childhood to 28% for those with deficits in memory. The three variables had low deficit rates in the offspring of the other two parental groups and were not associated with other psychiatric disorders in any group.

Conclusions: Schizophrenia-related psychoses in adulthood are distinguished in subjects at risk for schizophrenia by childhood deficits in verbal memory, gross motor skills, and attention. The findings suggest that deficits in these variables are relatively specific to schizophrenia risk and may be indicators of the genetic liability to schizophrenia.

Genetic Epidemiology of Major Depression: Review and Meta-Analysis? By: Patrick F. Sullivan, Michael C. Neale, Kenneth S. Kendler. *Am. J. Psychiatry* (2000), **157**: 1552-1562.

Objective. The authors conducted a meta-analysis of relevant data from primary studies of the genetic epidemiology of major depression.

Method: The authors searched MEDLINE and the reference lists of previous review articles to identify relevant primary studies. On the basis of a review of family, adoption, and twin studies that met specific inclusion criteria, the authors derived quantitative summary statistics.

Results: Five family studies met the inclusion criteria. The odds ratios for proband (subjects with major depression or comparison subjects) versus first-degree relative status (affected or unaffected with major depression) were homogeneous across the five studies (Mantel-Haenszel odds ratio=2.84, 95% CI=2.31-3.49). No adoption study met the inclusion criteria, but the results of two of the three reports were consistent with genetic influences on liability to major depression. Five twin studies met the inclusion criteria, and their statistical summation suggested that familial aggregation was due to additive genetic effects (point estimate of heritability of liability= 37%, 95% CI=31%-42%), with a minimal contribution of environmental effects common to siblings (point estimate=0%, 95% CI= 0%-5%), and substantial individual - specific environmental effects/measurement error (point estimate= 63%, 95% CI= 58%-67%). The literature suggests that recurrence best predicts the familial aggregation of major depression.

Conclusions: Major depression is a familial disorder, and its familiarity mostly or entirely results from genetic influences. Environmental influences specific to an individual are also etiologically significant. Major depression is a complex disorder that does not result from either genetic or environmental influences alone but rater from both. These findings are notably consistent across samples and methods and are likely to be generally applicable.

Natural Course of Adolescent Major Depressive Disorder in a Community Sample: Predictors of Recurrence in Young Adults? By: Peter M, Lewinsohn, Paul Rohde, John R. Seeley, Daniel N. Klein, Ian H. Gotlib, *Am. J. Psychiatry* (2000), **157**: 1584-1591.

Objective. The primary purpose was to identify factors related to the recurrence of major depressive disorder during young adulthood (19-23 years of age) in a community sample of formerly depressed adolescents.

Method: A total of 274 participants with adolescent-onset major depressive disorder were assessed twice during adolescence and again after their 24th birthday. Lifetime psychiatric information

was obtained from their first-degree relatives. Adolescent predictor variables included demographic characteristics, psychosocial variables, characteristics of adolescent major depressive disorder, comorbidity, family history of major depressive disorder and nonmood disorder, and antisocial and borderline personality disorder symptoms.

Results: Low levels of excessive emotional reliance, a single episode of major depressive disorder in adolescence, low proportion of family members with recurrent major depressive disorder, low levels of antisocial and borderline personality disorder symptoms, and a positive attributional style (males only) independently predicted which formerly depressed adolescents would remain free of future psychopathology. Female gender, multiple major depressive disorder episodes in adolescence, higher proportion of family members with recurrent major depressive disorder, elevated borderline personality disorder symptoms, and conflict with parents (females only) independently predicted recurrent major depressive disorder. Comorbid anxiety and substance use disorders in adolescence and elevated antisocial personality disorder symptoms independently distinguished adolescents who developed recurrent major depressive disorder comorbid with nonmood disorder from those who developed pure major depressive disorder.

Conclusion: Formerly depressed adolescents with the risk factors identified in this study are at elevated risk for recurrence of major depressive disorder during young adulthood and therefore warrant continued monitoring and preventive or prophylactic treatment.

Functional Imaging Studies: Linking Mind and Basic Neuroscience? By: Robert G. Shulman, *Am. J. Psychiatry* (2001), **158**: 11-20.

Objective. The imaging of brain activity with position emission tomography (PET) and functional magnetic resonance imaging has assumed a central position in psychiatry. Functional imaginsignals arise from changes in the neurophysiological parameters of glucose and oxygen consumption mediated by blood flow.

Method: Recent in vivo 13C nuclear magnetic resonance (NMR) neurochemical studies have established a quantitative coupling between the rates of glucose oxidation and glutamate neurotransmitter flux in rats and humans, thereby linking measured neurophysiological parameters to brain function.

Results: These results show that in the awake, resting, and unstimulated states, 70%-80% of brain energy consumption is devoted to the same glutamate/glutamine neurotransmitter signaling as are the small percentages stimulated by tasks. Furthermore, in anesthetized animals, in which unstimulated activity is reduced, the total signal rather than a particular increment is required for a response.

Conclusions: On this basis, the total signal, as well as the difference in the signal, measures cortical neurotransmitter flux. The total signal in a region therefore contains valuable information about required brain activity. Although signal change is often more easily measured, certain PET and 13C CNMR methods can quantify total regional signal activity and thereby provide another measure of neurotransmitter activity.

Medical illness, Past Depression, and Present Depression: A Predicative Triad for In-Hospital Mortality

Stephanie von Ammon Cavanaugh,

Leticia M. Furlanetto, Steven D. Creech, Lynda H. Powell, *Am. J. Psychiatry* (2001), **158**: 43-48.

Objective: The authors' objectives were to determine 1) whether major depressive disorder diagnosed according to DSM-IV criteria modified for the medically ill predicated in-hospital mortality better than major depressive disorder diagnosed according to inclusive DSM-IV criteria and 2) whether a history of depression and current depression predicated mortality independent of severity of physical illness.

Method: Of 392 consecutive medical inpatients, 241 were interviewed within the first 3 days of admission and 151 were excluded from the study. Chart review and a clinical interview that included the Schedule for Affective Disorders and Schizophrenia were used to determine demographic variables, past psychiatric history, psychiatric diagnoses, and illness measures. Diagnoses included major depressive disorder and minor depression diagnosed according to DSM-IV criteria that included all symptoms regardless of etiology and according to criteria modified for the medically ill (hopelessness, depression, or anhedonia were used as the qualifying affective symptoms; depressive symptoms were eliminated if easily explained by medical illness, treatments, or hospitalization). The Charlson combined age-comorbidity index was used to measure severity of illness.

Results: A diagnosis of major depressive disorder based on criteria modified for patients with medical illness better predicted mortality than a diagnosis based on inclusive criteria. A past history of depression and the Charlson combined age-comorbidity index predicted in-hospital mortality, but demographic variables, pain, discomfort, length of stay, medical diagnoses and minor depression did not . In the final multivariate logistic regression model, the Charlson combined age-comorbidity index, a modified diagnosis of major depressive disorder, and a history of depression were independent predictors of in-hospital death.

Conclusions: Severity of medical illness, a diagnosis of major depressive disorder based on modified criteria, and a past history of depression independently predicted in -hospital mortality in medical inpatients.

Childhood Abuse and Psychiatric Disorders Among Single and Married Mothers

Ellen L. Lipman, Harriet L. MacMillan, Michael H. Boyle, *Am. J. Psychiatry* (2001), **158**: 73-77.

Objective: This study examined the prevalence of, and association between, childhood abuse and psychiatric disorders in single and married mothers.

Method: Single and married mothers who participated in the Ontario Health Survey, a province-wide study derived from a probability sample of the general population of Ontario aged 15 years and older (N = 1.471), were included. Sociodemographic and mental health characteristics were collected by means of interviewer-administered questionnaires. A self-administered questionnaire was used to collect information on childhood physical and sexual abuse.

Results: Compared with married mothers, single mothers reported substantially lower incomes as well as higher rates of childhood abuse and all psychiatric morbidities examined (current and lifetime affective or anxiety disorders and substance use disorders). Childhood abuse has a consistent and significant association with adult mental health, even when other risk variables

were controlled. No interaction among childhood abuse and marital status and outcome was found.

Conclusions: Single mothers reported more childhood abuse and experienced higher levels of poverty and psychiatric disorders than married mothers. Childhood abuse was associated with more psychiatric problems in both single and married mothers. research, clinical, and policy implication of these findings are discussed.

The Psychosocial Treatment of Schizophrenia: An Update

Juan R. Bustillo, John Lauriello, William P. Horan, Samuel J. Keith, *Am. J. Psychiatry* (2001), **158**: 163-175.

Objective: The authors sought to update the randomized controlled trial literature of psychosocial treatments for schizophrenia.

Method: Computerized literature searches were conducted to identify randomized controlled trials of various psychosocial interventions, with emphasis on studies published since a previous review of psychosocial treatments for schizophrenia in 1996.

Results: Family therapy and assertive community treatment have clear effects on the prevention of psychotic relapse and rehospitalization . However, these treatments have no consistent effects on other outcome measures (e.g., pervasive positive and negative symptoms, overall social functioning, and ability to obtain competitive employment). Social skills training improves social skills but has no clear effects on relapse prevention , psychopathology, or employment status. Supportive employment programs that use the place-and - train vocational model have important effects on obtaining competitive employment. Some studies have shown improvements in delusions and hallucinations following cognitive behavior therapy. Preliminary research indicates that personal therapy may improve social functioning.

Conclusions: Relatively simple, long-term psychoeducational family therapy should be available to the majority of persons suffering from schizophrenia. Assertive community training programs ought to be offered to patients with frequent relapses and hospitalizations, especially if they have limited family support. Patients with schizophrenia can clearly improve their social competence with social skills training, which may translate into a more adaptive functioning in the community. For patients interested in working, rapid placement with ongoing support offers the best opportunity for maintaining a regular job in the community. Cognitive behavior therapy may benefit the large number of patients who continue to experience disabling psychotic symptoms despite optimal pharmacological treatment.

Studies of Cognitive Change in Patients with Schizophrenia Following Novel Antipsychotic Treatment

Philip D. Harvey, Richard S.E. Keefe, *Am. J. Psychiatry* (2001), **158**: 176-184.

Objective : Novel antipsychotic medications have been reported to have beneficial effects on cognitive functioning in patients with schizophrenia. However, these effects have been assessed in studies with considerable variation in methodology. A large number of investigator-initiated and industry-sponsored clinical trials are currently underway to determine the effect of various novel antipsychotics on cognitive deficits in patients with schizophrenia. The ability to discriminate between high-and low-quality studies will be required to under-

stand the true implications of these studies and their relevance to clinical practice.

Method: This article addresses several aspects of research on cognitive enhancement in schizophrenia, emphasizing how the assessment of cognitive function in clinical trials requires certain standards of study design to lead to interpretable results.

Results: Novel antipsychotic medication appear to have preliminary promise for the enhancement of cognitive functioning . However, the methodology for assessing the treatment of cognitive deficits is still being developed.

Conclusions: Researchers and clinicians alike need to approach publications in this area with a watchful eye toward methodological weaknesses that limit the interpretability of findings.

Characteristics of Female Psychiatrists

Erica Frank, Lisa Boswell, Leah J. Dickstein, Daniel p. Chapman, *Am. J. Psychiatry* (2001), **158**: 205-212.

Objective: This study assessed within gender differences between psychiatrists and other physicians by using data taken from a large national sample of U.S. female physicians.

Method: The authors used data from the women physician's health study, a large, national questionnaire-based survey conducted in 1993-1994, to compare characteristics of female psychiatrists (N = 570) with those of other female physicians (N = 3.875).

Results: Psychiatrists were older, in poorer health, less likely to be married, more likely to be current or ex-smokers, and more likely to be politically liberal than were the other female physicians. Psychiatrists were somewhat (a though not necessarily significantly) more likely than the other female physicians to report having had personal or family histories of various psychiatric disorders. Psychiatrists were more likely to have a solo practice and less likely to be in a group practice. They worked fewer hours than the other female physicians but reported comparable hourly incomes. Psychiatrists did not differ from the other female physicians in perceived work amount, work stress, work control, or career satisfaction. Their satisfaction with their specialty was, however, greater than that of the other female physicians. For nearly all of the 14 preventive health care counseling practices examined, the amount of preventive counseling psychiatrists reported performing, the clinical relevance they ascribed to those practices, their self -confidence in performing the practices, and the amount of training they reported receiving in preventive counseling practices was significantly lower than that or comparable to that of other specialists.

Conclusions: Female psychiatrists significantly differ from other female physicians with regard to a number of personal and professional dimensions.

The Dream in Contemporary Psychiatry

Morton F. Reiser, *Am. J. Psychiatry* (2001), **158**: 351-359.

Objective: This article offers selective reviews of cogent sectors of research regarding the dream in contemporary psychiatry.

Method: First, the author discusses relatively recent research (1953-1999) on the neurobiology and clinical psychophysiology of dreaming sleep; second, he reviews experimental cognitive neuroscientific studies of perception, emotion, and memory and the putative inter-

relationships among them in generating dream imagery; and third, he interprets psychoanalytic studies (1900-1999) on related aspects of dreams and the dream process.

Results: Exploration for interrelationships among information from these three areas entails discussion of the mind/brain problem. These considerations illuminate some of the logical and interpretive dilemmas that enter into debates about Freud's theory of the dream.

Conclusions: The author proposes a preliminary psychobiologic concept of the dream process and discusses, in light of the foregoing considerations, the importance of collaborative research for developing a realistic perspective concerning the proper place of the dream in contemporary psychiatry.

Perceived Stigma as a Predictor of Treatment Discontinuation in Young and Older Outpatients With Depression

Jo Anne Sirey, Martha L. Bruce, George S. Alexopoulos, Deborah A. Perlick, Patrick Raue, Steven J. Friedman, Barnett S. Meyers, *Am. J. Psychiatry* (2001), **158**: 479-481.

Objective: The authors' goal was to examine the extent to which perceived stigma affected treatment discontinuation in young and older adults with major depression .

Method: A two-stage sampling design identified 92 new admissions of outpatients with major depression. Perceived stigma was assessed at admission. Discontinuation of treatment was recorded at 3-month follow - up.

Results: Although younger patients reported perceiving more stigma than older patients, stigma predicted treatment discontinuation only among the older patients.

Conclusions: Patients' perceptions of stigma at the start of treatment influence their subsequent treatment behavior. Stigma is an appropriate large for intervention aimed at improving treatment adherence and outcomes.