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AMERICAN PSYCHIATRIC ASSOCIATION

PSYCHIATRIC NEWS

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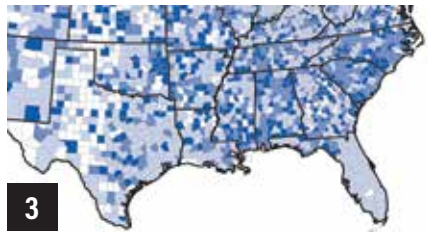
David Hathcox

SEE STORY BELOW

Immediate Past APA President Maria A. Oquendo, M.D., Ph.D., joined physicians from five other medical organizations last month to meet with members of Congress and their staffs to voice opposition to the Better Care Reconciliation Act. Above, she shakes hands with Sen. Steve Daines (R-Mont.).



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Should genetic testing be used to match patients with medication?

APA Fights Hard Against Republican Health Care Bills

APA is pulling out all the stops to protect Americans' access to mental health/substance use care. ***BY K.J. HERTZ***

APA leadership and staff of the Deparment of Government Relations (DGR) have been working tirelessly to protect mental health coverage in a highly unpredictable health care reform process that threatens to harm millions of Americans.

In the past few months, Republicans have issued two health care reform bills titled the Better Care Reconciliation Act and considered repealing the Affordable Care Act (ACA) without replacing it. Under these proposals anywhere from 22 million to 32 million people would be at risk of losing their coverage, including tens of millions of individuals on Medicaid—the largest provider of behavioral health services. Furthermore, states would be able to opt out of requiring mental health and substance abuse treatment coverage as an essential health benefit.

APA has taken a leadership role in consistently opposing these efforts to repeal and replace the Affordable Care Act. APA leaders and staff have engaged Capitol Hill lawmakers and staffers; worked as a leader in coalitions, including the Mental Health Liaison Group (a group of medical and advocacy organizations that focuses on mental health issues); and facilitated "fly-ins" with leaders coming to Washington D.C. to advocate on Capitol Hill and participate in press conferences with other major medical specialty groups.

On the Hill, APA leaders and staff have met with members of Congress and their staffs on both sides of the aisle, specifically targeting key Republican offices—leading up to the vote

see **BCRA** *on page 19*

K.J. Hertz is director of federal relations in APA's Department of Government Relations.

PERIODICALS: TIME SENSITIVE MATERIALS

Psychologist Prescribing Bills Defeated In Many States

Arguments against psychologist prescribing legislation go beyond opposition to include expanded access to care for the underserved. ***BY AARON LEVIN***

APA members in state psychiatric societies, working with staff of APA's Department of Government Relations, have beat back a number of bills this year that would have allowed psychologists to prescribe medications. And although a bill was passed in Idaho, it mandates what many APA members strongly fought for—very stringent standards of training for psychologists who seek prescribing privileges.

Evidence from New Mexico and Louisiana, which have had prescribing

see **Bills** *on page 18*

PSYCHIATRIC NEWS

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AMERICAN PSYCHIATRIC ASSOCIATION

FROM THE PRESIDENT

Enhancing Access & Effective Care at IPS: The MH Services Conference

BY ANITA EVERETT, M.D.

It's been just a few short months since APA's Annual Meeting in San Diego, and already it's time to gear up for one of my favorite events of the year, IPS: The Mental Health Services Conference.

The theme of this year's meeting is "Enhancing Access & Effective Care," and APA's Division of Education and the Scientific Program Committee have worked together on a fantastic offering of courses and sessions for attendees. The meeting will take place in New Orleans from October 19 to 22, with the goal of training and supporting psychiatrists and other mental health professionals to provide quality care and leadership in the field.

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The Annual Meeting is like the Super Bowl of psychiatry in the United States. It does so many things well and simultaneously. There are fantastic educational courses and sessions, captivating speakers, and groundbreaking research shared by colleagues from all over the world. The Annual Meeting is a mammoth event; IPS by comparison has a completely different feel, much more intimate. The great work by our APA Division of Education staff carries over to the IPS, but the focus is narrowed considerably, making it easy to plan your day around the sessions you want to attend.

The Division of Education has done a great job organizing the content of the meeting into tracks so that attendees can easily make the most of their time at the meeting. They include Addiction Psychiatry, Administrative Psychiatry, Community Psychiatry, Integrated and Collaborative Care, and Psychopharmacology. The Technology track will emphasize how EHRs, telepsychiatry, and mental health apps are changing the way we practice medicine and the best ways to implement the high-tech tools psychiatrists have at their disposal.

While networking opportunities abound at the Annual Meeting, the smaller, more intimate setting of IPS gives you the chance to really get to know some of your colleagues and forge lasting relationships. Many people who come to the IPS are repeat attendees who are really invested in the content of the meeting. For me, IPS represents the heart and soul of

see **From the President** *on page 18*

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DEPARTMENTS

Register Now for IPS: The Mental Health Services Conference

If you prefer learning at a smaller CME meeting where you can connect with the experts, APA's fall meeting was designed with you in mind. This year's theme is "Enhancing Access & Effective Care." Learn more and register at psychiatry.org/IPS. See article above.

Opioid Prescribing Falls But Still Remains High

Several states that have been hit hardest by the opioid epidemic have taken strides—such as mandated use of Prescription Drug Monitoring Programs—that have proven successful. **BY MARK MORAN**

Opioid prescribing decreased in parts of the country between 2010 and 2015, but remains high compared with 1999 levels, according to a report by the Centers for Disease Control and Prevention (CDC).

The amount of opioids prescribed in the United States peaked at 782 morphine milligram equivalents (MME) per capita in 2010 and then decreased to 640 MME per capita in 2015, the CDC reported in the July 7 *Morbidity and Mortality Weekly Report (MMWR)*.

Addiction experts say the finding is a ray of hope in the midst of the nation's opioid overdose epidemic. Yet despite the significant decreases, the amount of opioids prescribed per person in 2015 remained approximately three times as high as in 1999 and varied substantially across the country. County-level factors associated with higher amounts of prescribed opioids include a larger percentage of non-Hispanic whites, a higher prevalence of diabetes and arthritis, and higher unemployment and Medicaid enrollment, according to the CDC.

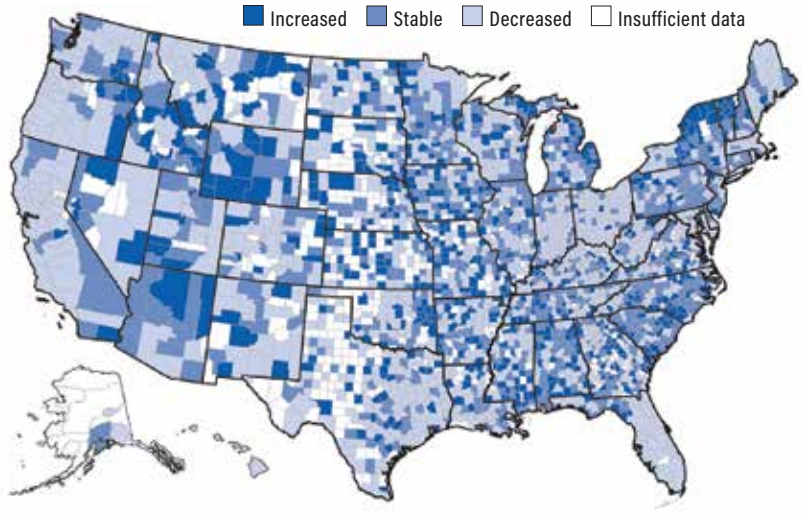
Moreover, opioid-involved overdose death rates continue to increase, though the CDC noted that these increases have been driven largely by use of illicit fentanyl and heroin. "There is no evidence that policies designed to reduce inappropriate opioid prescribing are leading to these increases," the *MMWR* report stated.

The CDC analyzed retail prescription data from QuintilesIMS to assess opioid prescribing in the United States from 2006 to 2015, including the rates, amounts, dosages, and durations. County-level prescribing patterns in 2010 and 2015 were also analyzed.

The CDC found that in the United States, annual opioid prescribing rates increased from 72.4 to 81.2 prescriptions per 100 people from 2006 to 2010, were constant from 2010 to 2012, and then decreased by 13.1 percent to 70.6 per 100 people from 2012 to 2015. Annual high-dose opioid prescribing rates remained stable from 2006 to 2010 and then declined by 41.4 percent from 11.4 per 100 people in 2010 to 6.7 in 2015.

Opioid Prescribing Varies Across Country

The chart shows increases or decreases in Morphine Milligram Equivalents of opioids prescribed between 2010 and 2015.



Source: Centers for Disease Control and Prevention

Several states that have been especially hard hit by the epidemic—Florida, Kentucky, and Ohio—have taken forceful measures to reduce prescribing that have shown impressive results. "In 2011 and 2012, Ohio and Kentucky, respectively, mandated that clinicians review Prescription Drug Monitoring Program (PDMP) data and implemented pain clinic regulation," the report stated. "MME per capita decreased in 85 percent of Ohio counties and 62 percent of Kentucky counties from 2010 to 2015. In Florida, where multiple interventions targeted excessive opioid prescribing from 2010 through 2012 (such as pain clinic regulation and mandated PDMP reporting

see **Opioid** *on page 26*

How to Code Correctly for E/M Payment

Selecting the correct E/M code can be challenging, but learning how to code correctly may improve reimbursement and prevent an audit and other problems. **BY ELLEN JAFFE**

APA's Practice Management HelpLine often receives calls from members whose use of the higher-level CPT medical evaluation and management (E/M) codes is being questioned by payers. Previous to the changes to CPT coding that went into effect in 2013, psychiatrists who saw patients for individual psychotherapy used timed codes that indicated the therapy was provided by a physician (90805, 90807, 90809). These codes paid slightly higher than the nonphysician psychotherapy codes, with the E/M included being valued at approximately the same level as a 99211, the lowest level outpatient E/M service for an established patient, a code that does not even require the presence of a physician.

The coding structure enables psychiatrists who provide their patients with E/M work to be more accurately compensated when they see patients who require a higher level of E/M than the minimal amount that was included in the previous codes in which psychotherapy and E/M were combined. Coding for the psychotherapy provided is selected on the basis of time. While this positive change permits more accurate coding and reimbursement, the use of the same E/M codes used by all physicians has made coding for psychiatric services more complex.

E/M coding can be confusing, and some psychiatrists have found it difficult to understand how to determine the appropriate level of E/M. Although the selection of the correct level of E/M coding is based on the number of elements involved in the history, exam, and medical decision making that occur during the encounter, **the decision about whether these elements should be included as part of the patient visit must be based on the patient's condition during that visit.**

For example, you may see a stabilized patient with a number of serious psychiatric and medical diagnoses on a regular basis to ensure that the patient's condition has not changed. Although the guidelines from the Centers for Medicare and Medicaid Services indicate that the number of diagnoses can drive a higher level of E/M, if the patient is seen bi-weekly and is stable, there is no need to do more than establish that the stability is continuing (which can be done with the lowest level of E/M, 99212) regardless of the patient's underlying diagnoses. If, however, this same patient has decompensated since the last visit and changes are needed in the treatment regimen, a higher level of E/M is warranted.

Although Medicare seems to be having no problem with payment for the use of the lowest physician level E/M service (99212) along with psychotherapy on a regular, even weekly basis, some larger commercial payers are reported to be balking at the idea that E/M services are necessary on such a frequent basis and have been auditing psychiatrists who code this way or denying payment for either the E/M or the psychotherapy. Remember, even if you're out of network with an insurer, the patient may be denied reimbursement if the medical record does not support the level of care billed (or may have to return payment previously received if an audit fails to support the level of E/M that was billed). Be sure your documentation records the E/M work you did.

Since traditionally psychiatrists have billed on the basis of time rather than on the severity of the patient's condition, it seems that an appreciable number of psychiatrists are choosing to use the total time of their visit as a basis for determining the level of the E/M code they bill. Using the "typical time" listed next to each CPT code in the CPT manual, they are billing higher-level CPT codes by spending more time with their patients. However, total time of the visit can be used as a basis for determining the level of the E/M code only if at least half of the time was spent providing "counseling and/or coordination of care, which is defined in CPT as educating the patient and family and/or coordinating the patient's care with other health care providers. Frequent use of high-level CPT codes often leads to

see **Code** *on page 26*

FROM THE HELP LINE
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Ellen Jaffe is the manager of APA's Practice Management HelpLine.

Active Engagement in APA Called Remedy to Burnout

Suicide deaths of medical students, residents, and physicians have brought the subject of physician well-being to public attention and turned the issue into an acute one for organized medicine. **BY MARK MORAN**

Burnout—the phenomenon of mental exhaustion and emotional depletion—is experienced and understood by physicians perhaps more so than many other professionals. When physicians talk about burnout, other physicians—that is, *you*—know what they are saying.

That's why *Psychiatric News* will be featuring commentary over the next year from APA members offering their unique perspectives on burnout, wellness, and resilience. Experts from the recently appointed APA Work Group on Physician Wellness and others who have a special insight on the subject will provide personal accounts of their experience of burnout and strategies for maintaining wellness and resilience, and offer knowledgeable commentary about research, treatment, and institutional and health system approaches to dealing with the problem.

"Burnout is pervasive in modern medicine," said APA President Anita Everett, M.D., who has made the subject a priority of her presidential year. She noted that a December 2015 report in *Mayo Clinic Proceedings* found that in 2014, roughly 54 percent of the physicians surveyed had at least one symptom of burnout. When compared with 2011, rates of burnout among physicians were higher in 2014, and satisfaction with work-life balance was lower (41 percent versus 49 percent).

Everett added that many aspects of modern American medicine—with its cumbersome electronic health records, excessive productivity quotas, limits on the time physicians can spend with each patient, loss of professional autonomy, and excessive documentation requirements—have become sources of professional dissatisfaction. Some stressors adversely affect psychiatrists uniquely: limited resources, high work demands, and patient violence.

"Most of us have felt some degree of compassion fatigue in our careers," she said. "Some of us may have even experienced deep and pervasive episodes of burnout that have had an impact both on our practice of medicine and on our home lives."

Tragically, Everett noted, suicides by medical students, residents, and physicians have brought the subject of physician well-being to public attention and turned the issue into an acute one for organized medicine.

Everett believes the subject of burnout—powerfully impacting the professional lives of APA members—is ripe for address by professional organizations like APA. And active engagement of members in the organizational life of APA can be a strong deterrent to burnout, she believes.

"Involvement in a professional society can empower members, providing a sense of collegial community and a venue for re-embracing the passion that caused us to want to be physicians in the first place," she said.

The *Psychiatric News* series will begin in the next issue with a report from work group chair Richard Summers, M.D., on the town hall discussion on burnout that was held at APA's 2017 Annual Meeting in San Diego. Other subjects to be addressed in coming issues include evidence-based interventions for physicians with depression, perspectives on burnout and resilience from senior psychiatrists, efforts to promote medical student wellness, incorporation of mindfulness training into professional practice, ACGME efforts around the issue of wellness and burnout, physician mental health issues and state licensing boards, and organized-medicine and institutional-level approaches to preventing and treating burnout.

Everett said she believes the *Psychiatric News* series will be a popular feature and one that members will look forward to from one issue to the next.

"It is my hope that the series will provide real tools that our members can use in their daily professional lives to stay healthy and to remain passionate about the vital work we do with our patients," she said. **PN**

How APA's Collaborative Care Training Is Leading to Improved Care

Child and adolescent psychiatrist Adair Parr, M.D., describes how APA's training in the collaborative care model has made her more aware of ways to work with pediatricians. **BY MARK MORAN**

Child psychiatrist Adair Parr, M.D., is among a growing cadre of clinicians looking to collaborative care models to extend their psychiatric expertise to primary care patients.

"As an individual psychiatrist in private practice, I am limited in the number of people I can see," she told *Psychiatric News*. "I love my private practice and clinical work with individual patients, but I feel constrained that I can see only a certain number of patients in a day."

Mark Moran

Child psychiatrist Adair Parr, M.D., who spoke at the SAMHSA Children's Mental Health Awareness event in May, turned to practicing in the collaborative care model because she felt constrained that she could see only a limited number of patients a day.

Parr is one of some 80 APA members who are participating in or have completed one of APA's online learning collaboratives—one of several APA programs on the Collaborative Care Model (CoCM) that are supported by the federal government's Transforming Clinical Practice Initiative (TCPI). Online learning collaboratives offer advanced training to APA members who have completed introductory training modules in CoCM.

The TCPI is a $2.9 million, four-year federal grant from the Centers for Medicare and Medicaid Services. APA is one of just 39 organizations chosen to participate in the TCPI. As one of the Support and Alignment Networks supported under the grant, APA is committed to training 3,500 psychiatrists in the principles and practice of collaborative care, a specific model of integrated care developed by the late Wayne Katon, M.D., Jürgen Unützer, M.D., M.P.H., and colleagues at the AIMS (Advancing Integrated Mental Health Solutions) Center at the University of Washington (see page 6).

In addition to her private practice in child psychiatryParr works as a staff psychiatrist three days a week at Potomac Pediatrics in Rockville, Md. She said the APA trainings have offered her new insight into how to implement collaborative care. Parr's work in the pediatric practice to date falls under

see **Training** *on page 18*

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TECH TIME

How to Chart Progress Notes Faster, Smarter, Better

Don't be afraid of using electronic health records to chart your notes. Here are tips on how to make the new technology save you time and effort. **BY STEVEN CHAN, M.D., JOHN TOROUS, M.D., AND JOHN LUO, M.D.**

Steven Chan, M.D., M.B.A., is a clinical informatics and digital health fellow at the University of California, San Francisco; John Torous, M.D., is co-director of the Digital Psychiatry Program at Harvard-affiliated Beth Israel Deaconess Medical Center in Boston; and John Luo, M.D., is a health science clinical professor in psychiatry and director of the psychiatry residency program at the UC Riverside School of Medicine.

Electronic health records (EHRs) have become much more common over the past decade, with federal incentives—and funding—for health systems and Medicare providers to implement computer systems, collect data, and report on outcomes. Overall, $35 billion has been allocated by the federal government to drive adoption of electronic charts.

But what about EHRs for behavioral health?

Generally, computer systems in the specialty of psychiatry have had limited adoption. In fact, adoption of EHRs is generally lower among specialists compared with primary care physicians. A 2013 study found that psychiatry was actually the medical specialty with the lowest EHR adoption rate.

Why the limited adoption of EHRs in psychiatry? Lack of comfort and familiarity with EHRs is one key factor. In a survey of psychiatrists conducted in 2012, more than 25 percent of psychiatrists said they weren't comfortable using computers for clinical purposes, despite strong familiarity with consumer technologies for personal use. Another barrier is that using an EHR may be particularly distracting and even harmful to the therapeutic alliance for psychiatry visits, according to early research.

Another important barrier: finances and lack of resources. Because of the additional privacy and sensitivity surrounding behavioral health records as well as the added complexity, the government did not incentivize the use of electronic charts for nonphysician behavioral health providers, long-term care facilities, and addiction treatment centers.

But given the increasing adoption of EHRs—along with announcements in 2016 by the Centers for Medicare and Medicaid Services to provide financial incentives to long-term care, behavioral health, and substance use care providers—it's only a matter of time before EHRs are the norm, not the exception.

Knowing how to effectively use EHRs in clinical settings can mean improved care, efficiency, and patient-doctor relationships—even improved communication. But this requires learning how to be attentive and computer proficient while using an EHR. It also requires that psychiatrists have an active voice and proactive stance to ensure EHRs are developed and responsive to the field's needs.

In an early study of patient satisfaction for psychiatrists adopting EHRs, the authors found that "consistent with several decades of research in the nonpsychiatric realm, we found no change in satisfaction survey scores among adult psychiatric patients" in outpatient settings where EHRs were used versus paper charting, as measured by a modified form of the Rand Corporation's previously validated Patient Satisfaction Questionnaire-18 (PSQ-18). The survey asked about items such as "Communication," "Time Spent with Doctor," and "Interpersonal Manner" and removed the original questions on "Financial Aspects" and "Accessibility & Convenience" subscales as research suggested that EHRs did not impact these factors.

Still, taking on an EHR can be arduous and difficult. Below are ways you can chart faster and smarter, so you can complete the work day in a timely manner.

Know Your Computer

To most effectively use EHRs, users must be familiar with their computer and the computer's operating system. Nearly all health settings—from the Veterans Affairs Health System to Kaiser Permanente—use the Windows family of operating systems, as Windows is used by many large enterprise systems.

In particular, learn these three key things:

- **Copy, paste, and revise:** Effective use of "copy-forwarding" or "cloned documentation" can increase efficiency by allowing you to duplicate a previously submitted note and modify it for use for a new encounter. But don't submit and sign information that is out of date or not longer valid. This can lead to not only unreliable documentation and concerns from your patient's other providers, but also legal issues: malpractice lawsuits, penalties, and imprisonment for falsification of data.

- **Use as many keyboard shortcuts as possible instead of clicking to save time**: For instance, learn how to use Ctrl+x to cut, Ctrl+c to copy, and Ctrl+v to paste text. Pressing Shift+Home and Shift+End can select text on the same line for you.

- **Anticipate wait times and crashes, and plan backup activities**: Despite advancements in computing, computer programs still experience freezes or crashes. If Internet browsers are being used for cloud-based EHRs, timeouts and delays can occur. Document at the end of the visit if possible, so that it is done at once. During delays, continue doing other work—such as filling out lab forms or handwritten prescriptions—while you wait for the computer to

see **EHR** *on page 19*

APA Reaches Across Boundaries to Forge Collaboration With UK Psychiatrists

APA President Anita Everett, M.D., and APA CEO and Medical Director Saul Levin, M.D., M.P.A., represented APA at the International Congress of the Royal College of Psychiatrists (RCP) in Edinburgh, Scotland, in June. Pictured at the congress are (from left) outgoing RCP President Sir Simon Wessely, Everett, Levin, and Wendy Burn, M.D., who became RCP president during the congress. The theme of the congress this year was "Psychiatry Without Boundaries."

The RCP represents more than 18,000 psychiatrists in the United Kingdom and internationally. Like APA, the RCP supports psychiatrists throughout their careers, sets standards of psychiatry in the United Kingdom, and aims to improve the outcomes of people with mental illness and the mental health of individuals, their families, and communities. Nationally and internationally, the RCP represents the expertise of the psychiatric profession to governments and other agencies.

Levin said the college is APA's "sister organization" in the United Kingdom. "Attendance at the International Congress is a chance for APA and RCP leaders to share ideas about how both of our organizations serve our members, advocate for patients, pursue research, and support the practice of psychiatry," he told *Psychiatric News*. "Our two organizations are alike in so many ways, and there is much that we can do to support each other's missions, as well as exchange the latest on research, technology, and treatment advances and knowledge about cultural differences to help us better address the same situations and populations."

At the congress, Everett delivered a plenary lecture titled "Ethics in an Era of Psychiatry Without Borders." She discussed how four core principles of ethics—beneficence, nonmaleficence, justice, and autonomy—can guide physician behavior even as psychiatric practice changes and transcends the traditional one-on-one office-based setting.

Increasingly, Everett said, psychiatric services are being delivered in complex systems of care, involving multiple disciplines and/or alternative modes of service delivery. Examples include psychiatric care embedded in a Medicare Accountable Care Organization, the use of peer supports for patients transitioning from the hospital to the community to reduce visits to the emergency department, and Assertive Community Treatment teams, in which psychiatrists meet patients at localities in the patient's community.

In each of these cases, the four core principles of ethics can guide psychiatrists in answering the questions: Will this be good for patients? Could this do harm to patients? Will this be fair? Will this respect autonomy or diminish autonomy?

Levin said he looks forward to continued collaboration with RCP and other international organizations. "We are truly living in an era of psychiatry without borders," he said. "The RCP and our other sister organizations around the globe share a common mission of service to our members and our patients, based on the principles of quality care and the continuation of prevention, early intervention, treatment, and recovery."

PSYCHIATRY & INTEGRATED CARE

Reflections on Implementation Of Collaborative Care

BY SEETA PATEL, M.D., AND SARA HAACK, M.D., M.P.H.

It's been a pleasure for me to watch the growth and development of our new Integrated Care Fellowship housed at the University of Washington and funded by the Washington state legislature. Our first fellows, the authors of this month's column, have done an excellent job leading, nurturing, and educating integrated care teams to effectively deliver collaborative care in both urban and rural settings. By providing integrated care training to early career psychiatrists, we hope to prepare a growing workforce equipped to improve access to effective behavioral health care.

—Jürgen Unützer, M.D., M.P.H.

Seeta Patel, M.D., completed her residency training at Harvard South Shore and the Integrated Care Fellowship at the University of Washington. Sara Haack, M.D., M.P.H., is an acting instructor and integrated care training program fellow at the University of Washington. Jürgen Unützer, M.D., M.P.H., is a professor and chair of psychiatry and behavioral sciences at the University of Washington, where he also directs the AIMS Center, dedicated to "advancing integrated mental health solutions."

As the first fellows of the new Integrated Care Fellowship offered by the Department of Psychiatry and Behavioral Sciences at the University of Washington, we had the privilege of helping shape the program from the ground up. The unique fellowship, directed by Anna Ratzliff, M.D., Ph.D., focuses on developing both clinical and leadership skills to deliver population mental health with an emphasis on how to leverage psychiatric expertise through working with other providers.

As part of the fellowship, we both participated in a year-long "Implementation Rotation" in which we helped a primary care clinic within Washington state start a collaborative care program. This was a terrific, hands-on opportunity that gave us enormous insight into the complexities of launching an integrated care program and the components that are necessary for success. Below are some highlights from our experience:

Implementation #1, Seeta Patel, M.D.

My implementation site, a primary care clinic located in rural Washington, consisted of four family medicine providers and two on-site behavioral health specialists who provided psychotherapy. Quality improvement was already part of the organizational culture, and due to a shortage of psychiatric providers in the clinic's rural location, there was a drive to shift from co-located psychotherapy to collaborative care.

We formed a stakeholder team that included an implementation expert, two psychiatric consultants (an attending and me as the fellow), two care managers, a care manager supervisor, a PCP "champion," the clinic manager, and organizational leaders including the chief medical officer. Our stakeholder team developed a shared vision for the program, an essential foundation moving forward. We also outlined our workflow and created a post-launch communication plan to evaluate the program's efficacy.

Team members demonstrated remarkable enthusiasm and perseverance throughout the implementation. In particular, the care managers' dedication to the shared integrated care vision led them to advocate for changes to achieve that vision. The care managers were also integral in creating an effective workflow to effectively communicate recommendations to PCPs, despite the presence of separate electronic medical records for primary care and behavioral health.

Additional post-launch site visits will further lay the foundation and address any questions regarding workflow early on in the development process. In addition, monthly calls between the psychiatric consultant and the PCPs for "Lunch and Learn" sessions will provide an opportunity to discuss patients with complex care needs and to review brief didactic

continued on facing page

New Award Honors Legacy Of Constance Lieber

Lieber Institute

Joseph Gleeson, M.D., has uncovered numerous inherited and de novo gene mutations that contribute to autism and other neurodevelopmental disorders.

Joseph Gleeson, M.D., is the recipient of the inaugural Constance Lieber Prize for his significant contributions to the understanding of the connection between brain development and behavioral disorders. ***BY NICK ZAGORSKI***

This past June, the Lieber Institute for Brain Development presented its inaugural Constance Lieber Prize for Innovation in Developmental Neuroscience to Joseph Gleeson, M.D., a professor of neuroscience at the University of California, San Diego, and the director of neurodevelopmental genetics at UCSD's Rady Institute for Genomic Medicine.

Gleeson has dedicated his career to identifying the genetic mutations that underlie rare, inherited forms of autism and other neurobehavioral disorders. His findings may help pave the way for treatments for these pediatric brain disorders while also revealing important clues about human behavior.

"Dr. Gleeson is a pioneer in the field of translational neuroscience whose landmark studies of Middle Eastern families have provided important links between brain development and behavioral disorders," said Daniel Weinberger, M.D., director and CEO of the Lieber Institute, at the presentation. The presentation took place at a symposium at Johns Hopkins School of Medicine.

"He is a fitting first recipient of this new award initiated to honor a tremendous woman and her keen insight that mental disorders likely arise during early development."

As noted by Weinberger, Gleeson has taken advantage of the high degree of interfamilial marriage in many Middle Eastern countries to establish a large cohort of families that express these rare, recessive abnormalities. Through genetic analysis of these families, he has discovered mutations in more than 50 genes that underlie these disorders.

Gleeson cited his 2012 work that linked a form of autism presenting with epilepsy with a mutation in the branched chain ketoacid dehydrogenase kinase (BCKDK) gene as one success story. People with defective BCKDK have very low levels of branched chain amino acids, which are key building blocks of neurotransmitters. Trials in mice, and at least some anecdotal evidence in affected children, suggest that using protein shakes to supplement these amino acids in the diet can ameliorate many of the symptoms.

Not every mutation uncovered involves a straightforward metabolic process that can be fixed with a supplement. But even in cases in which simple interventions may not be possible, finding these genetic markers can help with screening to prevent new cases of these rare diseases. As an example of effective screening, Gleeson pointed out that there hasn't been a child in the Ashkenazi population born with Tay Sachs disease in over 10 years.

Fully inherited forms of autism are quite rare, but Gleeson thinks genetic screens might also be used for a more common cause of autism: de novo mutations. These are mutations that are not present in the parents but arise during fertilization and fetal development.

A major contributor to potential de novo mutations is sperm DNA, as unlike eggs, sperm proliferate throughout the male's lifetime, and mutations can accumulate in sperm as men age. Numerous studies have shown that paternal age at conception is a significant risk factor for autism.

Gleeson discussed some of his newer work assessing gonadal mosaicism, which involves sequencing sperm DNA to identify the percentage of sperm cells that contain mutations or variants. The results of these tests can be used to develop an autism "risk score" that can help parents with family planning.

"Studying the early brain is challenging since this organ is encased by a thick skull and develops mostly inside a womb," Gleeson said, "but we are making steady progress in our field."

Echoing words spoken by Stephen Lieber during a tribute to his late wife earlier during the day-long award symposium, Gleeson concluded by saying, "I respect [Constance's] determination to always remain hopeful even at times when hope should be abandoned by rational people. That's something every researcher should strive for."

Set to be awarded every two years, the Constance Lieber Prize bestows $100,000 to an investigator (55 or younger) who has made transformative contributions to unlocking the role of brain development in behavioral disorders.

The new prize is a tribute to Constance Lieber and her tireless efforts

see **Award** *on page 18*

continued from facing page

presentations on how to manage common mental health conditions.

Implementation #2, Sara Haack

My implementation site, an internal medicine clinic located in a medium-sized Washington town, recognized that its Medicare-heavy patient population had few community options for psychiatric care. As the Medicare population frequently has multiple medical comorbidities, the clinic prioritized improving population's mental health to facilitate better overall health outcomes.

Establishing institutional and ground-level support for the program was our critical first step. Leadership demonstrated commitment by allocating funds and clinical space to support a new care manager. A PCP "champion" generated enthusiasm for collaborative care among his colleagues, while the clinic's prior experience with a chronic care manager made the new collaborative care model feel more familiar. The collaborative care team's program coordinator had previously worked in the chronic care model as well. Her familiarity with a team-based, outcomes-driven care model was an asset to the team throughout the process.

Similar to Dr. Patel's experience, our implementation was successful because of the individuals involved. One blessing in disguise was that the newly hired care manager was unable to see patients during his first month on the job while being credentialed. He capitalized on this prolonged orientation period by diligently studying his collaborative care responsibilities and making a consistent effort to visit with the clinic providers. Before even seeing patients, the PCPs trusted him to deliver effective care, which was extremely important as referrals steadily arrived once the program opened.

There are many opportunities to define and measure our program's outcomes, with an eye to "scaling up" the collaborative care program to other areas and patients within the clinic and to other clinics within the same health care system.

Take-Away Points From Rotation

- The PCP champion is essential to the implementation process. Checking in with the PCP champion regularly allowed us to continually reflect on opportunities for improvement.
- Laying the foundation for collaborative care and delineating clear roles for all team members are important first steps for implementation.
- Having a strong care manager is invaluable, as this is the person who liaises most with patients and with all other collaborative care team members.
- Anecdotal success stories from patients and providers are heartening to the rollout of a new collaborative care program. Identifying metrics of success and reviewing progress toward these metrics are key parts of the model's accountable care principle.

These themes are beneficial to any clinic thinking about starting a collaborative care program, and we will draw upon them and our implementation experience as we continue our careers in delivering population-based mental health. **PN**

More information on the Integrated Care Fellowship is posted at http://ictp.uw.edu/programs/integrated-care-fellowship.

Martin Klapheke, M.D., reports that all nine medical schools in Florida are collaborating to improve the training of medical students in addiction and pain management.

Educators Address Gap In Addiction, Pain Training

Some medical schools are developing a curriculum to train young physicians in addiction and pain management, often in collaboration with communities hard hit by the opioid crisis. **BY MARK MORAN**

Psychiatric educators are mobilizing to train medical students and psychiatry residents to confront the nation's opioid epidemic.

The Association of Directors of Medical School Education in Psychiatry (ADMSEP) and the American Association of Directors of Psychiatric Residency Training (AADPRT) have launched initiatives around educating trainees about pain management and addiction, while a growing number of medical schools have developed their own training efforts, often in collaboration with community agencies and governing bodies in communities heavily hit by the opioid epidemic.

A common theme is an emphasis on integration of care across disciplines and systems of care. "Collaboration is key," said Martin Klapheke, M.D., a professor of psychiatry and assistant dean of medical education at the University of Central Florida (UCF) College of Medicine. "No one discipline owns this problem.

"At UCF, this problem was on our radar even before the CDC guidelines were released [in 2016]," Klapheke told *Psychiatric News*. "We started to review our curriculum to see where we might need to strengthen it around pain management and addiction. We concentrate on pharmacologic and nonpharmacologic strategies for pain management throughout the four years of medical school. But we really focus on it in the clerkship years—we have beefed up our didactics and initiated 'flipped classrooms' where our students do independent study on pain management and then return to class to do case applications."

UCF is not alone. Klapheke said the nine-member Council of Florida Medical School Deans Pain Management Group, of which he is a member, is collaborating to share didactics and best educational practices and to develop a model curriculum. "Here in Florida, we have been hit very hard by the epidemic," he said. "All nine medical schools are committed to developing a common language for how to teach our students about this problem."

At ADMSEP's 2017 annual meeting, Lisa Fore-Arcand, Ed.D., education coordinator and co-director of the addiction medicine curriculum at Eastern Virginia Medical School (EVMS), and Senthil Kumar Rajasekaran, M.D., associate dean for academic affairs there, led a plenary session on medical student education in addiction.

Since 1994 EVMS has had an integrated addiction medicine curriculum until last year when they introduced a new systems-based curriculum—in which learning is organized around body systems—and wove in addiction training emphasizing integration of care across specialties.

"We wanted to move our curriculum closer toward a true integration with other disciplines," Fore-Arcand told *Psychiatric News*. "Addiction training is threaded throughout the four years of training and across all the clinical rotations. It's important that when we designed this curriculum, we wanted our students to understand that addiction is not the ownership of psychiatry or any other discipline."

> "We really emphasize that addiction is a disease, not a choice."

The EVMS curriculum emphasizes the disease model of addiction to help students understand the relapsing and remitting nature of addiction. "Traditionally addiction has been viewed as a not-very-glamorous discipline in part because it seems like patients don't get better," she said. "But we really emphasize that addiction is a disease, not a choice."

An innovative strategy for "threading" addiction education throughout the curriculum at EVMS is the use of "virtual families"—prototypical families in which one family member's addiction is seen in context with the conditions and disorders experienced by other family members and the surrounding community.

"The virtual family naturally lends itself to discussion about social and behavioral issues as part of the case discussion," Rajasekaran told *Psychiatric News*. EVMS received an Accelerating Change in Education grant from the AMA for this curricular model.

Another critical element of the curriculum is a requirement that students attend meetings of Narcotics Anonymous and Alcoholics Anonymous.

"The students are expected to go to two NA or AA meetings a year and write a reflective essay about the experience," she said. "Hopefully, when they talk to patients, they will be able to explain what attendance at a meeting is like. Our students learn a lot from hearing the stories that people in recovery tell, and they learn that this can happen to anyone—lawyers and college professors. It can be an eye-opener."

What Is Optimal Addictions Training?

In a May 31 president's blog, AADPRT President Sandra DeJong, M.D., reflected on a grim phenomenon: addicts were overdosing in the public bathrooms of cafes and shops including relatively upscale neighborhoods.

"Commuting to my office in Cambridge, Mass., this spring, I listened with some shock to a National Public Radio story about a new problem in the neighborhood where I work: the cafes of Inman Square were struggling to cope with the rate of overdose deaths in their restrooms. ... [T]he owner of [a local coffeehouse] where our residents and faculty regularly purchase their lattes and espressos reported he had mounted a sharps box and is training baristas in naloxone use."

Under DeJong's leadership, AADPRT established the Presidential Task Force on Addictions with the following charge:

- To ascertain what training programs need in order to implement expert recommendations on addictions training and identify ways to meet those needs.

- To use these data to develop a strategic plan for improving addictions training, including a developmental approach that will help trainees acquire milestone-based competencies related to assessment and treatment of addiction.

- To provide a clearinghouse for existing educational resources and a platform for disseminating them.

see **Educators** *on page 13*

FDA Approves Once-Daily ADHD Medication for Adults

Shire's amphetamine-based Mydayis is formulated to last up to 16 hours, which provides a new option for patients and clinicians looking at long-term ADHD medications. **BY NICK ZAGORSKI**

On June 20, the U.S. Food and Drug Administration (FDA) approved Shire Pharmaceuticals' new attention-deficit/hyperactivity disorder (ADHD) medication Mydayis (mixed salts of a single-entity amphetamine product).

Though it contains the same active ingredients as Shire's existing long-acting drug Adderall XR—the mirror-image chemicals levoamphetamine and dextroamphetamine—Mydayis is formulated to last up to 16 hours instead of 12, making it the first once-daily ADHD medication approved for this extended duration.

In its statement on the approval, Shire stated that Mydayis would be available in the third quarter of this year.

Mydayis consists of these amphetamine salts encased in three drug-releasing beads at a 1:1:1 ratio. One bead is designed for immediate drug release after swallowing, while the other two beads are formulated to dissolve in the stomach and intestines, respectively.

Manisha Madhoo, M.D., Shire's vice president of global medical affairs for neuroscience, told *Psychiatric News* that the company looked at multiple options for this new long-term agent but felt that a 16-hour duration was optimal for a once-daily therapy.

And while there are several types of brand name and generic stimulants already approved for ADHD, Madhoo believes that Mydayis fills an important unmet need in the ADHD population.

"Most ADHD medications were initially developed to help children having problems during school, and this new formulation reflects the increased recognition that college-age kids and adults have different schedules," said Mark Stein, Ph.D., the director of the ADHD Program at Seattle Children's Hospital.

Stein, who has no connection to the medication, noted that many adults take an extended-release pill in the morning and then a shorter duration medication in the afternoon, but finding the right timing can be difficult. A 16-hour duration simplifies matters.

"With longer benefits also comes the risk that adverse events or drug tolerability lasts longer as well, so clinicians will need to keep an eye on that," he said.

Madhoo highlighted the age aspect as Mydayis is approved only for adolescents and adults. During the research process, Shire conducted clinical studies in children 12 and younger, but in approval discussions with the FDA, it was decided to limit the drug to patients 13 and up.

The FDA approved Mydayis on the basis of positive data from 16 clinical studies that evaluated more than 1,600 ADHD patients. In placebo-controlled studies, Mydayis significantly outperformed placebo as measured by both the ADHD Rating Scale-IV and the Permanent Product Measure of Performance, an objective, skill-adjusted math test that measures attention.

The most common treatment-related side effects in adults were insomnia, decreased appetite and weight, dry mouth, increased heart rate, and anxiety. In adolescents, the most common reactions were insomnia, decreased appetite and weight, irritability, and nausea. Madhoo said the safety profile is similar to that found in other studies testing stimulants, and no new trends emerged with this extended formulation.

This approval ends a long saga for Shire, which first filed a New Drug Application for Mydayis in 2006 but was instructed by the FDA to conduct additional studies. **PN**

Sleep Disturbances May Increase Suicide Risk in Young Adults

Poor sleep may lower the threshold for suicidal behavior in youth, according to the researchers. **BY JOANN BLAKE**

Disturbed sleep is a short-term indicator of worsening suicide risk in young adults, according to a study published online June 28 in the *Journal of Clinical Psychiatry*.

"Sleep disturbances stand apart from other risk factors because they are visible as a warning sign, yet non-stigmatizing and highly treatable using brief, fast-acting interventions," said lead author Rebecca Bernert, Ph.D., an assistant professor of psychiatry and behavioral sciences at Stanford University, in a press release. "That's why we believe it may represent an important treatment target in suicide prevention."

The study collected both objective and self-reported sleep characteristics from 50 young adults aged 18 to 23 with a history of suicide attempts or recent suicidal ideation. They were recruited from among almost 5,000 undergraduate students enrolled in a university research pool.

Findings showed that sleep disturbances (insomnia, nightmares, and sleep-onset variability) predicted acute suicidal ideation symptom changes, even when controlled for the severity of participants' depression, substance use, and the severity of their suicidal symptoms at the start of the study.

"Sleep is a barometer of our well-being and directly impacts how we feel the next day. We believe poor sleep may fail to provide an emotional respite during times of distress, impacting how we regulate our mood, and thereby lowering the threshold for suicidal behaviors," said Bernert.

At the start of the study, and 7 and 21 days later, participants completed questionnaires to measure the severity of their suicidal symptoms, insomnia, nightmares, depression, and alcohol use. Researchers evaluated both actigraphic and subjective sleep parameters as acute predictors of suicidal ideation (Beck Scale for Suicide Ideation) and used hierarchical regression analyses to predict residual change scores.

They assessed participants' sleep objectively for one week, during which participants wore watch-like devices containing an accelerometer to measure wrist movements while sleeping or trying to sleep. The device had been validated as an accurate way to distinguish sleep-wake patterns and generate a variety of sleep metrics.

A total of 96 percent of participants (n=48) endorsed a suicide-attempt history. Mean actigraphy values revealed objectively disturbed sleep parameters; 78 percent endorsed clinically significant insomnia and nightmares, according to the study. Specifically, actigraphy-defined variability in sleep timing, insomnia, and nightmares predicted increases in suicidal ideation, the study found.

Falling asleep at very different times each night and waking at different times in the morning were especially predictive of an increase

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Late Bedtime May Cause Less Control Over OCD Symptoms

A late bedtime is associated with lower perceived control of obsessive thoughts, according to research from Binghamton University, State University of New York.

Meredith E. Coles, Ph.D., a professor of psychology at Binghamton, and Jessica Schubert, a former graduate student, monitored the sleep patterns of 20 individuals diagnosed with obsessive-compulsive disorder and 10 individuals with subthreshold OCD symptoms during one week.

Sergey Ivanov

The researchers found that the previous night's bedtime significantly predicted participants' perceived ability to control their obsessive thoughts and compulsive behavior on the subsequent day.

Participants completed sleep diaries and daily ratings of perceived degree of control over obsessive thoughts and ritualized behaviors. On average, participants in the study went to bed around 12:30 a.m. Patients who met the criteria for delayed sleep phase disorder, about 40 percent of the sample, went to bed around 3 a.m.

Coles was surprised to discover that it matters when people sleep, not only how many hours of sleep they get. "This seems to be very specific to the circadian component of when you sleep. There are negative consequences of sleeping at the wrong times."

Coles is collecting pilot data using lightboxes to shift participants' bedtimes to determine whether the change reduces their OCD symptoms and improves their ability to resist intrusive thoughts and compulsions.

"Later Bedtime Is Associated With Decrements in Perceived Control of Obsessions and Compulsions" was presented at the annual meeting of the Associated Professional Sleep Societies in June.

Psychiatric Readmissions Lower Among Patients Receiving ECT

Although greatly improved and effective, ECT is underutilized for psychiatric inpatients. **BY JOANN BLAKE**

A broader availability of electroconvulsive therapy (ECT) could lead to fewer hospital readmissions of psychiatric patients with severe affective disorders.

This reduced rate of psychiatric readmission carries a potential public health benefit that may be overlooked in U.S. hospitals' current decision making regarding the use of ECT, according to a large-scale study published June 28 in *JAMA Psychiatry*.

The study found that the rate of inpatient readmissions within 30 days of discharge among this group of patients was 46 percent lower than those not receiving ECT.

"The importance of our result—lower readmission rates—shows that ECT is an effective treatment and a better value than we thought," said lead author Eric Slade, Ph.D., an associate professor and director of Psychiatric Services Research at the University of Maryland School of Medicine.

Hospitals should take notice of this finding, especially because many of them now bear financial risk for inpatient readmissions under value-based payment arrangements, he said. (Value-based payment mandates better care at lower cost with less inefficiency and duplication of services.)

Among the study's 162,691 inpatients with a principal diagnosis of major depressive disorder (MDD), bipolar disorder, or schizoaffective disorder included in the analysis, only 2,486 (1.5 percent) underwent ECT during their index admission.

"The strikingly low number of hospital patients in this study who received ECT, only 1.5 percent, shows ECT is being underutilized," said geriatric psychiatrist Charles Kellner, M.D., chief of ECT at New York Community Hospital and an adjunct professor of psychiatry at the Icahn School of Medicine at Mount Sinai, New York City. "It's very likely that three to five times more mentally ill people should be getting ECT. If ECT were appropriately prescribed in the United States, it would have a major public health impact."

Increasing the use of ECT makes good financial and clinical sense, especially because "ECT is our most effective and rapid treatment for severe depression," and "hospitals are incentivized [by some payers] to provide patient-centered care and produce good outcomes," said Sarah Lisanby, M.D., director of the National Institute of Mental Health's Division of Translational Research and an expert on ECT.

The study's researchers speculated that a range of barriers have curbed ECT's availability, including stringent regulatory restrictions on its use, limited graduate medical training, persistent concerns about ECT's safety and adverse-effects profile, stigma, reluctance among medical professionals to recommend ECT, and cost considerations.

The first-line treatment for most patients with affective disorders is antidepressants, and if this treatment fails, ECT may be considered. However, patients who are urgently ill may get ECT as a first-line treatment, said Kellner.

While the Slade study found the use of ECT declining among hospital inpatients, Kellner said the practice of ECT has switched to becoming more of an outpatient procedure.

"Over half of patients are treated in outpatient facilities that are affiliated with hospitals. Some patients are mentally ill enough that they need hospitalization for the entire treatment—they may be suicidal, extremely depressed, and malnourished," he said. "Overall, the use of ECT is increasing because nothing else has approached its efficacy and safety. This is a very powerful, serious treatment."

According to the study, patients who received ECT were older and more likely to be female and non-Hispanic white, to have MDD rather than either bipolar disorder or schizoaffective disorder, to have private or Medicare insurance coverage, and to receive the treatment in urban small hospitals and nonurban hospitals, the researchers wrote.

The researchers found unexpectedly that ECT was administered more often to patients who had diagnoses indicating comorbid medical illnesses that may increase the relative health risks of ECT, possibly reflecting greater medical comorbidity in the group with ECT treatment or more frequent documentation of medical comorbidity among inpatients who are medically screened prior to ECT, according to the researchers.

For the study, Slade and colleagues relied on information contained in the Health Care Utilization Project's State Inpatient Databases (SID) from general hospitals in the following nine states: Arizona, Arkansas, California, Florida, Nevada, New York, North Carolina, Utah, and Washington. While SIDs are available for most states, only the nine states included in the study had complete data on patient readmissions.

Administration of ECT was associated with a reduced 30-day readmission risk among patients with severe affective disorders from an estimated 12.3 percent among individuals not administered ECT to 6.6 percent among individuals administered ECT (risk ratio = 0.54).

"The effect of ECT on 30-day readmission risk did not differ significantly by age or race/ethnicity, but was relatively larger among men than women and among individuals with bipolar disorder and schizoaffective disorder than among those with MDD," according to the study.

"The findings of Slade et al. should be interpreted in the context of a large and diverse body of evidence regarding ECT efficacy," Harold Sackeim, Ph.D., a professor of psychiatry at Columbia University, wrote in a related editorial. "The evidence indicating that ECT is effective in the treatment of mood disorders is diverse, long-standing, and incontrovertible. In both the short term and long term, it appears to exert greater benefit than pharmacological alternatives."

ECT is used more frequently in private facilities compared with municipal, county, state, or federal health psychiatric hospitals. ECT recipients are older, more often white, more likely to have private insurance, and more likely to live in affluent areas, he wrote. "Contrary to its portrayal as a treatment inflicted on the poor or destitute, ECT is disproportionately administered to those more well off," Sackeim concluded. **PN**

Eric Slade, Ph.D., says ECT makes good financial sense for hospitals because of lower readmission rates.

Charles Kellner, M.D., says ECT is strikingly underutilized among mentally ill patients in hospitals.

Sarah Lisanby, M.D., says that hospitals are incentivized to provide care that produces better outcomes.

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in suicidal symptoms at the 7- and 21-day marks. Participants with substantial variation in falling asleep times also reported more insomnia and nightmares, which independently predicted more suicidal behaviors, according to the study.

The findings suggest the potential use of sleep as a biomarker of suicide risk and a therapeutic target. Bernert's team is currently conducting two clinical trials to test a brief, nonmedication insomnia treatment for suicidal behaviors.

The study was supported by the John Simon Guggenheim Foundation and National Institutes of Health. **PN**

An abstract of "Objectively Assessed Sleep Variability as an Acute Warning Sign of Suicidal Ideation in a Longitudinal Evaluation of Young Adults at High Suicide Risk" is posted at https://www.ncbi.nlm.nih.gov/pubmed/28682534.

"Association of Electroconvulsive Therapy With Psychiatric Readmissions in U.S. Hospitals" is posted at http://jamanetwork.com/journals/jamapsychiatry/fullarticle/2633177. The related editorial, "Modern Electroconvulsive Therapy Vastly Improved Yet Greatly Underused," is posted at http://jamanetwork.com/journals/jamapsychiatry/fullarticle/2633172.

Ketamine Is a Potent Antidepressant, But How Does It Work?

Ketamine has been hailed as a major medical innovation for treatment-resistant depression. The next step is to develop alternative therapies without ketamine's side effects. **BY JOANN BLAKE**

For more than a decade, researchers across the country have been trying to figure out how ketamine produces its rapid antidepressant response. A series of published studies in mice has supported the view that ketamine, a commonly used anesthetic and a club drug, blocks the glutamate receptor N-methyl-D-aspartate (NMDA) on nerve cells, creating the initial strong antidepressant reaction and cascading effects.

"The results of these trials have major implications for millions of depressed patients seeking help, particularly those who have yet to find a medication that works," said Lisa Monteggia, M.D., a neuroscientist at the O'Donnell Brain Institute at the University of Texas Southwestern Medical Center and author of several ketamine studies. The findings can help scientists identify new drugs to replicate ketamine's antidepressant effects but without the side effects. They also can help researchers to look back at existing drugs in search of ones that work similarly, she said.

In March 2016, contrary to previously published papers, researchers at the National Institute of Mental Health (NIMH) published a mouse study in *Nature* whose results supported a new, different view—that a ketamine metabolite (chemical byproduct), known as hydroxynorketamine (HNK), produces the antidepressant effect, not ketamine itself. The researchers also found that HNK's antidepressant effect required the activation of another glutamine receptor, α-amino-3-hydroxy-5-methyl-4-isoxazolepropionic acid (AMPA). Unlike ketamine, HNK does not inhibit NMDA receptors. Thus, HNK does not produce the usual intensified sensory perception and euphoric effects of ketamine.

"The next steps are to confirm if hydroxynorketamine works similarly in humans and if it can be used therapeutically," said Todd Gould, M.D., principal investigator of Gould Lab at the University of Maryland School of Medicine, who worked on the NIMH study.

University of Texas Southwestern Medical Center scientists responded to the NIMH findings with a short study, "Effects of a Ketamine Metabolite on Synaptic NMDAR Function," published June 22 in *Nature*. Their mouse study reaffirmed the findings of previous research involving NMDA receptors, using the same electrophysiological lab techniques as the NIMH study, but administering ketamine to mice at higher doses. The Texas research team again found that ketamine itself triggers the initial antidepressant effects, and the metabolite only extends the duration of the effect.

"Until you have a target, it's very difficult to think about designing drugs or even knowing what drugs to screen," said Monteggia.

Gould, who collaborated with Carlos Zarate, M.D., and colleagues in the NIMH study, said that it is not necessary to know exactly how ketamine works to develop new, alternative drugs. He also pointed out that these were mice studies; future human studies may produce different results.

"Clearly, this needs more follow-up behind it," said Gerard Sanacora, M.D., Ph.D., a professor of psychiatry at Yale University and director of the Yale Depression Research Program. "There may be an additional mechanism that is playing a role other than the blockade of the NMDR receptor. It's pretty early on, and we can't get ahead of ourselves with limited preclinical data."

Neuroscientist Lisa Monteggia, M.D., points out that until "you have a target, it's very difficult to think about designing drugs or even knowing what drugs to screen."

Ketamine continues to be prescribed off label and administered, usually in low doses intravenously, at specialized ketamine clinics and in academic hospitals across the country to quickly stabilize severely depressed patients (see story below). The high demand for the drug is overriding important questions that remain about ketamine, such as how often should patients get infusions, what is a safe dose, how long do the effects last, and the amount of time they can safely continue to receive this drug, said Monteggia.

Meanwhile, intranasal ketamine has shown strong promise in clinical trials for patients with treatment-resistant major depressive disorder (MDD). Investigators at the Icahn School of Medicine at Mount Sinai in New York City found that intranasal ketamine spray conferred a rapid antidepressant effect within 24 hours, was well tolerated, and had few side effects. Their study was published in April 2014 in *Biological Psychiatry*. "This could lay the groundwork for using NMDA-targeted treatments for MDD," according to the researchers. **PN**

"NMDAR Inhibition-Independent Antidepressant Actions of Ketamine Metabolites" is posted at https://www.ncbi.nlm.nih.gov/pubmed/27144355. "Effects of a Ketamine Metabolite on Synaptic NMDAR Function" is posted at http://www.nature.com/nature/journal/v546/n7659/full/nature22084.html. "A Randomized Controlled Trial of Intranasal Ketamine in Major Depressive Disorder" is posted at http://www.biologicalpsychiatryjournal.com/article/S0006-3223(14)00227-3/fulltext.

Ketamine Use for MH Disorders Appears Increasing

A survey shows a growing number of medical specialists are treating psychiatric disorders with ketamine, but questions remain about regimens and safety for long-term use. **BY JOANN BLAKE**

Despite the lack of long-term data or FDA approval for psychiatric use, ketamine treatment for mental disorders is offered by a variety of physician specialists in numerous geographic locations, according to a survey by several prominent ketamine researchers. The results of the survey were published July 1 in a letter to the *American Journal of Psychiatry*.

The researchers cited an urgent need for more research on the use of ketamine for psychiatric disorders in clinical settings to establish evidence-based regimens and safety of long-term use.

The increasing use of ketamine to treat psychiatric disorders and the potential adverse effects of repeated dosing make a good argument for the establishment of a registry to follow psychiatric patients who receive ketamine, according to study investigators.

Reporting the survey results were Samuel T. Wilkinson, M.D., of the Yale Depression Research Program in New Haven, Conn.; Mesut Toprak, M.D., a researcher in the Department of Psychiatry at Yale University; Mason S. Turner, M.D., director of Outpatient Mental Health and Addiction Medicine for Kaiser Permanente, Northern California; Steven P. Levine, M.D., psychiatrist and president/CEO of Ketamine Treatment Centers in Princeton, N.J.; Rachel B. Katz, M.D., chief resident of the Yale University Interventional Psychiatry Service; and Gerard Sanacora, M.D., Ph.D., a professor of psychiatry and director of the Yale Depression Research Program.

iStock/BrianAJackson

From September 2016 through January 2017, researchers sent a web-based survey to 76 physicians nationwide inquiring whether their clinical practices use ketamine for psychiatric disorders. Responses were received from 57. Targeted individuals were identified through a systematic web search for sites advertising ketamine treatments for depression and through the authors' relationships with academic and community colleagues.

The most commonly reported diagnosis treated was major depressive disorder (72.2 percent), followed by bipolar disorder (15.1 percent) and posttraumatic stress disorder (5.7 percent). Most respondents (87.7 percent) reported administering ketamine intravenously, with a minority reporting using an oral (22.8 percent) or an intranasal (19.3 percent) formulation.

Among respondents reporting intravenous administration, 44 percent reported using a dosage of 0.5 mg/kg infused over 40 to 45 minutes, the typical dosage in most research protocols; a minority reported using a range of dosages between 0.5 and

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Write to Health: Journaling Can Enhance Psychotherapeutic Process

Journaling is a useful adjunct tool to treatment for many patients, says a Penn State psychiatrist and writer. **BY JOANN BLAKE**

As a part of psychotherapy, journaling or "expressive writing" can help patients work out psychological issues safely, said psychiatrist and writer Martha Peaslee Levine, M.D., an assistant professor of pediatrics and psychiatry at the Penn State Health Milton S. Hershey Medical Center.

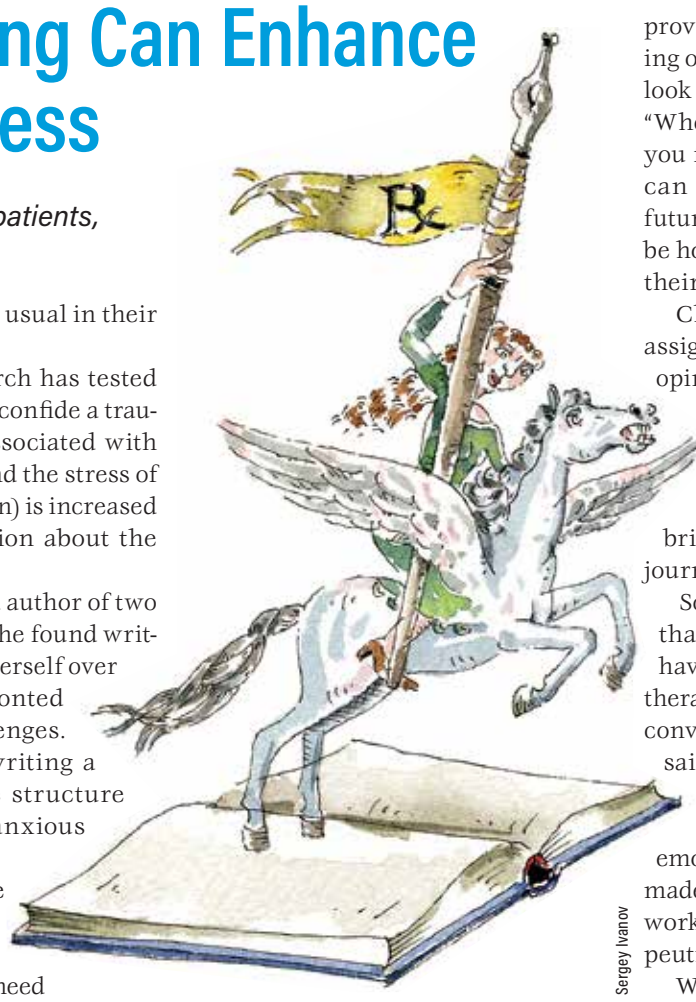
Speaking at APA's 2017 Annual Meeting, Levine said writing therapy is a personal form of "confession" that has helped her patients navigate through their feelings about complex emotional experiences and traumas, and eventually come to terms with them.

Writing about emotional topics has been found to have a beneficial effect on the immune function of people with chronic diseases, according to recent research by James Pennebaker, Ph.D., at the University of Texas, Austin. His first research study on journaling, published in 1983, showed that college students who wrote about their deep feelings and traumatic experiences visited the health center doctors less often than the control group who wrote about something usual in their day, said Levine.

Pennebaker's research has tested the idea that "failure to confide a traumatic experience is associated with psychological stress, and the stress of not confiding (inhibition) is increased by excessive rumination about the event," he wrote.

Levine, essayist and author of two children's books, said she found writing therapy useful for herself over the years when confronted with various life challenges. She discovered that writing a narrative helped give structure and organization to anxious feelings.

"As a writer, I have come to recognize the power of the story, the power of words. When I need to understand something that has happened in my life or a feeling I didn't understand, the best way for me to approach it was through writing. As a psychiatrist, I have come to understand the importance of the story," she said.



Sergey Ivanov

Therapeutic writing be done in therapy by individuals or in groups. Levine suggests giving patients 10 minutes (up to an hour at the most) to write on assigned topics or a topic of their choosing. As an example, she provided this prompt: "You are standing outside a door. What does the door look like?" The next prompt could be, "When you open the door, what do you find?" Levine said such prompts can help patients visualize their future and reflect on issues that might be holding them back from achieving their goals.

Clinicians might also consider assigning patients to journal on their opinions and dreams, how their family and upbringing have affected them, what personal characteristics they value, and what makes them happy and what brings them down—all part of their journey in self-discovery.

Some patients take to writing more than others, especially those who have difficulty talking during group therapy sessions yet may have a "huge conversation going on in their heads," said Levine.

Because initial writing about trauma can trigger distress and emotional arousal, patients should be made aware that they need to continue working through the distress therapeutically and continue the writing.

When some patients expressed worry about other people seeing their written work, Levine encouraged them to set boundaries or shred the paper when they're done.

"Sharing of writing is not as important as doing the writing," she said. **PN**

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1.0 mg/kg (12.0 percent) or between 0.5 and 3.0 mg/kg (14.0 percent).

Approximately one-half of the respondents reported monitoring heart rate (48.1 percent) and pulse oximetry (54.0 percent) at least every 5 minutes during the infusion, with 25.9 percent monitoring blood pressure at least every 5 minutes. Most reported monitoring heart rate (77.8 percent), pulse oximetry (80 percent), and blood pressure (75.9 percent) at least every 15 minutes during the infusion. Few respondents reported no monitoring of heart rate (1.9 percent), pulse oximetry (10 percent), and blood pressure (1.9 percent).

Most respondents (89.5 percent) reported offering ketamine on a continuation or maintenance basis (defined as greater than one month). The average frequency of maintenance treatments reported were monthly (29.8 percent), once per three weeks (21.1 percent), once per two weeks (12.3 percent), or less than monthly (15.8 percent). Respondents reported that 64 percent of patients paid for the ketamine treatment out of pocket, with 23 percent of patients having a portion of the cost reimbursed by insurance and 13 percent of patients having other payment structures.

Most (73.7 percent) respondents worked in private practice, with a minority in academic settings (14.0 percent) or in health maintenance organizations (8.8 percent), with a regional distribution as follows: West Coast (31.6 percent), Northeast (19.3 percent), Southeast (15.8 percent), Mountain West (10.5 percent), Mid-Atlantic (10.5 percent), and Midwest (8.8 percent). Most (66.7 percent) respondents were trained in psychiatry, with others trained in anesthesiology (22.8 percent), emergency medicine (3.5 percent), or family medicine (3.5 percent). Most respondents (73.7 percent) administered ketamine in an office-based setting, with a minority (21.1 percent) administering ketamine in a hospital-based setting or in a surgical or procedural suite.

The majority of respondents reported starting to provide ketamine for psychiatric disorders relatively recently, with a notable increase in the cumulative number of such providers since 2012. **PN**

"A Survey of the Clinical, Off-Label Use of Ketamine as a Treatment for Psychiatric Disorders" is posted at http://ajp.psychiatryonline.org/doi/full/10.1176/appi.ajp.2017.17020239. The letter lists the authors' financial interests.

Educators

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- To develop educational modules that turn content into dynamic, interactive adult-learning sessions.

- To offer "train the trainer" sessions at the AADPRT annual meeting.

DeJong has made the issue a theme of her presidential year. "I had been concerned about the state of addictions training in psychiatry, and how it seemed to be lagging behind the burgeoning need for treatment in this area given the public health crisis in our country," she told *Psychiatric News*.

"In the summer of 2016, I pulled together an advisory board of representatives from the various allied organizations, including addictions experts and representatives from training and education, many of whom were already doing work in this area," she said. "I felt our first task was to try to define what optimal addictions training in psychiatry might look like. The task force has begun its work by developing a survey of general psychiatry training directors to find out what they are doing in their programs and what resources they would need to have in place to meet what the experts are saying would be optimal."

The survey is being piloted now, and DeJong said the task force anticipates distributing it to AADPRT training directors in September. "Those results will guide us in developing a strategic plan for addictions training, identifying what resources need to be made available to programs across the country, and providing a platform for dissemination through websites and other technologies and annual meetings."

DeJong said she believes that the Accreditation Council on Graduate Medical Education's requirements in addictions training may need to be revised, but in the meantime programs across the country cannot be expected to do more until better resources are available.

Addiction services are lacking in many parts of the country, so it is hard to find clinical sites where residents can get addictions training. "Programs without addictions fellowships may not have addictions experts on their faculty," DeJong said. "And the current generation of training directors and faculty may themselves not have received much training in addictions, so we need to train the trainers for residents and fellows to receive the training they need." **PN**

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Should You Order Genetic Tests Before Prescribing Psychotropics?

In some cases, the effects of a genetic variant may be very modest, but pharmacogenetic data can help inform decisions about medication choice and dosing. **BY NICK ZAGORSKI**

The debate over whether psychiatrists should incorporate pharmacogenetic testing into clinical practice received attention at APA's Annual Meeting in San Diego.

"I have some colleagues who think we should test routinely and others who say not at all," Raj Mago, M.D., a psychiatrist in Philadelphia specializing in mood disorders, said during a session on managing the side effects of psychotropics. "I don't think either answer is right. Just like prescribing drugs, not everyone needs it, and you need to match the right test to the right person."

If you wanted to incorporate genetic testing into your decision-making process when prescribing, what might you look for?

To help clinicians understand their options for genetic testing, Mago described several genetic variants for which there are commercially available tests.

Tests that assess pharmacokinetics (variants of enzymes involved in drug metabolism) can offer clues about the optimal medication dose for a patient. For instance, if a patient has a variant of the cytochrome P450 (CYP) enzyme CYP2D6, which is associated with poor metabolism, it is recommended that clinicians first start them at a lower dose of aripiprazole and then adjust the dose to achieve a favorable clinical response. Other psychotropics influenced by CYP2D6 include the antidepressants fluoxetine and paroxetine, the attention-deficit/hyperactivity disorder medication atomoxetine, and opioids codeine and oxycodone.

Mago noted that when ordering genetic tests, it is important to remember that there is a large family of CYP enzymes. "Remember, there's no such person as a poor metabolizer; people just have deficits in specific CYP enzymes," he said. For example, while paroxetine is almost exclusively metabolized by CYP2D6, fluoxetine is metabolized by CYP2D6 and CYP2C19, so a deficit in one may not be significant.

Many companies do offer multigene test batteries that include all the significant CYPs, but when in doubt, Mago said the Flockhart table offers

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FROM THE EXPERTS

Point-of-Care EEG Device Could Ease Efforts to Detect Delirium

BY GEN SHINOZAKI, M.D., M.S.

Delirium is a dangerous state of confusion that affects millions of elderly people admitted to hospitals each year, increasing the risk of health complications and death.

Studies show that these patients are more likely to fall, aspirate, and hurt themselves and health care providers than others of the same age. Additionally, average hospital stays for delirious patients are 7.8 days longer than those who do not experience delirium. By some estimates, the extra days spent in the hospital can add up to more than $15,000, creating a significant burden for patients and hospitals.

Yet, delirium remains underdiagnosed, and thus undertreated.

Questionnaire-style instruments to assess delirium—including the Confusion Assessment Method (CAM), CAM-ICU, and Delirium Rating Scale (DRS)—have been shown to be sensitive at determining patients with delirium in research settings. However, the frequency with which these tools must be administered and their subjective nature makes them impractical for use in real-world hospital workflows. In fact, in busy hospital workflows such as those in an ICU, these tools have been shown to be ineffective with poor sensitivity (38 percent to 47 percent).

A psychiatric face-to-face interview including the use of an instrument such as CAM is the current standard for diagnosing and screening delirium, but this type of screening is also unrealistic for large volumes of patients admitted to hospitals.

Electroencephalography (EEG) can detect what is known as "diffuse slowing" brain wave signals that are characteristic of delirium. But, this too, may be impractical for screening the high volume of elderly patients admitted into hospitals; EEG commonly requires an experienced technician to correctly place 20 electrodes upon the head of the patient, as well as a neurologist to interpret the data.

What if there was a way to simplify an EEG screen for delirium?

Patients with delirium commonly display low frequency brain waves across multiple channels. If all channels are showing the same signals, is it possible that measuring the output of a limited number of channels could prove equally effective at screening for delirium? Recent studies suggest the answer may be yes.

One study confirmed the excellent sensitivity and specificity of a limited number of EEG leads rather than the traditional 20 leads for confirming delirium. Our team recently showed that a two-channel portable bedside EEG device can differentiate between a delirious patient and normal patient, as well as delirious state versus recovered state among the same patients.

We conducted a pilot study recruiting 142 subjects admitted to a hospital and measured brainwave signals using a simplified few-lead EEG. The performance metrics were as follows: accuracy=87.5 percent, sensitivity=80.0 percent, specificity=87.7 percent.

Reducing the number of lead placements on a patient's head from 20 to two—for bipspectral EEG—would likely reduce the need for specialized neurologists and technicians to apply the device and lead to more rapid screenings.

Bispectral brain wave monitoring is not new. For the last two decades, EEG signals obtained from a few leads attached to the foreheads of patients under anesthesia have been gaining popularity. Bispectral brain wave monitoring is almost standard care for anesthetized surgical patients, and electroconvulsive therapy machines use two EEG leads to monitor seizure activity.

Gen Shinozaki, M.D., M.S., is an associate professor of psychiatry at the University of Iowa Carver College of Medicine. He is interested in developing a point-of-care EEG device suitable for mass screening of encephalopathy/delirium. Shinozaki has received research support from the National Institutes of Health, the National Science Foundation, and the University of Iowa Research Foundation. Shinozaki is president and co-founder of Predelix Medical, LLC.

It is expected that EEG signals from a simplified handheld device can rapidly and accurately detect changes of EEG signals from normal to delirious conditions.

Our research team is hoping to begin using this approach to improve delirium care with mass screening and regular monitoring for elderly patients admitted to a hospital soon. **PN**

References for this article are posted at http://psychnews.psychiatryonline.org/doi/full/10.1176/appi.pn.2017.pp4b3.

Psychodynamic Therapy Found 'Equivalent' To CBT Across Disorders

Past meta-analyses have had mixed results, with some showing CBT as more effective, but the current study uses a more stringent methodology for determining "equivalence." **BY MARK MORAN**

Psychodynamic therapy (PDT) appears to be as effective at treating mental illness as other techniques with established efficacy, including cognitive-behavioral therapy (CBT), according to a meta-analysis in *AJP in Advance*.

A number of randomized, controlled trials comparing PDT and CBT have reported on "non-inferiority" of PDT—a conclusion that tends to understate PDT's value, according to Eric Plakun, M.D., chair of APA's Caucus on Psychotherapy and associate medical director and director of admissions at The Austen Riggs Center in Stockbridge, Mass.

"This study demonstrates the 'equivalence' of PDT to CBT, as opposed to 'non-inferiority,' as in other comparable studies," Plakun, who was not involved in the study, told *Psychiatric News*. "In doing so, it also is a big step toward ending what has frankly been an implicit bias against PDT that needs to come to an end."

The meta-analysis included 23 randomized, controlled trials with 2,751 patients. Twenty-one of the trials compared PDT with other forms of psychotherapy, in most cases CBT. Two studies compared psychodynamic therapy with a selective serotonin reuptake inhibitor or with a serotonin-norepinephrine reuptake inhibitor in the treatment of depression. The majority of studies investigated participants with a depressive disorder (n=8), followed by anxiety disorders (n=4), eating disorders (n=4), personality disorders (n=4), substance dependence (n=2), and posttraumatic stress disorder (n=1).

The primary outcome was "target symptoms," which included measures specific to the mental disorder under study (for example, measures of depressive symptoms in depressive disorders or of social anxiety in social anxiety disorder). General psychiatric symptoms and psychosocial functioning—including social, occupational, and personality functioning—were also examined.

Researchers found that regardless of whether efficacy results in the individual trials favored psychodynamic therapy or the comparator treatment, the pooled between-group difference in outcome for target symptoms at post-treatment for all studies was statistically small, suggesting PDT is as efficacious as the other treatments. In seven of the 23 studies, PDT was found to be more effective than the comparator treatment.

"This meta-analysis is the first in psychotherapy research to systematically investigate equivalence of a specific form of psychotherapy to established treatments by formally applying the logic of equivalence testing," wrote lead author Christiane Steinert, Ph.D., of the University of Giessen in Germany and colleagues.

Steinert and colleagues noted that "therapist effects" (the effects of the skills or experience a therapist brings to treatment as well as the "fit" between patient and therapist) are known to be a determinant in the effectiveness of psychotherapy.

Eric Plakun, M.D., chair of the APA Caucus on Psychotherapy: "The future will not be about pitting one school of therapy against another, but about finding what works for whom."

"Because therapist effects seem to have a stronger impact on outcome than the treatments being compared and need to be taken into account, one promising strategy for improving treatments is enhancing therapist training and eventually therapist outcome," they concluded. "Furthermore, different patients may benefit from different approaches, which is why a shift from one empirically supported treatment to another may be helpful in case of nonresponse."

Plakun said, "Trainees and, sadly, often their psychotherapy teachers and textbook authors have for too long equated absence of evidence of efficacy of PDT with evidence of absence of efficacy.

"This is not what the data have shown, but only the most careful psychotherapy researchers and clinicians who read the literature have paid attention to this level of detail."

Plakun characterized debates between adherents of CBT versus PDT as a "foolish circular firing squad." Instead, he said he advocates for recognition of the growing evidence base for psychotherapy of multiple types. He also cited the 2015 Institute of Medicine (IOM) report on "Psychosocial Interventions for Mental Health and Substance Use Disorders," which called for the elucidation of "shared elements" across psychotherapies that are found to be effective for a variety of conditions and a range of patients (*Psychiatric News*, December 4, 2015).

"The future will not be about pitting one school of therapy against another, but about finding what works for whom," Plakun said. **PN**

"Psychodynamic Therapy: As Efficacious as Other Empirically Supported Treatments? A Meta-Analysis Testing Equivalence of Outcomes" is posted at http://ajp.psychiatryonline.org/doi/full/10.1176/appi.ajp.2017.17010057.

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a valuable resource for tracking known CYP interactions so a doctor can pick the most appropriate test.

Another enzyme family to consider when prescribing is the uridine diphosphate glucuronosyltransferases (UGTs), which also metabolize several antidepressants and other psychotropics. Unlike the CYP tests, there is no single test that provides comprehensive UGT genotype data, as different companies have patented tests for different enzymes.

Besides pharmacokinetics, genetic tests can also offer insights about pharmacodynamics (how well medications bind to the receptors of patients), Mago said.

One newly available test is for the serotonin transporter-linked polymorphic region (5-HTTLPR). This is a highly variable region in the promotor of the serotonin transporter gene, and some people have short versions and some have long versions. Early evidence suggests that people with the long form tend to have a lower risk of side effects from SSRIs than those with short versions. Mago cautioned that current evidence suggests only a modest effect; for example, a large analysis from the STAR*D research study found that 7 percent of people with the long form had serious adverse events compared with 13 percent of people with the short form.

Other studies have implicated the HLA allele B*1502 as a marker for carbamazepine-induced Stevens–Johnson syndrome (SJS), a severe skin rash. This allele occurs almost exclusively in patients with ancestry across broad areas of Asia, including South Asian Indians. According to the FDA, "patients with ancestry from areas in which HLA-B*1502 is present should be screened for the HLA-B*1502 allele before starting treatment with carbamazepine." Mago added that lamotrigine can also cause SJS, possibly via HLA-B*1502, so genetic testing may be worthwhile for this drug as well in some patient populations.

Evaluating variants of serotonin receptors may also offer clues about risk of potential side effects of medications, Mago said. Previous studies suggest that one polymorphism in the serotonin 2a receptor can identify people more at risk for sexual side effects from antidepressants, while a polymorphism in the serotonin 2c receptor is linked with people more susceptible to antipsychotic-induced weight gain.

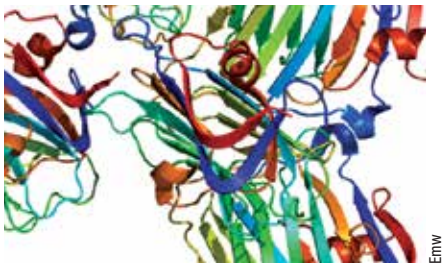
Because most pharmacogenetic testing is up to physician discretion, clinicians are often faced with the challenge of whether the price of these tests is worth the payoff, Mago noted.

"Since this is genetic info, the patient has to take the test only once, and the information is valid for life," he said. He added that a battery of the most common genetic variants can be done for less than $2,000.

"It is important to stress that a genetic test is not a be-all and end-all answer," James Kennedy, M.D., a professor and co-director of the Brain and Therapeutics Division in the Department of Psychiatry at the University of Toronto, said in another session at APA's Annual Meeting. "It is just one small part of a physician's decision-making process." **PN**

JOURNAL DIGEST

BY NICK ZAGORSKI



Emw

First Genetic Links With Tourette Syndrome Identified

An international team of researchers has identified some of the first definitive genetic risk variants for Tourette syndrome.

Deletion of a portion of the NRXN1 gene or a duplication in a segment of the CNTN6 gene increased the risk of Tourette syndrome by 20- and 10-fold, respectively, the authors reported in the journal *Neuron*.

The findings arose from an analysis of 2,434 individuals with Tourette syndrome and 4,093 controls.

NRXN1 and *CNTN6* are important genes for brain development as they produce proteins involved in the formation of synapses. In particular, these genes help the brain form connections between the frontal cortex and regions involved in processing emotions and movement. Studies have suggested that errors in these connections may underlie the distinct vocal and motor tics associated with Tourette syndrome.

About 1 percent of all people with Tourette syndrome carry one of these risk variants, the study authors noted.

Huang A, Yu D, Davis L, et al. Rare Copy Number Variants in NRXN1 and CNTN6 Increase Risk for Tourette Syndrome. *Neuron*. June 2017; 94(6):1101-1111.e7. http://www.cell.com/neuron/fulltext/S0896-6273(17)30508-1

iStock/ayo888

Magnesium Supplements May Improve Depression

A clinical study published in *PLoS One* has found that magnesium supplements can improve symptoms in people with mild-to-moderate depression.

A research team at the University of Vermont enrolled 126 adults with a Patient Health Questionnaire-9 (PHQ-9) score ranging from 5 to 19 in a 12-week crossover study. The participants were randomly assigned to take 248 mg of magnesium chloride daily during either the first or second six-week period of the trial.

The researchers found that average PHQ-9 scores improved by about 4.3 points among people taking magnesium at the end of each six-week period compared with 0.1 in the control groups. After adjusting for potential confounders including antidepressant use, the net PHQ-9 improvement of magnesium increased to 6.0 points. Similar effects were observed regardless of age, gender, baseline severity of depression, or baseline magnesium levels in the blood.

Overall, the supplements were well tolerated and most participants reported they would use magnesium in the future.

The authors cautioned that this study was not blinded and did not have a true placebo control, and additional work is needed to assess long-term effects and understand the mechanism of action.

Tarleton E, Littenberg B, MacLean C, et al. Role of Magnesium Supplementation in the Treatment of Depression: A Randomized Clinical Trial. *PLoS One.* June 2017; 12(6): e0180067. http://journals.plos.org/plosone/article?id=10.1371/journal.pone.0180067

iStock/Studio-Annika

D-Cycloserine Enhances Food Aversion Therapy In Children

A small clinical study of 15 children with avoidant/restrictive food intake disorder found that adding D-cycloserine (DCS) to behavioral intervention (BI) can augment the extinction of food aversion.

Children aged 20 months to 58 months were randomly assigned to daily BI with DCS or placebo administered over the course of five days. The BI sessions, which involved both extinction and reinforcement techniques to promote positive contact with food, were administered during mealtime, three times a day.

Compared with the placebo group, children who received adjunctive DCS showed greater improvements in food acceptance (as measured in percentage of bites with rapid swallowing) and problem behaviors (measured as number of mealtime disruptions). Visible improvements were seen in the DCS group by the second meal.

The investigators, led by a group at Emory University School of Medicine, next examined the effects of DCS on a mouse model of food avoidance. They found that DCS enhances the plasticity of neurons in the orbitofrontal cortex, a hub where sensory and cognitive data are integrated.

"[G]oal-directed action likely has a key role in overcoming avoidance and in learning to consume food," the authors wrote. "Overall, the current results suggest that DCS can facilitate extinction, resulting in decreased time to effect and overall food acceptance."

This study was published in *Translational Psychiatry*.

Sharp W, Allen A, Stubbs K, et al. Successful Pharmacotherapy for the Treatment of Severe Feeding Aversion With Mechanistic Insights From Cross-Species Neuronal Remodeling. *Transl Psychiatry*. June 2017; 7(6):e1157. https://www.nature.com/tp/journal/v7/n6/full/tp2017126a.html

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Suicide Risk Heightened Across Many Physical Health Conditions

At least 17 physical health conditions are associated with an increased risk of suicide, reports a study in the *American Journal of Preventative Medicine*.

"This study provides the first available evidence of the risk of suicide among individuals with major physical health conditions in the U.S. general population," wrote the authors, led by investigators at Henry Ford Health System in Detroit.

The authors compared the health care use by 2,674 people who died by suicide between 2000 and 2013 with 267,400 matched controls. All participants were enrolled in health care systems that are part of the Mental Health Research Network.

Among 19 health conditions assessed (which were chosen because other groups have studied their relation to suicide risk), 17 were individually associated with increased suicide risk after adjusting for age and sex (osteoporosis and multiple sclerosis were the only exceptions). After further adjusting for mental health and/or substance use diagnoses, nine conditions remained significantly associated with increased suicide risk. These conditions included back pain, cancer, congestive heart failure, chronic obstructive pulmonary disease, epilepsy, HIV/AIDS, migraine, sleep disorders, and traumatic brain injury (TBI). Of these, TBI led to the greatest risk of suicide, with an 8.8-fold increase.

More than 38 percent of individuals who died by suicide had more than one of the 19 physical conditions examined, and physical comorbidity was associated with a fourfold increased risk of suicide.

"Given that individuals with multiple conditions are often seen by providers in various general and specialty settings, there should be numerous opportunities to integrate suicide prevention into their care," the authors wrote.

Ahmedani B, Peterson E, Hu Y, et al. Major Physical Health Conditions and Risk of Suicide. *Am J Prev Med*. June 2017; S0749-3797(17)30222-2. [Epub ahead of print] http://www.ajpmonline.org/article/S0749-3797(17)30222-2/fulltext

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Epigenetic Changes Occur After Trauma, May Underlie PTSD Risk

Recent evidence suggests that epigenetic changes play a key role in adaptation to stressful events and thus may contribute to posttraumatic stress disorder (PTSD).

Investigators at Maastricht University in the Netherlands analyzed blood samples from military service members both before and after they were deployed to a combat zone. This enabled them to identify three genomic regions where post-stress epigenetic changes might signal PTSD susceptibility.

The investigators first sequenced DNA from 93 Dutch service members deployed to Afghanistan and identified 12 regions where changes in DNA methylation were associated with

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BY NICK ZAGORSKI

FDA to Release REMS Plan for Prescribers of Immediate-Release Opioids

In remarks delivered in July before the Food and Drug Administration (FDA) Scientific Meeting on Opioids, FDA Commissioner Scott Gottlieb announced that the FDA's risk-management requirements that apply to extended-release opioid formulas will now be extended to include immediate-release opioid drugs.

The FDA's Risk Evaluation and Mitigation Strategy (REMS) requires companies that manufacture opioids to educate prescribers on issues such as assessing patients' pain, managing opioid use, and recognizing addiction when it arises.

"This regulatory tool is needed to ensure that the benefits of how these drugs are prescribed continue to outweigh the risks of misuse, abuse, addiction, overdose, and death," Gottlieb said.

As part of the new requirements for immediate-release opioids, manufacturers must also include information on rival nonopioid pain therapies and nonpharmacological approaches to pain relief.

REMS courses are considered continuing medical education but are not mandatory for doctors, but Gottleib noted the agency is considering adding requirements for prescribers as well.

These latest measures come on the heels of the FDA's request that Endo Pharmaceuticals pull its extended-release opioid, Opana ER, from the market, in addition to numerous city and state lawsuits filed against opioid companies.

Commissioner Gottlieb stated that opioid manufacturers will get details on next steps soon. "[R]elevant letters, detailing the new requirements, will be sent to IR [immediate-release] manufacturers in the coming weeks," he said.

NDA Resubmitted For Aripiprazole-Ingestible Sensor Combination

Otsuka Pharmaceutical Co. Ltd. and Proteus Digital Health have resubmitted a New Drug Application (NDA) for their "digital medicine" that combines ***Abilify (aripiprazole)*** with a tiny ingestible sensor in a single tablet.

The FDA declined the original NDA submission in May 2016, requesting additional information on this medicine's performance under the conditions in which it is likely to be used as well as additional evaluation on any risks of this combination therapy.

Proteus's ingestible sensor, which was approved by the FDA in 2015, is activated by stomach fluids and communicates select physiological data via a wearable sensor. These data are then transmitted to a mobile application that a patient can view and share with a health care professional to inform medical decision making and improve adherence.

The FDA is expected to review the resubmitted NDA and take action by the end of this year.

Olanzapine-Samidorphan Combination Shows Promise in Phase 3 Trial

Alkermes in late June announced positive preliminary results from a phase 3 clinical study of its candidate schizophrenia drug ALKS 3831—an oral formulation that combines ***olanzapine*** with the opioid antagonist ***samidorphan.***

Olanzapine is known to increase the risk of weight gain and Type 2 diabetes. ALKS 3831 is designed to provide the antipsychotic efficacy of olanzapine without the metabolic effects of the medication.

The phase 3 study, known as ENLIGHTEN-1, was a four-week, hospital-based study that compared ALKS 3831 with placebo and olanzapine in 403 patients with acute schizophrenia. At the four-week mark, ALKS 3831 performed as well as olanzapine and significantly better than placebo at reducing baseline symptoms as measured by both the Positive and Negative Syndrome Scale scores and Clinical Global Impression–Severity rating scale.

The next hurdle is determining whether side effects are improved, which is currently ongoing with ENLIGHTEN-2, a six-month study evaluating the weight gain profile of olanzapine compared with ALKS 3831. The results of this study are expected sometime in 2018.

Study Supports Potential Of Naltrexone as Adjunct For ADHD Stimulants

Adjunctive ***naltrexone*** does not interfere with the clinical or side effect profile of ***methylphenidate*** in people with attention-deficit/hyperactivity disorder (ADHD), according to a study published in the *Journal of Clinical Psychiatry* in June. The finding suggests that combining opioid receptor antagonists such as naltrexone with stimulants might reduce the abuse potential of methylphenidate and other stimulants.

The study involved 37 adults with ADHD who experienced stimulant-induced euphoria after being given a test dose of immediate-release methylphenidate. Participants were randomly assigned to receive twice-daily extended-release methylphenidate in combination with 50 mg naltrexone or placebo over six weeks.

After six weeks, the group taking naltrexone and methylphenidate did not show any differences in clinical symptoms compared with the control group (as measured by the Adult ADHD Investigator Symptom Report Scale), suggesting the same level of methylphenidate effectiveness. Additionally, the combination of naltrexone and methylphenidate did not produce an increase in adverse events compared with methylphenidate alone.

NGF Inhibitor Receives Fast-Track Designation for Treatment of Chronic Pain

Pfizer and Eli Lilly recently announced that the FDA has given a fast-track designation to the nerve growth factor (NGF) inhibitor ***tanezumab*** for the treatment of chronic pain in patients with osteoarthritis and chronic low back pain.

Tanezumab is an antibody that works by selectively binding to and inhibiting NGF, which is elevated in response to injury, inflammation, and chronic pain. By inhibiting NGF, tanezumab may help prevent pain signals produced in peripheral tissues from reaching the spinal cord and brain.

Tanezumab is currently being tested in a phase 3 clinical program that includes six trials and approximately 7,000 patients with osteoarthritis, chronic low back pain, or cancer pain. Results are expected sometime in 2018.

Multiple companies have been trying to develop NGF inhibitors as analgesics, though this class of drugs has had many setbacks. Last year, the drug candidate ***fasinumab*** was placed under a clinical hold by the FDA due to concerns of joint damage. **PN**

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increases in PTSD symptoms. These regions were associated with genes involved in biological pathways with clear relevance to brain activity and stress, including serotonin transport or circadian rhythms.

A second DNA analysis in an independent sample of 98 U.S. marines in Afghanistan confirmed the association between methylation change and PTSD in three of these regions: ZFP57, RNF39, and HISTH2APS2—all genes located on chromosome six.

"Overall, this study is effective in highlighting those loci that have strong and consistent association with disease risk," the authors wrote. "Identification of these loci thereby provides new leads for the understanding of the mechanisms of differential responses to traumatic stress and how epigenetic alterations may play a role in the development of PTSD."

These findings were published in *Molecular Psychiatry.* **PN**

Rutten B, Vermetten E, Vinkers C, et al. Longitudinal Analyses of the DNA Methylome in Deployed Military Servicemen Identify Susceptibility Loci for Post-Traumatic Stress Disorder. *Mol Psychiatry.* June 20, 2017. [Epub ahead of print] https://www.nature.com/mp/journal/vaop/ncurrent/full/mp2017120a.html

LETTERS TO THE EDITOR

Opioid Deaths and 'Para-Suicide'

I am writing in response to the article "APA Holds Congressional Briefing on Ending the Opioid Epidemic" in the May 5 issue. I applaud the engagement of then-APA President Maria A. Oquendo, M.D., Ph.D., with members of Congress and their staffs in helping to end the current national opioid overdose death epidemic. I would like to make an addition to her statement "Many deaths from opioid overdose ... are actually suicides."

In a letter published in 2009 in issue 4 of the *American Journal on Addictions,* I contrasted 31 intentional male suicide deaths principally with guns with 22 unintended "suicidal" deaths most often associated with opioids. They were related to a dangerous self-destructive lifestyle, not with a decision to die. An apt term for such unintended demise is "para-suicide."

Furthermore, high opiate doses, presence of comorbid psychiatric diagnoses such as major depression or alcohol dependence, use of opioids not legally prescribed, and intractable pain are other factors that increase the risk of suicide. **PN**

PETER BARGLOW, M.D.
Berkeley, Calif.

From the President

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public and community psychiatry. Those who attend are passionate about doing their best to deliver the highest quality, evidence-based treatments and services possible.

Attending a meeting can be a great way to combat burnout as well. Stressors at our jobs can often have a big impact on both our work and home lives, leading to feelings of compassion fatigue and general exhaustion. Meeting with and talking to colleagues who face many of the same challenges in their day-to-day lives can be a great way to relieve that stress and really restore that collegial spirit that is so important to being satisfied at work.

Addressing physician burnout is one of the priorities for my presidential year, and with that in mind, IPS will have sessions on that very topic. The Medical Director's Bootcamp, one of this year's Learning Labs, will address burnout as well as a range of other topics, including negotiating and working with special populations. I'm very excited about seeing what this and other Learning Labs have to offer at IPS. (Check them out at https://www.psychiatry.org/psychiatrists/meetings/ips-the-mental-health-services-conference/learning-opportunities/learning-labs.)

One of the goals of IPS is to train attendees to be effective leaders in the field. Leadership is such an important quality for a psychiatrist to have, especially as we move into the era of integrated care, where psychiatrists will work alongside primary care physicians as experts in the mental health of our patients. That is why I am especially excited to see U.S. Army Lt. Gen. Mark Hertling (Ret.), who will speak at the Opening Session of IPS. Lt. Gen. Hertling will discuss how psychiatrists can enhance our leadership role in care systems today and into the future. He is the author of the 2016 book *Growing Physician Leaders.*

I am so excited to be attending this year's IPS as president of APA and to see how all the individual pieces coalesce into the robust, impactful meeting that has kept me coming back every year for the last 20 years. I hope you'll join me and many of your other colleagues in New Orleans in October for what is sure to be one of the best psychiatric events of the year. **PN**

Information on the IPS program, registration, and housing can be accessed at www.psychiatry.org/ips. Low advance registration fees are now in effect.

Training

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what is known as the "hybrid" model; she works partly as an on-site psychiatrist seeing patients in the office and partly in a consultative role to the primary care physicians.

"Educating the pediatricians is a big part of what I do—helping them feel comfortable that they can manage basic anxiety and depression themselves with patients," she said.

"Ever since I completed my [child and adolescent] fellowship, I have been interested in working with pediatricians," Parr said. "I also have been interested in population health, thinking about how I can make a difference to a population rather than just the individual patient in my office."

APA offers a four-hour introductory training in the collaborative care model both online and on site at local district branch meetings, allied meetings, the Annual Meeting, and IPS: The Mental Health Services Conference. There is also an advanced course that is offered online. To date, more than 1,200 psychiatrists from 49 states have taken the training.

For those who complete the introductory training, APA offers online learning collaboratives that allow clinicians who are interested in CoCM or already practicing collaborative care to share ideas and discuss ways to apply the principles of the model within their own practices.

The collaboratives consist of a group of 10 to 12 practitioners who meet online and in conference calls with a moderator over 12 weeks to discuss ways to apply the training they received in the earlier stages of didactic training. The content of the learning itself consists of a mix of reading material and conference-call discussions with the moderator and other participants. Additionally, each participant completes a "performance-in-practice" quality improvement project within his or her practice. Graduates of the learning collaboratives also earn an important benefit—credit toward Part II and Part IV of Maintenance of Certification as well as CME credit.

Ten psychiatrists completed the first two sessions of the online collaborative, first offered at the end of 2016; 30 clinicians are currently enrolled in two ongoing collaboratives.

"I found the APA training very helpful, giving me a better sense of what collaborative care is and how to implement it," she said. "And it's great to have an ongoing way to connect with other people doing this work. Everyone knows there are not enough child and adolescent psychiatrists to go around. And we know that most behavioral and emotional problems children experience get overlooked, so we need to educate primary care clinicians to help them identify and treat appropriately, or to refer to specialty care." **PN**

Information about APA's training in collaborative care is posted at https://www.psychiatry.org/psychiatrists/practice/professional-interests/integrated-care/get-trained.

Bills

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laws on the books since 2002 and 2004, respectively, show little, if any, expansion of access to mental health care in rural or other underserved areas, one of the main arguments of psychologists who favor prescribing.

"As physicians, we will continue to fight to protect our patients," said APA CEO and Medical Director Saul Levin, M.D., M.P.A. "We will also continue to provide support to district branches in educating legislators about the importance of advocating for people with mental illnesses and substance use disorders and ensuring that the care they receive is medically based."

Advocacy activity at the state level is aimed at patient safety; prescribing is not a right, it is a privilege earned after stringent education requirements are met. That means not just short courses or online training but medically based classes in biology, chemistry, biochemistry, physiology, and other science-based courses and clinical experience necessary to understand the human body, its interaction with medication and comorbid illness.

Because of the potent advocacy activity in state capitols, bills have been slowed or their introduction deferred in Florida, Kentucky, Minnesota, New Jersey, New York, North Dakota, Ohio, Texas, and Vermont, among others, said Amanda Blecha, J.D., APA's Midwest regional field director for state government affairs, in an interview. "The Nebraska Psychiatric Society is leading the effort to oppose the psychologist prescribing application through the credentialing process, in hopes that the technical review committee will not recommend it to the state legislature in advance of 2018."

APA's district branches and state associations are working hard to educate lawmakers and the public that there are existing options to increasing access to care, added Blecha.

"We also promote evidence-based alternatives in many states to mental health access challenges, like expansion of collaborative care models, telepsychiatry implementation, improving network adequacy, and parity enforcement. Collaborative care, for example, leverages the relative scarcity of psychiatrists by having them provide consultations to primary care physicians. Collaborative care allows up to 20 patient cases to be handled by a psychiatrist in a morning as opposed to traditionally four."

Advocacy efforts have also been stepped up in the battle against opioid addiction and overdoses, which now is taking up much legislative attention on the state level, said Angela Gochenaur, M.P.A., APA's Northeast regional field director.

"We argue that if legislators are putting new restrictions on prescribing practices, why add yet more prescribers with even less experience?" said Gochenaur. Furthermore, important medications (such as naloxone) used to treat substance use disorders can be dispensed only by specially trained and certified physicians, which would rule out a role for psychologists, in any case, she said. **PN**

Award

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in supporting, inspiring, and advocating on behalf of mental health research.

These efforts include co-founding the Lieber Institute in partnership with her husband and Milton and Tamar Maltz, as well as providing generous support and long-time leadership as president and president emeritus of the Brain and Behavior Research Foundation (BBRF; formerly NARSAD), the world's largest private funder of mental health research grants.

Said Herbert Pardes, M.D., president of the BBRF Scientific Council, "Having the prize for Innovation in Developmental Neuroscience named for Constance Lieber, a pioneer in advocacy for brain research and the psychiatrically ill given to Dr. Joseph Gleeson, a pioneer in neuroscience, is a marvelous pairing of one great to another." Pardes is also a former APA president and former director of the National Institute of Mental Health. **PN**

More information on the Constance Lieber Prize is posted at http://clprize.libd.org.

EHR

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recover. Know how to reach computers that have been set aside in case there is a network crash.

- **Know when to quit, and to quit fast**: If your EHR won't work and is beset by crashes and delays, the fastest method is to quit and restart the program, followed by logging out and logging in again, followed by using your computer's restart function, and, as a last resort, completely powering down and turning the device back on. If this is your daily struggle, you might want to be in the market for a new EHR.

Although these tips take an additional up-front investment of time, they will help you optimize your way around your computers, much like orienting yourself to a hospital for the first time. This investment will pay off and let you go home on time.

Know Your EHR

Good EHRs save you time by giving shortcuts, templates, and pre-saved order sets for quick use. Here are four EHR features that can make your workflow move faster:

- **Progress note templates:** Have the most common mental status exams ready to paste or include into your notes. You can also create templates for assessments and plans for common diagnoses. This is particularly helpful if you have a homogenous patient population.

- **Patient templates:** Think of this as the filing cabinet where you have previously stored all your patient handouts, therapy instructions, and medication risk/benefit explanations. With these templates in the EHR, you will know which handouts and worksheets you have previously given to your patient.

- **Text-expanding shortcuts:** Some EHRs, like Epic, include *smartphrases* with *smartlinks* that can expand text. For instance, typing "TP/TC" can expand to "thought process/thought content," thus saving you about 85 percent of typing time. If your EHR doesn't support it, use of an app like Text Expander or Mac OS X's built-in customizable shortcuts can provide similar functionality.

- **Favorited, pre-saved order sets:** EHRs and prescription systems may allow you to save pre-set medication regimens and pre-set patient instructions. Never again will you have to find, copy, and paste that lamotrigine taper. **PN**

In the next issue of *Psychiatric News,* the authors review six steps to keeping the patient-doctor relationship alive in the age of the EHR.

BCRA

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in the House as well as the vote in the Senate scheduled at press time.

APA has also written numerous letters with five other frontline physician groups—American Academy of Family Physicians, American Academy of Pediatrics, American College of Physicians, American College of Obstetricians & Gynecologists, and American Osteopathic Association—to the House and Senate about the negative effects the Republican health care bills would have on patients across America.

That same coalition worked over several months to host fly-ins with leadership from each organization participating in press conferences and meetings with the offices of key senators. During the fly-ins, APA Immediate Past President Maria A. Oquendo, M.D., Ph.D., and former APA President Renée Bender, M.D., expressed APA's concerns and urged the senators to take a bipartisan approach to health care reform.

In addition, APA has utilized the full force of its grassroots membership and social media to mobilize letter-writing and phone campaigns urging APA members to ask their members of Congress to vote no on any version of the bill that does not adequately protect people with mental illness and ensure access to mental health care as an essential health benefit.

"APA believes that the health and mental health of the American people is paramount to its prosperity," said APA CEO and Medical Director Saul Levin, M.D., M.P.A. "We urge Congress and the administration to work in a bipartisan manner to fix the ACA and improve it. We are willing to sit down with members of both parties and come up with a solution that puts patients first. Any health care plan needs to maintain mental health and substance use treatment as essential benefits. Mental health must be treated the same as physical illness in any bill moving forward." **PN**

Opioid

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of dispensed prescriptions), the amount of opioids prescribed per capita decreased in 80 percent of counties from 2010 to 2015. Florida also experienced reductions in prescription opioid-related overdose deaths."

John Renner, M.D., vice chair of APA's Council on Addiction Psychiatry, said the CDC results are a positive sign. "It's clear that various agencies of the government and concerned national groups have come forward with a strong and consistent message that more conservative prescribing of opioids is necessary," Renner told *Psychiatric News*. "The CDC report suggests that physicians are getting the message—not everyone is, but many are. Certainly, the Prescription Drug Monitoring Programs are important, and the states that make use of them are getting better outcomes."

Nonetheless, Renner cautioned against what he called a "ham-fisted" approach to the problem whereby some physicians may too abruptly curtail opioid prescribing for patients. "If you push too far in the opposite direction, you run the risk of making the problem worse," he said. "I am hearing anecdotally about patients who are dropped from treatment or abruptly tapered off who then go out seeking pills."

Renner also said that more and better public education about pain and pain management is needed to counter the effects of pharmaceutical advertising directed at consumers. "Physicians don't practice in a vacuum," he said. "Patients are bombarded by advertisements and the meta-message is that there are meds out there that should make you feel good, with a quick fix."

Psychiatrist Patrice Harris, M.D., who is the immediate past chair of the American Medical Association Board of Trustees and chair of the AMA Task Force to Reduce Opioid Abuse, agreed the CDC results indicate progress is being made.

"The AMA is pleased that national prescribing data confirm that for the past several years physicians have made more judicious prescribing decisions, but continued progress and improvements are necessary," she said in a statement.

"The Centers for Disease Control and Prevention's report also reinforces two critical elements that must be addressed if the nation's opioid epidemic is to be reversed. First, our country must do more to provide evidence-based, comprehensive treatment for pain and for substance use disorders. This can be accomplished, in part, by implementing the National Pain Strategy and reducing barriers to all modalities for treating pain. ... Second, physicians must continue to lead efforts to reverse the epidemic by using prescription drug monitoring programs, eliminating stigma, prescribing the overdose-reversal drug naloxone, and enhancing their education about safe opioid prescribing and effective pain management." **PN**

"Vital Signs: Changes in Opioid Prescribing in the United States, 2006–2015" is posted at https://www.cdc.gov/mmwr/volumes/66/wr/mm6626a4.htm?s_cid=mm6626a4_w.

Code

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audits by Medicare and private payers. If you provide at least 16 minutes of a recognized form of psychotherapy along with the E/M service, bill the E/M based on the level of history, exam, and medical decision making required with an add-on psychotherapy code and document both the E/M work and the psychotherapy work so each is separately identifiable (this can be two parts of the same note).

In contrast, if you educate the patient and family and/or coordinate care with other health care professionals for at least half the total time of the visit and meet the threshold time for the code in the CPT manual, you can bill on the basis of the total time. Be sure to document both the total time and the time spent counseling and/ or coordinating care, as

well as specifying what you educated the patient about or what care was coordinated. For all other E/M services provided, you should bill only on the basis of the complexity of the service and document enough specific history, exam, and medical decision-making elements to meet or exceed that level of care. Otherwise, you will be found to have coded incorrectly, leading to an audit or demands for refunds.

In summary, an important point to remember when selecting the level of E/M coding for a patient visit is that it is generally based on the elements of history, exam, and medical decision making that are **required** for that specific visit on the basis of the patient's presentation that day. The selection should not be based on the number of diagnoses a patient has or the overall complexity of the patient's physical and psychiatric illnesses. If a psychotherapy service is needed and provided, the psychotherapy add-on code is selected on the basis of the time estimated to have been devoted to psychotherapy. You should bill on the basis of time only if more than 50 percent of the entire visit meets the CPT definitions for counseling and/or coordination of care.

The good news is that if you code using the appropriate E/M code and add-on psychotherapy code, it is likely the reimbursement will be equivalent to that if you had just used a higher-level E/M code based on the time of the encounter—**and you will not be opening yourself up to audits from payers. PN**

More information on E/M coding can be found on the APA website at http://apapsy.ch/coding. If you have specific coding questions, contact the Practice Management HelpLine at practicemanagement@psych.org or (800) 343-4671.