State Implementation of Evidence-Based Practice for Youths, Part II: Recommendations for Research and Policy

ERIC J. BRUNS, PH.D., KIMBERLY EATON HOAGWOOD, PH.D., JEANNE C. RIVARD, PH.D., JIM WOTRING, M.S.W., LYNNE MARSENICH, L.C.S.W., AND BILL CARTER, L.C.S.W.

In part 1 of this column, we began with two universitybased researchers on opposite coasts of the United States struggling to lead state-level initiatives to promote adoption and implementation of evidence-based practice (EBP) for children, youths, and families.¹ We then provided six examples of state responses to this challenge. The present column concludes by reflecting on the diverse nature of state-level EBP implementation efforts and presenting opportunities and future directions for research and policy.

As previously described, states are clearly in a position to lead mental health service and system reform efforts, including the use of EBP to improve outcomes.^{2–4} As exemplified, however, by the multiplicity of approaches adopted by states such as California, Colorado, Hawaii, Michigan, New York, and Ohio, there is no single clear pathway to successful adoption of EBP.¹ Although there is some consensus on what we want to achieve (e.g., more children served via appropriate and effective models, more clinicians trained to EBP standards, sustained state and local structures that promote EBP implementation over time), there is little research or even theory on what state- or large jurisdiction–level approaches hold the most promise.

As a starting point, representatives from the states cited above (and others) who participate in the national Child and Family Evidence-Based Practices Consortium have attempted to characterize the diversity of their efforts by elucidating some dimensions of state EBP implementation efforts. The goal is to build a conceptual framework that can support state-level initiatives to promote EBP (and large-scale system initiatives in general). Through this effort, we also hope to facilitate future study of system-level factors that help create successful outcomes.

DIMENSIONS OF STATE EBP IMPLEMENTATION EFFORT

To date, we have identified six primary dimensions in which EBP implementation support varies in states. These include the impetus for EBP efforts, fiscal drivers, the locus of the effort(s), training infrastructure, evaluation model, and conceptual model. Unlike the models presented in part 1 of this column,¹ these dimensions do not constitute a model for promoting successful public policy, but rather are the result of an inductive process to develop a scheme for characterizing the different approaches adopted by states to support EBP implementation for children and youths.

One primary dimension in which states vary is the impetus—or driving force(s)—for the EBP effort. In some states, momentum for the effort is provided by leaders in the system who advocate for EBP

Accepted January 4, 2008.

Dr. Bruns is with the University of Washington School of Medicine; Dr. Hoagwood is with Columbia University College of Physicians and Surgeons; Dr. Rivard is with the National Association of State Mental Health Program Directors Research Institute; Mr. Wotring is with the Michigan Department of Community Health; and Ms. Marsenich and Mr. Carter are with the California Institute for Mental Health.

The authors thank all of the members of the Child and Family Evidence-Based Practice Consortium for their help with this column. They also thank Erik Janson, Research Coordinator, for assisting in literature review and manuscript preparation.

Correspondence to Dr. Eric J. Bruns, Division of Public Behavioral Health and Justice Policy, University of Washington School of Medicine, 2815 Eastlake Avenue East, Seattle, WA 98102; e-mail: ebruns@u.washington.edu.

^{0890-8567/08/4705-0499©2008} by the American Academy of Child and Adolescent Psychiatry.

DOI: 10.1097/CHI.0b013e3181684557

implementation. In other states, the driving forces are legal, regulatory, or fiscal motivators. This dimension can be conceived as developmental: Many state EBP efforts were initially leadership driven, but leaders eventually worked to create fiscal and regulatory levers for change. As a result, unlike a few years ago, few state EBP efforts are now supported solely by advocacy and leadership on the part of a few stakeholders. Oregon, for example, has gone so far as to pass legislation mandating that by 2008, 75% of services provided by the public mental health system will be evidence based.⁵ A list of these services has been made available to providers along with criteria for proposing other services that may be eligible under this mandate.

Certainly, fiscal drivers of EBP implementation can be posed as a dimension unto itself. In recent years, several states have experimented with new funding approaches to support delivery of EBPs. For instance, in 2003, Texas created a defined benefit plan for management of services to support different levels of services for children in the state system. The plan defined eligibility for benefits based on case rates, utilization management, and use of specific EBPs, such as cognitive-behavioral therapies, psychoeducation, multisystemic therapy,6 multidimensional treatment foster care,⁷ and the wraparound process.⁸ New York state has adopted an enhanced clinic rate structure as an incentive for quality practices. Neither of these approaches has been comprehensively evaluated, although an evaluation of an approach in New Mexico to integrate financing for all behavioral health services under one state umbrella is being supported by the MacArthur Foundation.

In addition to impetus, a related dimension is the locus of the effort. Where do guidance, support, and/ or policy development for state EBP activities make their home? For some states, it is firmly in state government (e.g., Hawaii, New York), whereas other states support county-level development to adopt specific approaches (e.g., Ohio). Other states provide resources to and rely heavily on universities or public–university partnerships (e.g., Michigan). Finally, some states have evolved complex collaborations to support EBP implementation, including contracts with nongovernmental intermediary purveyor organizations. California's effort, for example, is based at the California Institute for Mental Health, a private nonprofit organization that supports the public mental health system by working with county mental health departments and community-based organizations that choose to implement specific EBPs. Both private foundations and the state Department of Mental Health provide financial support to subsidize the implementation costs.

A fourth dimension includes establishment of training infrastructure. Although some states establish local infrastructure, others may rely on an expert-driven model whereby resources are provided to purveyors from outside the state. For example, in New York, the Office of Mental Health contracts with national treatment developers and university-based consultants to support the training of more than 400 clinicians per year. In other states, there is no support for implementation resources from the state itself; local providers or service system must find their own resources to respond to demands for EBP implementation.

Another dimension along which EBP implementation can vary is the evaluation model. States implementing EBP vary greatly in their decisions about specific data elements to be collected (e.g., costs, fidelity, outcomes), and how these data will be used. Although evaluation may be rather piecemeal in some states, other states (e.g., Michigan, Hawaii) have emphasized using empirical data as the basis for state decision making, including selection of EBPs.9 In this model, the performance measurement system is the foundation used to foster an empirically based culture among providers and consumers. Proponents of this approach advocate for evaluating client-level outcomes for EBPs, given the inconsistent quality of the research base of empirically supported treatments¹⁰ and the challenge of transporting them into real-world settings.¹¹

Other observed dimensions are somewhat more abstract. For example, EBP activities of some of the member states are clearly part of an overarching theory of change or conceptual model for achieving better outcomes for children and adolescents. New York's multifaceted effort that includes support for specific EBPs, a treatment dissemination center, an enhanced rate structure for providers that implement EBP, and efforts to foster engagement and empowerment of children and families is a good example of how EBP can fit into a complex but clearly articulated overarching systems change effort (Fig. 1). For many states, however, legislation, lawsuits, or other forces have introduced EBP implementation as an end unto



Fig. 1 New York state implementation model. EBPs = evidence-based practices.

itself, relatively disconnected from an overarching theory of change.

RECOMMENDATIONS AND FUTURE DIRECTIONS

Recommendations for States

The Child and Family Evidence-Based Practices Consortium has been meeting regularly since 2004 to share ideas about state-level EBP implementation challenges and strategies. Regardless of the specific approaches adopted, states involved in the Consortium have identified a consistent set of recommendations. By far the most frequently voiced recommendation from member states is to phase in slowly and take time to build relationships with a diverse array of stakeholders before rolling out any EBP implementation effort. Specifically, upfront planning among the key partners is critical, including both the leaders and mid-level managers of the child-serving agencies involved, representatives of provider organizations who will participate, and the model developers, purveyors, and researchers who will be contributing to the effort. In addition, Consortium members also have emphasized the importance of engaging a diverse set of "champions," individuals who may not participate in the day-to-day activities of EBP implementation but whose support is critical to maintain both the vision and tangible supports to the EBP effort. Champions may

include, for example, legislators, advocates for children and families, and local community leaders.

State representatives also recommend phasing in actual implementation rather than rapid expansion across multiple sites. Beginning an EBP implementation effort by restricting it to counties or providers that demonstrate readiness (e.g., through a request for proposal process) may be a way to feasibly test an initiative while generating broader interest among other stakeholders statewide. For example, the California Institute for Mental Health's Development Team approach builds in a request for proposals process aimed at ensuring that counties participating in initial EBP dissemination efforts meet criteria for readiness.⁴ In addition, putting into place data management and accountability systems to track implementation/dissemination processes at different levels (e.g., clinicians, supervisors, agencies) and provide feedback to practitioners and stakeholders, on both fidelity and outcomes, is critical to improving both practice and knowledge within these broad initiatives. As described in part 1 of this column, Michigan supports a systematic effort to conduct statewide outcomes measurement of mental health outcomes for children receiving services and convenes providers regularly to review data on fidelity and outcomes.4

As described above, state efforts are rapidly evolving from leadership-driven efforts to initiatives with specific fiscal and regulatory drivers. Even in the face of this trend, it is important to establish close partnerships among key leaders and stakeholders and to develop communication plans that capitalize and build on such partnerships. Whether formal or informal, such social marketing should include regular communication with top administrators and developing printed and Webbased materials to reinforce the vision, goals, and methods of the EBP implementation effort. The California Institute for Mental Health provides a range of training sessions at state conferences, state and local committee meetings, and county-sponsored events as a way to reinforce the child EBP implementation agenda in the state. Meanwhile, New York engages parents, family members, and youths in planning efforts and has developed a skills-based curriculum to train family partners who can actively bridge the divide between professionals and family members in EBP and other mental health implementation issues.¹²

Finally, it is critical not to underestimate the investment of funding (and time) required to make high-fidelity implementation (a hallmark of, but not unique to, EBP) successful.¹³ In New York, for example, the costs to conduct initial training and then provide 1 year of consultation to approximately 400 clinicians on a set of specific EBPs was more than \$600,000.¹² In California, a 4-year effort to disseminate an evidence-based family therapy model for high-need youths and families in 26 sites required state mental health dollars, foundation grants, and county and agency contributions that have totaled more than \$2.6 million. Neither of these examples accounts for the portion of clinicians' salaries and benefits required to receive training, supervision, and consultation or to provide the specific treatments. Although it is unclear whether this example reflects an actual increase in training or implementation funds spent by systems overall, it clearly illustrates the need for support for new strategies in the use of such funds. It also underscores the investment necessary to carry out model adherent implementation. With such investments of time and resources on the line, it is no wonder that poorly conceived or resourced efforts can create ill will and a reluctance to participate in future attempts.¹⁴

Federal Recommendations

The federal government has supported state efforts to adopt and disseminate EBP through developmental and

intervention research, training and technical assistance, and demonstration and evaluation of planning and implementation strategies.¹⁵ These types of federal assistance are helpful in facilitating state-level EBP efforts; however, states also need policy and programmatic initiatives that will assist in providing the infrastructure to sustain their efforts. As described above, such infrastructure will include support for ongoing provider and stakeholder training, fidelity tracking and monitoring, data management and feedback systems, and organizational management support.

Federal financing policies also need to be responsive to the intensive restructuring of clinical practice that accompanies state-level EBP implementation. This is no small matter. As described in our previous column,⁴ the state of New York is considering an enhanced case rate for provider organizations that implement EBPs. To support this effort, data on relevant indicators (e.g., number of clinicians and supervisors trained, number of children served) must be collected and applied, requiring significant changes to data, administrative, licensing, and fiscal infrastructures (in addition to the enhancements to the training and consultation infrastructures already described). In California, where the California Institute for Mental Health has provided support to a research-supported child welfare and mental health practice, local agencies must use at least two federal funding sources (Early Periodic Screening, Detection, and Treatment or and Title IV-E), as well as a third revenue source (e.g., grants, flexible funds available through state waivers, special foster care rates) to support other necessary practice components, not traditionally funded by child welfare or mental health systems. The challenge of coordinating all of these funding sources has been significant enough to inhibit broad dissemination of the model.

More fundamentally, as stated earlier, financing to sustain EBP is also influenced by Medicaid reimbursement rates and codes, which often do not map onto EBP nomenclature. In addition to falling short of the full amount needed to reimburse clinicians for their time implementing an EBP, the lack of alignment between Medicaid codes and EBP fidelity requirements means practitioners are often required to complete double and triple the paperwork, providing several additional barriers to EBP implementation. The Centers for Medicare and Medicaid Services recently released a technical assistance paper on how to finance EBP¹⁶;

J. AM. ACAD. CHILD ADOLESC. PSYCHIATRY, 47:5, MAY 2008

however, this document included only one child-specific EBP model. An updated guidance of this type, reflecting a wider range of specific EBPs for prevention and intervention in children's mental health, would help promote states' efforts to move toward effective dissemination.

At the same time, it will be important for federal policies not to inadvertently inhibit innovation. For example, federal requirements for Federal Community Mental Health Block Grants of the Substance Abuse and Mental Health Services Administration includes state-level reporting to the Uniform Reporting System, which comprises 21 tables on characteristics of people served, prevalence estimates of need, outcomes of care, client assessment of care, insurance status, use of selected EBPs, and many other domains.¹⁷ At this point, only three specific child EBPs are reported on in the Uniform Reporting System. Such reporting requirements can shape what EBPs are selected for implementation by states and thus may inadvertently restrict the range of EBPs that state policymakers are willing to consider to only those listed on the Uniform Reporting System. Such federal-level policy decisions must be made carefully because they will likely influence decisions about EBP implementation made by states.

A Research Agenda

As the vignette in the previous column described, empirical evidence on how to diffuse evidence, particularly in state systems, is largely absent.⁴ However, as the existence of our state EBP Consortium attests, there are numerous opportunities for studying the basic processes of implementation and dissemination in state systems. For example, by applying theories from health diffusion, social-organizational, and behavior change literatures, readiness for adoption studies can be conducted to examine change processes across multiple levels (child/family, clinician, clinic, agency, systems) and their interaction over time. Of particular interest will be identifying factors that predict initial adoption of a new practice (i.e., overt commitment of a clinician or agency to learn/apply an EBP), ongoing implementation (including achieving fidelity), and sustainability or maintenance over time.

Research on the alignment between specific EBPs and real-world systems of care is also needed. Empirically supported practices and programs continue to be implemented in underfunded and overburdened service systems serving an increasingly complex clientele. Meanwhile, practice developers have increasingly stringent requirements for implementation, including prescribed and limited staff roles, low caseloads, documentation beyond Medicaid or other insurance standards, and intensive clinical supervision. If there is to be a large-scale uptake of EBP (in the absence of a substantial increase in resources), then the field will need a critical mass of studies that focus on implementation models better fitted to the funding and policy contexts of real-world systems.

In general, the children's services field needs to broaden the common conception that EBP refers only to specific empirically supported treatments. As our Consortium has found, EBP writ large requires attention to a broader array of practices, including use of strategies for engaging stakeholders and families, standardized assessments and outcome monitoring systems, provision of different modalities of consultation and training (e.g., Web based, in person, telephone), and support for organizational change. To support more effective EBP implementation in the future, states and localities should take advantage of opportunities to generate and test hypotheses in these areas and others. For example, do counties (or provider organizations) that follow a prescribed preimplementation phase have fewer obstacles to implementation (or sustainability)? Do counties or clinics that install specified fidelity tracking and monitoring for the EBP demonstrate better fidelity or a greater rate of improvement in child/family outcomes? Are costs of using different well-specified training and consultation models offset by reductions in longer term costs of serving children, youths, and families?

CONCLUSIONS

Use of EBP to treat mental health problems in children and adolescents has hardly been a panacea. Implementation issues continue to confound providers and policymakers alike, and the evidence base itself continues to be at an extremely preliminary stage.¹⁰ Nonetheless, the focus on EBP has generated optimism¹⁸ and provided clinicians with a useful heuristic with which to resolve specific questions.¹⁹

At the state policy level, it may be true that the evidence does not (yet) answer questions about how

governments should operate, but even critics of the EBP movement have acknowledged that the practical limitations of EBP are at least balanced by its laudable public health goals and its political strengths.²⁰ These political strengths include providing an empirical argument for more funds for mental health services, greater acceptability of mental health treatments, a greater focus on quality and accountability, and a basis for proactive regulatory changes. The EBP movement may also help promote stronger alliances across agencies and thereby reduce stigma for consumers of mental health services. In the future, states will provide a beneficial unit of analysis to test such thought-provoking hypotheses about the benefits of EBP to the global children's mental health field.

Disclosure: The authors report no conflicts of interest.

REFERENCES

- Bruns EJ, Hoagwood KE. Implementation of evidence-based practice for youths, part 1: responses to the state of the evidence. J Am Acad Child Adolesc Psychiatry. 2008;47:369–373.
- Bell NN, Shern DL. State Mental Health Commissions: Recommendations for Change and Future Directions. Washington, DC: National Technical Assistance Center for State Mental Health Planning; 2002.
- Glisson C, Schoenwald S. The ARC Organizational and Community Intervention Strategy for implementing evidence-based children's mental health treatments. *Ment Health Serv Res.* 2005;7:243–259.
- Magnabosco J. Innovations in mental health services implementation: a report on state-level data from the US Evidence-Based Practices Project. *Implementation Sci.* 2006;1:1–13.
- Oregon Department of Human Services. Implementation of Evidence-Based Practices in Oregon. 2005. http://www.oregon.gov/DHS/mentalhealth/ebp/factsheet.pdf. Accessed September 17, 2007.
- 6. Henggeler SW, Schoenwald SK, Bordiun CM, Rowland MD, Cunningham PB. *Multisystemic Treatment of Antisocial Behavior in Children and Adolescents*. New York: Guilford; 1998.

- Chamberlain PC, Reid JB. Comparison of two community alternatives to incarceration for chronic juvenile offenders. J Consult Clin Psychol. 1998;66:624–633.
- Walker JS, Bruns EJ. Building on practice based evidence: using expert perspectives to define the wraparound process. *Psychiatr Serv.* 2006;57:1579–1585.
- Wotring J, Hodges K, Xue Y, Forgatch M. Critical ingredients for improving mental health services: use of outcome data, stakeholder involvement, and evidence-based practices. *Behav Ther.* 2005;28: 150–158.
- Jensen PS, Weersing R, Hoagwood KE, Goldman E. What is the evidence for our evidence based treatments? A hard look at our soft underbelly. *Ment Health Serv Res.* 2005;7:53–74.
- National Institute of Mental Health. State Implementation of Evidence-Based Practices, II: Bridging Science to Service. 2004. http://grants. nih.gov/grants/guide/rfa-files/RFA-MH-05-004.html. Accessed September 12, 2007.
- 12. North MS, Gleacher AA, Radigan M, et al. Evidence-Based Treatment Dissemination Center (EBTDC): Bridging the Research-Practice Gap in New York State. Report on Emotional and Behavioral Disorders in Youth, Vol. 8, no. 1; Winter 2008.
- 13. Fixsen DL, Naoom SF, Blasé KA, Friedman RM, Wallace F. Implementation Research: A Synthesis of the Literature. Tampa, FL: University of South Florida, Louis de la Parte Florida Mental Health Institute, The National Implementation Research Network; 2005.
- 14. Woolston JL. Implementing evidence-based treatments in organizations. J Am Acad Child Adolesc Psychiatry. 2005;44:1313–1316.
- Chambers DA, Ringeisen H, Hickman EE. Federal, state, and foundation initiatives around evidence-based practices for child and adolescent mental health. *Child Adolesc Psychiatr Clin North Am.* 2005; 14:307–327.
- Center for Medicare and Medicaid Services. Medicaid support of evidence-based practices in mental health programs. 2005. http:// www.cms.hhs.gov/PromisingPractices/Downloads/EBP_Basics.pdf. Accessed August 12, 2007.
- Lutterman T, Gonzales O. Uniform reporting system. In: Manderscheid R, Berry J, eds. *Mental Health, United States, 2004.* Rockville, MD: U.S. Department of Health and Human Services Substance Abuse and Mental Health Services Administration Center for Mental Health Services; 2004.
- Chorpita BF, Becker KD, Daleiden E. Understanding the common elements of evidence based practice: misconceptions and clinical examples. J Am Acad Child Adolesc Psychiatry. 2004;46:647–652.
- Hamilton J. The answerable question and a hierarchy of evidence. J Am Acad Child Adolesc Psychiatry. 2005;44:596–600.
- Tanenbaum S. Evidence-based practice in mental health: practical weaknesses meet political strengths. J Eval Clin Pract. 2004;9:287–301.