Colorado
Division of Behavioral Health

Evidence Based Practices Planning

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COLORADO DIVISION OF BEHAVIORAL HEALTH
EVIDENCE BASED PRACTICE PLANNING

EXECUTIVE SUMMARY

The Division of Behavioral Health (DBH) Evidence Based Planning Committee was convened in late 2007, as an internal working group. With the merging of the Division of Mental Health and Alcohol and Drug Abuse Division, it was an ideal time for the state to draft internal strategies for clearly linking evidence-based practices (EBPs) to DBH's goals and objectives.

DBH, consumers, clients, advocates, community providers, and other stakeholders share a commitment to insuring that Coloradans have access to the most effective mental health and substance use prevention and treatment. In an effort to continuously improve the quality of the public mental health and substance use systems:

The Division of Behavioral Health expects and supports a client and community-driven behavioral health system guided by evidence-based and promising practices and demonstrated by positive, measurable outcomes.

For all the target populations it serves, DBH will work to promote a bi-directional culture of learning. The state will provide expertise to the community, but also seek to learn from community-based innovation. EBPs have been defined as not only randomized trials, but as also encompassing other forms of promising practices such as practice-based evidence, expert consensus and consumer/ client preference. DBH is interested in supporting those practices that are effective in Colorado, whether they are EBPs with a strong national evidence base or practices developed in Colorado's communities. DBH will play a central role in:

- Pursuing outcome based performance contracting
- Showcasing community success
- Disseminating resources and training on EBPs, inclusive of promising practices
- Facilitating practices that allow persons with mental illnesses and substance use disorders to thrive in the least restrictive setting possible.

The EBP Planning Committee has used multiple methodologies, including catalogues of existing activities, literature reviews, key informant interviews, and a DBH staff survey, to create a 5-year timeline with detailed activities and expected outcomes. Areas of activity will include:

- Developing sustained leadership commitment
- Assessing community attitudes, values, utilization of EBPs
- Developing stakeholder partnerships
- Establishing contracting & policy
- Optimizing EBP targets
- Identifying community capacity
- Identifying priority practices
- Linking resources to cost
- Facilitating continued education for DBH staff
- Providing community training and consultation opportunities
- Determining acceptable fidelity and/or outcomes
- Developing a bi-directional culture of learning
- Identifying funding and billing mechanisms

DBH looks forward to partnering with the mental health and substance abuse prevention and treatment communities as we work to realize these outcome-based goals together.

COLORADO DIVISION OF BEHAVIORAL HEALTH
EVIDENCE BASED PRACTICE PLANNING

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I. BACKGROUND AND PURPOSE

I.A. DBH Position Statement and Principles

This Evidence Based Planning Report is an internal working document of the Colorado Department of Human Services, Division of Behavioral Health (DBH). The merging of the Division of Mental Health and Alcohol and Drug Abuse Division in July 2008 provides an opportunity to craft an integrated vision of how to continually increase quality and accountability by utilizing evidence based practices (EBPs). The position statement and guiding principles below create a framework for integrating the continually emerging evidence base for mental health and substance use prevention and treatment into the DBH culture, policy and procedures.

Position Statement

The Division of Behavioral Health expects and supports a client and community-driven behavioral health system guided by evidence-based and promising practices and demonstrated by positive, measurable outcomes.

Principles

1) **Increase the awareness and promote the value of evidence-based and promising practices within DBH and externally to all stakeholders (e.g., state agencies, community providers, consumers/clients, and families)**

2) **Disseminate information that supports evidence-based and promising practices**

3) **Promote continued competence within DBH and externally to all stakeholders**

4) **Support evidence-based and promising practices that encourage least restrictive treatment**

5) **Pursue outcome based performance contracting**

6) **Encourage practices that afford people the choice of remaining in their communities**

DBH Priority Populations

- Persons with substance use disorders
- Children / adolescents with serious emotional disturbance (SED)

- Adults with serious or serious and persistent mental illnesses (SMI / SPMI)
- Persons at risk for developing substance use and/or mental health disorders

I.B. Background

National and regional trends in health care and economics are driving an increased focus on evidence-based practices (EBPs) in the US health care system. Numerous factors have heightened interest in EBPs, including the rapid expansion of scientific knowledge regarding the causes and treatments of medical, mental, and substance use disorders, the growing voice of consumer and advocacy sectors, the managed care reform movement, and concerns about the growing costs of health care.

Despite the many advances in knowledge about behavioral health treatment (behavioral health is defined as mental health and substance use disorders), science often does not translate into available services. Frequently developed at universities and other academic centers, evidence-based treatments diffuse slowly into general clinical practice (Berwick, 2003; Coalition for Evidence-Based Policy, 2003; IOM, 2001; USDHHS, 1999; 2001). The President's New Freedom Commission on Mental Health (2003) noted that stigma, system fragmentation and economic barriers make diffusion of evidence-based practices for patients with serious mental illnesses especially challenging. Clinician behavior has been relatively resistant to change initiatives (Davis et al. 1992; Haynes et al. 1984) and attempts to enhance adherence to evidence-based practice guidelines usually produce modest to limited improvements. While the reasons for the lag-time from the dissemination of research results to their actual translation into improved clinical practice are complex (Rogers, 1995), this gap is typically measured in decades (Chapko, 1991).

Evidence-based practice guidelines are typically poorly implemented in behavioral healthcare, and comprehensive, multi-modal strategies are required to achieve guideline concordance (Bauer, 2001). This dilemma is exacerbated in the public sector where funding constraints, access barriers, organizational factors and distinctive characteristics of the consumer population can make state-of-the-art treatments and practice less easily adoptable. There are questionable, as well as valid, concerns about EBPs. A number of forces might influence the use of EBPs. For the most part, these proposed forces are seen as barriers to utilization (e.g., Addis, 2002; Hoagwood, 2001). Some of the primary concerns involve:

- Perceived lack of clinician support
- Lack of training
- Difficulties in converting clinical guidelines into actionable performance measures
- Inadequate means of integrating findings into daily operations
- Cost factors and associated dearth of resources
- Potential inconsistency with the consumer-driven movements
- A credibility gap among clinicians, supervisors, and administrators
- A focus on specific disorders rather than the complexity of "real life"

How Can Colorado Address the Problem in an Effective and Sustainable Manner?

The core problem—the gap between EBPs as developed in universities and other academic settings and their implementation in clinical practice — has been long recognized by healthcare delivery systems, healthcare consultation groups such as the Institute for Health Care Improvement (Berwick; 2003), foundations such as the Robert Wood Johnson Foundation (Wagner et al. 2001; Pincus et al. 2003), and federal agencies such as the Institute of Medicine (IOM, 1985, 2001) and the Agency for Healthcare Research and Quality. Systematic reviews have called for increased use and study of practice-enabling and reinforcing strategies, such as systemic organizational interventions (Davis et al. 1995; Grol, 1997; Littlejohns & Cluzeau, 2000). Literature reviews emphasize the importance of quality improvement efforts that include participation of key clinicians, feedback to team members and a supportive environment (Shortell et al., 1998; Ovretveit, 1999). These strategies are not off-the-shelf solutions, and understanding complex organizations and their capacity to improve must be integrated into interventions (Blumenthal & Kilo, 1998).

Methodologies to characterize and address the gap between development of EBPs and their implementation in "real world" settings have drawn on a variety of related and often overlapping conceptual frameworks. It appears that EBPs are possible when values, evidence, and resources intersect. Moreover, there is general recognition that effective intervention and treatment depends upon recognition of the roles of providers, consumers / clients, and family members. Often, consumer / client and family centered education is targeted to make positive changes in care systems (Toprac et al., 2000) because provider behavior is notoriously difficult to change (Davis et al., 1995; Ellrodt, 1995; Freemantle, 1997; Grimshaw, 1993). Confronting the widespread failure of education to change physician practices, several studies have suggested physician practices can be changed by going around the care system and educating consumer and families directly about the care they should receive (Davis et al., 1995).

Past EBP work also suggests that evidence based practice guidelines often fail to be implemented due to insufficient systemic collaboration and support. A first essential phase of dissemination and implementation is creating buy-in for proposed service directions. Therefore, any EBP initiatives necessarily include coordinating, linking, and maximizing existing partnerships. Fortunately, DBH has a wealth of local and national working relationships that has been and will be essential in building systems of evidence-based care. Many of the agencies and organizations with whom DBH has existing relationships have an active interest in pursuing a credible vision for closing Colorado's gap between evidence-based research and practice.

Although there are a number of concerns and in some cases general resistance to EBPs, national and federal organizations are in agreement that the science-to-service gap needs to be closed. The Presidents New Freedom Commission (2003) stressed the need to:

- Identify innovative, effective treatments, services and technologies that can be widely replicated in different settings, and

- Formulate policy options that could be implemented to integrate effective treatments, improve coordination, and improve community integration

Many national organizations have created specific funding, training, and policies to support states' initiatives to reach these goals. For example, the National Association of State Mental Health Program Directors (NASMHPD) has made the identification and dissemination of evidence-based mental health practices a priority. The National Institute of Mental Health, Agency for Healthcare Research and Quality, and other federal agencies have similarly increased their focus on substance abuse and mental health services research and implementation. The National Institute on Drug Abuse (NIDA) has established a Clinical Trials Network (CTN) and a related Blending Initiative to specifically accelerate the utilization of evidence based practice in community treatment providers. NIDA provides funding through SAMHSA for the Addiction Technology Transfer Centers (ATTC) to disseminate the Blending Initiative products of the CTN.

A primary goal of SAMHSA is the "delivery of excellent care and accelerated research". To these ends, SAMHSA has developed a series of EBP toolkits that have been the cornerstone of training and funding mechanisms. There are six toolkits currently and more are slated for release over the coming months (see http://www.mentalhealth.samhsa.gov/cmhs/communitysupport/toolkits/default.asp.).

SAMHSA Toolkits

- **Supported employment**
- **Family psychoeducation**
- **Co-occurring disorders**
- **Assertive community treatment**
- **Medication management**
- **Illness management and recovery**

NASMHPD and the National Technical Assistance Center (NTAC) support the above EBPs but have also added therapeutic foster care and family support services like Multisystemic Therapy to the list of EBPs (NASMHPD Research Institute, 2002)

There are a number of other organizations focused on effective substance use prevention and treatment. SAMHSA's National Centers for the Application of Prevention Technologies (CAPT) is bringing research to practice by assisting States / Jurisdictions and community-based organizations in the application of the latest evidence-based knowledge to their substance abuse prevention programs, practices, and policies. Other primary resources for substance use prevention and treatment include the Addiction Technology Transfer Center Network, the Office of National Drug Control Policy, the Texas Institute of Behavioral Research, and the National Institute on Drug Abuse's Criminal Justice Drug Alcohol Treatment Studies (CJ-DATS) which is a partnership among NIDA, federal agencies, researchers, criminal justice professionals, and drug / alcohol treatment practitioners to learn how to best provide treatment for drug abusing offenders.

I.C. Existing State Initiatives and Resources

Substance Use Prevention and Treatment

The current EBP planning is a natural outgrowth of the state's ongoing attention to the science-to-service gap. DBH (formerly the Alcohol and Drug Abuse Division) highlights the need for EBPs in its Strategic Plan, emphasizing that "reducing the social and economic consequences of untreated substance use disorders requires an investment in evidence-based prevention, intervention and treatment." DBH requests that all providers funded by the Substance Abuse Prevention and Treatment Block Grant utilize EBPs.

DBH is further facilitating use of EBPs among substance use prevention and treatment providers by:

- Funding the creation of manualized curricula for intervening with substance abusing offenders, adolescents, and DUI offenders, each using a cognitive-behavioral therapy approach.

- Requiring training in Motivational Interviewing and Cognitive-Behavioral Therapy for all addiction professionals seeking certification or licensure.

- Partnering in the Prevention Leadership Council to establish a "Best Practices" website containing information on over 200 effective, evidence-based prevention programs in 46 topic areas.

- Developing a curriculum for probation officers to increase familiarity with evidence-based treatment concepts when dealing with their clients with substance use disorders.

- Working with the Mountain West Addiction Technology Transfer Center (ATTC; a SAMHSA regional initiative) and partners to train agencies on effective business and clinical practices.

- Hosting statewide informational forums annually to share the latest research, outcome studies and best clinical practices with those interested in substance abuse treatment and prevention in Colorado.

Mental Health

In 2002, DBH (then known as the Colorado Mental Health Services) formed the Colorado Work Group for Evidence-Based Mental Health Practices. With broad stakeholder representation, the Work Group developed priority recommendations for EBPs in Colorado's public mental health system, and worked to expand awareness and support for the value of scientific evidence as the basis of health practices. In its 2004 report, the Work Group outlined priorities for EBPs and promising practices for both youth and adults, documented implementation issues, and made recommendations for establishing and disseminating EBPs. The Work Group found that some of the EBPs deemed a high priority already exist in Colorado in limited areas, pilot programs and

demonstration projects, and urged further collaboration, partnership, or consultation among stakeholders to expand EBPs.

Based on SAMHSA's Center for Mental Health Services Evidence-Based Practices Reporting Guidelines (August 2006), DBH began to utilize a new reporting system for Fiscal Year 2007, regularly collecting data on existing EBPs from community mental health centers. As the purpose and frequency of Colorado Client Assessment Record (CCAR) collection did not lend itself as a useful means of collecting EBP data, a new process was developed. EBPs are now reported on a bi-monthly basis to DBH. Definitions of acceptable EBPs are given to community providers along with a comparison to Department of Health Care Policy and Financing's (HCPF) service category definitions.

Fiscal Year 2008 (FY08) data on public mental health provider's use of EBPs are presented below. Overall, 13,831 clients received EBP services in FY 08[1]. Table 1 lists the types of EBPs client received.[2] The three most highly utilized EBPs were Medication Management, Assertive Community Treatment (ACT), and Integrated Treatment for Co-Occurring Disorders.

Table 1. Total EBP Clients Served- Fiscal Year 2008

Name of EBP	Frequency	Percent of Total
Medication Management	5,631	29.3%
Assertive Community Treatment (ACT)	4,092	21.3%
Integrated Treatment for Co-Occurring Disorders	2,598	13.5%
Supported Housing	1,937	10.1%
Illness Management Recovery	1,934	10.1%
Functional Family Therapy (FFT)	996	5.2%
Other EBP	764	4.0%
Supported Employment	725	3.8%
Multisystemic Therapy (MST)	351	1.8%
Family Psycho-Education	108	0.6%
Wraparound	64	0.3%
Therapeutic Foster Care	0	0.0%
Total*	19,200	100.0%

*Individuals may have received more than one EBP

The majority of clients (75%) received only one EBP service. Table 2 lists the number of individuals who received one or more EBP.

[1] Pikes Peak Mental Health does not provide client level data and are not included in the analysis
[2] The total clients listed in Table 1 is greater than the actual number of individuals (n=10,308)

Table 2. Total Individuals receiving one or more EBP- Fiscal Year 2008

Number of EBPs received	Frequency	Percent
One	10,314	74.6%
Two	1,976	14.3%
Three	1,259	9.1%
Four	254	1.8%
Five	27	0.2%
Six	1	0.01%
Total	13,831	100.0%

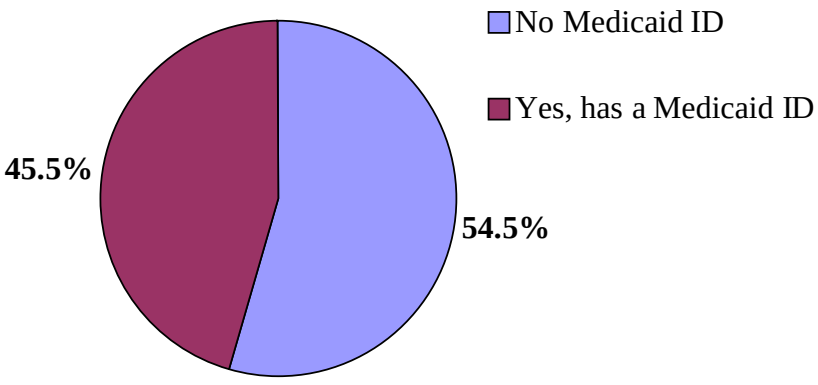
Agencies varied in the number of EBPs offered during FY 08 (See Table 3).

Table 3. Total Agencies Offering One or More EBP

Number of EBPs offered	Number of Agencies	Percent of Total
One	3	18.7%
Two to Three	5	31.3%
Four or More	8	50.0%
Total	16	100.0%

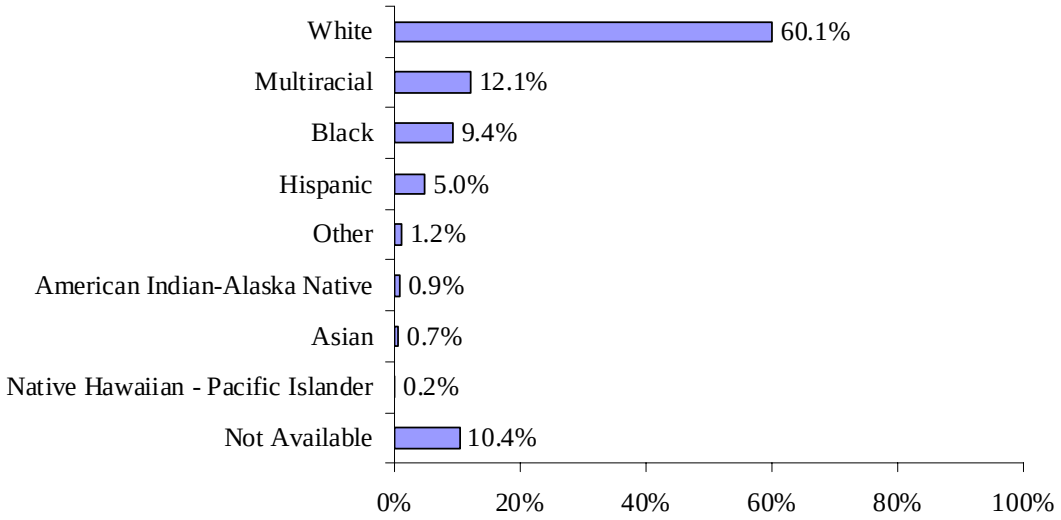
Overall, the majority of clients who participated in EBPs did not qualify for Medicaid (54.5%). Figure 1 displays the overall Medicaid status of EBP clients.

Figure 1. Medicaid Status of EBP Clients (n = 13,831)



The gender breakdown was almost even with 49% of those receiving EBPs being male and 51% being female. The breakdown by ethnicity is presented in Figure 2.

Figure 2. Ethnicity of Clients Receiving EBPs in FY 08 (n = 13,831)



Potential EBP Funding

DBH also has a number of funding sources which could be used, in whole or part, to support EBPs.

Division of Behavioral Health

- State general funds
- Block grant funds

Mental Health

- Existing ACT budget line
- Alternatives program funding
- The enhanced program for detained youth FFT / MST ($500,000)
- Offender Mental Health Services (Senate Bill 97)- mental health services for juvenile and adult offenders, currently 2 million will go to 4 million in 2009- the letter of intent could include EBP requirements
- Former Goebel dollars
- $440,000 was added to block grant- $44,000 is for training and staff development, but these funds need to be expended by the end of the year
- Population in need dollars- could become funding for Data and Evaluation staff in the future

Substance Abuse

- Tobacco securitization dollars
- Potential ETOH tax
- Other state partners- e.g., Medicaid, criminal justice
- Standardized programs- e.g., methadone replacement
- Access to Recovery Grant
- Screening, Brief Intervention, and Referral to Treatment (SBIRT) Grant

II. METHODS

II.A. Creation of the EBP Working Group

A Division of Behavioral Health EBP Working Group was convened in late 2007. The working group represents leaders and experts in the fields of prevention, substance abuse and mental health experts (see Appendix I for working group members). From 2007 to the present, the working group has met eight times to develop the components of this report. Subgroups were also developed charged with reporting back to the working group as a whole. Subgroups focus on:

- Review of State Models
- Data and Outcomes
- Fidelity and Training
- Funding and Contracting

In developing a Colorado EBP model, the working group determined that additional information was needed. This information was collected through cataloguing existing activities, literature review, key informants, and a DBH staff survey. The methodologies for each are briefly described below.

II.B. Literature Review

Literature review of EBP development in public systems

A literature review was conducted aimed at assessing the current state of knowledge related to the dissemination of evidence-based practices at a national or regional system level. The review process produced 16 articles that described a number of state models as well as national efforts, which have developed methods to disseminate evidence-based practices on a large scale (Aarons & Sawitzky, 2006; Daleiden & Chorpita, 2005; Daleiden, Chorpita, Donkervoet, Arensdorf, Brogan & Hamilton, 2006; Coleman, Schnapp, Hurwitz, Hedberg, Cabral, Laszlo & Himmelstein, 2005; Drake, Teague& Gersing, 2005; Ganju, 2003, 2006; Ganju & Goldman, 2006; Gold, Glynn & Mueser, 2006; Goldman, Ganju, Drake, Gorman, Hogan, Hyde& Morgan, 2001; Glisson, 2007;

Hermann, Chan, Zazzali& Lerner, 2006; Isett, Burnam, Coleman-Beattie, Hyde, Morrissey, Magnabosco & Rapp, 2007; Manderscheid & Carroll, 2005; Manderscheid, 2006; Power, 2005; Proctor, Knudsen, Fedoravicius, Hovmand, Rosen & Perron, 2007; Rapp, Bond, Becker, Carpinello, Nikkel & Gintoli, 2005). A summary of many of these articles is found in Appendix III. Published guidelines, existing toolkits, EBP materials developed by other states, and additional resources were also considered.

Attitudinal literature review

The original literature review suggested that system readiness or buy-in from the different stakeholders was critical. Therefore a second literature review was conducted examining studies that had conducted attitudinal surveys of evidence based practices. Using information gathered from several articles, the research team developed a survey to examine the internal workings of DBH in regards to EBPs (see Appendix VI).

II.C. Key Informant Interviews

The literature reviewed identified potential model states. Working group members contacted key champions in those states as well as conducted a more thorough examination of information available for these states' EBPs (e.g., websites, toolkits). The three states participating in interviews were Ohio, Hawaii and Delaware. Summaries of these states' programs are found in Appendix VII.

II.D. Division of Behavioral Health Staff Survey

Through monthly working group discussions, it was determined that DBH would conduct an internal survey to examine the knowledge, attitudes toward, and use of EBPs. The survey was created using a secured on-line survey website. All DBH staff was subsequently emailed twice by the DBH Deputy Director asking for their voluntary participation on the survey. Of the potential 75 respondents, there were a total of 35 respondents. Participants consisted of 19 females (52.8%) and 15 males (41.7%; one person did not report gender) with 80.9% indicating they were of Caucasian descent. Ages ranged from 28-61 years old (M=47.6, SD =9.03). Fifty-eighty percent indicated that their highest level of education was a master's degree followed by a Bachelor's and then a Ph.D. / M.D. The majority of participants (38.9%) indicated that they had been working in the health field for 16-20 years.

Table 4. Division of Behavioral Health Staff Survey Demographic Variables

Ethnicity	Number	Percentage
African American	2	5.56
American Indian/Native American	1	2.78
Caucasian	29	80.56
Hispanic	2	5.56
Pacific Islander	1	2.78
Gender		

Female	19	52.78
Male	15	41.67
Missing	1	2.78
Educational Degree		
Associate's Degree (2 years)	1	2.78
Bachelor's Degree (4 years)	7	19.44
Master's Degree	21	58.33
Ph.D. / M.D.	6	16.67
Years of Service		
0-5	4	11.11
6-10	6	16.67
11-15	3	8.33
16-20	14	38.89
25	7	19.44
Missing	1	2.78

III. KEY FINDINGS

III.A. National Models

There are multiple themes from the EBP literature, which have applicability to Colorado (see the literature review table in Appendix III). The most comprehensive literature search for substance abuse was completed by NIDA's Clinical Trials Network which created a dissemination library to house the latest research findings and effective practices. The literature indicates that EBP implementation needs to reflect multi-level efforts and outcomes, and implementation facilitators and barriers are presented below.

Dissemination of information

Increasing the knowledge base of numerous stakeholders is an early key step to dissemination efforts (Rogers, 2006). These efforts can include training, administrative consultation and practice feedback. Even when fairly intensive, training appears to increase knowledge, but has a limited impact on practice (Rapp et al., 2005).

Organizational culture and climate

There is a clear need for a dedicated organizational champion acting within an infrastructure that can support EBPs. Two broad strategies employed in disseminating EBPs focus on first adopters and later adopters. Success states have initially marketed EBPs to interested providers who wish to be early adopters. These sites typically have a champion and necessary resources at hand. The state of New York used this strategy in running an EBP awareness campaign that sought to enlist champions across stakeholder groups. These first sites establish the visibility and desirability of EBPs, and often act as a training resource for second-generation adopters. Regulatory approaches and contractual mandates may then be put in place for late adopters based on lessons learned (Rapp et al., 2005).

Past research has further demonstrated that a constructive culture overall was associated with more positive attitudes toward adoption of EBP, and poor organizational climates were associated with divergence from EBPs (Aarons et al., 2006).

Policy efforts

There is also some evidence for financial incentives, regulation, and policy interventions in achieving implementation goals. As a few examples, Oregon by statute requires the state to implement EBPs with increasing gradations of funding to be allocated to these practices each year, while North Carolina and Texas passed legislation to require EBPs.

Other strategies include some states' push to include EBPs in Medicaid plans, negotiating a higher rate for these practices. Oregon is moving toward allocating block grant funds on an outcome basis (Rapp et al., 2005). To further support EBPs, many states have also developed partnerships with universities. For these partnerships to be successful, academic partners must understand the realities of public services and have adequate experience with community based research (Gold et al, 2006; Manderscheid, 2006).

Different practices have different requirements

Often times, adoption decisions are made in a context of risk assessment. States diverge widely in their readiness to implement and sustain specific practices. Furthermore, each EBP requires different critical contingencies such as funding and training (Isett et al., 2007). Major decision factors in adopting EBPs includes how easy a practice can be implemented in the current system (e.g., data and outcomes, fidelity monitoring, funding), as well as staff capabilities (e.g., trainability, present skill level). Due to the many resources required, many states focus on just a few EBPs at any given time. It is worth noting that state systems with adjoining university partnerships (e.g., where the EBP was developed) may have an initial advantage due to the existing knowledge base and ready local champions.

The overlap between EBPs and statewide measurement

Although independently developed, both evidence-based practices and performance measurement systems face similar dissemination and sustainability issues. There are some attempts to address both these needs simultaneously (Ganju, 2006). Common measures of EBPs must be integrated into a shared information technology platform (Manderscheid & Carroll, 2005). States like Ohio find that performance monitoring is one of the best means to insure community utilization of EBPs. Therefore, a lack of agreement on desired outcomes is a significant impediment.

Outcomes must include recovery goals such as independence, employment, relationships and health. Fidelity measures can be used to establish clear standards, monitor programs over time, improve performance, and document the relationship between model adherence and outcomes (Rapp et al., 2005). In South Carolina the Governor has adopted an activities based funding approach that requires programs and services to be tied directly to outcomes. New York uses fidelity to Assertive Community Treatment (ACT) to renew licenses. Oklahoma, Alabama, New Hampshire and New York use performance targets and benchmarking milestones to trigger financial incentives.

Exemplary States

Practices in Hawaii, Ohio and Delaware are further detailed as best practices (see Appendix VII for more details).

Hawaii

Hawaii stands out as a state that has implemented diverse and far-reaching evidence-based services which incorporate a wide variety of quality improvement activities for child and adolescent mental health (Daleiden et al., 2006). The state has created decision algorithms and a list of treatment as usual by disorder compared to EBP literature (Daleiden & Chorpita, 2005). Hawaii expects each team/ provider to use EBP approaches, and routinely monitor the outcomes of the services they have provided through approved standardized measures. In addition, to facilitate the ongoing and future EBP capabilities Hawaii developed the Practice Development Office. This office provides interagency training, mentoring, and consultation to promote ongoing skill development and dissemination of services. Future policies are aimed at contracting

providers to complete 46 hours of training across a year in the four main EBP treatments for childhood disorders as well as assessment and outcome monitoring in the system.

Delaware

In an effort to promote EBP usage, Delaware moved to performance based contracting when choosing substance abuse providers. Contracted providers were asked to identify at least one evidence based practice and to provide evidence of their ability to perform that practice, with most providers choosing Motivational Interviewing and/or Cognitive Behavioral Therapy. The first six months following the implementation of the performance incentives were considered a “hold harmless” period where programs were expected to try procedures that would increase utilization and active participation. Community providers were then eligible to receive financial bonuses contingent upon their ability to attract and engage their full complement of patients (i.e., capacity utilization) and to keep those patients actively engaged in all phases of that outpatient treatment. The Delaware contract used both positive incentives (additional dollars) and penalties (loss of base dollars), with no other incentives earned if program utilization was below the 80% and later 90% target rate. Results included integration of EBPs, streamlined procedures and operations, as well as outcomes based staff incentives.

Ohio

Ohio EBP efforts have focused on funding Coordinating Centers of Excellence and Networks (CCOEs) to serve as expert resources providing technical assistance and consultation to improve quality by promoting Best Clinical Practices. CCOEs are based in universities and/or organizations in metropolitan areas around Ohio. Each CCOE concentrates on one EBP and serves as a resource in Ohio for that practice. The shared goal of CCOEs is to encourage the adoption and facilitate the implementation of EBPs by providing training, technical assistance, and consultation to service providers. Ohio tracks process outcomes for the CCOEs (e.g., who was trained, how many participants), and has also completed a study to determine factors and processes that influence the adoption and assimilation of evidence-based practices within provider organizations. While Ohio does not presently monitor fidelity at the state level or tie service codes to EBPs, the state is building a system to flag those persons receiving EBPs to then investigate individual outcomes.

III.B. Definitions

Evidenced-based practices are not a distinct category of practices. Rather, EBPs exist on a continuum from emerging practices to empirically-based practices for prevention and treatment that have been proven by multiple randomized controlled trials.

The scientific evidence to evaluate a particular treatment or practice can vary regarding the number of studies conducted, the rigorousness of study design, the size of samples, the amount of detail about the services or intervention(s) being studied, and other factors. The cumulative strength of scientific evidence regarding a particular practice can be categorized using a variety of schemas.

The Continuum of Evidence

It is clear that EBPs refer to more than just positive research results. In its report, Crossing the Quality Chasm, the Institute of Medicine (IOM, 2001) defines EBPs as "the integration of best research evidence with clinical expertise and patient values". The IOM identifies EBPs by asking "which treatments work for whom, under what circumstances, and why?"

Outside of past research DBH realizes that other sources of evidence need to be considered such as:

- Consumer, family member, and advocate experience, values, and preferences
- Cultural, regional, economic, and clinical variables operative in Colorado
- The practice-based experiences of community providers and administrators
- Statewide cost-effectiveness

SAMHSA toolkits are examples of nationally supported interventions that are not necessarily supported by randomized controlled trials. Concepts like "recovery" or "wrap-around services" may be thought of as promising practices that have a great amount of anecdotal support but little research backing. Much of the currently available scientific evidence on treatments was generated before the consumer-directed movements and other recent developments in the field, and thus research findings are slanted toward conventional outcome measures such as psychiatric symptoms, relapse rates and service utilization patterns, rather than global outcomes, recovery, functional status, and quality of life.

To augment the notion that EBPs are "treatment methodologies for which there is scientifically collected evidence that the treatment works (Hayes, 2005)", many states are determining the strength of practices based on clinical expertise within the context of client characteristics, culture, values and preferences as well.

Cultural factors are an important consideration in planning and delivering services. Many EBPs have not been systematically studied across cultural subgroups (e.g., ethnic minorities, immigrants, genders, age, geographic regions). The supplement to the US Surgeon General's 1999 report noted that culture may affect family structure, coping styles, treatment-seeking behaviors, privacy norms, stigma, and other factors that can

influence the presentation and treatment of disorders. Also, cultural factors may manifest in the culture of the clinician, the service delivery system, and society at large. Despite this awareness, very few systematic studies of defined mental health practices have examined their efficacy or effectiveness in cultural subgroups, nor have many studies determined the cultural adaptation(s) needed to achieve effectiveness in groups that differ from the one(s) for which the original research was conducted. This is extremely salient to Colorado, which has a diverse population, a unique geographic setting, and communities ranging from highly urban to frontier.

III.C. Evidence Based Practice Lists

There are a number of lists or registries of EBPs. For mental health services, some of the most prominent for children and adolescents include both Hawaii's Blue Menu (2007), Virginia's Evidence Based Practices Matrices (2003), SAMHSA's list of EBPs (2005), and Ohio's matrices for adults (2004). Both Hawaii and Ohio's matrices are presented in Appendix V, as they represent the most updated and comprehensive lists. There are also a number of ready resources for substance use prevention and treatment. The National Registry of Evidence-based Programs and Practices (NREPP) is a searchable online registry of mental health and substance abuse interventions that have been reviewed and rated by independent reviewers. SAMHSA/ CSAP's National Centers for the Application of Prevention Technologies (CAPT) also brings research to practice by assisting states and community-based organizations in the application of the latest evidence-based knowledge to their substance abuse prevention programs, practices, and policies. Colorado may use these national resources as a logical place to begin in identifying and prioritizing EBPs.

III.D. Staff Survey

Key results from the staff survey on knowledge, attitudes toward, and use of EBPs are presented below. Six open-ended questions were asked, and responses were compiled and examined using N-VIVO qualitative software.

EBP Definition. The first question asked participants to give a definition of Evidence Based Practices. There was strong agreement between most participants indicating a need for (1) scientific evidence (n=15) (2) proven effectiveness of the EBP (n=12), and (3) demonstrated positive outcomes (n=9). Definitions also included the suggestion that an EBP goes beyond the treatment itself (n=4; e.g., "a process of decision making" or the "client's individual preferences").

Facilitate Participant's Use. Participants were also asked what would facilitate their use of EBPs. Seventeen domains were identified, with the majority indicating further training and knowledge of EBPs (n=10). At the same time, a number of participants indicated that this question was not applicable to them or their position (n=8). Additional themes included; state policies promoting EBPs, having better fidelity measures, increased funding, accessible information regarding EBPs, and better education of the public.

Facilitate Community Use. Participants were asked what would facilitate community use of EBPs. The most indicated response was (1) training (n=18), followed by (2)

consultation and support (n=11), and (3) funding (n=10). Respondents also indicated a need to increase the knowledge base of community stakeholders and to provide more accessible information regarding EBPs.

Barriers to Implementation. Participants identified sixteen barriers to implementing EBPs. The most cited barriers included (1) the need for training (n=21), (2) funding issues (n=19) and (3) the generalizability of EBP research (n=9). The theme of system readiness was also indicated including; lack of (1) buy-in from the numerous stakeholders, (2) policy to support EBP initiatives and (3) a model to help guide the state in the successful implementation of EBPs.

Biggest Downside. Finally, participants were asked what the biggest downside was in moving toward an EBP oriented system. The majority of respondents indicated it (1) EBPs discourage innovation (n=10), followed by (2) cost and resources (n=9), and (3) inappropriate usage (n=7).

Likert Scale Questions. Seven Likert scale questions were asked.

Table 5. Frequency of Responses for the EBP Staff Survey.

	Frequency	Percent
How often do you use EBPs in your work at DBH (e.g., discuss EBPs, analyze data regarding EBPs, monitor EBPs)?		
Frequently	19	54.29
Sometimes	8	22.86
Infrequently	5	14.29
Never	3	8.57
How often do your DBH colleagues use EBPs in their work (e.g., discuss EBPs, analyze data regarding EBPs, monitor EBPs)?		
Frequently	12	34.29
Sometimes	13	37.14
Infrequently	6	17.14
Never	2	5.71
Missing	2	5.71
How would you describe the attitude toward EBP in your agency?		
Neutral	8	22.86
Welcoming	25	71.43
Missing	2	5.71
How would you describe the attitude of most of your colleagues toward EBPs?		
Neutral	12	34.29
Welcoming	21	60.00
Missing	2	5.71
How much do you agree or disagree that the practice of EBP improves client		

outcomes?		
Strongly Agree	14	40.00
Agree	13	37.14
Neutral	4	11.43
Disagree	1	2.86
Missing	3	8.57
How much do you agree or disagree that the practice of EBP increases your workload?		
Agree	10	28.57
Neutral	14	40.00
Disagree	6	17.14
Strongly Disagree	2	5.71
Missing	3	8.57
How do you obtain information about EBPs?		
Journals	21	60
Listservs	16	45.7
Colleagues	28	80
Trainings	22	62.5
Internet	25	71.4
Administration	10	28.6

IV. RECOMMENDATIONS

IV.A. Leadership

"Change requires supportive leadership that it actively involved in the process, ensuring full participation from all members and protecting time for reflection (Stroebel et al. 2005, p. 441)." Implementation of EBPs is a long process and needs to become an ongoing part of the business of DBH, and must have a clear linkage to DBH's goals and objectives. Leadership support will be necessary throughout this long process if positive outcomes are to be achieved.

IV.B. Logic Model

The working group and DBH will follow the logic model on the next page for the state's future EBP initiatives. Proximal and distal activities are presented along with potential outcomes to be tracked. The working group will revisit this logic model on a regular basis to determine what actions have been accomplished and if changes need to be made.

IV.C. Definition of Evidence-Based Practices

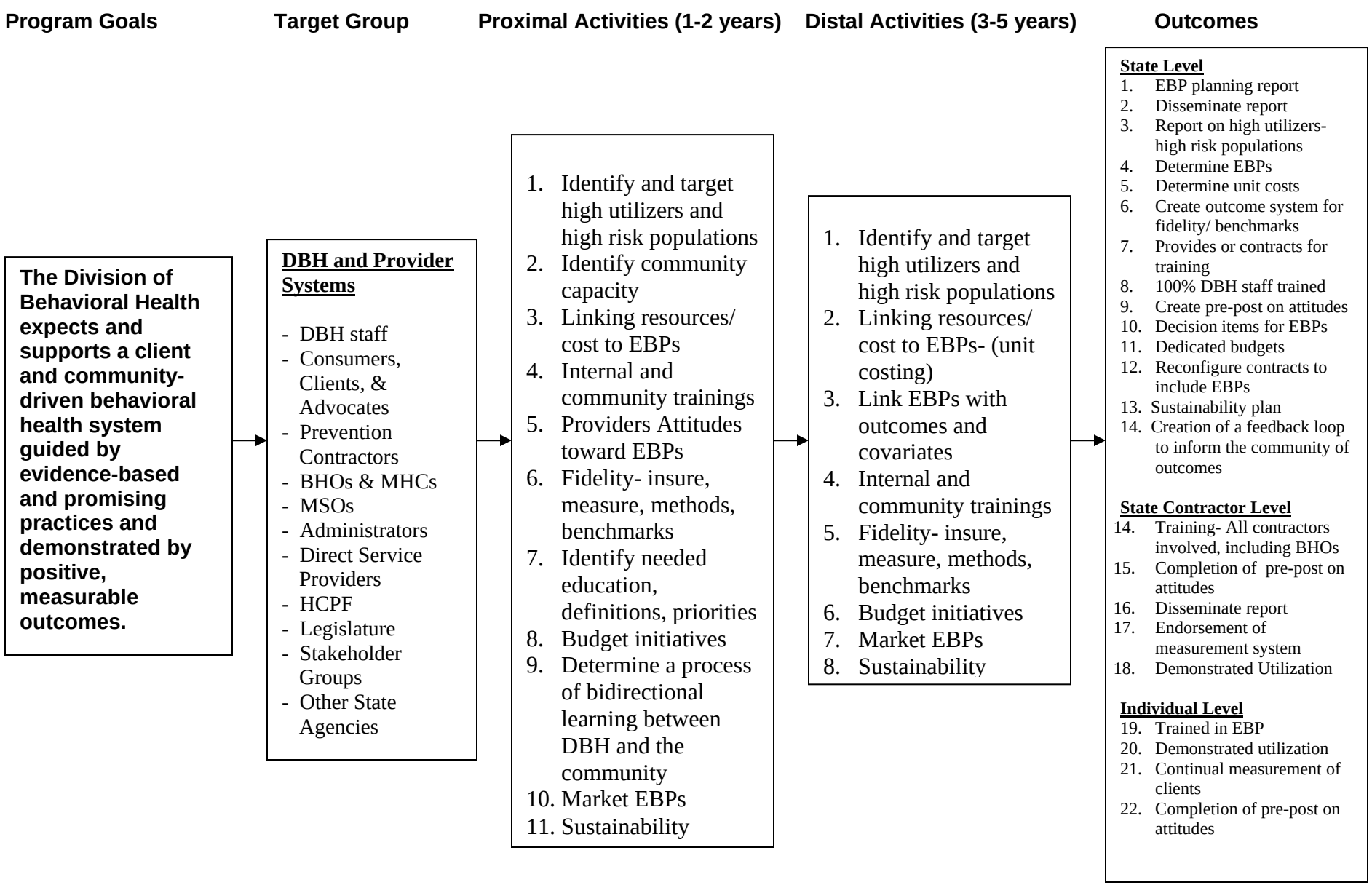
The Division of Behavioral Health defines Evidence-Based Practices as those practices that have an established research base, but will also encompass promising practices. Promising practices may emerge from new research, practice based evidence, expert consensus and/or client preference.

This operational flexibility will allow DBH to continually enhance the quality of public services while addressing Colorado's demographics, geography, community readiness, and available resources. The defining requirement of all EBPs, inclusive of promising practices, will be the ability to demonstrate outcomes acceptable to DBH and the stakeholders it serves.

IV.D. Priority Evidence-Based Practices

The EBPs prioritized for policy and contracting will be those already included in the 2006 EBP Guidelines for mental health, and any EBPs currently employed by substance abuse providers. To the extent possible, further EBPs development will draw from existing national catalogues of EBPs (Appendix V), as well as SAMHSA and NIDA toolkits and best practices.

The recommended EBPs for Colorado should be considered guidelines for program planning and development, rather than treatment guidelines for particular consumers. Service planning for individual consumers should incorporate their needs, preferences, values, goals, and strengths, as well as the assessment and clinical judgment of those providing services.


Program Goals
Target Group
Proximal Activities (1-2 years)
Distal Activities (3-5 years)
Outcomes
The Division of Behavioral Health expects and supports a client and community-driven behavioral health system guided by evidence-based and promising practices and demonstrated by positive, measurable outcomes.
DBH and Provider Systems
- DBH staff
- Consumers, Clients, & Advocates
- Prevention Contractors
- BHOs & MHCs
- MSOs
- Administrators
- Direct Service Providers
- HCPF
- Legislature
- Stakeholder Groups
- Other State Agencies
1. Identify and target high utilizers and high risk populations
2. Identify community capacity
3. Linking resources/ cost to EBPs
4. Internal and community trainings
5. Providers Attitudes toward EBPs
6. Fidelity- insure, measure, methods, benchmarks
7. Identify needed education, definitions, priorities
8. Budget initiatives
9. Determine a process of bidirectional learning between DBH and the community
10. Market EBPs
11. Sustainability
1. Identify and target high utilizers and high risk populations
2. Linking resources/ cost to EBPs- (unit costing)
3. Link EBPs with outcomes and covariates
4. Internal and community trainings
5. Fidelity- insure, measure, methods, benchmarks
6. Budget initiatives
7. Market EBPs
8. Sustainability
State Level
1. EBP planning report
2. Disseminate report
3. Report on high utilizers- high risk populations
4. Determine EBPs
5. Determine unit costs
6. Create outcome system for fidelity/ benchmarks
7. Provides or contracts for training
8. 100% DBH staff trained
9. Create pre-post on attitudes
10. Decision items for EBPs
11. Dedicated budgets
12. Reconfigure contracts to include EBPs
13. Sustainability plan
14. Creation of a feedback loop to inform the community of outcomes
State Contractor Level
14. Training- All contractors involved, including BHOs
15. Completion of pre-post on attitudes
16. Disseminate report
17. Endorsement of measurement system
18. Demonstrated Utilization
Individual Level
19. Trained in EBP
20. Demonstrated utilization
21. Continual measurement of clients
22. Completion of pre-post on attitudes

IV.E. Policy & Contracting

DBH will increasingly integrate EBPs into provider contracts for substance abuse and mental health services. A gradual shift to EBPs will occur over the next five years. The specific details of this plan will be determined by DBH leadership. A first step will involve the demonstration of outcomes for the EBPs, which community providers currently state they are using per current contracts. This would be aligned with the reporting requirements for indigent consumers under the 2006 EBP Guidelines for mental health. Similar contractual obligations would be added to substance abuse contracts where they do not already exist.

As a performance-based system is established, DBH will rapidly need to determine what outcomes will be tracked and how funding will be tied to both qualitative and quantitative results. DBH will explore means for linking payment codes to EBPs beginning with a review of the existing “cross-walk”.

IV.F. Training

Through training, DBH will collaboratively champion priority ideas and actions. EBP training is necessary for both DBH staff and the public substance abuse and mental health systems. The recent DBH survey results will suggest training needs for DBH staff. The fidelity and training subgroup will suggest next steps for internal training and community training. Training will focus on closing the credibility gap, the applicability of EBPs, and the flexibility inherent in this system, potential outcomes and available resources. Fortunately, DBH already has a strong research foundation and existing relationships with academic centers to capitalize on when building training opportunities.

IV.G. Outcomes & Monitoring

The working group and relevant subgroups will determine expected outcomes for EBPs and to what extent fidelity to EBPs will be required. Outcomes will include not only conventional measures (e.g., symptom levels, relapse rates, hospitalization), but also capture recovery, hopefulness, community integration, and quality of life.

EBP initiatives also provide an opportunity to discuss if evaluation and monitoring functions can be better integrated across public mental health and substance abuse services. A natural place to begin would be with provider setting currently providing co-occurring mental health and substance abuse services.

IV.H. Community Dissemination & Input

The working group will determine how EBP planning will be reported to the community (e.g., planning council, individuals and families, provider groups, and advocacy organizations), and how input will be solicited. Community buy-in will be critical to the sustainability of EBPs.

IV.I. Timeline

The working group will arrive at a timeline for next actions by the end of November 2008 and will update this timeline on at least a quarterly basis throughout 2009.

APPENDIX I.
COLORADO EVIDENCE-BASED PRACTICES
WORK GROUP MEMBERS

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Appendix II. Division of Behavioral Health Evidence Based Practice Data for Fiscal Year 2008

Appendix II. Table 1. Total EBP Clients Served by Agency

Appendix II. Table 2: Total Individuals Receiving One or More EBP by Agency

Appendix II. Table 3. Medicaid Status of EBP Clients by Agency

Appendix II. Table 1. Total EBP Clients Served by Agency- FY08*

Agency	ACT	Supported Employment	Supported Housing	Family Psych-Educ	Integrated Treatment for Co-Occurring Disorders	Illness Management Recovery	Medication Manag.	MST	FFT	Wrap-around	Other EBP	Total*
Colorado West			47	22	455		2,503		42			3,069
North Range Behavioral	182	55			48	94	27	95	153			654
Centennial				13								13
Arapahoe		55	188		524	35			137			939
Larimer		52	204	38	81			143	134			652
West Central	40			19						22		81
Community Reach Center			270		243					3		516
Southeast Colorado						21						21
Jefferson			470		31	66		113	166		286	1,132
Southwest Colorado			25		89	1						115
Boulder	110								109			219
San Luis Valley	83	28	28		9	308			164			620
Midwestern Colorado				16								16
MH Center of Denver	2,253	462	520		1,107	136				11	478	4,967
Aurora	1,273	70	156		11	1,273	3,101		91	28		6,003
Spanish Peak	151	3	29									183
Total	4,092	725	1,937	108	2,598	1,934	5,631	351	996	64	764	19,200

*Individuals may have received more than one EBP

Appendix II. Table 2: Total Individuals Receiving One or More EBP by Agency- FY08

Agency	One	Two	Three	Four	Five	Six	Total
Colorado West (n=2,872)	93.2%	6.7%	0.1%				100%
North Range Behavioral (n=552)	85.1%	11.6%	2.9%	0.4%			100%
Centennial (n=13)	100.0%						100%
Arapahoe (n=845)	90.1%	8.9%	0.9%	0.1%			100%
Larimer (n=613)	94.0%	5.7%	0.3%				100%
West Central (n=81)	100.0%						100%
Community Reach Center (n=475)	91.4%	8.6%					100%
Southeast Colorado (n=21)	100.0%						100%
Jefferson (n=998)	89.0%	8.9%	1.8%	0.3%			100%
Southwest Colorado (n=109)	94.5%	5.5%					100%
Boulder (n=219)	100.0%						100%
San Luis Valley (n=394)	49.5%	44.4%	5.3%	0.8%			100%
Midwestern Colorado (n=16)	100.0%						100%
MH Center of Denver (n=2,926)	51.4%	31.3%	13.7%	3.3%	0.2%		100%
Aurora (n=3,523)	62.2%	10.7%	22.4%	4.2%	0.6%	0.03%	100%
Spanish Peak (n=174)	94.8%	5.2%					100%
Total (n=13,831)	78.8%	15.5%	4.6%	1.0%	0.1%		100%

Appendix II. Table 3. Medicaid Status of EBP Clients by Agency

Agency	No Medicaid ID	Yes, has a Medicaid ID
Colorado West (n=2,872)	60.9%	39.1%
North Range Behavioral (n=552)	35.7%	64.3%
Centennial (n=13)	61.5%	38.5%
Arapahoe (n=845)	51.5%	48.5%
Larimer (n=613)	42.6%	57.4%
West Central (n=81)	100.0%	
Community Reach Center (n=475)	20.8%	79.2%
Southeast Colorado (n=21)	28.6%	71.4%
Jefferson (n=998)	43.5%	56.5%
Southwest Colorado (n=109)	78.0%	22.0%
Boulder (n=219)	47.0%	53.0%
San Luis Valley (n=394)	28.4%	71.6%
Midwestern Colorado (n=16)	62.5%	37.5%
MH Center of Denver (n=2,926)	69.6%	30.4%
Aurora (n=3,523)	57.5%	42.5%
Spanish Peak (n=174)	20.7%	79.3%
Total (n=13,831)	54.5%	45.5%

Appendix III. Evidence Based Practices Literature Review

Title	Author	Journal	Description of Article/Abstract
Getting Better at Getting Them Better: Health Outcomes and Evidence-Based Practice Within a System of Care	Daleiden, Chorpita, Donkervoet, Arensdorf, Brogan, Hamilton	Journal of the American Academy of Child & Adolescent Psychiatry Vol 45(6) Jun 2006 749-756	During the past 10 years, public mental health services for children and youths in Hawaii experienced a major system restructuring. The five current goals of the Department of Health Child and Adolescent Mental Health Division (CAMHD) strategic plan are shared ownership, accountable business practices, system of care principles, evidence-based practices, and performance evaluation. Hawaii has implemented a diverse and far-reaching evidence-based services initiative that incorporates a wide variety of quality improvement activities. The initiative may be broadly characterized as a two-pronged strategy: first, building specific empirically supported programs and second, pursuing incremental improvement of current care toward evidence-based ideals. Procedures for evaluating the Hawaii system of care for youths have evolved over the years, so long-term, well-validated child and system status measures that clearly map the course of the transformation are not available. Nevertheless, progressive information from each of the reform eras can be illuminating. A variety of qualitative and quantitative evidence indicates that the Hawaii system of care for youths has improved dramatically during the past decade. Numerous system restructuring and quality improvement activities were implemented during this period.
Assessing and changing organizational culture and climate for	Glisson	Research on Social Work Practice Vol 17(6), Nov-07 pp. 736-747	The 2007 Aaron Rosen Lecture was presented at the annual meeting of the Society for Social Work and Research, January 12, 2007, in San Francisco, CA. The lecture begins by describing the gap between what is known about

effective services.			efficacious treatments and other evidence-based practices on the one hand and the services that are provided in actual community-based practice settings on the other. To address this gap, the lecture calls for the development of a science of implementation effectiveness and describes the author's research on assessing and changing the social context of mental health and social service organizations as contributing to that effort. The findings of two national studies and one controlled clinical trial are summarized to (a) link organizational social context to service outcomes, (b) describe a new profiling system for assessing organizational social context, and (c) demonstrate how social context can be changed with planned organizational intervention strategies.
Implementation of evidence-based practice in community behavioral health: Agency director perspectives.	Proctor, Knudsen, Fedoravicius, Hovmand, Rosen, Perron	Administration and Policy in Mental Health and Mental Health Services Research. Vol 34(5), Sep 2007, pp. 479-488	Despite a growing supply of evidence-based mental health treatments, we have little evidence about how to implement them in real-world care. This qualitative pilot study captured the perspectives of agency directors on the challenge of implementing evidence-based practices in community mental health agencies. Directors identified challenges as limited access to research, provider resistance, and training costs. Director leadership, support to providers, and partnerships with universities were leverage points to implement evidenced-based treatments. Directors' mental models of EBP invoked such concepts as agency reputation, financial solvency, and market niche. Findings have potential to shape implementation interventions.
The state policy context of implementation issues	Isett, Burnam, Coleman-Beattie, Hyde, Morrissey,	Psychiatric Services. Vol 58(7), Jul 2007 pp. 914-921	Objectives: This study analyzed implementation issues related to several evidence-based practices for adults with serious mental illness that were included in a national

for evidence-based practices in mental health.	Magnabosco, Rapp, Ganju, Goldman		demonstration project. The five evidence-based practices included in this investigation are assertive community treatment, family psychoeducation, illness management and recovery, integrated dual diagnosis treatment, and supported employment. The objective of the study was to assess the role of state mental health authorities as agents of change. Methods: Two-person teams conducted interviews with state mental health authorities, consumers, families, representatives of local mental health authorities, and representatives of other relevant state agencies--more than 30 individuals at each of the eight sites. Interviews took place at two time points at least one year apart and probed the facilitators and barriers to implementation at the state level. Data were assessed qualitatively to identify common trends and issues across states related to leadership, training, and regulatory issues for each evidence-based practice. Results: Each of the five practices has different critical contingencies for statewide implementation and requires unique assets to address those contingencies by the state mental health authorities. The contingencies are related to these critical areas: financing and regulations, leadership, and training and quality. Conclusions: States are key to implementing evidence-based practices, but state mental health authorities should note that each of the practices requires different skill sets and involves different stakeholders. Thus implementing many evidence-based practices at once may not yield economies of scale.
Aligning measurement-based quality improvement with implementation	Hermann, Chan, Zazzali, Lerner	Adminstration and Policy in Mental Health and Mental Health	Two models for improving quality of care have been adopted by segments of the US mental healthcare system. Measurement-based quality improvement (MBQI) is routinely conducted by many provider organizations

of evidence-based practices.		Services Research. Special Issue: Implementing evidence-based mental health practices and performance measures in Massachusetts. Vol 33(6), Nov 2006, pp. 636-645	(including practices, hospitals and health plans), either at their own initiative or at the behest of payers and oversight organizations. Systematic implementation of evidence-based practices (EBPs) is being undertaken by several state mental health authorities and by other systems of care, working in collaboration with services researchers and stakeholders. Although they are distinct approaches, MBQI and EBP implementation (EBPI) overlap in their objectives and means. This article explores the degree to which these two approaches are aligned and whether further coordination between them could yield greater effectiveness or efficiency.
Some thoughts on the relationships between evidence based practices, practice based evidence, outcomes, and performance measures.	Manderscheid	Administration and Policy in Mental Health and Mental Health Services Research. Special Issue: Implementing evidence-based mental health practices and performance measures in Massachusetts. Vol 33(6), Nov 2006, pp. 646-647	Because of its current organizational arrangements and close family-like contacts among leaders in the field, Massachusetts is well positioned to become an exemplary State with respect to implementation of evidence-based practices and performance measurement in behavioral health care. EBPs hold much promise for behavioral health care. If implemented appropriately, they can improve the quality of behavioral health care services to millions of people. Linking EBP with PBE through outcome assessment will allow us to bridge this important quality chasm so that the consumers' point of view is actually reflected in practice. Outcome measures should be based upon objective factors and upon consumer perception of care. When outcome measures are summarized across consumers for a particular provider, or are summarized across providers, then one has performance measures that can be used to improve the quality of care delivery systems. Massachusetts is ready to begin implementing EBPs, identify PBE through outcome

			assessment, and to create a performance measurement system that will promote quality improvement.
Mental health quality and accountability: The role of evidence-based practices and performance measurement.	Ganju	Adminstration and Policy in Mental Health and Mental Health Services Research. Special Issue: Implementing evidence-based mental health practices and performance measures in Massachusetts. Vol 33(6), Nov 2006, pp. 659-665	Both evidence-based practices and performance measurment in mental health systems have been implemented as largely independent initiatives, each facing issues related to systemwide, sustained implementation. A major thrust of this article is that a broader quality and accountability framework is cririca l for obtaining better outcomes and for incorporating these initiatives into business as usual. This article provides an overview of national initiatives in these areas, lessons learned from implementation efforts, and problems encountered. Building on these experiences, a model for a quality acountability framework is proposed in which evidence-based practices and performance measurement systems can together provide productive and ongoing synergy.
Challenges to Implementing and Sustaining Comprehensive Mental Health Service Programs.	Gold, Glynn, Mueser	Evaluation & the Health Professions. Vol 29(2), Jun 2006, pp. 195-218	The President's New Freedom Commission recently concluded that the nation's mental health service delivery system is ill equipped to meet the complex needs of persons with mental illness. A major contributor to this service quality crisis has been the longstanding divergence of research efforts and clinical programs. In this article, the authors begin by describing the unique needs of persons with serious and persisting psychiatric disorders and the evolution of the mental health service system that has attempted to meet these needs. They then discuss recent efforts to upgrade services by emphasizing the use of evidence-based practices (EBPs) and the research underlying their development. Next, they describe the difficulties of using traditional research methods to develop

			and test interventions for persons receiving services at public mental health agencies. Finally, they outline the challenges confronted when trying to disseminate these EBPs to the wider clinical community
Organizational Culture and Climate and Mental Health Provider Attitudes Toward Evidence-Based Practice.	Aarons, Sawitzky	Psychological Services. Vol 3(1), Feb 2006, pp. 61-72	Mental health provider attitudes toward adopting evidence-based practice (EBP) are associated with organizational context and provider individual differences. Organizational culture and climate are contextual factors that can affect staff acceptance of innovation. This study examined the association of organizational culture and climate with attitudes toward adopting EBP. Participants were 301 public sector mental health service providers from 49 programs providing mental health services for youths and families. Correlation analyses and multilevel hierarchical regressions, controlling for effects of provider characteristics, showed that constructive culture was associated with more positive attitudes toward adoption of EBP and poor organizational climates with perceived divergence of usual practice and EBP. Behavioral health organizations may benefit from consideration of how culture and climate affect staff attitudes toward change in practice.
The Role of State Mental Health Authorities in Promoting Improved Client Outcomes through Evidence-Based Practice.	Rapp, Bond, Becker, Carpinello, Nikkel, Gintoli	Community Mental Health Journal. Vol 41(3), Jun 2005, pp. 347-363	The role of state mental health authorities (SMHA) is critical to implementing and sustaining evidence-based practices. This paper describes the seven major tasks of SMHA's that comprise that role and provides examples from states, which have been actively pursuing evidence-based practices.
State Mental Health Authorities and	Drake, Teague, Gersing	Community Mental Health Journal. Vol	As state mental health authorities (SMHAs) attempt to promote evidence-based practices within their systems of

Informatics.		41(3), Jun 2005, pp. 365-370	care, they often ignore the enormous potential of information technology. In this article, we outline the advantages of using informatics to promote evidence-based practices, describe the current barriers to using informatics in this way, and suggest several strategies for SMHAs. Electronic medical records offer the potential to provide standardized data on assessments, service use, and outcomes in real time. Clinicians and/or clients can input accurate, relevant, and usable data. Changing clinical culture requires commitment, leadership, investment, persistence, and continued attention over time. Because of the up-front costs and many sources of resistance, re-orienting a system of care must be based on a long-term rather than short-term vision. SMHAs can facilitate the adoption of information technology in several ways, such as leadership, education, standardization, and technology transfer. The most important SMHA role is leadership. In the process of moving toward informatics to improve evidence based practices, SMHAs must provide leadership, standardization, training, decisions support systems, and resources. To achieve success, they must also insure that their efforts improve clinical care and efficiency rather than increase burden at the local level.
Strategies for Transforming Mental Health Care Through Data-Based Decision Making.	Power	International Journal of Mental Health. Vol 34(1), Spr 2005, pp. 26-36	The President's New Freedom Commission on Mental Health calls for the transformation of the U.S. mental health-care system. The use of information technology is a cornerstone in the preparation for this mission. Achieving transformation, however, means overcoming existing hindrances to high-quality mental health care for all Americans. Strategies in financing, human resources, rapid integration of evidence-based practices, adoption of

			performance measures, and expanding the use of information technology are crucial to transforming the behavioral health-care system.
Information Technology and Performance Measures as Transformational Strategies.	Manderscheid & Carroll	International Journal of Mental Health. Vol 34(1), Spr 2005, pp. 103-111	As discussed in other articles in this special issue, the Institute of Medicine's Crossing the Quality Chasm model is ideally suited to promote the transformation of mental health-care delivery systems [1]. The model identifies several key strategies through which transformation takes place, including new approaches to financing, preparing, and training of human resources; the introduction of evidence based practices; and implementation of information technology and performance measurement systems. This article focuses on only the last two of these strategies. Specific topics to be addressed include (a) the role of information technology in transformation, (b) development of a national information technology strategy, (c) development of a common information technology platform for the field, and (d) identification of common performance measures. Special attention is devoted to Decision Support 2000+, a Substance Abuse and Mental Health Services Administration initiative to promote these goals.
Overview Of Publicly Funded Managed Behavioral Health Care.	Coleman, Schnapp, Hurwitz, Hedberg, Cabral, Laszlo, Himmelstein	Administration and Policy in Mental Health. Vol 32(4), Mar 2005, pp. 321-340	Using MEDLINE and other Internet sources, the authors perform a systematic review of published literature. A total of 109 articles and reports are identified and reviewed that address the development, implementation, outcomes, and trends related to Managed behavioral health care (MBHC). MBHC remains a work in progress. States have implemented their MBHC programs in a number of ways, making interstate comparisons challenging. While managed behavioral health care can lower costs and

			increase access, ongoing concerns about MBHC include potential incentives to under-treat those with more severe conditions due to the nature of risk-based contracting, the tendency to focus on acute care, difficulties assuring quality and outcomes consistently across regions, and a potential cost-shift to other public agencies or systems. Success factors for MBHC programs appear to include stakeholder involvement in program and policy development, effective contract development and management, and rate adequacy.
Implementation of Evidence-Based Practices in State Mental Health Systems: Implications for Research and Effectiveness Studies.	Ganju	Schizophrenia Bulletin. Vol 29(1), 2003, pp. 125-131	There is a huge gap between knowledge and practice, and between what is known through research and what is actually implemented in public mental health systems. In the past 2 decades, rigorous research has demonstrated the effectiveness of various treatments and interventions but these findings have not resulted in broad-based implementation. A major contention of this article is that while there is a growing body of knowledge related to evidence-based practices, there is a lack of understanding and research related to factors critical for implementation. This article reviews the current status of implementation of evidence-based practices in the public mental health system and identifies challenges and barriers related to their dissemination. Based on this analysis, this article proposes a research agenda that promotes the development of a science of implementation of evidence-based practices.
Policy implications for implementing evidence-based practices.	Goldman, Ganju, Drake, Gorman, Hogan, Hyde, Morgan	Psychiatric Services Vol 52(12). Dec 2001, pp. 1591-1597	The authors describe the policy and administrative-practice implications of implementing evidence-based services, particularly in public-sector settings. They review the observations of the contributors to the evidence-based practices series published throughout 2001 in Psychiatric

			Services. Quality and accountability have become the watchwords of health and mental health services; evidence-based practices are a means to both ends. If the objective of accountable, high-quality services is to be achieved by implementing evidence-based practices, the right incentives must be put in place, and systemic barriers must be overcome. The authors use the framework from the U.S. Surgeon General's 1999 report on mental health to describe eight courses of action for addressing the gap between science and practice: continue to build the science base; overcome stigma; improve public awareness of effective treatments; ensure the supply of mental health services and providers; ensure delivery of state-of-the-art treatments; tailor treatment to age, sex, race, and culture; facilitate entry into treatment; and reduce financial barriers to treatment.
From Data to Wisdom: Quality Improvement Strategies Supporting Large-scale Implementation of Evidenced Based Services	Daleiden & Chorpita	Child Adolescent Pscyhiartric Clincics of North America V 14 2005 329-349	The goal of this article is to illustrate various strategies that the Hawaii Child and Adolescent Mental Health Division (CAMHD) adopted to increase the use of empirical evidence to improve the quality of services and outcomes for youth. We operate from the premise that evidence-based decision making extends beyond the use of treatment outcome literature to inform decisions regarding treatment selection. We elaborate a list of common clinical decisions, discuss multiple evidence bases that may inform these decisions, and use a model of the phases of evidence to illustrate multiple quality improvement strategies used within the Hawaii system of care for youth. This article provides a broad overview to various quality initiatives for promoting evidence-based practices rather than in depth discussion of any specific strategy.

APPENDIX IV
OTHER REFERENCES AND RESOURCES

Achieving the Promise: Transforming Mental Health Care in America. The President's New Freedom Commission on Mental Health, 2003.

Addiction Technology Transfer Center Network website: http://www.attcnetwork.org/index.asp

Blueprint for Change: Research on Child and Adolescent Mental Health. 2001

Centers for the Application of Prevention Technologies website: http://captus.samhsa.gov/national/resources/evidence_based.cfm

Evidence-based Practices Implementation Resource Kits. SAMHSA's National Mental Health Information Center. Substance Abuse and Mental Health Services Administration (SAMHSA), the Center for Mental Health Services. http://www.samhsa.gov

Institute of Medicine. (2001). Crossing the quality chasm: A new health system for the 21st century. Washington, DC: Institute of Medicine.

NASMHPD Research Institute (2002). Implementation of evidence-based services by state mental health agencies: 2001: Preliminary results based on 42 states responding. NRI State Profile Highlights, 11.

National Institute on Drug Abuse (NIDA) – CTN Dissemination Library

National Institute on Drug Abuse (NIDA) - Medical and Health Professionals website at http://www.drugabuse.gov/medstaff.html

National Institute on Drug Abuse (NIDA) – Principles of Drug Addiction Treatment: A Research Based Guide at http://www.drugabuse.gov/PODAT/PODATIndex.html

National Technical Assistance Center (Spring, 2001). Bridging the gap between research and services with evidence-based practices. Networks.

New York State Office of Mental Health http://www.omh.state.ny.us

Prevention Office of National Drug Control Policy website: http://www.whitehousedrugpolicy.gov/PREVENT/programs.html

SAMHSA website: www.samhsa.gov

SAMHSA Center for Substance Abuse Treatment (CSAT) website: http://csat.samhsa.gov

SAMHSA Co-Occurring Center for Excellence (COCE) website: http://coce.samhsa.gov

SAMHSA National Registry of Evidence Based Programs and Practices website: http://nrepp.samhsa.gov/index.asp

Texas Institute of Behavioral Research website: http://www.ibr.tcu.edu/

US Department of Health and Human Services, Office of the Surgeon General: Mental health: A report of the Surgeon General, 1999

US Department of Health and Human Services, Office of the Surgeon General: Mental health: culture, race, and ethnicity—A supplement to mental health: a report of the Surgeon General, 2001

US Department of Health and Human Services, US Public Health Service: Report of the Surgeon General's Conference on Children's Mental Health: a national action agenda, 2000

Wisconsin Clearinghouse for Prevention Resources website: http://wch.uhs.wisc.edu/01-Prevention/01-Prev-EvidenceBased.html

Appendix V. Evidence Based Practices for Adults

Problem spectrum	Level of Evidence	Intervention
Agoraphobia	Well-Established	Exposure Therapy for Agoraphobia
Alcohol Abuse and Dependence	Probably-Efficacious	Cue Exposure
Alcohol Abuse and Dependence	Probably-Efficacious	Social Skills Training
Alcohol Abuse and Dependence	Probably-Efficacious	Urge Coping Skills
Generalized Anxiety Disorder	Well-Established	Applied Relaxation
Generalized Anxiety Disorder	Well-Established	Cognitive Therapy
Major Depressive Disorder	Well-Established	Antidepressant Medication
Major Depressive Disorder	Well-Established	Cognitive Therapy
Major Depressive Disorder	Well-Established	Depression Behavior Therapy
Major Depressive Disorder	Probably-Efficacious	Problem-solving Therapy
Obsessive-Compulsive Disorder	Well-Established	Exposure and Response Prevention Therapy
Obsessive-Compulsive Disorder	Probably-Efficacious	Cognitive Therapy
Panic Disorder	Well-Established	Exposure Therapy
Panic Disorder	Well-Established	Applied Relaxation
Panic Disorder	Well-Established	Cognitive Therapy
Post-traumatic Stress Disorder	Well-Established	Exposure Therapy for PTSD
Post-traumatic Stress Disorder	Well-Established	Eye Movement Desensitization and Reprocessing (Imaginal Exposure)
Post-traumatic Stress Disorder	Probably-Efficacious	Inoculation Therapy
Schizophrenia	Probably-Efficacious	Social Skills Training
Social Phobia	Well-Established	Exposure Plus Cognitive Restructuring
Social Phobia	Well-Established	Exposure Therapy
Substance Abuse and Dependence	Probably-Efficacious	Behavior Therapy
Substance Abuse and Dependence	Probably-Efficacious	Cognitive Therapy for Opiate Dependence
Substance Abuse and Dependence	Probably-Efficacious	Relapse Prevention Therapy for Cocaine Dependence
Substance Abuse and Dependence	Probably-Efficacious	Supportive-expressive Therapy for Opiate Dependence

Appendix V. Evidence Based Practices for Children and Adolescents

Problem spectrum	Level of Evidence	Intervention
Anxious or Avoidant Behaviors	Well-Established	Cognitive Behavior Therapy
Anxious or Avoidant Behaviors	Well-Established	Education
Anxious or Avoidant Behaviors	Well-Established	Exposure
Anxious or Avoidant Behaviors	Well-Established	Modeling
Anxious or Avoidant Behaviors	Probably Efficacious	Assertiveness Training
Anxious or Avoidant Behaviors	Probably Efficacious	Cognitive Behavior Therapy and Medication
Anxious or Avoidant Behaviors	Probably Efficacious	Cognitive Behavior Therapy with Parents
Anxious or Avoidant Behaviors	Probably Efficacious	Hypnosis
Anxious or Avoidant Behaviors	Probably Efficacious	Relaxation
Attention and Hyperactivity Behaviors	Well-Established	Behavior Therapy and Medication
Attention and Hyperactivity Behaviors	Well-Established	Intensive Communication Training
Attention and Hyperactivity Behaviors	Probably Efficacious	Biofeedback
Attention and Hyperactivity Behaviors	Probably Efficacious	Contingency Management
Attention and Hyperactivity Behaviors	Probably Efficacious	Education
Attention and Hyperactivity Behaviors	Probably Efficacious	Parent Management Training
Attention and Hyperactivity Behaviors	Probably Efficacious	Parent Management Training and Problem Solving
Attention and Hyperactivity Behaviors	Probably Efficacious	Physical Exercise
Attention and Hyperactivity Behaviors	Probably Efficacious	Relaxation and Physical Exercise
Attention and Hyperactivity Behaviors	Probably Efficacious	Social Skills and Medication
Attention and Hyperactivity Behaviors	Probably Efficacious	Working Memory Training
Delinquency and Disruptive Behavior	Well-Established	Assertiveness Training
Delinquency and Disruptive Behavior	Well-Established	Cognitive Behavior Therapy

Delinquency and Disruptive Behavior	Well-Established	Contingency Management
Delinquency and Disruptive Behavior	Well-Established	Multisystemic Therapy
Delinquency and Disruptive Behavior	Well-Established	Parent Management Training
Delinquency and Disruptive Behavior	Well-Established	Social Skills
Delinquency and Disruptive Behavior	Probably Efficacious	Relaxation
Delinquency and Disruptive Behavior	Probably Efficacious	Self Verbalization
Delinquency and Disruptive Behavior	Probably Efficacious	Parent Management Training and Problem Solving
Delinquency and Disruptive Behavior	Probably Efficacious	Anger Control
Delinquency and Disruptive Behavior	Probably Efficacious	Client Centered Therapy
Delinquency and Disruptive Behavior	Probably Efficacious	Communication Skills
Delinquency and Disruptive Behavior	Probably Efficacious	Foster Care
Delinquency and Disruptive Behavior	Probably Efficacious	Functional Family Therapy
Delinquency and Disruptive Behavior	Probably Efficacious	Multidimensional Treatment
Delinquency and Disruptive Behavior	Probably Efficacious	Outreach Counseling
Delinquency and Disruptive Behavior	Probably Efficacious	Peer Pairing
Delinquency and Disruptive Behavior	Probably Efficacious	Problem Solving
Delinquency and Disruptive Behavior	Probably Efficacious	Rational Emotive Therapy
Delinquency and Disruptive Behavior	Probably Efficacious	Self Control Training
Delinquency and Disruptive Behavior	Probably Efficacious	Transactional Analysis
Depressive or Withdrawn Behaviors	Well-Established	Cognitive Behavior Therapy
Depressive or Withdrawn Behaviors	Well-Established	Cognitive Behavior Therapy and Medication
Depressive or Withdrawn Behaviors	Relaxation	Cognitive Behavior Therapy
Depressive or Withdrawn Behaviors	Interpersonal Therapy	Cognitive Behavior Therapy
Depressive or Withdrawn Behaviors	Family Therapy	Cognitive Behavior Therapy

Depressive or Withdrawn Behaviors	Cognitive Behavior Therapy with Parents	Cognitive Behavior Therapy
Depressive or Withdrawn Behaviors	Client Centered Therapy	Cognitive Behavior Therapy
Eating Disorders	Probably Efficacious	Family Therapy
Substance Use	Well-Established	None
Substance Use	Probably Efficacious	Cognitive Behavior Therapy
Substance Use	Probably Efficacious	Family Therapy
Substance Use	Probably Efficacious	Contingency Management
Substance Use	Probably Efficacious	Family Systems Therapy
Substance Use	Probably Efficacious	Purdue Brief Family Therapy
Traumatic Stress	Well-Established	Cognitive Behavior Therapy with Parents
Traumatic Stress	Probably Efficacious	Cognitive Behavior Therapy

Appendix VI. Division of Behavioral Health Staff Survey

1. Open-Ended Questions

The Behavioral Health Services Division at the Colorado Department of Human Services is surveying DBH staff about their awareness, attitudes, beliefs, and behaviors regarding Evidence Based Practices (EBPs). The information we collect will be used to help DBH determine staff needs and concerns regarding the roll-out of a statewide EBP program. Please take a few moments to complete the items. We appreciate your thoughts.

***1. In your own words, how do you define Evidence Based Practices (EBPs)?**

***2. In your own words, how do you define fidelity to EBPs?**

***3. What would facilitate your use of EBPs in your job?**

***4. What would facilitate community use of EBPs?**

***5. From your perspective, what are the main barriers to implementing community-based EBPs?**

***6. What is the biggest downside to moving toward an EBP oriented system?**

2. Multiple Choice Questions

1. How often do you use EBPs in your work at DBH (e.g., discuss EBPs, analyze data regarding EBPs, monitor EBPs)? (frequently, sometimes, never)

2. How often do your DBH colleagues use EBPs in their work (e.g., discuss EBPs, analyze data regarding EBPs, monitor EBPs)? (sometimes, infrequently, never)

3. How do you obtain information about EBPs? (journals, listservs, trainings, internet)

4. How would you describe the attitude toward EBP in your agency? (welcoming, unwelcoming)

5. How would you describe the attitude of most of your colleagues toward EBPs? (welcoming, unwelcoming)

6. How much do you agree or disagree that the practice of EBP improves client outcomes? (strongly agree to strongly disagree)

7. How much do you agree or disagree that the practice of EBP increases your workload?

3. Demographic Information

1. Ethnicity:

2. Gender:

3. Highest Educational Degree

4. What organization do you identify with (please choose one)?

5. What is your current title?

6. How many years have you worked in the behavioral health field?

7. Age:

Appendix VII. Exemplary State Models

A. **Delaware**
B. **Hawaii**
C. **Ohio**

A. Delaware Division of Substance Abuse and Mental Health
http://www.dhss.delaware.gov/dhss/dsamh/index.html

In Partnership with the-

Treatment Research Institute, Philadelphia, PA
http://www.tresearch.org/tx_systems/projects1.htm

The **Delaware Division of Substance Abuse and Mental Health (DSAMH)** is located in the Department of Health and Social Services (DHSS). DSAMH serves the adult (age 18 and older) population in need of publicly funded behavioral health services. DSAMH is organized into three operating units. These are the Delaware Psychiatric Center (DPC), two Community Mental Health Centers with six sites, and a variety of community-based Substance Abuse Treatment Programs.

DSAMH has partnered with the **Treatment Research Institute (TRI)** which is a not-for-profit research and development organization dedicated to reducing the devastating effects of alcohol and other drug abuse on individuals, families and communities by employing scientific methods and disseminating evidence-based information. TRI was founded in 1991 by A. Thomas McLellan, Ph.D., Jack Durell, M.D. and a small team of colleagues from the University of Pennsylvania.

Performance Based Purchasing in the Delaware Substance Abuse Treatment System: Delaware providers were eligible to receive financial bonuses contingent upon their ability to attract and engage their full complement of patients (i.e., capacity utilization) and to keep those patients actively engaged in all phases of that outpatient treatment. The Delaware contract used both positive incentives (additional dollars) and penalties (loss of base dollars).

Program encourages "**practice based evidence**". A key element in fostering creativity, ingenuity, and efficiency is that these contracts provide incentives for faster completion and/or for a better finished product - and penalties for poor performance. Contracted providers were asked to identify at least one evidence based practice and to provide evidence of their ability to perform that practice. Most providers chose Motivational Interviewing and/or Cognitive Behavioral Therapy.

Three patient behaviors were selected as the key performance criteria: (1) Capacity Utilization, (2) Active Participation, (3) Program Completion. No other incentives could be earned if program utilization was below the 80% and later 90% target rate. The relative importance of the contingencies is important to re-emphasize. The ability to achieve 80% capacity utilization was critical for the majority (94%) of the funding available to a program and thus their very survival. It is perhaps not surprising that the programs showed remarkable and rapid levels of improvement on that criterion. In contrast, each of the participation criteria could only account for an additional 1%

increment; and while seemingly potent enough to engender change, those rates of change were not dramatic.

The first six months following the implementation of the performance incentives were considered a "hold harmless" period where programs were expected to try procedures that would increase utilization and active participation, but all programs received full payment of one twelfth of their annual budget – though not performance incentives.

Results- The program encouraged each provider to try any legitimate set of administrative and clinical procedures they thought might enhance performance; and to share those "best practices" with the other programs, without detracting from their own potential earnings.

- All programs streamlined their admission procedures, reducing the data collection burden and focusing early sessions upon meeting the patients' needs and promoting engagement. All programs increased their hours of operation making it easier for patients to attend sessions in the morning and evening. Three programs opened additional satellite offices to make services more easily accessible in previously under-served areas.
- Several programs made physical changes in their programs to make them more attractive and inviting.
- Two programs developed methods of sharing the program performance bonuses directly with the clinical staff.
- Some tied patient performance bonuses directly to the salaries of their counselors, while other programs created group incentives based on the performance of the clinical teams.
- Finally, all programs learned at least one evidence based clinical practice - primarily Motivational Interviewing and Cognitive Behavioral Therapy.

Program avoided an inter-program system of competition that would have necessitated "case mix adjustment" which is problematic.

A final general design principle for the system was that the performance incentive dollars would be calculated and reimbursed to the programs each month, rather than in a lump sum at the end of a year. This may appear to be a mundane property of the system but in fact, close contiguity between behavior and incentives (rewards) is a critical behavioral principle. Beyond the psychological aspects of this, most of the programs essentially went at risk for new funding, and rapid return of the earned income (within 30 - 45 days of invoice receipt) was necessary to maintain liquidity and assure adequate cash flow.

Reference: McLellan AT, Kemp J, Brooks AC, Carise D (In Press) Improving Public Addiction Treatment through Performance Contracting: The Delaware Experiment. Health Policy

B. Hawaii- Child and Adolescent Mental Health Division (CAMHD)

http://hawaii.gov/health/mental-health/camhd/index.html

Approach

CAMHD is organized into eight (8) CAMHD branches consisting of seven (7) Family Guidance Centers (FGCs) and one (1) Family Court Liaison Branch (FCLB), and include approximately 164 positions. A network of approximately 18 contracted provider agencies located throughout the

CAMHD expects each team/provider to use research findings as data to guide them as they develop individualized plans. The teams are then expected to routinely monitor the outcomes of the services they have provided. CAMHD supports the use of practices and approaches that achieve the goals as established, not any particular treatment approach.

Implementation of EBPs

1."Package" EBP programs (MST, FFT, and MTFC)

Provider agencies that HI contracts to provide services to youth enrolled in CAMHD that specifically provide one of the package programs. These programs provide training to their providers via the associated purveyor organization (e.g., MST National).

2.Evidence-based practice elements (EBPE)

With regard to EBPEs, the Practice Development section of CAMHD in the Clinical Services Office is in the process of developing trainings (modeled after Child STEPs modular trainings in collaboration with Bruce Chorpita) and plan to begin trainings in the fall to all contracted providers in CAMHD network.

Training in EBPE will utilize an "evidenced informed approach". It will consist of 46 hours of training to occur over a yearlong process in total.

- Introduction training:
  - 4 hours
  - Introduction to the state system and a little about elements. It is a prerequisite to all other trainings.
- Additional sets of trainings:
  - Trainings will be 6 hour long utilizing an interactive approach.
  - Trauma
  - DBD
  - Affective Disorders
  - Non-specific factors

- Possibility of doing a supervision module

3. Additional ways that EBPs are encouraged are through IPSPG (purple book) and the EBS Committee.

Purple book are the guidelines and policies

EBS Committee is a standing committee with open participation to code research articles and help design the tools which detail the most up to date information on EBPs.

Monitoring abilities

1. Childhood Behavioral Checklist (Clinical measure)
2. Child Adolescent Functioning Assessment Scale (Functioning measure)
3. CALOCUS (Functioning measure)
4. Monthly Provider Treatment Summary (Provider Practice Measure)
5. Possibility of doing some fidelity monitoring with EBPE for certification.

At a programmatic level these tools are utilized for CQI and UM purposes. Also been utilized to review the effectiveness of specific programs such as MST in comparison to national data. As time goes on, they will hopefully be utilized to monitor individual client progress and the use of EBPs.

C. Ohio Department of Mental Health
Office of Clinical Best Practices
http://www.mh.state.oh.us/medicaldirdiv/clinicalbp/clinicalbp.resources.html

Ohio's public mental health system includes the **Ohio Department of Mental Health (ODMH)**, 50 county and multi-county boards, and nearly 500 community mental health agencies. The boards, which in most cases oversee both mental health and addiction services, do not directly provide services. They act as local mental health authorities, funding, planning, monitoring and purchasing services provided by private agencies and the Behavioral Healthcare Organizations (BHOs) operated by ODMH. The decision to adopt EBPs supported by the centers is voluntary.

ODMH does not directly track individual outcomes, but rather contracts for a service package with the county and multi-county boards. In aggregate they track general outcomes such as decreased hospitalization and criminal justice involvement, functioning, and quality of life. They do not monitor fidelity at the state level or tie service codes to EBPs. They are headed toward flagging those persons receiving EBPs to investigate individual outcomes in the future.

ODMH funds **Coordinating Centers of Excellence and Networks** (CCOEs) to serve as expert resources providing technical assistance and consultation to improve quality by promoting Best Clinical Practices. CCOEs are based in universities and/or organizations in metropolitan areas around Ohio. Each CCOE concentrates on one EBP and serves as a resource in Ohio for that practice. The shared goal of CCOEs is to encourage the adoption and facilitate the implementation of EBPs by providing training, technical assistance, and consultation to service providers. The CCOEs are:

- Integrated Dual Disorder Treatment/ SAMI
- Supported Employment
- Cluster-Based Planning Alliance
- Mental Illness/MR/DD
- Criminal Justice
- Center for Learning Excellence
- Center for Innovative Practices
- Wellness Management and Recovery
- Adult Recovery Network
- Mental Health Network for School Success
- Ohio Coordinating Center for Assertive Community Treatment
- Mental Health Housing Leadership Institute

ODMH tracks process outcomes for the CCOEs (e.g., who was trained, how many participants).

ODMH also has a longitudinal study- **The Innovation Diffusion and Adoption Research Project (IDARP)** was conducted to identify factors and processes that influence the adoption and assimilation of evidence-based practices within organizations. Some of the key findings are:

- Adoption decisions are made in a context of risk assessment. There is a decision process and a decision point within an agency about whether they're going to adopt an evidence-based practice.
- Scientific evidence was important in the decision process; this information can also be communicated in an educational campaign.
- A big decision factor in whether agencies thought they could manage the risks was how easy they thought the practice would be to get up and running, and whether their staff could get the skills to do it.
- The variable that had the highest correlations with positive outcomes was performance monitoring—the extent to which the agency actively watched what was happening as the practice was being implemented.
- Results showed a negative correlation with the variable of reinvention—in other words, the extent to which the practice is modified from its original tested form has a negative impact on success.
- How things happen at the very beginning—back when the agency is in the thinking and discussion process—can affect whether there is success at the end.
- The successful implementation of an EBP is a long process by definition. It needs to become an ongoing part of business in an agency. Top management support for the practice is needed throughout the long, ongoing implementation for it to produce positive outcomes.