MindView

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IMPROVING THE QUALITY OF LIFE FOR VETERANS WITH PSYCHOSIS

UPCOMING EVENTS

MOTIVATIONAL INTERVIEWING WORKSHOP
May 10-11, 2011
Location: San Diego, CA
Contact: noosha.niv@va.gov

MOTIVATIONAL INTERVIEWING WORKSHOP
June 27-28, 2011
Location: Loma Linda, CA
Contact: noosha.niv@va.gov

COUPLES THERAPY WORKSHOP
August 29 – September 1, 2011
Location: TBD
Contact: sglynn@ucla.edu

MIRECC TRAINING AND SCIENTIFIC RETREAT
September 2011 (TBD)
Location: Long Beach, CA
Contact: noosha.niv@va.gov

IN THIS ISSUE

1 VA Expands Family and Caregiver Services

2 Letter from the Director

2 VA Health Services Research and Development Service (HSR&D) National Meeting

6 Identifying Mechanisms Underlying Attention and Impulsivity

7 Recent MIRECC Publications

8 New Grants & Awards

VA EXPANDS FAMILY AND CAREGIVER SERVICES

Noosha Niv, Ph.D.

The Department of Veterans Affairs recognizes that Veterans live within a support network which includes family member and caregivers and that the wellbeing of these relationships may be key components to the Veteran's treatment plan and recovery. In response to this understanding, the VA has made significant expansions to the services offered to family members and caregivers of Veterans.

Expansion of Authority to Provide Mental Health and Other Services to Families of Veterans

As part of Public Law 110-387: Veterans' Mental Health and Other Care Improvements Act of 2008, the VA has expanded authority to provide mental health and other services to Veteran's family members, legal guardians, and individual in whose household the Veteran certifies an intention to live. In August 2010, the VA Under Secretary for Health, Robert A. Petzel, M.D., disseminated a letter providing clinical guidance on this expanded authority. His letter explained that the law allows for marriage and family consultation, counseling, and training to be provided as part of hospital care if considered appropriate for effective treatment and as part of outpatient care if considered necessary in connection with the Veteran's treatment. The letter also clarified that, "In providing marriage and family counseling, the provider must be mindful that the primary focus for VA care must always be on the Veteran and the Veteran's treatment plan." If family members have a problem that does not affect the Veteran's treatment or recovery, they should be referred to non-VA facilities for assessment and treatment.

Dr. Petzel also provided examples of when care may or may not be necessary as authorized by this law. Examples of when care may be necessary in connection with the Veteran's treatment:

(1) A Veteran without a mental health diagnosis, but having problems with the Veteran's spouse post-deployment that affect readjustment and trigger emotional distress. Goals for the couple may include, for example, renegotiating new roles or rules within the household, adjusting to new financial circumstances, and communicating effectively with each other. These goals focus on facilitating readjustment by bolstering the Veteran's relationships with the Veteran's spouse or other family members and reducing the Veteran's emotional distress.

(2) A Veteran with a diagnosis of bipolar disorder with relational distress with the Veteran's spouse and a teenage son whose substance use is stressing the Veteran and leading to an increase in his mental health symptoms. Family goals may include education around bipolar disorder for the spouse and teenager; increasing supportive communication among all family members (decreasing destructive interactions); problem solving around multiple potential sources of stress in the family (e.g., substance abuse or a lack of structure and rules in

Susan McCutcheon, RN, EdD, *Director, Family Services, Women's Mental Health and Military Sexual Trauma, Office of Mental Health Services within Patient Care Services*

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> *"In providing marriage and family counseling, the provider must be mindful that the primary focus for VA care must always be on the Veteran and the Veteran's treatment plan."*

MIRECC
Mental Illness Research, Education and Clinical Center

LETTER FROM THE DIRECTOR

Stephen R. Marder, MD

The article by Noosha Niv describes the recent expansion of the VA's authority to support services for veterans' family members and caregivers. This is an important program that recognizes the vital role of family members in supporting the healing process for veterans with physical and psychiatric illnesses.

The family was not always recognized for its potential contribution. Several decades ago, families often felt unwelcome in psychiatric settings. At that time, there was a prevalent theory that illnesses such as schizophrenia could be caused by poor parenting. These theories have never been substantiated, but they influenced the field until recently. Another obstacle to family involvement comes from the belief that communicating with family members can contaminate the important relationship between a patient and his or her psychotherapist. This belief has never had empirical support, but it still guides the reluctance of many mental health providers to return phone calls or to meet with family members.

The reality in schizophrenia and other serious mental illnesses is that interventions that include patients and families are effective in a number of ways. These interventions can prevent relapse and rehospitalization. They can also improve adherence with treatment, decrease family stress, and improve psychiatric symptoms. Our MIRECC, in collaboration with the VA's Office of Mental Health Services, is participating in the national roll out of new programs to engage family members and to involve them in the treatment process. Hopefully, this new approach from the VA will facilitate a new level of family and caregiver involvement.

VA HEALTH SERVICES RESEARCH AND DEVELOPMENT SERVICE (HSR&D) NATIONAL MEETING

"Teaming Up for High Value Care" was the theme of the 28th VA Health Services Research and Development Service (HSR&D) National Meeting that was held February 16-18, 2011 in National Harbor, MD. This year's theme emphasized HSR&D's priority to establish and maintain close collaborative relationships with its program partners, so that research is more responsive and the findings are more likely to be implemented into practice. Hosted by HSR&D's Northwest Center for Outcomes Research in Older Adults, the Meeting was attended by more than 650 policymakers, clinicians, and researchers. Ninety papers, 21 workshops, and 113 posters were presented on vital healthcare issues. MIRECC investigators presented on the following topics:

Returning Veterans with Schizophrenia to Paid, Competitive Employment

Cohen, A. N., Young, A. S., Hamilton, A. B., Teague, A., Mullins, D., Chemerinski, E., Schubert, M., Steele, A., McNagny, K., & Reist, C.

Objectives: Chronic unemployment affects 90% of individuals with schizophrenia. Employment can improve symptoms, provide opportunities to improve social skills, increase self-efficacy, and reduce the economic costs of the illness. An evidence-based treatment, Supported Employment (SE), exists, but is underutilized by this population. The VA HSR&D QUERI project, Enhancing QUality of care In Psychosis (EQUIP), aimed to increase utilization of SE and employment rates using evidence-based quality improvement methods.

Methods: This was a clinic-level controlled trial involving 8 mental health clinics across 4 VISNs. One clinic in each VISN was assigned to intervention; one to care as usual. Prior to implementation, 39 key stakeholders were interviewed to assess readiness for change. 808 veterans with schizophrenia enrolled. At baseline and one year follow-up, veterans reported interest in returning to paid, competitive employment and work status. Kiosks were installed in waiting rooms for veterans to self-report work interest and status at each clinic visit. These self-report data were provided to the clinician and veteran via a kiosk printout.

Results: Stakeholder interviews were evaluated using Atlas.ti and indicated shortcomings with knowledge and attitudes toward SE. At baseline, 15% (121/808) of enrolled veterans were working, and 60% (413/686) responded they wanted to work. Over the one year at the intervention sites, SE utilization almost doubled from 5.7% (22/383) to 10.7% (41/383); veterans with paid employment also increased from 11.8% (46/389) to 14.9% (45/303). Over the same period at control sites, those using SE services remained virtually the same: 5.9% (24/406) to 6.9% (28/406); there was a slight decrease in employment rates from 17.7% (74/418) to 16.2% (57/352). At one intervention site, managers used kiosk data on veterans' desire to return to work to gain one more SE FTE. At another intervention site, managers used kiosk data to justify reorganizing care so that psych interns could provide SE services.

Implications: Consistent with the literature, only 15% of veterans with schizophrenia in this large sample were working. Unknown until this study, 60% want to work. This large gap in evidence-based, recovery-oriented care was addressed and increased service utilization, capacity of the service, and number of veterans working. As with other implementation efforts, successful uptake may require an assessment of the clinic readiness

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for change and utilization of QI techniques to address shortcomings in knowledge, attitudes, and capacity.

Homeless Women Veterans' Social Service Needs and Experiences

Hamilton, A. B., Poza, I., & Washington, D.

Objectives: Eliminating homelessness is a VHA priority. However, homelessness among women veterans is on the rise. Their challenges often differ from those of male veterans. Therefore, we investigated homeless women veterans' life experiences, health issues, and current social service needs.

Methods: Three focus groups were conducted with 29 homeless women veterans in Los Angeles, CA. Data was analyzed in ATLAS.ti using constant comparison method.

Results: Women were 48 years old on average (range: 32-68); the majority were either African American (46%) or White (33%). Their military service ended at an average age of 26 years. The average age at first homelessness was 36 years. In attempting to obtain information or access to social services, women encountered numerous barriers with regard to their identities as veterans, e.g., not being given respect as women who had served in the military. Women expressed feelings of isolation and abandonment with regard to their housing predicaments and their lack of access to sufficient, women-only, long-term, safe options for care. Participants had utilized or were familiar with a small set of programs that addressed their mental health and/or substance abuse treatment needs. They had mostly heard about these programs through word-of-mouth. They expressed an urgent need for coordination and delivery of information about available social services; they experienced particular challenges with "mixing" VA and state or county services. Women also described frustration with being ineligible for certain services if they did not have drug or alcohol problems, and they expressed their perception that more services were available for male veterans than female veterans. The focus groups themselves served as venues for sharing information about available services.

Implications: Homeless women veterans face numerous challenges accessing information about and entry into programs to address their multiple needs. Their fundamental need for safe and stable housing was paramount, and their desire for coordinated, women-only services was pronounced. As increasing numbers of women return from military duty, VA has an opportunity to intervene in the early post-military years. To counter homelessness, VA social services will have to be prepared to meet the multiple psychosocial, mental health, and medical needs of these women veterans.

Disparities in the Treatment of Schizophrenia

Young, A. S., Hsieh, Y., Xu, S., Menachemi, N., & Rost, K. M.

Objectives: Comparable individuals should receive comparable treatment in health care systems that provide treatment without disparities. In depressive and anxiety disorders, most affected individuals are encountered in primary care, undertreatment is common, and there are substantial disparities by race/ethnicity, gender, age, and education. The treatment of serious, persistent mental illness is less well understood. While outcomes are good with evidence-based care, rates of appropriate treatment are low. It is generally believed that treatment for schizophrenia is provided in mental health specialty settings, however, it is likely that access to mental health clinicians is limited, especially in rural areas. Researchers have studied disparities in the treatment of schizophrenia in a few clinics and health plans, but little is known more broadly. This study evaluated, nationally, the extent to which patients vary in receipt of antipsychotic medication, referrals, and hospitalizations, by age, gender, minority status, insurance, rurality, and national region.

Methods: Multivariate logistic regressions in 3359 visits by individuals diagnosed with schizophrenia sampled in the 1999-2007 National Ambulatory Medical Care Surveys and National Hospital Ambulatory Care Medical Surveys.

Results: Primary care clinicians provided 14% of visits, and 62% of these resulted in a prescription for antipsychotic medication. When primary and specialty care were examined together, visits were less likely to result in an antipsychotic medication prescription for middle-aged (OR = 0.66, p = .03) and rural patients (OR = 0.49, p = .04); and more likely to result in antipsychotic medication prescription for non-Hispanic Blacks (OR = 1.66, p < .05). Visits by non-Hispanic Blacks (OR = 3.90, p < .01) were significantly more likely to result in a referral; visits by patients covered by Medicare (OR = 6.97, p < .01) or Medicaid (OR = 4.23, p = .04) were more likely to result in referral; and visits in the western U.S. (OR = 0.34, p = .02) were less likely to result in referral. Visits by non-Hispanic Blacks were more likely to result in hospitalization (OR = 3.64, CI = 1.13-11.79), while visits made by patients with no insurance (OR < .001, p < 0.0001) were significantly less likely to result in hospitalization. A large proportion of observed disparities was related to whether a patient was treated in primary or specialty care.

Implications: These findings provide the first national evidence of potential disparities in the treatment of serious, persistent mental illness. Disparities differ substantially from those found in depressive and anxiety disorders, and are pronounced by race/ethnicity and age. Research is needed that evaluates interventions to ensure consistently appropriate care for people with schizophrenia.

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household); and enhancing basic parenting skills. Other goals could include help for the family in developing a strategy to encourage the child to enter treatment for substance use in another care setting.

Examples of when care may not be necessary in connection with the Veteran's treatment:

(1) The non-Veteran spouse of a Veteran (whose adjustment appears adequate) is depressed related to the recent death of her mother. While couples therapy could be provided to address the effect of the spouse's depression on the marital relationship, specific treatment for the spouse's depression may not be necessary care in connection with the Veteran's treatment. Care for the spouse should not be provided by VA, rather, e.g., by the spouse's primary care provider or a mental health provider in the community. A referral could be provided for community-based bereavement groups or services sponsored by churches and hospice organizations, or for a clinical evaluation and treatment for the spouse.

(2) The child of a Veteran (whose adjustment appears adequate) is experimenting with drugs. While marital or family therapy could be provided to address the stress the child's drug use is placing on the family and to develop strategies to encourage the child to accept treatment, treatment for the child's drug use may not be necessary care in connection with the Veteran's treatment. VA care might help the Veteran and his or her spouse problem-solve about how to speak about the problem with the child's primary care provider or pediatrician (as suggested in the second example of necessary care above), or it might provide a referral to a community-based mental health provider and problem-solve about following through.

Caregivers and Veterans Omnibus Health Services Act of 2010

On May 5, 2010, President Barack Obama signed the Caregivers and Veteran Omnibus Health Services Act of 2010 into law. The Act allows VA to provide unprecedented benefits to caregivers who support the Veterans who have sacrificed for this Nation. Under the new law, primary caregivers of Veterans who incurred injury on or after 9/11/01 may be eligible to receive a stipend, mental health counseling, and access to healthcare coverage if they are not already entitled to care or services under a health plan contract (e.g., Medicare, Medicaid, or worker's compensation). Caregivers may also be eligible for travel, lodging and per diem when they accompany the Veteran for care or attend training. The law includes comprehensive caregiver education and training on caring for a disabled Veteran and counseling services.

Each VA medical center has designated a Caregiver Support Point of Contact to coordinate caregiver activities and serve as a resource expert for Veterans, their families and VA providers. Contact Social Work Service at your local VA Medical Center to connect to the Caregiver Support Point of Contact in your area.

Several programs are already in place for all Veteran caregivers including:

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*In-Home and Community Based Care: This includes skilled home health care, homemaker home health aide services, community adult day health care and Home Based Primary Care.

*Respite care: Designed to relieve the family caregiver from the constant burden of caring for a chronically ill or disabled Veteran at home, respite services can include in-home care, a short stay in an institutional setting, or adult day health care.

*Caregiver education and training programs: VA currently provides multiple training opportunities which include pre-discharge care instruction and specialized caregiver programs in multiple severe traumas such as Traumatic Brain Injury (TBI), Spinal Cord Injury/Disorders, and Blind Rehabilitation. VA has a caregiver assistance healthy living center on My Health Vet (www.myhealth.va.gov), as well as caregiver information on the VA's main Web page health site. Both Websites include information on VA and community resources and caregiver health and wellness.

*Family support services: These support groups can be face to face or on the telephone. They include family counseling, spiritual and pastoral care, family leisure and recreational activities, and temporary lodging in Fisher Houses.

*Other benefits: VA provides durable medical equipment and prosthetic and sensory aides to improve function, financial assistance with home modification to improve access and mobility, and transportation assistance for some Veterans to and from medical appointments.

For details on VA support programs for caregivers, look online at www.caregivers.va.gov.

VA Opens Toll-Free Caregiver Support Line

Caregivers are the family members and loved ones who provide care for Veterans who are living with the effects of war, disability, chronic illness, or aging. They deserve VA's highest level of support. On February 1, 2011, the Department of Veterans Affairs (VA) opened a toll-free National Caregiver Support Line housed at the Canandaigua VA Medical Center campus in Canandaigua, New York. The support line will serve as a primary resource/referral center to assist caregivers, Veterans and others seeking caregiver information to help in the care of our Nation's Veterans. Calls to The National Caregiver Support Line will be answered by VA employees who are licensed clinical social workers.

The Support Line will provide information on VA/community caregiver support resources and "warm" referrals to dedicated Caregiver Support Coordinators located in every VA Medical Center; emotional support for the caregiver will be an integral component of this service. The National Caregiver Support Line is also available to respond to inquiries about the caregiver benefits associated with Public Law 111-163, Caregivers and Veterans Omnibus Health Services Act of 2010.

The National Caregiver Support Line will be open Monday through Friday 8:00 a.m. to 11:00 p.m. and Saturday 10:30 a.m. to 6:00 p.m. Eastern Time. The Toll-Free number is 1-855-260-3274. The VA's caregiver website is: www.caregiver.va.gov.

(HSR&D) NATIONAL MEETING CONT'D

Qualitative and Mixed Methods in QUERI and Implementation Research
Zickmund, S., Bokhour, B., & Hamilton, A. B.

Workshop Objectives: The Veterans Health Administration (VHA) promotes implementation research as an evidence-based strategy for improving care by facilitating the adoption of evidence-based clinical practices. Implementation research, in turn, relies on the rigorous application of qualitative data collection methods, especially in the context of formative and process evaluation. The use of qualitative methods implementation research is uniquely shaped by the exigencies inherent in this field in ways not previously described. The objective of this workshop is to present the methodological and theoretical foundations of qualitative and mixed methods implementation research. It draws upon the experiences of qualitative researchers in the context of VHA Quality Enhancement Research Initiative (QUERI) implementation projects.

Activities: In this workshop, the three presenters will: (1) define qualitative and mixed methods research, (2) provide usable hands-on guidance for conducting studies with qualitative methods, (3) discuss how qualitative methods fit into the QUERI process and frameworks; and (4) provide exemplars from QUERI projects that use qualitative and mixed methods for implementation. Participants will then design a qualitative evaluation for an implementation project themselves. Workshop presenters will facilitate discussion about strengths and weaknesses of different approaches to identifying appropriate research questions and data collection methods. The workshop will conclude with recommendations for the analysis of qualitative data in the context of mixed methods implementation research. Participants will be provided with materials and bibliographies needed to begin using qualitative methods in the context of implementation research.

IDENTIFYING MECHANISMS UNDERLYING ATTENTION AND IMPULSIVITY

Jared Young, Ph.D. and Mark Geyer, Ph.D.

Impaired cognition in neuropsychiatric disorders is closely linked to functional outcomes (e.g., the ability to reintegrate into society, hold down a steady job, and maintain a relationship). The recognition of this link has galvanized research to identify treatments that can improve cognition.

To achieve this goal, the mechanisms underlying cognition must be understood, and a means to test therapeutics before they are given to patients must be developed. Given the impairments in attention/vigilance and response inhibition commonly seen in psychiatric disorders, the MIRECC Neuropsychopharmacology Unit (NPU) sought to meet these challenges, developing a paradigm that can be used by researchers to take up the challenge of developing pro-cognitive treatments for patients with schizophrenia.

Initially funded by MIRECC Pala grants (P.I. - Jared Young, Ph.D.), the NPU developed an animal version of the continuous performance test (CPT), the most commonly used test to measure attention in patients. Consistent with human CPTs, the animal version, the 5-choice CPT (5C-CPT), requires animals to maintain attention, and respond or inhibit from responding to visual images that are presented to them. This task assesses vigilance and two forms of impulsivity, motor impulsivity and response disinhibition.

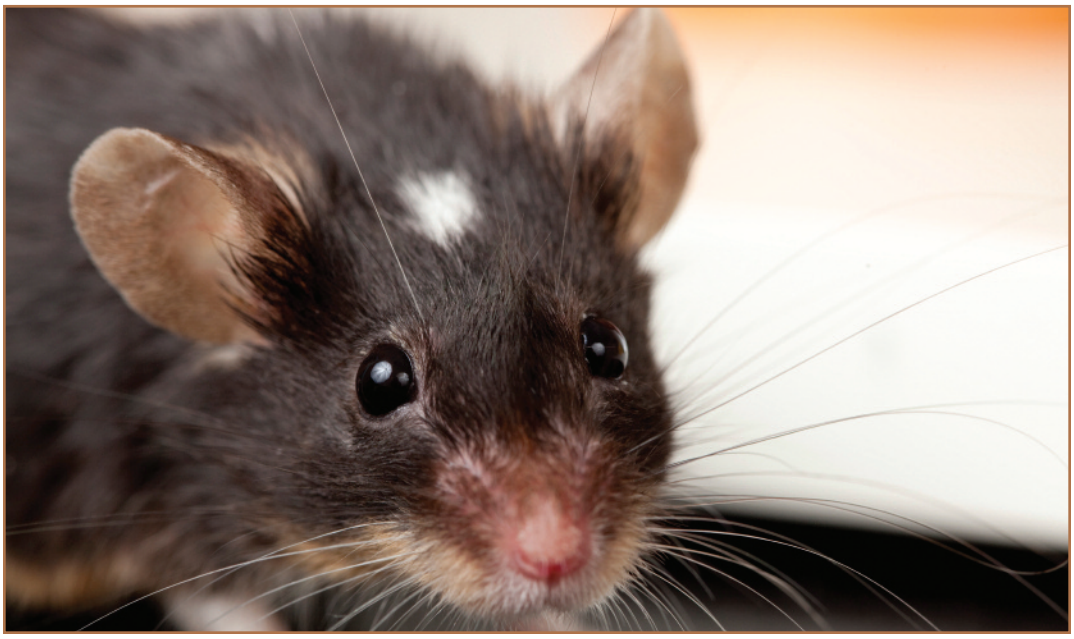
Reduced function of one of the major dopamine receptors in the brain, the dopamine D4 receptor (DRD4), is implicated in several psychiatric disorders. Hence, we examined the 5C-CPT performance of mice with reduced expression of the Drd4 gene. We trained wildtype (WT), heterozygous (HT), and knockout (KO) mice of the murine Drd4 gene to perform the 5C-CPT under normal and challenging conditions. To further separate motor impulsivity from response disinhibition, we treated mice with a drug that blocks specific serotonin receptors (i.e., the 5-HT2C antagonist SB242084) during another challenge to performance. We also examined the ability of mice to filter incoming sensory information as well as how they explore novel environments because these behaviors are abnormal in patients with schizophrenia.

Reduced Drd4 gene expression in mice resulted in response disinhibition and impaired attention/vigilance, while motor impulsivity was unaffected. Conversely, serotonergic blockade increased motor impulsivity without affecting response inhibition or attentional measures. No effect of reduced Drd4 expression was observed on sensory filtering or exploratory behavior, indicating that the impairment in vigilance was somewhat specific.

These studies indicate that reduced expression of the Drd4 gene impairs attentional performance driven by response disinhibition. This increased impulsive responding to visual signals that should not have been responded to differed from simple motor impulsivity, suggesting that the deficit is cognitive in nature. Given that impulsive responding to irrelevant signals is observed in several neuropsychiatric disorders, these data support the hypothesis that this abnormal behavior may be mediated by reductions in the functioning of the dopamine D4 receptor. Moreover, the data demonstrate that motor impulsivity can be dissociated from response disinhibition using the serotonin receptor blocker SB242084. Reduced Drd4 expression did not alter the ability of the mice to filter incoming sensory information or alter their exploration of novel environment, suggesting that reduced expression of this receptor does not contribute toward these abnormalities observed in patients with schizophrenia.

The availability of the 5C-CPT for use in mice enables the assessment of cognitive treatments, including any drug that activates the dopamine D4 receptor. The challenge of examining the neural substrates underlying attention and assessing putative therapeutics has been taken up by others using the 5C-CPT. The NIMH-funded Cognitive Neuroscience Treatment Research to Improve Cognition in Schizophrenia initiative recently selected the 5C-CPT as one of the primary tests of attention that should be supported for further development and use in research.

Young, JW, Powell, SB, Scott, CN, Zhou, X, & Geyer MA (2011). Reduced dopamine D4 receptor expression as a mouse model of ADHD: Evidence of impaired vigilance in the 5-choice continuous performance test. *Brain & Behavioral Research, 222,* 183-192.



RECENT MIRECC PUBLICATIONS

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Braff, D.L. (In press). **Gating in schizophrenia: From genes to cognition (to real world function?)**. *Biological Psychiatry*.

Brown, G.G. & Thompson, W.K. (2010). **Functional brain imaging in schizophrenia: Selected results and methods.** In N.R. Swerdlow (Ed.), *Behavioral Neurobiology of Schizophrenia and its Treatment*. New York: Springer.

Buchanan, R.W., Keefe, R.S., Lieberman, J.A., Barch, D.M., Csernansky, J.G., et al. (In press). **A randomized clinical trial of MK-0777 for the treatment of cognitive impairments in people with schizophrenia**. *Biological Psychiatry.*

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Eyler, L.T., Prom-Wormley, E., Panizzon, M.S., Kaup, A.R., Fennema-Notestine, C., & Neale, M.C., et al. (2011). **Genetic and environmental contributions to regional cortical surface area in humans: A magnetic resonance imaging twin study**. *Cerebral Cortex*. Epub ahead of print.

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Greenwood, T.A., Lazzeroni, L.C., Murray, S.S., Cadenhead, K.S., Calkins, M.E., Dobie, D.J., & Green, M.F. (2011). **Analysis of 94 candidate genes and 12 endophenotypes for schizophrenia from the Consortium on the Genetics of Schizophrenia**. *American Journal of Psychiatry.* Epub ahead of print.

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Halberstadt, A.L. & Geyer, M.A. (2010). **Hallucinogens**. In G.F. Kobo, M. Le Moal, & R.M. Thompson (Eds.), *Encyclopedia of Behavioral Neuroscience*. London: Academic Press.

Hamilton, A.B. (In press). **The vital conjuncture of methamphetamine-involved pregnancy: Objective risks and subjective realities**. In L. Fordyce & A. Maraesa (Eds.), *Responsible Reproduction? Social and Biomedical Constructions of Reproductive Risk*. Vanderbilt University Press.

Henderson, C., Jackson, C., Slade, M., Young, A.S., & Strauss, J.L. (2010). **How should we implement psychiatric advance directives? Views of consumers, caregivers, mental health providers and researchers**. *Administration and Policy in Mental Health*. Epub ahead of print.

Heslin, K.C., Hamilton, A.B., Singzon, T.K., Smith, J.L., & Anderson, N.L. (In press). **Alternative families in recovery: Fictive kin relationships among residents of sober living homes**. *Qualitative Health Research*.

Horan, W.P., Rassovsky, Y., Kern, R.S., Lee, J., Wynn, J.K., & Green, M.F. (In press). **Further support for the role of dysfunctional attitudes in models of real-world functioning in schizophrenia**. *Journal of Psychiatric Research.*

Jahshan, C., Cadenhead, K.C., Rissling, A.J., Braff, D.L., & Light, G.A. (In press). **Automatic sensory information processing abnormalities in at-risk, recent-onset and chronic schizophrenia patients**. *Biological Psychiatry*.

Kaup, A.R., Mirzakhanian, H., Jeste, D.V., & Eyler, L.T. (2011). **A review of the brain structure correlates of successful cognitive aging**. *Journal of Neuropsychiatry and Clinical Neuroscience, 23 (1)*, 6-15.

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Mancuso, F., Horan, W.P., Kern, R.S., & Green, M.F. (2011). **Social cognition in psychosis: Multidimensional structure, clinical correlates and relationship with functional outcome.** *Schizophrenia Research, 125*, 143-151.

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Quednow, B.B., Geyer, M.A., & Halberstadt, A.L. (2010). **Serotonin and schizophrenia**. In C.P. Muller & B. Jacobs (Eds.), *Handbook of the Behavioral Neurobiology of Serotonin*. London: Academic Press.

Rissling, A.J. & Light, G.A. (2011). **Neurophysiological measures of sensory registration, stimulus discrimination and selection in schizophrenia patients**. In N.R. Swerdlow (Ed.), *Behavioral Neurobiology of Schizophrenia and Its Treatment. Current Topics in Behavioral Neuroscience.* Heidelberg: Springer.

Rost, K., Hsieh, Y., Xu, S., Menachemi, N., & Young, A.S. (In press). **Potential disparities in the management of schizophrenia in the United States**. *Psychiatric Services*.

Schweinsburg, A.D., Schweinsburg, B.C., Nagel, B.J., Eyler, L.T., & Tapert, S.F. (In press). **Neural correlates of verbal learning in adolescent alcohol and marijuana users**. *Addiction.*

Stone, W.S., Giuliano, A.J., Tsuang, M.T., Braff, D.L., Cadenhead, K.S., et al. (In press). **Group and site differences on the California Verbal Learning Test in persons with schizophrenia and their first-degree relatives: Findings from the Consortium on the Genetics of Schizophrenia (COGS)**. *Schizophrenia Research.*

Stone, W.S., Tsuang, M.T., Faraone, S.V., Glatt, S.J., Braff, D.L., et al. (In press). **Impaired learning and memory on the California Verbal Learning Test (CVLT-II) in subjects with schizophrenia and their first-degree relatives: Findings from the Consortium on the Genetics of Schizophrenia**. *Schizophrenia Research.*

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PUBS CONT'D

Subotnik, K.L., Nuechterlein, K.H., Ventura, J., et al. (In press). **Risperidone nonadherence and return of positive symptoms in the early course of schizophrenia.** *American Journal of Psychiatry.*

Thorp, S.R., Sones, H.M., Glorioso, D., Thompson, W., Light, G.A., et al. (In press). **Older patients with schizophrenia: Does military veteran status matter?** *American Journal of Geriatric Psychiatry.*

Velligan, D.I., Rubin, M., Fredrick, M.M., et al. (In press). **The cultural adaptability of intermediate measures of functional outcome in schizophrenia**. *Schizophrenia Bulletin.*

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NEW GRANTS

"Neurocognitive Effects of Nicotine Use in Bipolar Disorders: Parallel Human and Animal Studies"
Principal Investigators: Lisa Eyler, Ph.D. and Jared Young, Ph.D.
Funded by UCSD Clinical and Translational Research Institute (CTRI) Pilot Project

NEW AWARDS

Congratulations to Dr. Mark Geyer for receiving the 2010 Bleuler Prize for schizophrenia research.

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