Understanding Evidence-Based Practices for Co-Occurring Disorders

Overview Paper 5

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
Substance Abuse and Mental Health Services Administration
Center for Mental Health Services
Center for Substance Abuse Treatment
www.samhsa.gov
About COCE and COCE Overview Papers
The Co-Occurring Center for Excellence (COCE), funded through the Substance Abuse and Mental Health Services Administration (SAMHSA), is a leading national resource for the field of co-occurring mental health and substance use disorders (COD). The mission of COCE is threefold: (1) to receive and transmit advances in treatment for all levels of COD severity, (2) to guide enhancements in the infrastructure and clinical capacities of service systems, and (3) to foster the infusion and adoption of evidence- and consensus-based COD treatment and program innovations into clinical practice. COCE consists of national and regional experts including COCE Senior Staff, Senior Fellows, Steering Council, affiliated organizations (see inside back cover), and a network of more than 200 senior consultants, all of whom join service recipients in shaping COCE’s mission, guiding principles, and approaches. COCE accomplishes its mission through technical assistance and training, delivered through curriculums and materials on-line, by telephone, and through in-person consultation.

COCE Overview Papers are concise and easy-to-read introductions to state-of-the-art knowledge in COD. They are anchored in current science, research, and practices. The intended audiences for these OPs are mental health and substance abuse administrators and policymakers at State and local levels, their counterparts in American Indian tribes, clinical providers, other providers, and agencies and systems through which clients might enter the COD treatment system. For a complete list of available overview papers, see the back cover.

For more information on COCE, including eligibility requirements and processes for receiving training or technical assistance, direct your e-mail to coce@samhsa.hhs.gov, call (301) 951-3369, or visit COCE’s Web site at www.coce.samhsa.gov.

Acknowledgments
COCE Overview Papers are produced by The CDM Group, Inc. (CDM) under Co-Occurring Center for Excellence (COCE) Contract Number 270-2003-00004, Task Order Number 270-2003-00004-0001 with the Substance Abuse and Mental Health Services Administration (SAMHSA), U.S. Department of Health and Human Services (DHHS). Jonielle R. Brown, Ph.D., Center for Substance Abuse Treatment (CSAT), serves as COCE’s Task Order Officer and Lawrence Rickards, Ph.D., Center for Mental Health Services (CMHS), serves as the Alternate Task Order Officer. George Kanuck, COCE’s Task Order Officer with CSAT from September 2003 through November 2005, provided the initial Federal guidance and support for these products.

COCE Overview Papers follow a rigorous development process, including peer review. They incorporate contributions from COCE Senior Staff, Senior Fellows, consultants, and the CDM production team. Senior Staff members Michael D. Kitzner, Ph.D., Fred C. Osher, M.D., and Rose M. Urban, LCSW, J.D., co-led the content and development process. Senior Staff member Stanley Sacks, Ph.D., made major writing contributions. Other major contributions were made by Project Director Jill G. Hensley, M.A.; Senior Staff Member Sheldon R. Weinberg, Ph.D.; and Senior Fellows Barry S. Brown, M.S., Ph.D., Michael Kirby, Ph.D., Kenneth Minkoff, M.D., Richard K. Ries, M.D., and Joan E. Zweben, Ph.D. Editorial support was provided by CDM staff J. Max Gilbert, Jason Merritt, Michelle Myers, and Darlene Colbert.

Disclaimer
The contents of this overview paper do not necessarily reflect the views or policies of CSAT, CMHS, SAMHSA, or DHHS. The guidelines in this paper should not be considered substitutes for individualized client care and treatment decisions.

Public Domain Notice
All materials appearing in COCE Overview Papers, except those taken directly from copyrighted sources, are in the public domain and may be reproduced or copied without permission from SAMHSA/CSAT/CMHS or the authors.

Electronic Access and Copies of Publication
Copies may be obtained free of charge from SAMHSA’s National Clearinghouse for Alcohol and Drug Information (NCADI), (800) 729-6686 or (301) 468-2600; TDD (for hearing impaired), (800) 487-4889, or electronically through the following Internet World Wide Web sites: www.ncadi.samhsa.gov or www.coce.samhsa.gov.

Recommended Citation

Originating Offices
Co-Occurring and Homeless Activities Branch, Division of State and Community Assistance, Center for Substance Abuse Treatment, Substance Abuse and Mental Health Services Administration, 1 Choke Cherry Road, Rockville, MD 20857.

Homeless Programs Branch, Division of Service and Systems Improvement, Center for Mental Health Services, Substance Abuse and Mental Health Services Administration, 1 Choke Cherry Road, Rockville, MD 20857.

Publication History
COCE Overview Papers are revised as the need arises. For a summary of all changes made in each version, go to COCE’s Web site at: coce.samhsa.gov/ocod_resources/papers.htm. Printed copies of this paper may not be as current as the versions posted on the Web site.

DHHS Publication No. (SMA) 07-4278
Printed 2007.
The advantages of employing evidence-based practices (EBPs) (see Table 1, Key Definitions) are now widely acknowledged across the medical, substance abuse (SA), and mental health (MH) fields. This overview paper discusses EBPs and their role in the treatment of co-occurring disorders (COD).

Practitioners seldom have as much evidence as they would like about the best clinical approach to use in any given clinical situation. To choose the optimal approach for each client, clinicians must draw on research, theory, practical experience, and a consideration of client perspectives. Picking the best option at the moment using the best information available has been termed “evidence-based thinking” (Hyde et al., 2003) (see Table 1, Key Definitions).

This paper discusses EBPs and their use in treating persons with COD, discusses how evidence (see Table 1, Key Definitions) is used to determine if a given practice should be labeled as evidence based, and gives some brief examples of EBPs for COD.

There is still considerable debate concerning how EBPs should be defined. This paper presents various points of view and offers COCE’s perspective as a starting point for further discussion by the field.

### LITERATURE HIGHLIGHTS

Both researchers and practitioners increasingly perceive EBPs as essential for improving treatment effectiveness in the medical, SA, and MH fields. The use of EBPs permits clinicians and programs to more reliably improve services and achieve optimal outcomes. In substance abuse treatment, EBPs have influenced service delivery in areas ranging from initial engagement (e.g., in the use of motivational enhancement strategies) to community re-entry (e.g., in the focus on cognitive-behavioral strategies for relapse prevention). The National EBP Project (e.g., Torrey et al., 2001) exemplifies the focused attention on translating science to service that is taking place for the treatment of persons with serious mental illnesses in mental health systems.

The earliest definitions of EBPs emphasized scientific research and contrasted scientific evidence with approaches based on “global subjective judgment,” consensus, preference, and other forms of “nonrigorous” assessment (Eddy, 2005). This “research only” approach was recently rearticulated for the field of mental health by Kihlstrom (2005): “Scientific research is the only process by which clinical psychologists and mental health practitioners should determine what evidence guides EBPs” (p. 23).

Critics of the “research only” approach note that the true performance of an intervention often remains uncertain even when research evidence is available (Claxton et al., 2005), that certain types of interventions are more amenable to research than are others and are therefore more likely to be supported by research evidence (Reed, 2005), and that definitions of successful outcomes are not universally shared, especially in behavioral health (Messer, 2005). Reed (2005) suggests that the dichotomy between research and “everything else” in defining EBPs unnecessarily restricts the definition of evidence and precludes important knowledge based on nonexperimental research (e.g., case studies) and clinical and patient

### Table 1: Key Definitions

<table>
<thead>
<tr>
<th>Evidence-Based Practice</th>
<th>A practice which, based on research findings and expert or consensus opinion about available evidence, is expected to produce a specific clinical outcome (measurable change in client status).</th>
</tr>
</thead>
<tbody>
<tr>
<td>Evidence-Based Thinking</td>
<td>A process by which diverse sources of information (research, theory, practice principles, practice guidelines, and clinical experience) are synthesized by a clinician, expert, or group of experts in order to identify or choose the optimal clinical approach for a given clinical situation.</td>
</tr>
<tr>
<td>Evidence</td>
<td>Facts, theory, or subject matter that support or refute the claim that a given practice produces a specific clinical outcome. Evidence may include research findings and expert or consensus opinions.</td>
</tr>
<tr>
<td>Expert Opinion</td>
<td>A determination by an expert, through a process of evidence-based thinking, that a given practice should or should not be labeled “evidence based.”</td>
</tr>
<tr>
<td>Consensus Opinion</td>
<td>A determination reached collectively by more than one expert, through a process of evidence-based thinking, that a given practice should or should not be labeled “evidence based.”</td>
</tr>
<tr>
<td>Strength of Evidence</td>
<td>A statement concerning the certainty that a given practice produces a specific clinical outcome.</td>
</tr>
</tbody>
</table>
experiences. It has also been argued that clinical decision-making (Messer, 2005) and health policy (Atkins et al., 2005) involve factors and trade-offs related to patient and community values, culture, and competing priorities that are not generally informed by research. An alternative to the “research only” approach that addresses these concerns is the “multiple streams of evidence” approach (Reed, 2005).

The Institute of Medicine (IOM; 2001) suggests a definition of EBPs that reflects the “multiple streams of evidence” approach. The IOM argues for three components of EBPs:

1. **Best research evidence**—the support of clinically relevant research, especially that which is patient centered
2. **Clinician expertise**—the ability to use clinical skills and past experience to identify and treat the individual client
3. **Patient values**—the integration into treatment planning of the preferences, concerns, and expectations that each client brings to the clinical encounter

These “streams of evidence” can be integrated through “evidence-based thinking” (see Table 1, Key Definitions). Evidence-based thinking may be undertaken to designate practices as evidence based or in day-to-day clinical decision making. See Messer (2005) for two case-based examples of evidence-based thinking in clinical practice; see Atkins and colleagues (2005) for examples related to health policy.

**KEY QUESTIONS AND ANSWERS**

1. **What do we mean by evidence-based practices for co-occurring disorders?**

COCE has adopted the “multiple streams of evidence” approach to EBPs discussed above. COCE also takes the position that the integration of multiple streams of evidence requires the application of evidence-based thinking. Accordingly, EBPs are defined by COCE as practices which, based on expert or consensus opinion about available evidence, are expected to produce a specific clinical outcome (i.e., measurable change in client status). Figure 1 illustrates the process by which streams of evidence (i.e., research and scholarship, client factors, and clinical experience) are combined using evidence-based thinking to arrive at recommendations concerning EBPs. The systems, practitioners, and clients who use these EBPs contribute to the evidence base for future evidence-based thinking.

2. **How much evidence is needed before a practice can be called an EBP?**

There is no simple answer to this question. In general, the designation of a practice as an EBP derives from a review of research and other evidence by experts in the field (see Question 1). Different organizations use different processes and standards to determine whether or not practices are evidence based.
In evaluating evidence, it is important to understand the distinction between efficacy and effectiveness. Efficacy means that a treatment or intervention produces positive results in a controlled experimental research trial. Effectiveness means that treatment or intervention produces positive results in a usual or routine care setting (i.e., in the real world). Efficacy established in controlled research does not necessarily equate with effectiveness in real world settings. For example, it may be impractical to provide real world clinicians with the level of training and supervision provided to clinicians in research studies, or real world target populations and community contexts may differ from those used in the research.

3. Why should EBPs be used?

There are several reasons to use EBPs. Foremost, when services are informed by the best available evidence, the quality of care is improved. Second, using EBPs increases the likelihood that desired outcomes will be obtained. EBPs that are based upon research typically have carefully described service components, and many have manuals to guide their implementation. This supports consistent delivery of the practice and high fidelity to the model. Third, by employing these practices, providers will often more efficiently use available resources.

4. What are the differences among EBPs, “consensus-based practices,” “science-based practices,” “best practices,” “promising practices,” “emerging practices,” “effective programs,” and “model programs”?

A number of terms have been used at different times, and by different groups, to describe practices that are expected to produce a specific clinical outcome. These terms are somewhat interchangeable. The terms “promising” and “emerging” are consistent with the notion that the strength of evidence varies among practices deemed likely to produce specific clinical outcomes. COCE avoids descriptors like “best” and “model” because they may imply that there is a single best approach to treating all persons with COD. COCE also avoids the term “effective” because no hard criterion exists for the level of evidence by which “effectiveness” is established.

The term “consensus based” refers to a process by which evidence is commonly evaluated and synthesized to determine if a given practice is an EBP. Other common processes include evaluation of evidence using standardized criteria and numerical scores, meta-analysis, and synthesis by a single scholar. COCE views the consensus process as the best way to identify and evaluate EBPs.

5. Is all manualized treatment evidence-based treatment? Have all EBPs been manualized?

Just because a practice is documented in manual form does not mean it has risen to the level of an EBP. Manual development can be an early step in outcome research, and that research may show the manualized treatment to be ineffective. Moreover, manuals are sometimes developed as marketing tools for treatments that have undergone little research.

However, once an EBP is established, the development of treatment manuals and practice guidelines are an important part of the dissemination process and help make the EBP accessible to providers. Manuals can minimize the need for costly trainings and often contain fidelity measures and outcome assessment strategies. They can also improve clinical decisionmaking by laying out guidelines for critical circumstances. Practice manuals vary in their level of detail and may not be useful as stand-alone products. Not all EBPs have manuals, but many do.

6. What is EBP fidelity and why does it matter?

Fidelity is the extent to which a treatment approach as actually implemented corresponds to the treatment strategy as designed. Following the initial design with high fidelity is expected to result in greater success in achieving desired client outcomes than deviating from the design (i.e., having low fidelity).

7. What are some evidence-based practices for co-occurring disorders?

Because the treatment of COD is a relatively new field, there has not been time for the development and testing of a large number of EBPs specifically for clients with COD. Clearly, EBPs developed solely for MH or SA should be considered in the treatment of people with COD.

EBPs for COD should combine both treatment elements (e.g., the use of motivational strategies) and programmatic elements (e.g., composition of multidisciplinary teams). COCE has outlined the critical components of COD practices (see Overview Paper 3, Overarching Principles) that should guide the selection of these elements.

At the treatment level, interventions that have their own evidence to support them as EBPs are frequently a part of a comprehensive and integrated response to persons with COD. These interventions include:

- Psychopharmacological Interventions (e.g., desipramine and bupropion for people with cocaine dependence and depression [Rounsaville, 2004])
- Motivational Interventions (e.g., motivational enhancement therapy [Miller, 1996; Miller & Rollnick, 2002])
- Behavioral Interventions (e.g., contingency management [Roth et al., 2005; Shaner et al., 1997])

At the program level, the following models have an evidence base for producing positive clinical outcomes for persons with COD:

- Modified Therapeutic Communities (CSAT, 2005; De Leon et al., 2000; Sacks et al., 1998, 1999)
• Integrated Dual Disorders Treatment (CMHS, 2003; Drake et al., 1998b, 2004; Mueser et al., 2003)
• Assertive Community Treatment (Drake et al., 1998a; Essock et al., 2006; Morse et al., 1997; Wingerson & Ries, 1999)

The current state of the science highlights the need for evidence-based thinking in making both programmatic and clinical decisions in the treatment of people with COD.

8. How can I learn about new developments in EBPs?

At SAMHSA, the National Registry of Effective Programs and Practices (NREPP) is a decision-support tool that assesses the strength of evidence and readiness for dissemination of a variety of mental health and substance abuse prevention and treatment interventions. The NREPP system is available through a new Web site (www.nationalregistry.samhsa.gov). In Great Britain, the Cochrane Collaborative maintains the Cochrane Library, which contains regularly updated evidence-based healthcare databases (see www.cochrane.org) on a comprehensive array of health practices. Relevant specialty organizations (e.g., American Psychological Association) also publish lists of evidence-based practices. These compilations of programs and interventions may be generalizable to persons with COD, and the reader should look for specific reference to COD populations.

9. What issues should be considered in the use of EBPs?

Most EBPs are not universally applicable to all communities, treatment settings, and clients. If communities, treatment settings, and/or clients vary from those for which the EBP is designed, or if the human and facilities resources needed for the EBP are not available, effectiveness may be reduced. The various issues that must be considered in the use of an evidence-based practice include:

- Client population characteristics including culture, socioeconomic status, and the existence of other health and social issues that may complicate service delivery (e.g., pregnancy, incarceration, disabilities)
- Staff attitudes and skills required by the EBP
- Facilities and resources required by the EBP
- Agency policies and administrative procedures needed to support the EBP
- Interagency linkages or networks to provide needed additional services (e.g., vocational, educational, housing assistance, etc.)
- State and local regulations
- Reimbursement for the specific services to be provided under the EBP

10. Are there financial incentives to use EBPs? Are there components of EBPs that are not reimbursable?

The financing of EBPs for COD varies greatly by State. Some States (e.g., New York) have included evidence-based practice language in their licensing and regulation standards to create an incentive for providers receiving State support to use EBPs (New York State Office of Mental Health, 2005). Other States now require that programs demonstrate the use of EBPs in order to receive funding. In Oregon, for example, programs that receive State funds must show that a percentage of those funds are used to pay for EBPs (Oregon Department of Human Services, 2005).

For evidence-based program model EBPs, like assertive community treatment, some States will use Medicaid dollars to support a case rate, and other States use a fee-for-service methodology to reimburse providers.

11. What should be done to facilitate-enable program administrators and staff to adopt EBPs?

The implementation of EBPs will present both psychological challenges (e.g., resistance to change, commitment to current practices) and practice challenges (e.g., need for training and supervision, need for organizational changes, new licensures or certifications). Several practical guides to facilitating adoption of new practices are available, including sections from SAMHSA’s Evidence-Based Practice Implementation Resource Kits available at www.mental-health.samhsa.gov/cmhs/communitysupport/toolkits/cooccurring/default.asp and Module 6 of COCE’s Evidence- and Consensus-Based Practice curriculum (CSAT, in development)

12. How can one bridge the gap between the diverse needs of people with COD and the limited number of EBPs?

The reality is that the number of EBPs available to the clinician is insufficient to the task of treating COD. Clients with COD present a variety of disorders, and appropriate treatment covers a wide spectrum of services—screening, assessment, engagement, intensive treatment, and re-entry. The clinician will need to use evidence-based thinking to determine the optimal course of action for each patient. As discussed earlier, inputs to evidence-based thinking include research, theory, practice principles, practice guidelines, and clinical experience.

Two documents provide substantial information to inform evidence-based thinking: TIP 42, Substance Abuse Treatment for Persons With Co-Occurring Disorders (CSAT, 2005) and Service Planning Guidelines: Co-Occurring Psychiatric and Substance Disorders (Minkoff, 2001).
These documents incorporate EBPs where appropriate and emphasize recommended treatment interventions for people with COD in substance abuse treatment settings.

**FUTURE DIRECTIONS**

Much has been accomplished in the field of COD over the last 10 years, and a body of knowledge has been acquired that is appropriate for broad dissemination and application. There are now several well-articulated, evidence-based practices that are ready for application in clinical programs. Despite this considerable progress, far more research is needed to answer the host of questions that surround the treatment of persons with COD. Research is needed that will:

- **Survey typical treatment facilities** to understand their capabilities (with particular regard to staffing) and current activities (regarding identifying and serving clients with COD)
- **Clarify the characteristics** of those clients with COD for whom substance abuse treatment alone is not sufficient to achieve significant improvement in their substance use and mental disorders
- **Develop and test strategies to engage** clients with COD of different degrees of severity
- **Develop and test strategies to maximize adherence** to substance abuse and mental health counseling services, medication, and medical regimens
- **Clarify the optimum length of treatment** for clients with COD who manifest different severities of disorders
- **Develop and test strategies and techniques for ensuring successful transition** to continuing care (also known as aftercare) and for determining the effectiveness of different aftercare service models
- **Evaluate the dual recovery mutual self-help approaches** that are emerging nationally
- **Study the principles, practices, and processes of technology transfer** in the field of COD treatment
- **Facilitate integrated treatment through policies and workforce development strategies** that overcome legal and other barriers to the provision of a full spectrum of behavioral health services by the substance abuse treatment workforce

**CITATIONS**


Center for Substance Abuse Treatment. (in development). Introduction to evidence- and consensus-based practices for co-occurring disorders. Rockville, MD: Substance Abuse and Mental Health Services Administration.


COCE Senior Staff Members

The CDM Group, Inc.
Rose M. Urban, LCSW, J.D., Executive Project Director
Jill G. Hensley, M.A., Project Director
Anthony J. Ernst, Ph.D.
Fred C. Osher, M.D.
Michael D. Kiltzner, Ph.D.
Sheldon R. Weinberg, Ph.D.
Debbie Tate, M.S.W., LCSW

National Development & Research Institutes, Inc.
Stanley Sacks, Ph.D.
John Challis, B.A., B.S.W.
JoAnn Sacks, Ph.D.

National Opinion Research Center at the University of Chicago
Sam Schildhaus, Ph.D.

COCE National Steering Council

Richard K. Ries, M.D., Chair, Research Community Representative
Richard N. Rosenthal, M.A., M.D., Co-Chair, Department of Psychiatry, St. Luke’s Roosevelt Hospital Center; American Academy of Addiction Psychiatry
Ellen L. Bassuk, M.D., Homelessness Community Representative
Pat Bridgman, M.A., CCDCIII-E, State Associations of Addiction Services Representative
Redonna K. Chandler, Ph.D., Ex-Officio Member, National Institute on Drug Abuse
Joseph J. Cocozza, Ph.D., Juvenile Justice Representative
Gail Daumit, M.D., Primary Care Community Representative
Raymond Daw, M.A., Tribal/Rural Community Representative
Lewis E. Gallant, Ph.D., National Association of State Alcohol and Drug Abuse Directors
Andrew L. Homer, Ph.D., Missouri Co-Occurring State Incentive Grant (COSIG)

Andrew D. Hyman, J.D., National Association of State Mental Health Program Directors
Denise Juliano-Bult, M.S.W., National Institute of Mental Health
Deborah McLean Leow, M.S., Northeast Center for the Application of Prevention Technologies
Jennifer Michaels, M.D., National Council for Community Behavioral Healthcare
Lisa M. Najavits, Ph.D., Trauma/Violence Community Representative
Annette B. Primm, M.D., M.P.H., Cultural/Racial/Ethnic Populations Representative
Deidra Roach, M.D., Ex-Officio Member, National Institute on Alcohol Abuse and Alcoholism
Marcia Starbecker, R.N., M.S.N., CCI, Ex-Officio Member, Health Resources and Services Administration
Sara Thompson, M.S.W., National Mental Health Association
Pamela Waters, M.Ed., Addiction Technology Transfer Center
Mary R. Woods, RNC, LADAC, MSWS, National Association of Alcohol and Drug Abuse Counselors

COCE Senior Fellows

Barry S. Brown, M.S., Ph.D., University of North Carolina at Wilmington
Carlo C. DiClemente, M.A., Ph.D., University of Maryland, Baltimore County
Robert E. Drake, M.D., Ph.D., New Hampshire-Dartmouth Psychiatric Research Center
Michael Kirby, Ph.D., Independent Consultant
David Mee-Lee, M.S., M.D., DML Training and Consulting
Kenneth Minkoff, M.D., ZiaLogic
Bert Pepper, M.S., M.D., Private Practice in Psychiatry

Stephanie Perry, M.D., Bureau of Alcohol and Drug Services, State of Tennessee
Richard K. Ries, M.D., Dual Disorder Program, Harborview Medical Center
Linda Rosenberg, M.S.W., CSW, National Council for Community Behavioral Healthcare
Richard N. Rosenthal M.A., M.D., Department of Psychiatry, St. Luke’s Roosevelt Hospital Center
Douglas M. Ziedonis, M.D., Ph.D., Division of Psychiatry, Robert Wood Johnson Medical School
Joan E. Zweben, Ph.D., University of California - San Francisco

Affiliated Organizations

Foundations Associates
National Addiction Technology Transfer Center
New England Research Institutes, Inc.
Northeast/IRETA Addiction Technology Transfer Center
Northwest Frontier Addiction Technology Transfer Center
Pacific Southwest Addiction Technology Transfer Center
The National Center on Family Homelessness
The George Washington University
COCE Overview Papers*

“Anchored in current science, research, and practices in the field of co-occurring disorders”

- Paper 1: Definitions and Terms Relating to Co-Occurring Disorders
- Paper 2: Screening, Assessment, and Treatment Planning for Persons With Co-Occurring Disorders
- Paper 3: Overarching Principles To Address the Needs of Persons With Co-Occurring Disorders
- Paper 4: Addressing Co-Occurring Disorders in Non-Traditional Service Settings
- Paper 5: Understanding Evidence-Based Practices for Co-Occurring Disorders

*Check the COCE Web site at www.coce.samhsa.gov for up-to-date information on the status of overview papers in development.

For technical assistance:
visit www.coce.samhsa.gov, e-mail coce@samhsa.hhs.gov, or call (301) 951-3369