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SYLLABUS AND COURSE GUIDE

Addressing Barriers to Care: Strategies for the Management of Patients with Schizophrenia

neuroscience CME

A Free, One-Hour CME/CNE/CEP/NASW/CCMC/CPE Live and On Demand Activity
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On the Web: www.neuroscienceCME.com

FACULTY: Henry A. Nasrallah, MD, and Dawn I. Velligan, PhD
MODERATOR: John W. Newcomer, MD

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This activity is supported by an educational grant from Janssen, Division of Ortho-McNeil-Janssen Pharmaceuticals, Inc., administered by Ortho-McNeil Janssen Scientific Affairs, LLC.

INFORMATION FOR PARTICIPANTS

Statement of Need

Until the past decade, there was generally a pessimistic attitude about the treatment of patients with schizophrenia and their outcomes. One key concept that has been identified as critical in optimizing the care and outcomes of patients is continuity of care by a team of healthcare providers. Continuity of care is widely viewed as a key quality indicator for outpatient mental health care and is essential to prevention of relapse and re-hospitalization.[1]

Yet, progress has lagged in the implementation and measurement of continuity of care in clinical practice. In a recent educational activity by CME Outfitters, over 220 psychiatrists responded that their main reason for not changing practice immediately regarding continuity of care was they did not know where to start, demonstrating a gap in knowledge and performance regarding the implementation of this process in clinical practice. A first step to improving care is identifying the barriers that exist. Patient barriers, physician barriers and system barriers can be significant obstacles requiring education of the entire mental healthcare team in order to begin to break down the walls and allow clinicians to provide the best care for each patient.

The identification of the barriers can be the first step in empowering both the provider and the patient. This can highlight to psychiatrists, other healthcare providers, payors, and healthcare systems what barriers may exist and how they are impacting the outcomes and lives of patients.

In this neuroscienceCME Live and On Demand activity, faculty will highlight barriers to optimal care and their impact on the outcomes and lives of patients with schizophrenia and propose practical strategies and tools that can be utilized to improve the care of patients with schizophrenia.

1 Adair CE, McDougall GM, Beckie A, et al. History and measurement of continuity of care in mental health services and evidence of its role in outcomes. *Psychiatr Serv* 2003;54:1351-1356.

Activity Goal

To offer clinicians optimal strategies to more effectively manage individuals with schizophrenia across the continuum of care.

Learning Objectives

At the end of this CE activity, participants should be able to:

- Assess key barriers in practice that impact continuity of care in the management of patients with schizophrenia.
- Implement treatment plans in concordance with patients that focus on improving continuity of care.
- Incorporate tools and measures in practice to improve discharge transitions of patients with schizophrenia.

Target Audience

Physicians, physician assistants, nurse practitioners, nurses, psychologists, social workers, certified case managers, pharmacists, and other healthcare professionals interested in the management of patients with schizophrenia.

CREDIT INFORMATION

CME Credit (Physicians)

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Universal Activity Number: 376-999-09-027-L01-P (live presentation)
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Activity Type: knowledge-based

All other clinicians will either receive a CME Attendance Certificate or may choose any of the types of CE credit being offered.

Commercial Support
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FACULTY BIOS & DISCLOSURES

Henry A. Nasrallah, MD
Dr. Nasrallah is a widely recognized psychiatrist, educator, and researcher. He received his BS and MD degrees at the American University of Beirut. Following his psychiatric residency at the University of Rochester and neuroscience fellowship at the NIH, he served as a faculty member at the University of California at San Diego and the University of Iowa before assuming the chair of the Ohio State University Department of Psychiatry for 12 years. In 2003 he joined the University of Cincinnati College of Medicine as Associate Dean and Professor of Psychiatry and Neuroscience.

Dr. Nasrallah is the Director of the Schizophrenia Program, and his research focuses on the neurobiology and psychopharmacology of schizophrenia and related disorders including bipolar disorder. He has published over 350 scientific articles and 400 abstracts, as well as 10 books. He is Editor-In-Chief of two journals (Schizophrenia Research and Current Psychiatry) and is the co-founder of the Schizophrenia International Research Society (SIRS). He has been board-certified in both adult and geriatric psychiatry. He is a Fellow of the American College of Neuropsychopharmacology [ACNP], Fellow of the American College of Psychiatrists, distinguished Fellow of the American Psychiatric Association, President of the Cincinnati Psychiatric Society, and President of the Ohio Psychiatric Education and Research Foundation. He has twice received the NAMI Exemplary Psychiatrist Award and was voted as the U.S. Teacher of the Year by the *Psychiatric Times*. He has received over 75 research grants and is listed in several editions of the book "Best Doctors in America".

Dawn I. Velligan, PhD

Dr. Velligan is a Professor in the Department of Psychiatry and Co-Chief of the Division of Schizophrenia and Related Disorders at the University of Texas Health Science Center in San Antonio. She received her training in clinical psychology at the University of California and Mental Health Clinical Research Center for Schizophrenia in Los Angeles. In 1989, Dr. Velligan moved to Texas to assist in the development of the University of Texas Health Science Center-San Antonio State Hospital Clinical Research Unit specializing in pharmaceutical and psychosocial studies of psychotic disorders. Dr. Velligan is nationally recognized as an expert in training structured interviewing and rating for clinical research, and has produced a number of training tapes, which have been widely distributed. Dr. Velligan's internationally recognized research program has focuses on the cognitive deficits associated with schizophrenia, the functional consequences of these deficits, and interventions to decrease cognitive impairment and improve community function in individuals with this illness. An additional research focus is on adherence to oral antipsychotic medications for individuals living in the community. Dr. Velligan is the author of numerous publications and is principal investigator for various studies funded by the National Institute of Health, pharmaceutical companies, The National Alliance for Research on Schizophrenia and Depression, and private foundations. Dr. Velligan frequently serves as a consultant to pharmaceutical companies and scientific investigators in the areas of symptom assessment, cognition and outcomes, and is a scientific associate of the World Health Organizaiton U.S.-Mexico Border Collaborative Center.

John W. Newcomer, MD (Moderator)

Dr. Newcomer is the Gregory B. Couch Professor of Psychiatry, Psychology and Medicine at Washington University School of Medicine in St. Louis. He is also the Medical Director for the Center for Clinical Studies at Washington University. Dr. Newcomer is a Principal Investigator on research grants funded through the National Institutes of Health (NIH), and also serves as the Chairman of the Drug Utilization Review (Medicaid) Board for the State of Missouri.

Dr. Newcomer received his undergraduate degree at Brown University (magna cum laude) and his medical degree at Wayne State University School of Medicine. He completed his residency and a research fellowship in Psychiatry at Stanford University School of Medicine prior to joining the faculty at Washington University. Dr. Newcomer has received a number of honors and awards, including a 1999 Exemplary Psychiatrist Award from the National Alliance for the Mentally Ill (NAMI), an Independent Scientist Award from the National Institute of Mental Health (NIMH), and a 2002 Gerald L. Klerman Award for Outstanding Clinical Research from the National Alliance for Research on Schizophrenia and Depression (NARSAD). Funded continuously by the NIH for 17 years, Dr. Newcomer has also served as a reviewer for the NIH as well as other funding agencies, including the Department of Veteran's Affairs and the National Science Foundation.

Dr. Newcomer serves on the editorial board for *Journal of Clinical Psychiatry, Journal of Psychotic Disorders, Clinical Schizophrenia & Related Psychoses and Obesity*, and he is a reviewer for numerous journals, including the *New England Journal of Medicine*, *Diabetes Care, American Journal of Physiology, American Journal of Psychiatry, Archives of General Psychiatry*, and the *Journal of Neuroscience*. He has contributed numerous articles to leading scientific journals, including *Archives of General Psychiatry, The Journal of Clinical Endocrinology & Metabolism, The Journal of Neuroscience, The Journal of the American Medical Association*, and *Neuropsychopharmacology*.

Andrew W. Goddard, MD (Content/Peer Reviewer)

Dr. Goddard is currently Professor of Psychiatry at Indiana University School of Medicine and the Director of the Adult Psychiatry Outpatient Clinic and Study Center at the Indiana University Hospital. He has completed his medical school at University of Melbourne, Australia, and a fellowship at Yale University. He is certified by the American Board of Psychiatry and Neurology and is a fellow at Royal Australian and New Zealand College of Psychiatrist. He has extensive teaching and research experience in schizophrenia disorders and anxiety disorders.

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Dr. Nasrallah has disclosed that he receives grant support from AstraZeneca Pharmaceuticals LP, Janssen, L.P., the National Institute of Mental Health, Otsuka America Pharmaceutical, Inc., Roche, and Sanofi-aventis. He serves as a consultant to Abbott Laboratories, AstraZeneca Pharmaceuticals LP, Dainippon Sumitomo Pharma, Janssen, L.P., Pfizer Inc., Schering-Plough Corporation, and Vanda Pharmaceuticals. He serves on the advisory boards of Abbott Laboratories, AstraZeneca Pharmaceuticals LP, Janssen, L.P., Pfizer Inc., and Vanda Pharmaceuticals. He is on the speakers bureaus of AstraZeneca Pharmaceuticals LP, Janssen, L.P., and Pfizer Inc.

Dr. Velligan has disclosed that she receives grant support from AstraZeneca Pharmaceuticals LP, Janssen L.P., and Pfizer Inc. She serves as a consultant to Abbott Laboratories, AstraZeneca Pharmaceuticals LP, Janssen L.P., and Pfizer Inc.

Dr. Newcomer has disclosed that he receives grant support from The National Institute of Mental Health, The National Alliance for Research on Schizophrenia and Depression, Bristol-Myers Squibb Company, Janssen, L.P.; Pfizer Inc., and Wyeth Pharmaceuticals. He serves as a consultant to AstraZeneca Pharmaceuticals LP, Bristol-Myers Squibb Company, litigation regarding medication effects, GlaxoSmithKline, H. Lundbeck A/S, Janssen, L.P., Organon Pharmaceuticals USA Inc., Otsuka America Pharmaceutical, Inc., Pfizer Inc., Solvay Pharmaceuticals, Inc., Tikvah Therapeutics, Inc., VANDA Pharmaceuticals, and Wyeth Pharmaceuticals. He serves on the data safety monitoring committee of Dainippon Sumitomo Pharma America, Inc., Organon Pharmaceuticals USA Inc., Schering-Plough Corporation, and Vivus, Inc. Dr. Newcomer also receives product development royalties for Metabolic Screening forms from Compact Clinicals/Jones and Bartlett Publishing.

Dr. Goddard has disclosed that he receives grant support from AstraZeneca Pharmaceuticals LP and Janssen, L.P. He serves as a consultant to Bristol-Myers Squibb Company and Pfizer Inc.

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Abbreviation List

ACT	Assertive Community Treatment
AIMS	Abnormal Involuntary Movement Scale
APA	American Psychiatric Association
APN	Advanced practice nurse
BARS	Brief Adherence Rating Scale
BP	Blood pressure
CAFÉ	Comparison of Atypicals for First-Episode
CAI	Competency Assessment Instrument
CAT	Cognitive Adaptive Training
CATIE	Clinical Antipsychotic Trials of Intervention Effectiveness
CGI	Clinical Global Impressions scale
CVD	Cardiovascular disease
DM	Diabetes mellitus
EBQI	Evidence-Based Quality Improvement
EQUIP	Enhancing QUality of Care In Psychosis
FDA	Food & Drug Administration
HAM-D	Hamilton Depression Rating Scale
HTN	Hypertension
MedMAP	Medication Management Approaches in Psychiatry
MEMS	Medication Event Monitoring System
MH	Mental health
MHA	Mental Health America
NASMHPD	National Association of State Mental Health Program Directors
PANSS	Positive And Negative Symptom Scale
PCP	Primary care physician
PharmCAT	Pharmacological Cognitive Adaptive Training
PreFER	Prevent First Episode Relapse
SMI	Severe mental illness
TAU	Treatment as usual
WHO	World Health Organization

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The course guide for this activity includes slides, disclosures of faculty financial relationships, and biographical profiles.

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Moderator:
John W. Newcomer, MD

Gregory B. Couch Professor of Psychiatry, Psychology and Medicine

Director, Clinical Trials Unit, Institute of Clinical and Translational Sciences (ICTS)

Director, Regulatory Support Center, ICTS

Medical Director, Center for Clinical Studies

Washington University School of Medicine

St. Louis, MO

John W. Newcomer, MD
Disclosures

- ***Research/Grants:*** Bristol-Myers Squibb Company; Janssen, L.P.; National Alliance for Research on Schizophrenia and Depression; National Institute of Mental Health; Pfizer Inc.; Wyeth Pharmaceuticals
- ***Speakers Bureau:*** None
- ***Consultant:*** AstraZeneca Pharmaceuticals LP; Bristol-Myers Squibb Company; litigation regarding medication effects; GlaxoSmithKline; H. Lundbeck A/S; Janssen, L.P.; Organon Pharmaceuticals USA Inc.; Otsuka America Pharmaceutical, Inc.; Pfizer Inc.; Solvay Pharmaceuticals, Inc.; Tikvah Therapeutics, Inc.; VANDA Pharmaceuticals; Wyeth Pharmaceuticals
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Henry A. Nasrallah, MD

Professor of Psychiatry and Neuroscience
University of Cincinnati College of Medicine
Cincinnati, OH

Henry A. Nasrallah, MD
Disclosures

- ***Research/Grants:*** AstraZeneca Pharmaceuticals LP; Forest Laboratories, Inc.; GlaxoSmithKline; Janssen, L.P.; National Institute of Mental Health; Otsuka America Pharmaceutical, Inc.; Roche; Sanofi-aventis
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- ***Stockholder:*** None
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- ***Advisory Board:*** AstraZeneca Pharmaceuticals LP; Janssen, L.P.; Pfizer Inc.; Vanda Pharmaceuticals

Dawn I. Velligan, PhD

Professor and Co-Director
Division of Schizophrenia
and Related Disorders
Department of Psychiatry
The University of Texas Health Science
Center at San Antonio
San Antonio, TX

Dawn I. Velligan, PhD
Disclosures

- ***Research/Grants:*** AstraZeneca Pharmaceuticals LP; Janssen L.P.; Pfizer, Inc.
- ***Speakers Bureau:*** None
- ***Consultant:*** AstraZeneca Pharmaceuticals LP; Abbott Laboratories; Janssen L.P.; Pfizer, Inc.
- ***Stockholder:*** None
- ***Other Financial Interest:*** None
- ***Advisory Board:*** None

Addressing Barriers to Care: Strategies for the Management of Patients with Schizophrenia

December 16, 2009

Learning Objective 1

Assess key barriers in practice that impact continuity of care in the management of patients with schizophrenia

Learning Objective 2

Implement treatment plans in concordance with patients that focus on improving continuity of care

Learning Objective 3

Incorporate tools and measures in practice to improve discharge transitions of patients with schizophrenia

Barriers to Optimal Care

- Patient barriers
  - Nonadherence, comorbidities, pharmacological (side effects)
- Physician barriers
  - Continuity of care, pharmacological (prescribing/dosing issues), lack of evidence-based practice
- System barriers
  - Inadequacy of human resources, financial constraints, communication/ coordination of care

Key Patient Barriers to Care

- Comorbidities
  - Medical
  - Psychiatric
  - Substance use
- Insurance coverage
- Pharmacological
  - Access
  - Efficacy
  - Tolerability/safety
- Nonadherence
  - Medications
  - Scheduling/appts
- Limited support system
- Persistent symptoms
  - Positive/negative symptoms[1]
  - Cognitive deficits
  - Aggression

1. Lindenmayer JP, et al. *J Clin Psychiatry* 2009;70:990-996.

Key Physician Barriers to Care

- Lack of time; burn-out[1,2]
- Lack of resources
  - Lack of psychosocial treatment resources[2]
  - Treatment issues (effectiveness and access)
- Psychiatrists not as equipped to address patients' overall health as primary care physicians (PCPs)[2]

1. Brown AH, et al. *Implement Sci* 2008;3:9.
2. Mental Health America. *Mental Health and Psychiatry News* 2008. http://www.health.am/psy/more/schizophrenia-and-healthcare-survey.

Key Physician Barriers to Care

- Continuity of care
  - Communication challenges, poor discharge follow-up
- Pharmacological
  - Tolerability and dosing issues
- Physician stereotyping patients with mental illness[1]
- Lack of utilization of evidence-based practice

1. Gold KJ, et al. *Am Fam Physician* 2008;78:314-315.

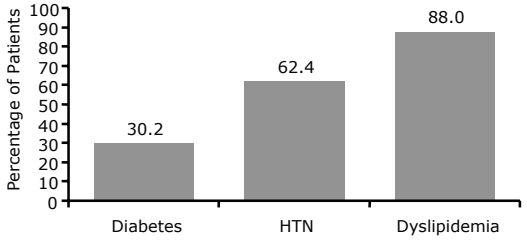
Attitudes, Behaviors, and Communication Barriers

- Both psychiatrists and PCPs had slightly negative stereotypes and attitudes concerning patients with schizophrenia[1]
- PCPs reported receiving information from psychiatrists only 0% to 10% of the time[1]
- PCP frustrations include:
  - Long delays in getting patients seen for initial consult
  - No response back when they refer a patient
  - Lack of explicit recommendations they can act on
  - No response to request for medical information

1. Jones SM, et al. *Int J Geriatr Psychiatry* 2009;24:254-260.

Low Rates of Treatment for Metabolic Disorders in Schizophrenia in CATIE

% of Patients Who Never Received Treatment



N = 1460; HTN = hypertension
Nasrallah H, et al. *Schizophr Res* 2006;86:15-22.

Key System Barriers to Care

- Lack of bridges between institutions
  - Communication between hospital and community-based physician regarding discharge of patients
- Lack of structure to develop care plan
  - Coordinating care, screening, and monitoring
- Inadequacy of human resources
- Financial constraints
  - Reimbursement

Key System Barriers to Care

- *"Today's mental health system is a patchwork relic—the result of disjointed reforms and policies"*[1]
- *The system presents barriers that add to the burden of mental illness of individuals, families, and the community*[1]
- *"The lag between discovering effective forms of treatment and incorporating them into routine patient care is unnecessarily long, lasting 15-20 years"*[2]

1. Hogan M. The President's New Freedom Commission on Mental Health. *Achieving the Promise: Transforming Mental Health Care in America*. 2003.
2. Institute of Medicine Committee on Quality Health Care in America. *Crossing the Quality Chasm: A New Health System for the 21st Century*. National Academies Press. 2001. Full text available at http://www.nap.edu/books/0309072808/html.

Community-Based Service Gaps

- Provider-provider interactions are not usually covered by third-party payers[1]
- Best practice interventions may not be covered by third-party payers[1]
- Differing formularies in different health systems[2]

1. Goin MK. *Psychiatr Serv* 2001:52:605-609.
2. Shaya FT, et al. *Pharmacoeconomics Outcomes Res* 2004;4:595-597.

Michael Jones

- 23-year-old male
- Past history of schizophrenia x3 yrs
- History of medication nonadherence
- Admits history of substance use
- Psychiatrist did a lipid profile—triglycerides were above 250 mg/dL; referral made to primary care physician to evaluate medical condition

Michael Jones (cont.)

- Patient arrives at referral office, but is unkempt, no insurance information, and uncertain why he is there for evaluation
- Patient is told to return at a later date, but no follow-up appointment is made
- Patient stops taking medication because he is frustrated and is hospitalized 1 month later

Medication Adherence

- Poor across physical and psychiatric disorders[1]
- Particularly poor in persistent disorders, where treatments are designed to prevent symptom onset or recurrence, and when the consequences of stopping treatment are delayed[2]
- As many as 75% of patients with schizophrenia become nonadherent within two years of hospital discharge[3]
- Consequences of nonadherence are severe; more than 50% of patients who discontinue antipsychotics will relapse within 3-10 months[4,5,6]
- Relapse rates are 5 times higher in nonadherent patients[6]

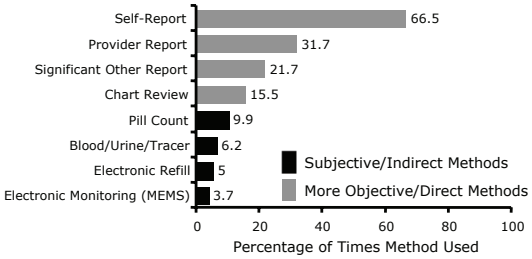
See supplemental bibliography for full references.

Can Physicians Identify Poorly Adherent Patients?

- Correlations between adherence assessed with electronic monitoring and physician impressions of adherence are non-significant or small[1]
- At 80% or better adherence, physicians were completely unable to divide patients into adherent and nonadherent groups[2]
- Some positive evidence that a brief self-report measure known as the Brief Adherence Rating Scale (BARS) (which sensitizes patients to missed doses prior to asking about the amount of medication taken) is related to adherence as measured by electronic monitoring[3]

1. Byerly M, et al. *Psychiatry Res* 2005;133:129-133.
2. Velligan DI, et al. *Schizophr Bull* 2006;32:724-742.
3. Byerly M, et al. *Schizophr Res* 2008;100:60-69.

Methods Used to Measure Adherence



MEMS = Medication Event Monitoring System; Percentages are not mutually exclusive

161 schizophrenia studies reviewed by Velligan DI, et al. *Schizophr Bull* 2006;32:724–742.

Approaches to Address Nonadherence

- Modify the plan to be patient-centered
  - Shared decision-making
  - Concordance
- Modify the environment
  - Cues to act
  - Increase social support
  - Address barriers
- Modify the medicine
  - Maximize efficacy through tailored treatment
  - Maximize tolerability in that patient
  - Simplify regimen
  - Use depot formulation

Environmental Supports to Improve Adherence

Maples, Velligan. *Am J Psychiatric Rehab* 2008;11:164-180.
Velligan DI, et al. *Schizophrenia Bull* 2008;34:483-493.

Physician and System Solutions Improve Outcomes

- CAI (Competency Assessment Instrument)[1]
  - Evaluates consumer-led intervention and implements recovery-oriented care
- EQUIP (Enhancing QUality of Care In Psychosis)[2]
  - Methods and tools to implement chronic illness care principles
- EBQI (Evidence-Based Quality Improvement)[3]
  - Performance feedback and leadership support
  - EBQI had perceptible effects on practice performance for patients with depression[3]

1. Chinman M, et al. *Ment Health Serv Res* 2003:5:97-108.
2. Brown AH, et al. *Implement Sci* 2008;3-9.
3. Rubenstein LV, et al. *J Gen Intern Med* 2006;21:1027–1035.

Physician and System Solutions Improve Outcomes

- NASMHPD/MHA[1]
  - Identify persons with SMI as high priority, assure adequate strategies developed, tested, and implemented, reduce premature mortality/ morbidity[1]
  - Integration of general and specialty care with a focus on systematic assessment and competent, integrated intervention focal strategy[1]
- ACT (Assertive Community Treatment)[2]
  - Team approach to continuity of care

SMI = severe mental illness

1. Parks J, et al. *Morbidity and Mortality in People with Serious Mental Illness*. Presented at the Fifth National Summit of State Psychiatric Superintendents. Bethesda, MD. May 2007.
2. Assertive Community Treatment Association; http://www.actassociation.org.

ACT Tools to Aid in Treatment Adherence

- Educate patients about medications and side effects
- Continually assess and discuss side effects
- Monitor medication regimens and outcomes
- Become the eyes and ears of the psychiatrists
- Assist with medication set-ups
- Use pill boxes, "eyes on meds", and "ears on meds"
- Readily make medication changes when needed

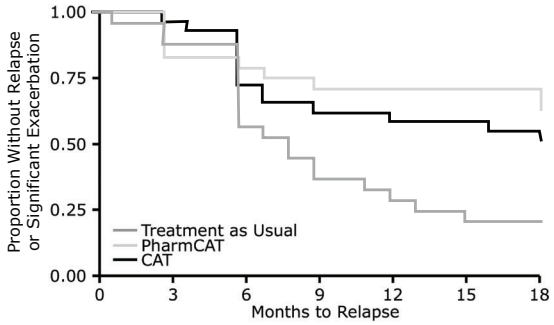
ACT = assertive community treatment association.
http://www.actassociation.org. Accessed October 5, 2009.

Patient Solutions Improve Outcomes

- CAT (Cognitive Adaptive Training)
  - Environmental supports to cue behavior change
- PharmCAT
  - Focuses on medication and appointment adherence
- 9-month randomized, single-blind trial, 6-month follow-up
  - Full CAT (n = 37), PharmCAT (n = 36), TAU (n = 29)
- Maintenance of gains in functional outcome may require some form of continued intervention

TAU = treatment as usual
Velligan DI, et al. *Schizophr Bull* 2008;34:483-493.

Evidence-Based Interventions to Improve Adherence in Schizophrenia



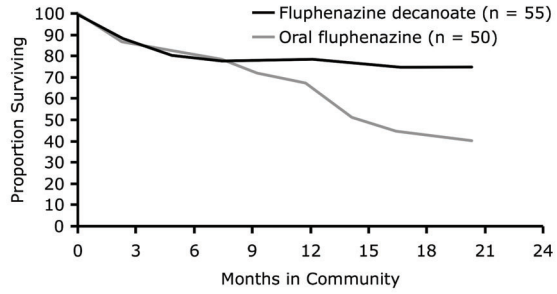
Velligan DI, et al. *Schizophr Bull* 2008;34:483-493.

Oral vs. Long-Acting Antipsychotics

- Oral[1]
  - Partial or total non-compliance remains widespread
  - Associated with significant increases in the risk of relapse, rehospitalization, progressive brain tissue loss, and further functional deterioration
- Long-acting[1]
  - Developed to promote treatment compliance in patients requiring maintenance treatment for schizophrenia
  - Have potential to address issues of all-cause discontinuation and poor compliance
  - Should be considered in first-episode patients, for whom optimal outcome is frequently compromised by early treatment discontinuation and poor adherence[2]

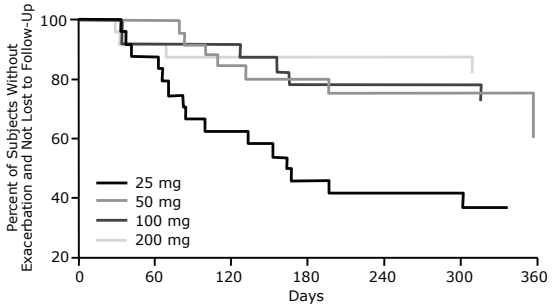
1. Nasrallah HA. *Acta Psychiatr Scand* 2007;115:260-267.
2. Chue P, et al. *CNS Drugs* 2007;21:441-448.

Relapse-Free Survival Rates with Oral and Depot Fluphenazine



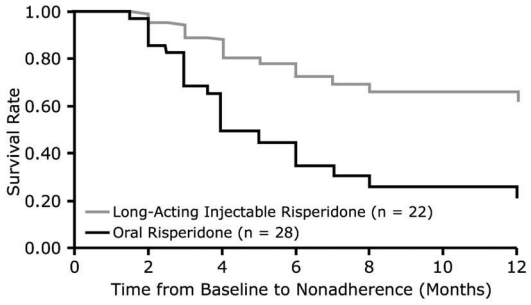
Hogarty GE, et al. *Arch Gen Psychiatry* 1979;36:1283-1294.

Haloperidol Decanoate *Relapse Prevention*



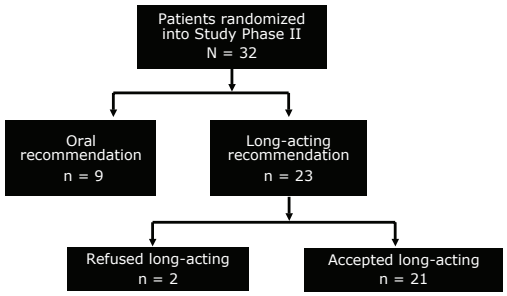
Wald χ^2 = 14.07, df = 3, p = .003
Kane J, et al. *Am J Psychiatry* 2002;159:554-560.

Long-Acting Injection Impact on Adherence



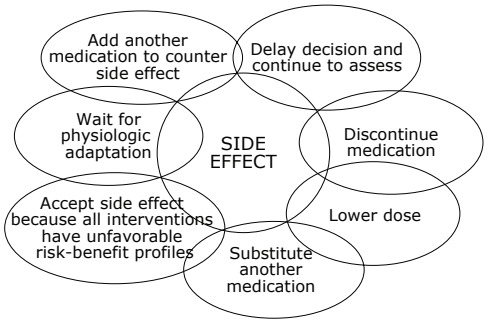
Kim B, et al. *Prog Neuropsychopharmacol Biol Psychiatry* 2008;32:1231-1235.

PreFER Acceptance of Long-Acting Recommendation



Weiden PJ, et al. Poster presented at the APA Psychiatric Services Annual Meeting,New York, NY. October 5-8, 2006.

Assessing and Managing New Side Effects During Treatment



Steps to Improve the Medical and Mental Health of Patients with Schizophrenia

Ask	Act	Decide

• Personal/family history
  • Family history of mental illness
• Medical history
  • HTN, DM, CVD
  • Smoking
  • Diet
  • Activity
  • Substance use
	• Height, weight, BP
	• Waist circumference
	• Fasting glucose
	• PANSS, AIMS, HAM-D, CGI
		• Behavioral treatments
		• Referral
		  • External
		  • Internal
		• Switch medications
		  • Address issues of tolerability, lack of efficacy, and non-adherence

HTN = hypertension; DM = diabetes mellitus; CVD = cardiovascular disease; BP = blood pressure; PANSS = positive and negative symptom scale; AIMS = abnormal involuntary movement scale; HAM-D = Hamilton Depression Rating Scale; CGI = clinical global impression scale

Measurement-Based Medicine

- Routine monitoring of relevant outcomes with standardized scales[1]
- Provides feedback to clinicians to inform medical decision-making[2]
- Used to inform payers and health care systems[3]
- Measurement-based mental health care has been found to be feasible and effective[4]

1. Zimmerman M, et al. *Primary Psychiatry* 2008;15:67-75.
2. Valenstein M, et al. *Psychiatric Services* 2009;60:1372-1375.
3. Kashner TM, et al. *CNS Neuroscience & Therapeutics* 2009;15:320-332.
4. Trivedi MH, et al. *Neuropsychopharmacology* 2007;32:2479-2489.

Treatment Team Approach to Improving Continuity of Care After Discharge

- Use of an advanced practice nurse (APN) to provide transitional care in the community setting can be useful
  - APN interviews patients, contacts outpatient providers, and communicates with patients after discharge via cellphone[1]
- Improved communication between primary care and psychiatry regarding the treatment of patients with chronic mental disorders may reduce re-admission and relapse[2]

1. Price LM. *Arch Psychiatr Nurs* 2007;21:336-344.
2. Nielsen B, et al. *Ugeskr Laeger* 2008;170:3862-3866.

Treatment Team Approach to Improving Continuity of Care After Discharge

- It is important that there be no gaps in service delivery; patients are particularly vulnerable to relapse after acute episode and need support in resuming normal life and activities in the community[1]
- For hospitalized patients, it is frequently beneficial to arrange an appointment with an outpatient psychiatrist before discharge[1]
- Adjustment to life in the community for patients can be facilitated through realistic goal setting and skills training

1. American Psychiatric Association. Practice guideline for the treatment of patients with schizophrenia. 2nd ed. Arlington (VA): American Psychiatric Association; 2004.

Aligning Treatment Goals

- Concordance on treatment goals
  - Psychiatrist vs. patient
  - Psychiatrist vs. PCP
    - Referring patients to a specialist for additional treatment[1]
  - PCP vs. psychiatrists
  - MHA study—psychiatrists work in tandem with primary care physicians to reduce health problems related to medication side effects[1]
- Shared decision-making
  - Informed consent at least
  - Useful for well-informed and compliant patients and for those who currently dislike their antipsychotic[2]
  - Psychosocial matters[2]

1. Bender E. *Psychiatr News* 2008;43:14.
2. Hamann J, et al. *Psychiatr Serv* 2009;60:1107-1112.

Role of Family in Overcoming Barriers

- Participation of family in psychoeducation decreases relapse rates
- Provides illness education, support, problem-solving training, and crisis intervention services
- Requires investment but should improve outcomes and decrease service utilization

Cohen AN, et al. *Psychiatr Serv* 2008;59:40-48.

Clinical Connections

- Assist the patient
  - Psychotherapeutic approaches
  - Increase social support
  - Provide tools to aid in adherence
- Address the physician
  - Collaboration and communication
    - Routine sharing of clinical information with other providers
  - Evidence-based medicine
  - Utilize quality measures and scales
- Modify the system
  - Integration or co-localization of mental health and medical services[1]
  - Assure responsible party in MH system for each patient's medical health care needs

1. Lenroot R, et al. *Psychiatr Serv* 2003;54:1499-1507.

Clinical Connections

- Intervene early
  - Modify the plan, the environment, or the medication to address issues of nonadherence
  - Evaluate role of medication in nonadherence
    - Side effects, dosing, formulation
- Optimize the treatment
  - Maximize efficacy and tolerability
  - Simplify regimen
  - Consider long-acting medications
- Collaborative treatment model
  - Assess competencies of treatment team and formulate a plan for improving care
- Involve families in recovery plan

Questions?

Call toll-free:
800.879.2166

Fax:
240.465.5524

E-mail:
questions@cmeoutfitters.com

Resources

Practice Guidelines and Recommendations

- APA – Practice Guidelines for the Treatment of Patients with Schizophrenia
  - http://www.psychiatryonline.com/pracGuide/pracGuideTopic_6.aspx
- WHO – Recommendations for improving the delivery of mental health services
  - http://www.who.int/mental_health/management/schizophrenia/en/
  - http://www.ipap.org/schiz/
- Joint Commission – Discharge and Referral Requirements
  - http://www.jointcommission.org

Resources

Quality Measures

- EBQI – Evidence-Based Quality Improvement
- MedMAP - Medication Management Approaches in Psychiatry
  - http://mentalhealth.samhsa.gov/cmhs/communitysupport/toolkits/community/workbook/appendixd.asp

Models for Optimizing Care

- ACT – Assertive Community Treatment
  - http://www.actassociation.org
- CAI – Competency Assessment Instrument
  - http://www.desertpacific.mirecc.va.gov/.../cai-item-key-intro-revised-4-2004.pdf
- EQUIP – Enhancing QUality of Care In Psychosis
  - http://www.desertpacific.mirecc.va.gov/equip/

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Supplemental Bibliography

Slide Title: Medication Adherence

1. Blackwell B. The drug defaulter. *Clin Pharmacol Ther* 1972;13:841-848.

2. Haynes RB, Sackett DL, Gibson ES, et al. Improvement of medication compliance in uncontrolled hypertension. *Lancet* 1976;1:1265-1268.

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4. Hirsch SR, Barnes TRE. The Clinical Treatment of Schizophrenia with Antipsychotic Medication. In: Hirsch SR, Weinberger DR, eds. *Schizophrenia*. Oxford: Blackwell; 1995, 443-468.

5. Nosé M, Barbui C, Tansella M. How often do patients with psychosis fail to adhere to treatment programmes? A systematic review. *Psychol Med* 2003;33:1149-1160.

6. Velligan DI, Weiden PJ, Sajatovic M, et al; Expert Consensus Panel on Adherence Problems in Serious and Persistent Mental Illness. The expert consensus guideline series: adherence problems in patients with serious and persistent mental illness. *J Clin Psychiatry* 2009;70(Suppl 4):1-46.

Post-Test

Participants are required to complete the post-test to assess their achievement of the educational objectives for this activity. To obtain a certificate or statement of credit, you must complete the post-test and indicate your answers on the **Post-Test Responses** section found on the credit request form. You must complete both this post-test and the evaluation to receive credit. A score of 70% is required for credit.

Addressing Barriers to Care: Strategies for the Management of Patients with Schizophrenia

1. True or False: Inadequacy of human resources, financial constraints, and communication/coordination of care are all identified as system barriers to care.
   A. True
   B. False

2. Key patient barriers to care include:
   A. Comorbidities
   B. Limited support system
   C. Persistent symptoms
   D. All of the above

3. Key physician barriers to care include which of the following?
   A. Communication challenges
   B. Tolerability and dosing issues
   C. Insurance coverage
   D. Both A and B

4. According to data from the CATIE study that was published in 2006 by Nasrallah and colleagues, the percentage of patients with schizophrenia who never receive treatment for dyslipidemia is:
   A. 85%
   B. 88%
   C. 62.4%
   D. 30.2%

5. A 1995 publication by Weiden and colleagues, cites that _____ of patients with schizophrenia will become nonadherent within two years of hospital discharge?
   A. 80%
   B. 75%
   C. 65%
   D. 85%

6. Based on the review by Velligan and colleagues of schizophrenia studies, which of the following was the most common method used to measure medication adherence in patients with schizophrenia?
   A. Provider Report
   B. Chart Review
   C. Self-Report
   D. Pill Count

7. A focus on the team approach to continuity of care is associated with which of the following models for optimizing quality of care for patients?
   A. Assertive Community Treatment (ACT)
   B. Enhancing QUality of Care In Psychosis (EQUIP)
   C. Evidence-Based Quality Improvement (EBQI)
   D. Both B and C

8. In which of the following ways can clinicians respond to the problem of side effects in a patient taking antipsychotic medication?
   A. Wait for physiologic adaptation
   B. Discontinue medication
   C. Accept side effects because all interventions have unfavorable risk-benefit profiles
   D. Delay decision and continue to assess
   E. All of the above

9. True or False: Measurement-based mental health care has been found to be feasible and effective.
   A. True
   B. False

10. Although it requires a time investment, participation by the patient's family in psychoeducation is important because:
    A. It decreases relapse rates
    B. It equips the family with problem-solving training and crisis intervention services
    C. It is likely to lead to increased service utilization
    D. A and B
    E. All of the above

This CE activity is co-sponsored by Indiana University School of Medicine, CME LLC, and CME Outfitters, LLC.

TV-065-121609-01

CE Credit Request Form

Addressing Barriers to Care: Strategies for the Management of Patients with Schizophrenia

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PLEASE PRINT CLEARLY (Form must be filled out completely to process CE credit)

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I am a: ❑ Physician ❑ Physician Assistant ❑ Nurse Practitioner ❑ Nurse ❑ Psychologist
❑ Social Worker ❑ Certified Case Manager ❑ Pharmacist ❑ Other: _____

Degree: ❑ MD ❑ DO ❑ PhD ❑ NP ❑ RN ❑ PharmD ❑ MSW ❑ Other: _____

I participated in a: ❑ **LIVE broadcast** ❑ **LIVE webcast** ❑ **LIVE audio feed** ❑ **Internet archive** ❑ **Rebroadcast/Videotape** ❑ **Podcast**

Participation Date: _____ / _____ / _____

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Business Phone: _____ Fax: _____

Email: _____

Type of CE credit requested: ❑ CME/Physicians (max. 1.0 _____) ❑ CNE/Nurses (1.0) ❑ CEP/Psychologists (1.0)
❑ NASW/Social Workers (1.0) ❑ CCMC/Case Managers (1.0) ❑ CPE/Pharmacists (1.0)
❑ Others (1.0 CME Attendance Certificate)

Please see syllabus and course guide pages 2–3 for credit information and requirements.

How long did it take you to complete this activity? _____ hours _____ minutes

Post-Test Responses (Enter letter of correct response; 70% score required for CE credit):

1. _____ 2. _____ 3. _____ 4. _____ 5. _____ 6. _____ 7. _____ 8. _____ 9. _____ 10. _____

How did you learn about this continuing education activity?

❑ Postcard/direct mail ❑ Email ❑ Internet ❑ Colleague ❑ Fax ❑ Other: _____

Please rate your interest in participating in future neuroscienceCME educational activities (1=highly interested, 5=uninterested): _____

What formats do you prefer for learning? (Please rank the top three; 1 = most preferred):

_____ Symposium _____ Audioconference _____ Internet _____ CD-ROM
_____ Journal _____ Satellite Broadcast _____ Monograph _____ Other: _____

As a result of my participation in this activity, I will commit to:

- Sharing information from this activity with staff and colleagues. ❑ Yes ❑ No
- Utilizing the assessment tools described in this activity to develop an individualized management/care plan for each of my patients. ❑ Yes ❑ No
- Analyzing overall improvement in patient management/care through use of the therapeutic options described in this activity. ❑ Yes ❑ No

Signature: _____ **Date:** _____

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TV-065-121609-01

POST-SURVEY

Addressing Barriers to Care: Strategies for the Management of Patients with Schizophrenia

December 16, 2009 – Project ID: 6866-OS-22

In an effort to better determine the overall impact of continuing education activities, the Postgraduate Institute for Medicine (PIM) is conducting measurements of educational effectiveness. Listed below are several statements for which we would like you to rate your level of agreement/disagreement. All information obtained in this process will be used and reported in aggregate only, without individual attribution. Thank you for your participation.

Please answer the questions that follow.

What is your practice type?

❑ MD/DO ❑ RN ❑ Pharmacist ❑ Social Worker ❑ Case Manager

❑ PA/NP ❑ Psychologist ❑ Other, please specify: _____

To what extent do you agree with the following statements? *(Please circle the appropriate number on the scale.)*

1 = Strongly Disagree 2 = Disagree 3 = Somewhat Disagree 4 = Somewhat Agree 5 = Agree 6 = Strongly Agree

As many as 75% of patients with schizophrenia will become nonadherent within 2 years following hospital discharge.

Strongly Disagree 1 2 3 4 5 6 Strongly Agree

Most clinicians can readily identify a patient who is or soon will become medication nonadherent.

Strongly Disagree 1 2 3 4 5 6 Strongly Agree

Treatment with long-acting antipsychotic medications may improve medication adherence in patients with schizophrenia.

Strongly Disagree 1 2 3 4 5 6 Strongly Agree

Cognitive adaptive training focused on medication and appointment routines (PharmCAT) is successful in maintaining adherence in patients with schizophrenia.

Strongly Disagree 1 2 3 4 5 6 Strongly Agree

Now that you have participated in this activity, how often do you plan to engage in the following practice behavior? (1 = Never; 6 = Always) *(Check box if this decision or authority is outside your usual scope of practice)*

I monitor patients with schizophrenia for metabolic risk factors on a scheduled basis.

Never 1 2 3 4 5 6 Always ❑ Not within my scope of practice

I rely on more objective measures, such as serum levels, pill counts/refills, or the Brief Adherence Rating Scale, rather than patient or family self-reports, when making assessments of medication adherence in patients with persistent mental illness.

Never 1 2 3 4 5 6 Always ❑ Not within my scope of practice

I routinely communicate summaries of treatment plan changes for any health condition to other relevant members of the treatment team for patients with severe mental illness (for example: if in primary care, I send to mental health clinician; if mental health clinician, I send to primary care provider).

Never 1 2 3 4 5 6 Always ❑ Not within my scope of practice

Return this survey via FAX to 240.243.1033 or mail to
CME Outfitters, ATTN: CE Forms Processor, 1395 Piccard Drive, Suite 370, Rockville, MD 20850

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TV-065-121609-01

CE Activity Evaluation

Addressing Barriers to Care: Strategies for the Management of Patients with Schizophrenia

A CME/CNE/CEP/NASW/CCMC/CPE Live and On Demand Activity

To receive CE credit, you must complete both this form and a credit request form, and return the completed forms via mail to CME Outfitters, ATTN: CE Forms Processor, 1395 Piccard Drive, Suite 370, Rockville, MD 20850; or, FAX to 240.243.1033 for fastest service. Forms must be submitted within 30 days of completion of activity. A certificate or statement of credit will be mailed to you within 4–6 weeks of our receiving this form and the credit request form.

To complete your credit request/activity evaluation online, and print your certificate or statement of credit immediately, please visit www.neuroscienceCME.com and click on the Testing/Certification link under the Activities tab (requires free account activation).

1. The content level was: ❑ Too easy ❑ About right ❑ Too difficult

	Strongly Agree				Strongly Disagree
2. Objective(s) were related to the overall purpose/goal of the activity (to offer clinicians optimal strategies to more effectively manage individuals with schizophrenia across the continuum of care).	5	4	3	2	1
3. The course met the stated objective(s):					
• Assess key barriers in practice that impact continuity of care in the management of patients with schizophrenia.	5	4	3	2	1
• Implement treatment plans in concordance with patients that focus on improving continuity of care.	5	4	3	2	1
• Incorporate tools and measures in practice to improve discharge transitions of patients with schizophrenia.	5	4	3	2	1
4. The educational materials were useful.	5	4	3	2	1
5. The visual aids were useful and appropriate.	5	4	3	2	1
6. The overall activity was excellent.	5	4	3	2	1
7. The physical environment/format was conducive to learning.	5	4	3	2	1
8. The moderator was effective at facilitating the faculty discussion.	5	4	3	2	1

9. Rate the quality of the faculty member(s) listed below, from 5 (Excellent) to 1 (Poor):

Speaker	Content	Clinical Relevance	Teaching Strategies	Level of Expertise
Henry A. Nasrallah, MD	5 4 3 2 1	5 4 3 2 1	5 4 3 2 1	5 4 3 2 1
Dawn I. Velligan, PhD	5 4 3 2 1	5 4 3 2 1	5 4 3 2 1	5 4 3 2 1

10. Will you change the way you practice based on this activity? ❑ Yes ❑ No
    If no, is it because you already practice this way? ❑ Yes ❑ No
    If no, please explain: _____
11. Do you feel the activity was balanced and objective? ❑ Yes ❑ No
    If no, please state reasons: _____
12. Do you feel the activity was free of commercial bias? ❑ Yes ❑ No
    If no, did it negatively impact the educational value of this activity? ❑ Yes ❑ No
    If yes, please state reasons: _____
13. What was the most useful information you gained from this activity? _____
14. Suggested topics for future activities: _____
15. General comments/suggestions: _____
16. I participated in a: ❑ LIVE broadcast ❑ LIVE webcast ❑ LIVE audio feed ❑ Internet archive ❑ Rebroadcast/Videotape ❑ Podcast
17. Participation date: _____ / _____ / _____
18. I am a: ❑ Physician ❑ Physician Assistant ❑ Nurse Practitioner ❑ Nurse ❑ Psychologist
    ❑ Social Worker ❑ Certified Case Manager ❑ Pharmacist ❑ Other: _____

Thank you for your feedback. Your comments will be reviewed carefully and ultimately used to guide the development of our future continuing education activities.

Attendance Form for Groups

Please complete and FAX to **240.243.1033**

Activity Title and Faculty:
Addressing Barriers to Care: Strategies for the Management of Patients with Schizophrenia
with Henry A. Nasrallah, MD, Dawn I. Velligan, PhD, and John W. Newcomer, MD

Site/Institution Name: ______________________________

Practice Setting: ❑ Community Mental Health ❑ State Mental Health ❑ Private Practice ❑ Primary Care ❑ Other: __________

Address: ______________________________

City: ____________________ State: ________ ZIP: ____________

Site Coordinator: ____________________ Phone: ____________________

Fax: ____________________ Email: ____________________

Completion Date: ____________ We participated in a: ❑ LIVE broadcast ❑ LIVE webcast ❑ LIVE audio feed ❑ Internet archive ❑ Rebroadcast/Videotape ❑ Podcast

Attendee Name (please print)	Please Circle Discipline						
____________________	MD	DO	PA	NP	RN	Pharm	Psychol	Other: ________
____________________	MD	DO	PA	NP	RN	Pharm	Psychol	Other: ________
____________________	MD	DO	PA	NP	RN	Pharm	Psychol	Other: ________
____________________	MD	DO	PA	NP	RN	Pharm	Psychol	Other: ________
____________________	MD	DO	PA	NP	RN	Pharm	Psychol	Other: ________
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____________________	MD	DO	PA	NP	RN	Pharm	Psychol	Other: ________

Please FAX completed form to 240.243.1033 and use additional sheets as necessary.
Questions? Call 877.CME.PROS. Thank you for participating in this CME Outfitters continuing education activity!