporation of pharmacogenetics into clinical practice will have an impact on health care costs in the future, researchers in the field maintain.

Henry Kranzler, M.D., director of the Center for Studies of Addiction at the University of Pennsylvania, believes that personalized medicine will likely reduce costs by eliminating unnecessary treatment and its associated potential for producing adverse effects.

David Goldman, M.D., chief of the Laboratory of Neurogenetics at the National Institute on Alcohol Abuse and Alcoholism, told *Psychiatric News* that "pharmacogenetics technology may be one of our best bargains. . . . Multiple genes can be analyzed at one time using a genotyping array for a few hundred dollars. This would be available as a resource for genetic predictors for the person's whole life—very different from current procedures, which require repeats."

DSM-5 SELF-EXAM

Sexual Dysfunctions

In *DSM-IV-TR*, sexual dysfunctions referred to sexual pain or to a disturbance in one or more phases of the sexual-response cycle. Research suggests that sexual response is not always a linear, uniform process and that the distinction between certain phases (for example, desire and arousal) may be artificial. In contrast to *DSM-IV-TR*, gender-specific sexual dysfunctions have been added, and, for females, sexual desire and arousal disorders have been combined into one disorder (female sexual interest/arousal disorder). To improve precision regarding duration and severity criteria compared with *DSM-IV-TR* and to reduce the likelihood of overdiagnosis, all of the sexual dysfunctions (except substance- / medication-induced sexual dysfunction) now require a minimum duration of approximately six months and more precise severity criteria. This provides useful thresholds for making a diagnosis and distinguishes transient sexual difficulties from more persistent sexual dysfunction. Genito-pelvic pain/penetration disorder is added to *DSM-5* and represents a merging of vaginismus from dyspareunia, which were highly comorbid and difficult to distinguish. The diagnosis of sexual aversion disorder is removed due to rare use and lack of supporting research.

The questions below are from *DSM-5 Self-Exam Questions: Test Questions for the Diagnostic Criteria,* which may be preordered from American Psychiatric Publishing at http://www.appi.org/SearchCenter/Pages/SearchDetail.aspx?ItemId=62467. The book, available in January 2014, contains 500 questions for all the categories of psychiatric disorders and includes Section III. The questions were developed under the leadership of Philip Muskin, M.D., a professor of clinical psychiatry at Columbia University College of Physicians and Surgeons. APA members may purchase the book at a discount.

1. Which one of these *DSM-IV-TR* diagnoses is still included in *DSM-5?*

a) sexual aversion disorder
b) female orgasmic disorder
c) dyspareunia
d) vaginismus
e) none of the above

2. Which of these terms is a valid subtype of sexual dysfunction in *DSM-5?*

a) lifelong
b) secondary to a medical condition
c) due to relationship factors
d) due to psychological factors
e) none of the above

3. Which of these is most accurate with regard to the *DSM-IV-TR* diagnosis of sexual dysfunction due to a general medical condition?

a) This diagnosis is now classified with the somatic symptom disorders.
b) New criteria for this diagnosis specify that the general medical condition must have been present for at least six months.
c) New criteria for this diagnosis specify that the general medical condition must be included in the *ICD-10* diagnostic manual.
d) This diagnosis no longer exists, because this condition had poor diagnostic reliability.
e) This diagnosis no longer exists, because a sexual dysfunction that is better accounted for by a medical condition is no longer given a psychiatric diagnosis. PN

CLINICAL & RESEARCH NEWS

Smoking and Mental Disorders: Which Comes First?

New evidence suggests that educating the public about the dangers of smoking should include warnings about an added risk for new-onset mood and anxiety disorders.

BY AARON LEVIN

First lung cancer, then heart disease. Now mental illness may prove to be another baleful outcome of smoking cigarettes.

Two Johns Hopkins researchers said their findings add a new statistical twist to prior research and help "point to an increased smoking-attributable burden of mental health morbidity and impairment in functioning."

The use of tobacco is usually seen as a form of self-medication in people with mental illness, but perhaps the flow of causation also runs in the opposite direction as well, said Ramin Mojtabai, M.D., Ph.D., an associate professor of mental health, and Rosa Crum, M.D., M.H.S., a professor of epidemiology and of mental health, both at the Johns Hopkins Bloomberg School of Public Health, in the September *American Journal of Public Health.*

The researchers based their study on data from wave 1 (2001-2002) and wave 2 (2004-2005) of the National Epidemiologic Survey on Alcohol and Related Conditions (NESARC). The 33,154 participants were divided into current regular smokers (18 percent), nonsmokers (54 percent), and ex-smokers (28 percent).

The current smokers, especially those lighting up at least a pack a day, were two to three times more likely than the nonsmokers to meet lifetime criteria for mood, anxiety, or substance use disorders.

After adjustment for a number of sociodemographic and psychiatric factors, they found "a statistically significant association between regular smoking and new onset of any mood or anxiety disorder as well as specific disorders, except for generalized anxiety disorder."

However, that association held true only for participants under age 50. Among older smokers, only new-onset manic episodes were associated with smoking.

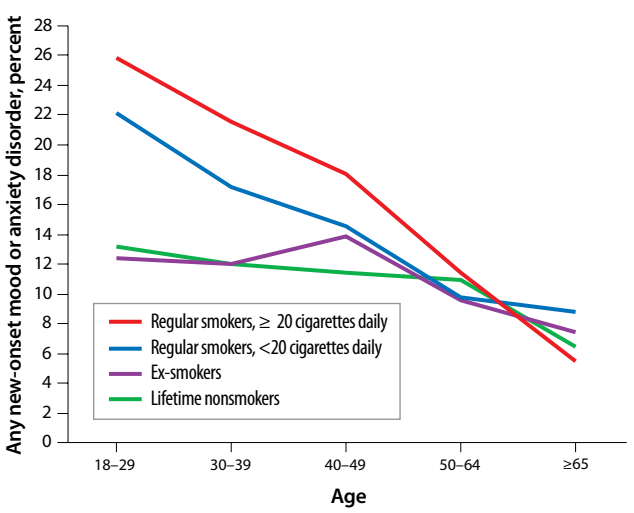
Why younger age had an effect on outcomes was not clear, said Mojtabai and Crum. They speculated that there might be a "risk window" for mood and anxiety disorders among younger participants, or perhaps smokers with mood and anxiety disorders may die younger. Alternatively, there might be some hypothetical protective effect of hormonal changes associated with age. Future research could shed light on these possible explanations, they said.

Another exception to the general pattern was post-

see ***Smoking*** *on page 43*

Smoking Is Also Bad for Your Mental Health

Regular smokers have an increased risk of developing mood or anxiety disorders, but not PTSD and only before age 50, say Ramin Mojtabai, M.D., Ph.D., and Rosa Crum, M.D., M.H.S.



Source: Ramin Mojtabai, M.D., Rosa Crum, M.D., *American Journal of Public Health,* September 2013

FROM THE EXPERTS

What's New in *DSM-5* for Cultural Psychiatry?

BY RUSSELL LIM, M.D., M.ED.

The publication of *DSM-IV* in 1994 was a watershed moment for cultural psychiatry with the manual's new Outline for Cultural Formulation (OCF), glossary of culture-bound syndromes, culturally relevant diagnostic categories, and cultural considerations in the narratives introducing each chapter.

DSM-5 advances the evolution of the practice of cultural psychiatry with the Cultural Formulation Interview (CFI). Based on the OCF, it is a 16-question interview, with 12 supplementary modules (Explanatory Model; Level of Functioning; Psychosocial Stressors; Social Network; Cultural Identity; Spirituality, Religion, and Moral Traditions; Coping and Help Seeking; Patient-Clinician Relationship; Immigrants and Refugees; School-Age Children and Adolescents; Older Adults; and Caregivers), which can be accessed with the CFI at http://www.psychiatry.org/practice/dsm/dsm5/online-assessment-measures. This column will highlight the most useful of the 16 questions, broken down into four sections: (1) Cultural Definition of the Problem (1–3); (2) Perceptions of Cause, Context, and Support (4–10); (3) Cultural Factors Affecting Self-Coping and Past Help Seeking (11–13); and (4) Cultural Factors Affecting Current Help Seeking (14–16). The clinician wanting to perform a culturally appropriate assessment now has sample questions to use to collect the clinical data for the OCF.

Cultural Definition of Problem and Perceptions of Cause, Context, and Support

Question 2 is an extremely effective way of determining how the patient's community sees the patient's illness: "Sometimes people have different ways of describing their problem to their family, friends, or others in their community. How would you describe your problem to them?"

Questions 3 to 5 are extensions from Arthur Kleinman's eight questions about explanatory models (Kleinman, et al., 1978), which ask patients to identify their concerns, why they think it is happening, and what are the causes? (3. What troubles you most about your problem? 4. Why do you think this is happening to you? What do you think are the causes of your problem? 5. What do others in your family, friend, or others in your community think are the causes of your problem?)

Questions 9 and 10, which ask the patient to explain how he or she sees cultural identity as making the patient's problem worse or better, explore the role of cultural identity in the patient's illness. (9. Are there any aspects of your background or identity that make a difference to your problem? 10. [Or] are causing other concerns or difficulties for you?)

Help Seeking

The last six questions focus on how the patient has gotten help in the past and where he or she will get help in the future. Questions 11 and 12 ask the patient what he or she has tried in the past. Not only do the questions show interest in the patient, but they also give the clinician information about the patient's health beliefs that can be used during the discussion of the treatment plan. (11. Sometimes people have various ways of dealing with problems like your problem. What have you done on your own to cope with your problems? 12. Often, people look for help from many different sources, including different kinds of doctors, helpers, or healers. In the past, what kinds of treatment, help, advice, or healing have you sought for your problem?) Question 14 asks the patient what he or she thinks would be helpful, while Question 15 looks at what others have advised, further putting the clinician's advice to the patient in context with the patient's health beliefs.

Question 16 asks the patient if he or she has concerns about the therapist-patient relationship, completing the fourth part of the OCF. The 16 questions of the CFI and its 12 supplementary modules equip any clinician with sample questions to perform a culturally appropriate assessment and create a cultural formulation that will engage the patient in treatment and serve as an important advance in the practice of cultural psychiatry. PN

Russell Lim, M.D., M.Ed., is a health sciences clinical professor in the Department of Psychiatry and Behavioral Sciences at the University of California Davis School of Medicine. He is the editor of the *Clinical Manual of Cultural Psychiatry* from American Psychiatric Publishing. APA members may purchase the book at a discount at http://www.appi.org/SearchCenter/Pages/SearchDetail.aspx?ItemId=62256. The second edition, scheduled for release next year, will include the Cultural Formulation Interview, new chapters on women, gays and lesbians, and religion, as well as video vignettes to illustrate teaching points from the text.

Advisory Group Draws Roadmap For President's BRAIN Initiative

An interim report for President Obama's BRAIN Initiative focuses on new technologies to develop an integrated view of brain circuits and their function.

BY AARON LEVIN

President Obama's Brain Research through Advancing Innovative Neurotechnologies (BRAIN) Working Group should focus on intermediate circuits and activity in the brain—those more complex than individual cells but not yet encompassing the whole brain, said an interim advisory report presented September 16 at the National Institutes of Health (NIH).

"Our goal is to look at the broad impact of this project on neuroscience research by posing problems, not dictating solutions," said committee cochair William Newsome, Ph.D., a professor at Stanford University, in a teleconference.

"The challenge is to map the circuits of the brain, measure the fluctuating patterns of electrical and chemical activity flowing within those circuits, and understand how their interplay creates our unique cognitive and behavioral capabilities," said the committee's written report. "[O]ur ultimate goal is to understand our own brains."

The advisory committee included one psychiatrist, Karl Deisseroth, M.D., Ph.D., a professor of bioengineering and of psychiatry and behavioral sciences at Stanford University.

The committee heard from dozens of invited experts representing a variety of relevant fields: chemistry, molecular biology, electrophysiology, optics, structural neurobiology, data analysis, computation, and human neuroscience.

"The focus is not on technology per se, but on the development and use of tools for acquiring fundamental insight about how the nervous system functions in health and disease," the report stressed.

Once under way, the program should begin by generating a census of neuronal and glial cell types and creating structural maps of the brain, said cochair Cornelia Bargmann, Ph.D., a professor at Rockefeller University in New York.

Work would begin first with animal models, graduating eventually to humans. But human research data could come even now from patients undergoing diagnostic brain imaging or by monitoring those receiving deep brain stimulation and other technological interventions.

"We're seeking an understanding of the dynamics of the brain: where signals come from and how they are related to internal states," said Newsome.

Understanding brain circuits will mean identifying and characterizing their cells, clarifying synaptic connections, observing patterns of activity during behavior, and perturbing these patterns to assess their significance, said the report. Doing so will mean integrating observations of the brain in action across time and space.

*see **BRAIN Initiative** on page 43*

Test Appears to Differentiate Unipolar From Bipolar Depression

While the test needs further research, the tools needed to conduct it are available now.

BY JOAN AREHART-TREICHEL

A test to facilitate differential diagnosis between unipolar and bipolar depression was described in a study reported online in the *British Journal of Psychiatry* August 22. The lead researcher was Jorge Almeida, M.D., Ph.D., then an assistant professor of psychiatry at the University of Pittsburgh and now affiliated with Brown University.

The test is based on pattern-classification analysis, a technique recently applied to analyzing brain-imaging data, Almeida told *Psychiatric News*. "Most importantly, while traditional imaging analysis relates to group means, this new approach relates to a specific subject within the sample. For this reason, it can be considered a breakthrough in neuroimaging studies and in possible clinical applicability."

Also, the test entails a kind of fMRI imaging called arterial spin labeling, in which blood flow in the brain can be measured without using invasive techniques.

Almeida and his colleagues used pattern-classification analysis and arterial spin labeling to measure blood flow in the anterior cingulate cortex—a brain area involved in mood regulation—in 18 subjects with unipolar depression, 18 subjects with bipolar disorder who were in a depressive episode, and 18 healthy controls. They found that the amount of blood flow in this region differentiated individuals with bipolar depression from individuals with unipolar depression with 81 percent accuracy (83 percent sensitivity, 78 percent specificity). In contrast, the amount of blood flow in this region did not accurately distinguish between unipolar depression subjects and healthy subjects.

Almeida believes that these results are encouraging from a clinical point of view because, as he explained, "Clinical psychiatrists are capable of doing a very good job at discriminating between a depressed person and a nondepressed person, so there is no real clinical utility to differentiating a depressed person from a control using neuroimaging. However, this differentiation is still poor when trying to discriminate between unipolar and bipolar depression, especially if a clear history of mania/hypomania is not present. So we have a clear benefit using neuroimaging as a supplemental tool for the differential diagnosis of a depressive episode."

As for the timeline for availability of such a test, he said, "All of the technologies discussed in our manuscript are available in many university-affiliated centers. However, our study had a relatively small sample size and was done only in females, so this limits the generalizability of the results. Thus, before such a test becomes clinically available, the results need to be replicated using independent and larger samples."

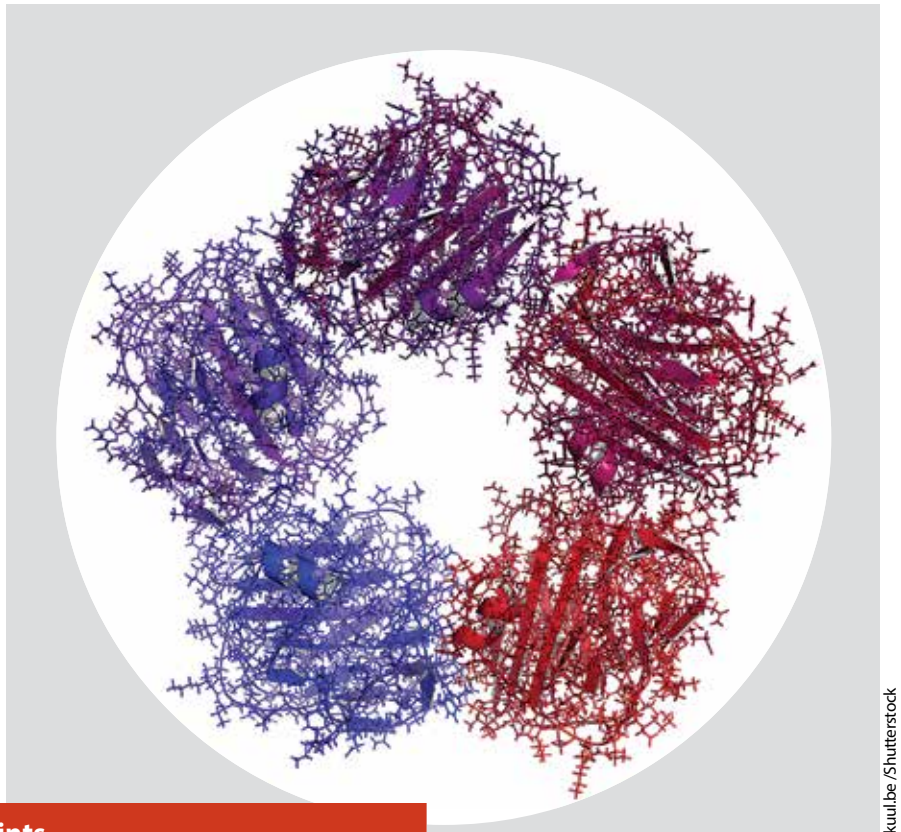
The study was funded by the National Institutes of Health, the Brain and Behavior Research Foundation, and the Wellcome Trust. PN

An abstract of "Pattern Recognition Analysis of Anterior Cingulate Cortex Blood flow to Classify Depression Polarity" is posted at http://bjp.rcpsych.org/content/early/2013/08/10/bjp.bp.112.122838.abstract.

Immune System Protein Could Give Clue To Late-Onset Schizophrenia

An immune system component called C-reactive protein appears to be associated with late-onset schizophrenia, suggesting that immune-system-provoked inflammation contributes to the illness.

BY JOAN AREHART-TREICHEL



molekuul.be /Shutterstock

Key Points

- Researchers have linked a major component in the immune system to late-onset schizophrenia. It is C-reactive protein, which is released by cytokines in reaction to infection and mirrors the amount of inflammation triggered by the immune system.
- C-reactive protein might contribute to the schizophrenia disease process by disrupting the blood-brain barrier and allowing other immune system components, such as pro-inflammatory cytokines, to flood the brain and damage it.
- Assuming that C-reactive protein contributes to schizophrenia, it lends support to the inflammatory pathophysiology hypothesis in schizophrenia.
- Data suggest that autoimmunity might play a role in mood disorders as well as in schizophrenia and may be linked to the same immune system components.

Often, when people think of schizophrenia, they picture it as an illness that tends to strike teens or young adults. But nearly 1 in 4 individuals who develop schizophrenia does so later in life, research by Jilip Jeste, M.D., and others has found.

And now, in what may help explain why some people develop the illness in middle age, researchers have linked a major component of the body's immune response with late-onset schizophrenia.

The senior researcher was Borge Nordestgaard, M.D., a professor and chief physician at Copenhagen University Hospital in Denmark. Study results were published online August 31 in *Schizophrenia Bulletin.*

Individuals with autoimmune diseases and severe infections have been found to have a heightened risk of developing schizophrenia compared with people without such diseases or infections. Moreover, there is increasing evidence that patients with schizophrenia have in their blood elevated levels of pro-inflammatory cytokines—immune system molecules that initiate an inflammatory response to fight disease. This has led some researchers to suggest that the immune system, and cytokine-provoked inflammation specifically, might be involved in the schizophrenia disease process.

Now enter C-reactive protein, an immune system component that is released by the cytokines in reaction to infection and whose role is to bind to bacteria or dying cells and activate the complement-system arm of the immune system. This protein also mirrors the amount of inflammation that is triggered by the immune system. Nordestgaard and his colleagues suspected that elevated blood levels of C-reactive protein might be implicated in late-onset schizophrenia and decided to test this hypothesis.

Their study cohort included some 79,000 individuals aged 20 to 100 whom they followed over a 20-year period. In total, 238 individuals received a diagnosis of schizophrenia during that period; the average follow-up to a diagnosis was seven years.

The researchers found that baseline elevated blood levels of C-reactive protein were associated with a sixfold to 11-fold increased risk of developing late-onset schizophrenia, even after adjusting for several possible confounders. They also found that individuals with schizophrenia had significantly higher levels of C-reactive protein in their blood than did individuals without schizophrenia, again after controlling for possibly confounding factors.

The researchers thus believe that C-reactive protein is implicated in late-onset schizophrenia and suspect that it might contribute to the schizophrenia disease process. One possibility, they suggested, is that the protein disrupts the blood-brain barrier, allowing other immune system players, such as pro-inflammatory cytokines and/or auto-antibodies, to flood the brain and create havoc there. The protein has been shown to disrupt the blood-brain barrier in laboratory studies of animals.

"The association of C-reactive protein with late-onset schizophrenia is very robust, even after health-related confounds are addressed," William Carpenter, M.D., told *Psychiatric News*. Carpenter, a schizophrenia expert, is a professor of psychiatry at the University of Maryland and director of the Maryland Psychiatric Research Center.

However, "The immediate challenge with this report is the causal direction," he pointed out. "Is elevated C-reactive protein causing a porous blood-brain barrier, permitting entry for pro-inflammatory cytokines, for example, or are variables associated with schizophrenia, such as therapeutic or abuse drugs, causing the C-reactive protein elevation?"

But assuming that C-reactive protein is contributing to schizophrenia, he indicated, then it helps support the "inflammatory pathophysiology hypothesis in schizophrenia"—a hypothesis that "is opening new opportunities for etiology and therapeutic discovery."

For example, during the past five years, scientists at the Maryland Psychiatric Research Center, as well as scientists in England, Israel, and Japan, have reported that the antibiotic minocycline countered not just positive symptoms, but negative ones in some schizophrenia patients. Minocycline is known to be capable of fighting inflammation and crossing the blood-brain barrier into the brain. So it might be able to reduce inflammation in the brain (*Psychiatric News,* August 17, 2012).

There is also research evidence suggesting that infection and autoimmune disease can increase the risk for mood disorders, and if so, the mechanism at work might be inflammation created by an activated immune system (*Psychiatric News,* July 23). Indeed, the same immune system components that are associated with an increased risk for schizophrenia—such as C-reactive protein—might also increase risk for mood disorders, Nordestgaard told *Psychiatric News,* since he and his colleagues reported in the February *JAMA Psychiatry* that a high level of C-reactive protein is a strong risk factor for depression.

The study was funded by Herlev Hospital, Copenhagen University Hospital, and the Danish Council for Independent Research, Medical Sciences. PN

An abstract of "Elevated C-Reactive Protein Associated With Late- and Very-Late-Onset Schizophrenia in the General Population: A Prospective Study" is posted at http://schizophreniabulletin.oxfordjournals.org/content/early/2013/08/28/schbul.sbt120.

Nominations Invited

Nominations for APA's Distinguished Service Award are now being accepted. The award was established in 1964 by the Board of Trustees to honor an APA distinguished fellow, fellow, general member, nonmember, or organization that has contributed exceptional meritorious service to the field of psychiatry. Nominations should include the nominee's full name and contact information, as well as a CV and 150-word statement describing the nominee's contributions to psychiatry. PN

Nominations should be submitted by October 31 to ctobita@psych.org.

JOURNAL DIGEST

BY VABREN WATTS

Cholesterol Gene Linked To Anorexia Nervosa

The largest ever DNA-sequencing study of anorexia nervosa (AN) links the eating disorder to genetic variance in epoxide hydrolase 2 EPHX2—a gene that regulates cholesterol metabolism.

Sequencing multiple genes from blood samples of approximately 3,000 patients with and without AN, the researchers found that EPHX2 occurred more frequently in people with AN, in addition to being associated with low body mass index.

The study, published in *Molecular Psychiatry*, noted that previous work has shown an association between high cholesterol levels, weight loss, and improved mood. According to the authors, certain individuals with AN, for genetic reasons, may not eat due to euphoria attributed to high circulating levels of cholesterol. They emphasized that more work must be done to assess the biological effects of EPHX2 variance.

Scott-Van Zeeland, A, Bloss, A, et al. "Evidence for the Role of EPHX2 Gene Variants in Anorexia Nervosa." 2013. Mol Psychiatry. Sep 3 [Epub ahead of print] http://www.nature.com/mp/journal/vaop/ncurrent/abs/mp201391a.html

Electronic Cigarettes Found as Effective as Nicotine Patch

Researchers from the University of Auckland in New Zealand published in the *Lancet* the first trial comparing the efficacy of electronic cigarettes (e-cigarettes) with nicotine patches in achieving smoking cessation.

Broken into three groups, nearly 700 smokers received a 13-week supply of commercially available e-cigarettes, 13 weeks' supply of nicotine patches, or placebo e-cigarettes. After six months, cigarette consumption was markedly reduced in the nicotine e-cigarette group, compared with nicotine-patch and placebo groups. In addition, subjects in both the nicotine and the placebo e-cigarette groups were almost four times as likely to be adherent to treatment as those receiving patch therapy. Though the success rate for absolute cessation was higher in the e-cigarette group, it did not differ significantly from that of those administered nicotine patches.

The authors concluded, "Our study establishes a critical benchmark for e-cigarette performance compared to nicotine patches and placebo e-cigarettes, but there is still so much that is unknown about the effectiveness and long-term effects of e-cigarettes. Given the increasing popularity of these devices in many countries, and the accompanying regulatory uncertainty and inconsistency, larger [and] longer-term trials are urgently needed to establish whether these devices might be able to fulfill their potential as effective and popular smoking-cessation aids."

Bullen C, Howe C, Laugesen M, et al. "First Trial to Compare e-Cigarettes With Nicotine Patches." 2013. Lancet. Sep 9. [Epub ahead of print] http://linkinghub.elsevier.com/retrieve/pii/S0140-6736(13)61842-59

Suicide Attempts More Frequent In Adopted Individuals

A recent study in *Pediatrics* assessed whether adoption status poses a greater risk for suicide attempt among adopted offspring than nonadopted offspring. The study, conducted by the Minnesota Center for Twins and Family Research at the University of Minnesota, investigated suicide-attempt records and suicidal behavioral factors—including psychiatric and substance abuse disorders—in 692 adopted and 540 nonadopted teenagers.

The results showed that adoptees were four times as likely to attempt suicide than nonadopted individuals. The relationship between adoption status and suicide attempt was also influenced by suicidal behavioral factors.

The authors said that the study's results could be useful for clinicians treating adopted individuals who already show other signs of being at risk for suicide.

Keyes, M, Malone, S, Sharma, A. et al. "Risk of Suicide Attempt in Adopted and Nonadopted Offspring." 2013. Pediatrics. Sep 9. [Epub ahead of print] http://pediatrics.aappublications.org/content/early/2013/09/04/peds.2012-3251.long

New Medicaid Beneficiaries Provide Opportunity to Reduce Smoking, Alcohol Use

According to a study published in *Annals of Family Medicine*, characteristics of the Medicaid-eligible population will begin to look quite different at the beginning of 2014 in states that choose to expand the program to millions of their uninsured citizens. Tammy Chang, M.D., an assistant professor in the Department of Family Medicine at the University of Michigan, conducted a national study projecting the demographic and health characteristics of potentially eligible Medicaid beneficiaries.

The study outcome projected that new Medicaid beneficiaries who gain coverage under the Affordable Care Act are more likely to be younger, white, and male and have a diagnosis of substance abuse—particularly alcohol and smoking—than current beneficiaries.

"Based on our analysis, Medicaid expansion represents a key opportunity to improve the health of millions of uninsured individuals and reduce national costs associated with smoking and excessive alcohol use," Chang said. "Coverage for these Americans may be coming at just the right time to provide access to health care that can help keep these Americans healthy through prevention and improving healthy behaviors."

Chang T, Davis M. "Potential Adult Medicaid Beneficiaries Under the Patient Protection and Affordable Care Act Compared With Current Adult Medicaid Beneficiaries." 2013. Annals of Family Medicine. 11(5)406-411. http://www.annfammed.org/content/11/5/406.long

Playing Video Games May Increase Brain Function In Older Adults

While studies have pointed to negative consequences of children's excessive video-game playing, when adults try their hand at these games, it may increase their cognitive control, a recent study in *Nature* suggests.

Researchers at the University of California, San Francisco, created a 3-D race-car video game that measured cognitive control in adults who were instructed to notice specific road signs while driving full speed—virtually. After one month of video-game participation, adults aged 60 to 85 were evaluated for alterations in multitasking, working memory, and attention sustainment.

Results showed that multitasking capabilities, working memory, and attention sustainment were dramatically increased and sustained six months after the video-game training. In addition, multitasking capabilities of seniors surpassed that of young adults who played the game for the first time.

The authors noted that this is the first study to show how custom-designed video games can be used to assess cognitive abilities across the lifespan. If the research is replicated, this could be a beneficial application to other brain-related disorders such as attention-deficit/hyperactivity disorder, depression, and dementia, which are also associated with deficits in cognitive control, the authors concluded.

Anguera J, Boccanfuso J, Rintoul J, et al. "Video Game Training Enhances Cognitive Control in Older Adults." Nature. Sep 5. [Epub ahead of print] http://www.nature.com/nature/journal/v501/n7465/full/nature12486.html

Children With Disabled Siblings Are at Greater Risk Of Functional Impairment

Researchers at the University of Arkansas for Medical Science assessed the well-being of children living in households with disabled siblings. The study divided 6,800 children and adolescents into two groups—those who lived with a sibling with a disability and those who did not. Functional impairment—as reported by parents—was measured by the Columbia Impairment Scale.

After adjusting for demographic characteristics, 20 percent of individuals growing up with disabled siblings were documented as having significant functional impairment, compared with 10 percent in the cohort without disabled siblings.

The researchers noted that functional impairment is a critical indicator of the need for mental health services and that health care professionals need to consider a family-based care approach for those in households with disabled children. PN

Goudie A, Havercamp S. "Assessing Functional Impairment in Siblings Living With Children With Disability." Aug 2013. Pediatrics. 132(2):476-83. http://pediatrics.aappublications.org/content/132/2/e476.long

Lisa F. Young/Shutterstock

ICD Codes for Some *DSM-5* Diagnoses Updated

Unlike the *DSM-5* criteria and text that describes them, which are relatively stable, the *ICD* coding system is subject to revisions at conferences held twice a year.

BY MARK MORAN

Clinicians should be aware of several changes to the codes attached to diagnoses in *DSM-5*.

The changes and updates, and any future ones, can be accessed at APA's *DSM-5* website (www.dsm5.org).

The recently released manual, like all previous versions of *DSM*, uses coding designations from the *International Classification of Diseases, Clinical Modification (ICD-9-CM),* as well as the forthcoming 10th edition (*ICD-10-CM*), to allow clinicians to code for specific mental disorders. The *ICD-CM* is the official system of assigning codes to diagnoses in the United States.

APA Director of Research Darrel Regier, M.D., M.P.H., explained that since the *ICD* system has been created independently of the *DSM* system, it was necessary for *DSM-5* to use the closest approximation of *ICD-CM* codes to classify diagnoses for insurance claims and other research and public-health purposes.

"The benefit of the *DSM* process is that it has been able to provide a level of scientific review of mental disorders that is extensive and beyond that provided by the World Health Organization—which oversees development of the *ICD*—and the Centers for Disease Control and Prevention's National Center for Health Statistics [NCHS]—which, with the Centers for Medicare and Medicaid Services [CMS], oversees revisions to all clinical modifications [CM] of the *ICD* for the United States," he said. "For that reason, *DSM* is widely used by CMS contractors for quality assessment and by insurance companies and federal and state agencies to indicate eligibility for services."

But Regier said that unlike the *DSM-5* criteria and text that describes the criteria—both of which are relatively stable—the coding system is subject to revisions by NCHS and CMS in their review conferences held twice a year.

As of late September, the following changes and refinements to the coding system have been implemented and posted on the www.dsm5.org website:

- ***Intellectual disability (intellectual developmental disorder):*** The new *ICD-9-CM* codes (and *ICD-10-CM* codes, which follow in parentheses) that should be used to indicate severity are 317 (F70) Mild, 318.0 (F71) Moderate, 318.1 (F72) Severe, and 318.2 (F73) Profound.

- ***Language disorder:*** The new *ICD-9-CM* code (and *ICD-10-CM* code) that should be used is 315.32 (F80.2).

- ***Bipolar I disorder, current or most recent episode hypomanic, in partial remission:*** The updated *ICD-9-CM* code (and *ICD-10-CM* code) that should be used is 296.45 (F31.71).

- ***Bipolar I disorder, current or most recent episode hypomanic, in full remission:*** The updated *ICD-9-CM* code (and *ICD-10-CM* code) that should be used is 296.46 (F31.72).

- ***Selective mutism***: The new *ICD-9-CM* code (and *ICD-10-CM* code) that should be used is 313.23 (F94.0).

- ***Trichotillomania (hair-pulling disorder):*** The new *ICD-9-CM* code (and *ICD-10-CM* code) that should be used is 312.39 (F63.3).

- ***Insomnia disorder:*** The new *ICD-9-CM* code (and *ICD-10-CM* code) that should be used is 307.42 (F51.01).

- ***Hypersomnolence disorder:*** The updated *ICD-9-CM* code (and *ICD-10-CM* code) that should be used is 307.44 (F51.11).

- ***Conduct disorder, adolescent-onset type***: The updated *ICD-9-CM* code (and *ICD-10-CM* code) that should be used is 312.82 (F91.2).

- ***Kleptomania:*** The updated *ICD-9-CM* code (and *ICD-10-CM* code) that should be used is 312.32 (F63.2).

In addition, clinicians should be aware of newly implemented coding recommendations for neurocognitive disorders. As currently reflected in *DSM-5*, the diagnoses of major neurocognitive disorder possibly due to Alzheimer's disease, frontotemporal lobe degeneration, Lewy bodies, and Parkinson's disease do not use additional codes to indicate the presence of behavioral disturbances—a major reason for psychiatric and other mental health service interventions for neurocognitive disorder treatment.

Consequently, APA is revising codes for these four disorders to include codes that indicate the presence (294.11 [F02.81]) or absence (294.10 [F02.80]) of a behavioral disturbance—resulting in a recommendation to use the same code for both probable and possible etiologies of these major neurocognitive disorders.

"For these conditions, there is no question about meeting the criteria for a major neurocognitive disorder and the need for intervention if behavioral disturbances are present," Regier explained. "The causal attribution level of evidence for the possible or probable designation is a useful guide for treatment selection, but is not as important as the presence or absence of behavioral disturbances for indicating the need for psychiatric and other behavioral health interventions."

And last month APA presented seven diagnoses that are new to *DSM-5*, along with proposals for new codes that will be used, to the CDC/NCHS and CHS/CMS at their annual *ICD* review conference. The new codes, if approved, would probably not be added to *ICD-10-CM* until 2015. These are among the proposed changes:

- ***Binge eating disorder (BED):*** This disorder is not listed in *ICD-9-CM* or *ICD-10-CM*. In *ICD-9-CM*, it is coded with the same code as bulimia nervosa (307.51). APA is recommending that BED be added to *ICD-10-CM* and temporarily be given the same code as "other" eating disorders (F50.8). APA also has asked the NCHS to consider giving BED its own code in the future, rather than having to continually share the same code as "other eating disorders."

- ***Disruptive mood dysregulation disorder:*** This disorder is not listed in *ICD-9-CM* or *ICD-10-CM*. In *ICD-9-CM*, it is coded with the same code as other specific episodic mood disorder (296.99). APA is recommending that this disorder be added to *ICD-10-CM* and temporarily be given the same code as other persistent mood (affective) disorder (F34.8) until a unique code can be approved in the *ICD* revision conference.

- ***Social (pragmatic) communication disorder:*** This disorder is not listed in *ICD-9-CM* or *ICD-10-CM*. In *ICD-9-CM*, it is coded with the same code as other developmental speech or language disorder (315.39). APA is asking that this disorder be listed under other developmental disorders of speech and language (F80.89). Further, APA is asking that the *ICD-10-CM* note that use of this code excludes use of the code for autism spectrum disorder (ASD), as children with ASD have a presentation different from those with social (pragmatic) communication disorder.

- ***Hoarding disorder:*** This disorder is not listed in *ICD-9-CM* or *ICD-10-CM*. In *ICD-9-CM*, it is coded with the same code as obsessive-compulsive disorders (OCD) (300.3). APA is recommending that hoarding disorder be added to *ICD-10-CM* and temporarily be given the same code as obsessive-compulsive disorder (OCD; F42). However, given that hoarding disorder and OCD are distinct conditions, APA prefers that the NCHS eventually assign unique codes in future revisions for both OCD and hoarding disorder.

- ***Excoriation (skin picking) disorder***: This disorder is not listed in *ICD-9-CM* or *ICD-10-CM*. In *ICD-9-CM*, it is coded with the same code as dermatitis factitia (artefacta) (698.4). APA initially recommended that this disorder be added to *ICD-10-CM* and given the same code as factitial dermatitis (L98.1). However, given that this is an OCD-related disorder, the NCHS officials at the recent revision conference preferred to temporarily assign this to the same F42 code as OCD with an exclusion of the factitial dermatitis (L98.1) code until a separate F42.x code can be assigned in 2015—this is to avoid a one-year trend increase in the L98.1 domain. Since *ICD-10-CM* codes are not yet in use, this issue will be resolved and posted when it is final.

- ***Premenstrual dysphoric disorder (PMDD):*** This disorder is not listed in *ICD-9-CM* or *ICD-10-CM*. In *ICD-9-CM*, it is coded with the same code as premenstrual tension syndromes (625.4). APA initially recommended that PMDD be added to *ICD-10-CM* and given the same code as premenstrual tension syndrome (N94.3). However, given that premenstrual tension syndrome is generally considered a normal physiological state and not a mental disorder, the NCHS officials preferred that this receive a temporary code in the Depressive Disorders section (F33.xx) rather than in the N94.3 section. The decision on this code will be posted when final.

Additionally, APA petitioned for revisions to the *ICD-10-CM* listing for gender dysphoria in adolescents and adults, which is not a new disorder. The previous recommendation for the coding and listing of gender identity disorder in *ICD-10-CM* was to assign it the code of F64.1, which corresponds to dual-role transvestism.

Regier noted that this was an inappropriate designation, as transvestism

see ***Codes Updated*** *on page 42*

LETTERS TO THE EDITOR

Lebanese Psychiatrists Take Stand on Homosexuality

For decades, Lebanon—a small Arab country with a strong clerical tradition—has been in the headlines for all the wrong reasons. However, a refreshing change appeared on July 18. The Lebanese Psychiatric Society (LPS), a body of doctors affiliated with the official Lebanese Order of Physicians and representing the majority of the country's psychiatrists, released a statement favoring homosexual rights. The LPS declared that homosexuality is not a mental illness and that homosexuals do not require treatment for their sexual orientation.

The statement was a response to two prior events in Lebanon. The first was the widespread public denunciation of acts of abuse by semiofficial bodies against LGBT groups. The second was the television broadcast of psychologists and psychiatrists repeatedly asserting that homosexuality was an illness they could cure.

The LPS's statement was noted in the international press, with articles appearing in publications such as the *Los Angeles Times, Huffington Post,* and the *Economist*. Commentaries were widely circulated on the web, with some praising the move, while others questioned its timing and effect.

Lebanese law punishes individuals for homosexual acts, which accords with even harsher punishments inflicted on homosexuals across the Arab and Muslim world. The statement's impact on the attitudes of health professionals toward homosexuals and the human-rights struggles of the wider public in the Middle East is unclear. This is a region where psychiatry and psychology are still in their infancy, struggling for acceptance as means of explaining and shaping social behavior. Indeed, there is hardly unanimity on this political hot potato among psychiatrists in Lebanon and within the LPS, and it is unlikely to go away.

The core debate within the Lebanese psychiatric community is whether they should restrict their public statements to the issuance of scientific facts or assume the role of advocacy. A proposed compromise might be to restrict their advocacy role to support the advocacy campaigns of other specifically dedicated organizations in Lebanon (such as the very active Helem organization). The purpose of such an approach would be to maintain the psychiatrists' credibility as an unbiased source of scientific opinion, which might otherwise be compromised, were they perceived as militant advocates.

Lebanon's diverse population and relatively liberal society are atypical among Arab and Muslim countries. Yet its media and entertainment sectors make it a regional sociocultural beacon, so any debate starting in Lebanon might well be aired in other Middle Eastern countries. The validation and protection of LGBT rights in Lebanon and the region will remain aspirational, for sure, but this intervention by psychiatrists may nonetheless bring immediate benefits. For example, it may curtail attempts to convince a gay person or his family of the benefits of "sexual orientation change efforts," a practice that has been declared ineffective and potentially harmful by APA and flagged by the United Nations as a potential form of human-rights abuse.

The example set by our colleagues in Lebanon holds an example for other psychiatric societies to follow. It highlights the important role of psychiatry as the medical discipline with the broadest sociopolitical influence on the general public. The statement of the LPS not only refutes that homosexuality is a disease, but also it carries implications regarding civil society's definitions of citizenship, equality, and human rights. Since WHO defines health as "complete physical, mental, and social well-being, and not merely the absence of disease or infirmity," our role shouldn't be limited to treating mental illness, but should also include advocating for better mental well-being for all individuals.

People all over the world pay attention to what happens in the United States. The psychiatric community in the United States has a long history of advocating for LGBT rights, and the LPS would benefit from the mutual support of APA and the World Psychiatric Association on this issue. We hope this letter will serve to draw attention to the current situation unfolding in Lebanon.

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Military Knowledge Needed

We could not agree more with the article "Knowledge of Military Life Facilitates Vets' MH Care" in the August 2 issue.

Most civilian psychiatrists have little knowledge of military jargon and culture. Phrases and words like being "down range" (deployed to Southwest Asia) and being around "TPNs," or third-party nationals often contracted to conduct day-to-day maintenance, could be misinterpreted or affect the conduct of the clinical interview. The identification of stressful events other than the obvious combat exposure can sometimes hinge around the knowledge of combat-zone deployment activities other than the usual easily identified firefights and improvised explosive device concussive blast or shrapnel exposure. The conflicts in both Iraq and Afghanistan have required that soldiers be embedded with local national security forces for recruitment, training, and mission completion. These forces can sometimes be infiltrated by enemy combatants. These account for the so-called "green on blue" attacks that can heighten soldiers' experience of constant tension and fear, which can result in nonacute trauma but nevertheless can cause an increase in vigilance and anxiety.

As your article mentions, soldiers often are reluctant to come forward with emotional complaints. The reasons for this vary. Noncommissioned officers are reluctant to volunteer symptoms that would render them "profiled" (limit their ability to either carry or fire a weapon), even if temporary. Most fear not being promoted and/or losing their military careers. Others prefer to "lock it down": this usually means a soldier's voluntary repression of thoughts and/or symptoms of a traumatic event. This term is somewhat akin to what we could call "resilience" and could be utilized to shore up resources to adapt and tolerate stressful situations in the military or veteran patient.

Administrative jargon may call into question a soldier's deployment activity. A DD 2214 may say that the soldier was in Kuwait, reflecting only the soldier's theater entry. This could make a Posttraumatic Stress Disorder Clinical Team suspicious about a history of combat-zone exposure. Service members' activities may not always reflect their "military occupation specialty," since service members are frequently cross-trained or assigned or volunteer to others.

Posttraumatic stress disorder (PTSD) and mood disorders are the most frequent diagnoses among soldiers. PTSD is the most common, present among both combat arms (31 percent) and noncombat arms (20 percent) of combat zone–deployed soldiers. Among noncombat zone–deployed soldiers, mood disorders are the most frequent diagnosis equally present, in about 4 percent of both combat and noncombat arms soldiers.

Community and faculty psychiatrists should learn and teach residents some of the cultural nuances and parlance of military personnel, especially in those states that have a large military presence, such as Virginia, North Carolina, Texas, and California.

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Letters Invited

Readers are invited to submit letters up to 500 words long for possible publication. *Psychiatric News* reserves the right to edit letters and to publish them in all editions, print, electronic, or other media. Receipt of letters is not acknowledged. Letters should be sent by mail to *Psychiatric News*, APA, Suite 1825, 1000 Wilson Boulevard, Arlington, Va. 22209 or by e-mail to cbrown@psych.org. Clinical opinions in letters are not peer reviewed and thus should be independently verified.

Schizophrenia

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North Carolina School of Medicine, and the lead author of the study, told *Psychiatric News*.

Based on their analysis of genomes sampled from tens of thousands of patients and controls, the researchers estimated that approximately 6,000 to 10,000 independent SNPs contribute to at least one-third of the risk for schizophrenia. "There may be 1,000 genes involved," said Sullivan. However, identifying 2,000 or so of the risk loci might be enough to reveal the biological processes that lead to schizophrenia, the researchers suggested.

"In this study, we describe concrete ways to discover more [risk] loci and deliver more robust results," Sullivan noted. As more genomic data are collected from patients, and larger DNA chips are produced, it is only a matter of time before the genetic variants and, in turn, biological pathways surface.

Identifying key biological pathways of schizophrenia can open the door to more precise and successful methods for developing new treatments for the disorder. The researchers noted that clinical studies are already under way to test calcium channel blockers, commonly used for hypertension and heart disease, as a potential treatment for schizophrenia.

In addition, the study findings suggest that at least half, and perhaps most, of the genetic variations contributing to the risk of schizophrenia are common variants, meaning that they are widely inherited throughout the population. Although previous studies have discovered several rare variants and copy-number variants associated with schizophrenia, the data have convinced Sullivan that common variations probably play a predominant role.

Sullivan believes the analyses by his team suggest that schizophrenia is fundamentally similar to other "complex trait" characteristics and diseases, such as height, obesity, and cardiovascular diseases. Complex traits, in genetic terms, refer to phenotypes that result from variations within many genes and their interactions with the environment. Complex traits are not passed through generations in the pattern of Mendelian traits, caused by single-gene variations, such as those that cause Huntington's disease.

"Genetics is really starting to deliver some ideas that will be very helpful in our understanding of schizophrenia," Sullivan said. The rapidly growing GWAS data—more studies from larger samples are on the way—are finally illuminating the "genetic architecture" of schizophrenia.

Nevertheless, the role of nongenetic factors in the pathology of schizophrenia remains to be elucidated. The genetic evidence offers only a hint of the importance of the regulation of gene expression, which interacts with environmental triggers and stressors.

"The results of this mega-collaborative study by Sullivan and colleagues paint an even more complex mosaic than was previously appreciated," APA President Jeffrey Lieberman, M.D., told *Psychiatric News*. "If confirmed, they will have a game-changing effect on our understanding of the genetics of mental illness." He pointed out that the magnitude of SNPs estimated for schizophrenia, and possibly other mental disorders, could be larger than other complex-trait diseases, such as type 2 diabetes, coronary artery disease, and rheumatoid arthritis. "This is the genetic equivalent of death by a thousand cuts and shifts the focus from the rare mutations and CNVs that had previously been thought to be the predominant genetic mechanisms conferring disease risk." Lieberman, who also is chair of psychiatry at Columbia University and director of the New York State Psychiatric Institute, agreed that the identified risk loci offer targets for new treatment development. PN

An abstract of "Genome-wide Association Analysis Identifies 13 New Risk Loci for Schizophrenia" is posted at http://www.nature.com/ng/journal/vaop/ncurrent/abs/ng.2742.html.

Codes Updated

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and gender identity disorder are different phenomena. Further, *DSM-5* has revised its conceptualization and terminology such that the disorder is now called gender dysphoria rather than gender identity disorder. APA is recommending that *ICD-10-CM* list this disorder as gender dysphoria in adolescence and adulthood, using the *ICD-10* code that corresponds to transsexualism (F64.0).

"Although the 11th edition of *ICD* might not be approved by the World Health Organization until 2015 or later, the United States. is unlikely to adopt an *ICD-11-CM* for at least a decade or more following its release," Regier said. "APA wants to ensure changes adopted in *ICD-10-CM* are as accurate and comprehensive as possible, given that this will be the *ICD-CM* code set in use in this country for the foreseeable future." PN

Information about *ICD* coding of *DSM-5* diagnoses is posted at www.dsm5.org.

Quality Program

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clinicians must report PQRS measures for at least 50 percent of their applicable Medicare encounters for both years, but if they don't submit at least one quality reporting measure in 2013 they will be hit with the 1.5 percent penalty in 2015.

And that penalty will increase to 2 percent on all Medicare reimbursement in 2016.

The PQRS has a list of 259 measures that can be used for claims-based reporting. For solo practitioners and psychiatrists in small-group practices, the most likely method will be to report the measures using a designated G or F code (for example, G8126 or 1040F) on Form 1500.

The G or F code is entered on the Form 1500 below the procedure (CPT) code when filing a Medicare claim, either on paper or electronically, listing 0.00 as the charge for the G and F codes (see link below for sample filing forms).

Of the 259 PQRS measures, there are several that are specifically relevant to psychiatrists—five to be used when treating a patient with depressive disorder, four on screening for unhealthy substance use, one on medication reconciliation, and several others that are less specifically related to psychiatry but can be reported with the CPT codes psychiatrists use.

So, for instance, when a patient is seen for treatment of major depressive disorder (MDD), PQRS measure 9 comes into play, Antidepressant Medication During Acute Phase for Patients With Major Depressive Disorder. That measure indicates that a patient was treated with an antidepressant and stayed on the medication for the entire 12-week period of the acute-treatment phase.

The clinician would list the appropriate code (G8126) below the CPT code when submitting a claim to Medicare to indicate that the patient is being treated with antidepressant medication during the entire 12-week acute treatment phase. If the patient was not a candidate for treatment with an antidepressant for whatever reason, or was not being seen for a new episode of MDD, the code would be G8128.

Robert Plovnick, M.D., APA's director of quality improvement and psychiatric services, said he hopes psychiatrists understand that participation in PQRS through reporting of quality measures is not "mandatory" in the sense that physicians will be breaking a law if they don't participate. But they should know that clinicians who don't submit at least one quality measure before the end of 2013 will be hit with the 1.5 percent penalty in 2015 (as well as foregoing the incentive payments they might receive by submitting measures for 50 percent of their applicable Medicare encounters).

And he emphasized that the incentives and disincentives apply only to Medicare. He urged members who treat Medicare patients, however, to participate in the program, emphasizing that pay-for-performance is the future. And since avoiding the penalty requires only the minimum level of participation, it should be a fairly painless way for clinicians to get a taste of what's required.

Plovnick noted that properly reporting the quality measures is an administrative task tied to billing and that the APA website has detailed information about the PQRS—including links to sample reporting forms. "Quality measurement is likely to increase in prominence in the coming years, with a possible impact on reimbursement, board certification, and public accountability," Plovnick pointed out. PN

Information about the PQRS and sample quality measure reporting forms for psychiatry are posted at http://psychiatry.org/FileLibrary/Practice/Managing a Practice/PQRS Measures/2015PQRSpenaltyHSF.pdf.

Key Points

The Physician Quality Reporting System (PQRS) has been an incentive program, but the government is transitioning it to a set of incentives and disincentives to increase participation.

- Any clinician who treats Medicare patients must submit at least one quality reporting measure this calendar year to avoid a 1.5 percent penalty on reimbursement in 2015.
- Of 259 PQRS measures, several are specifically relevant to psychiatrists—five to be used when treating a patient with major depressive disorder, four on screening for unhealthy substance use, one on medication reconciliation, and others that are less specifically related to psychiatry but can be reported with the CPT codes psychiatrists use.
- For solo practitioners and psychiatrists in small-group practices, the most likely method will be to report the measures using a designated G or F code (such as G8126 or 1040F) on the Form 1500.

Bottom Line: Quality measurement will continue to be important in coming years, with a possible impact on reimbursement, board certification, and public accountability.

Farm

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activity facilitates growth, development, independence, and improvement in symptoms."

Robert Patterson, M.D., a psychiatrist at Harvard Medical School and McLean Hospital, served as the program's consulting psychiatrist for many years. The farm "is part of the mainstream in thinking about pharmacologic, behavioral, and social treatment of major mental illnesses," he states.

On Wednesday afternoons, Burkhart runs a community meeting that includes everyone—guests and staff. During the meeting, there are announcements: "There will be a ski trip on Monday," or "We're going to have popcorn and a movie at our house tomorrow night, and all of you are welcome to come." Sometimes there is discussion of issues that arise in the community. And there is a custom of expressing appreciation. Tom might say, "I want to appreciate Joe; he helped me gather eggs today." And Joe might reply, "Thanks, Dude!" And it's not obvious to a visitor whether Tom and Joe are staff members or guests. And whenever a guest is about to leave the farm, the appreciations go on overtime, Burkhart remarks. "There are tears, laughter, encouragement—good therapy."

Guests can also enjoy their free time at the farm. There are spontaneous music gatherings, Berkshire-area performances, Passover seders, Christmas parties, bonfires, skating, skiing, yoga, and checking out a newborn calf.

Good things often come out of guests' stay at Gould Farm. They may make friendships that will endure after they leave. They may acquire skills that will help them get a job. One young guest got so adept at cooking that he was accepted into the Culinary Institute of America. "I was in such a bad place when I got here," he says, "but am now so excited, hopeful, and enthusiastic!"

In 2010, Gould Farm published its first outcomes study, of 450 guests, and learned some valuable information from it. For instance, a comparison of psychiatrist-rated Global Assessments of Functioning (GAF) of the guests at the beginning and end of their treatment showed statistically significant improvements. Former guests also reported what the GAF evaluations had shown—that the farm had helped them with their mental health, physical health, family relationships, and social relationships. And when the guests were asked what had helped them the most during their farm stay, they rated friends, family, and community most highly, followed by work and staff, then by therapy, activities, and safety/structure, and finally by psychotropic medications.

So many former guests cherish their time at the farm that they attended a Gould Farm centennial reunion in August. And as someone pointed out at a Gould Farm centennial symposium in April, "Recovery is a journey of the heart—not an outcome. The goal is to become more connected to what makes us human." PN

More information about Gould Farm is posted at www.gouldfarm.org.

To watch a video interview with Jesse Goodman, M.D., about his work at Gould Farm, scan the QR code at left with your smartphone or go to http://youtu.be/G6RGpOhku2M.

BRAIN Initiative

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Such research will require new or improved technologies to record brain activity, manipulate brain circuits, and then connect neuronal activity to behavior in the organism. That research and the tools to process the immense quantities of data require close collaboration between neuroscientists and computer specialists, statisticians, physicists, engineers, and other scientists.

Rapid dissemination of these tools as they are developed, through training modules and summer courses, would accelerate progress.

"The overarching vision is to combine these approaches into a single, integrated science of cells, circuits, brain, and behavior," said the report.

The committee will present its final report in June 2014.

What will happen then is an open question given the current confusion over federal budgets.

"It's hard to be specific, but this project will need sustained support over many years," said NIH Director Francis Collins, M.D., Ph.D. "We will need to nail down a timeline in June." PN

The advisory committee's report is posted at http://www.nih.gov/science/brain/09162013-Interim%20Report_Final%20Composite.pdf.

National Institutes of Health

The BRAIN Initiative will need sustained support over many years, says NIH Director Francis Collins, M.D., Ph.D.

Pharmacogenetics

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treatment effect for those with alcohol dependence," he told *Psychiatric News*.

Though Kranzler has investigated genetic-based treatment for substance abuse among populations involving multiple ethnicities, he said that findings relevant to populations outside of European Americans are lacking. According to Kranzler, this lack, as well as the limited availability of genetic testing, are limitations that will need to be overcome for personalized medicine to advance therapeutics for psychiatric disorders. "As other medications and their genetic moderators are identified, . . . hopefully, findings will be extended to other population groups."

As the field evolves, psychiatric researchers are optimistic about the fate of pharmacogenetics in clinical practice.

"The 'one drug fits all' concept for very heterogeneous disorders like schizophrenia, depression, and bipolar is not the way of the future," said Malhotra. "Using genetic tools, such as neuroimaging and other modalities, is very attractive in identifying patients who will benefit more from alternative treatment than from current psychotherapies." Malhotra believes that some clinicians are apprehensive about the incorporation of genetics into clinical care because of the lack of information on how to master the skills needed in this developing therapeutic realm.

Goldman agreed. "Clinicians have been hearing for a while that genomics will have something to offer them. The incorporation of new knowledge for genetics or neuroscience into psychiatric diagnosis or guidances for clinical care are scarce. I think that we will see in *DSM-6* and *DSM*s beyond that, the incorporation of genetic predictors that will increasingly come into clinical practice and give clinicians new tools for delivering care to patients." PN

Smoking

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traumatic stress disorder, in which the difference between smokers and nonsmokers was not significant.

The researchers said aspects of the results argued for more than a simple association.

Because regular smokers without mental disorders at baseline recorded a higher incidence of disorders at three years of follow-up, the temporal order of smoking and mental disorders support a causal relationship, said Mojtabai, in an interview. So did the dose-response relationship.

"We found that the association was generally stronger for those who smoked a larger number of cigarettes, and stronger for current smokers than ex-smokers," he said.

Biological mechanisms to explain how smoking might induce mental illness were also speculative, they said, noting one hypothesis suggesting that that "chronic administration of cholinergic agents may lead to indirect inhibition of the nicotinic receptors (functional antagonism) and hence contribute to the prevalence of depression."

Their work provides still more evidence of the need for antismoking efforts, especially those directed at young people, they concluded. Increased public-health education about smoking and its effects, coupled with higher cigarette taxes, could help reduce smoking and save a few more hearts, lungs, and minds.

The study was funded by the National Institute on Drug Abuse and the National Institute on Alcohol Abuse and Alcoholism. PN

An abstract of "Cigarette Smoking and Onset of Mood and Anxiety Disorders" is posted at http://ajph.aphapublications.org/doi/abs/10.2105/AJPH.2012.300911.