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Extended Day Treatment: A Comprehensive Model of After School Behavioral Health Services for Youth

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Abstract

This paper describes Extended Day Treatment (EDT), an innovative intermediate-level service for children and adolescents with serious emotional and behavioral disorders, delivered in the after school hours. The current paper describes the core components of the EDT model of care within the context of statewide systems of care, including its theoretical foundations, core service components, relation to evidence-based practices, workforce composition and staff training, and data collection and reporting mechanisms. Recommendations are provided for statewide implementation, followed by discussion of model development as an approach to systems reform for the treatment of children and youth with emotional and behavioral disorders.

More than one-third of children will meet criteria for a psychiatric disorder sometime between the age of nine and sixteen (Costello, Mustillo, Erkanli, Keeler, & Angold, 2003), and the majority of these children will not receive the treatment they need (Ringel & Sturm, 2001; Satcher, 2001; U.S. Department of Health and Human Services [U.S. DHHS], 1999). Statewide behavioral health systems of care provide large-scale opportunities to address the needs of these children (Bell & Shern, 2002; Bruns & Hoagwood, 2008; Bruns et al., 2008). Such systems provide an array of behavioral health services for youth along a continuum of intensiveness, ranging from outpatient treatment, intensive home-based services, and intermediate-level treatment, to inpatient and residential services (Bruns & Hoagwood, 2008). However, states often are challenged to develop consistent practice standards and models of care within their array of services, particularly for comprehensive, multimodal treatment programs that are implemented by community-based agencies. Specification of models of care for such programs provides the foundation for implementation, fidelity monitoring, and outcomes evaluation (Huang et al., 2005).

This paper describes Extended Day Treatment (EDT), an innovative intermediate-level service for children and adolescents with serious emotional and behavioral disorders. We define EDT

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as a center-based, multi-component intervention for children and adolescents, 5 to 17 years old, with emotional and behavioral problems and their families, that is delivered during the after school hours, and maintains children and adolescents in their homes, schools, and communities. The primary goals of EDT are to reduce youth mental health symptoms, enhance youth strengths and competencies, promote better family functioning, and prevent restrictive clinical placements, such as inpatient hospitalization and residential services.

The paper has two primary aims. The first is to describe components of the EDT model of care, including its theoretical foundations, core service components, workforce composition and staff training, and data collection and reporting. The second aim is to provide recommendations for statewide implementation of EDT and related intermediate-level behavioral health programs. We conclude with a discussion of how the proposed EDT model of care represents an innovative approach to systems reform for the treatment of children and adolescents with serious emotional and behavioral disorders.

Extended Day Treatment within a Statewide Service Continuum

A critical need within a state's behavioral health service array for children and adolescents is the availability of comprehensive intermediate-level treatment programs. Such programs allow children and adolescents to receive intensive behavioral health services and continue to live at home, attend a local school, and remain in the community (Robinson, Dow, & Nicholas, 1999; Robinson, 2000). Programs that are similar to EDT across states include partial hospitalization, partial day treatment, therapeutic after school, and intensive outpatient programs (Vanderploeg, Tebes, & Franks, 2007). EDT is designed for children and adolescents whose level of need exceeds the resources available in less intensive services, such as outpatient therapy, or those recently discharged from or at risk of requiring more intensive services, such as inpatient hospitalization or residential treatment. Maintaining children who require more intensive services in community-based settings is consistent with system of care values and principles (Huang et al., 2005; Pumariega & Winters, 2003; U.S. DHHS, 2002), and may reduce reliance on restrictive and costly out-of-home placements within state behavioral health systems of care.

A critical first step in the implementation of intermediate-level behavioral health services in a state system of care is the development of clear models that specify and organize treatment (Dale, Baker, & Racine, 2002; Huang et al., 2005; Walker & Bruns, 2006). Failure to articulate the core components of a comprehensive treatment model is likely to result in variable implementation of the service across agencies. In contrast, a comprehensive model that specifies interlocking program components and their rationale, and places the treatment approach within the broader context of the system of care, increases the likelihood that the program will be implemented with fidelity (Huang et al., 2005). Such a comprehensive model of care also provides a common foundation for staff training and development, the incorporation of evidence-based treatments, fidelity monitoring, continuous quality improvement, and outcome evaluation (Fixsen, Naoom, Blasé, Friedman, & Wallace, 2006).

Thus far, there is little direct evidence of the effectiveness of EDT because no overarching model of care has been specified and implemented. However, component practices within EDT are supported by evidence, including day treatment, family therapy, and after school programs. For example, studies of children and adolescents in day treatment have demonstrated symptom improvements and increased likelihood of returning to schools in their communities (Pruitt & Kiser, 1991). Children and adolescents in day treatment also show greater improvements in internalizing and externalizing behaviors, as well as reduced depression and enhanced self-esteem, as compared to a wait-list comparison group (Grizenko, Papineau, & Sayegh, 1993). Similarly, parent participation in family therapy while a child or adolescent is enrolled in day

treatment has been found to predict improvements in internalizing and externalizing behavioral functioning five years after program completion (Grizenko, 1997). Frequently, youth receiving day treatment services attend an alternative school. However, Robinson et al. (1999) have described a partial-day treatment program that provides services daily during the after school hours while maintaining youth in their home, school, and community. In a study involving 215 youth, they demonstrated significant reductions in total problem behaviors over a median treatment period of 17 weeks, with equivalent effects reported across genders and diagnostic groups (Robinson, 2000).

Evidence for the value of EDT services also can be found in studies of the effects of after school programs on youth outcomes. Since youth are enrolled in EDT during the after school hours, studies of after school programs provide additional support for the potential for EDT to be a part of an evidence-based service array within a system of care. There is a growing literature on after school programs indicating that these programs can lead to improved social, emotional, and behavioral functioning, particularly among at-risk and low-income youth (Posner & Vandell, 1994). A more recent promising approach to after school programming is the emphasis on positive youth development which has been found to reduce the progression of substance use among low-income urban adolescents (Tebes et al., 2007). Although few after school programs are specifically designed as behavioral health interventions, these findings suggest that effective interventions can be delivered in the context of an after school setting.

Thus, the combined available evidence suggests that clinical interventions provided during the after school hours to youth with emotional and behavioral disturbances, including day treatment, can have a positive impact on their social, emotional, and behavioral functioning. However, currently there is no specified model for EDT. Model specification would promote consistent implementation of services across programs, foster the development of practice guidelines, advance rigorous effectiveness research on EDT, and provide guidance to policy makers on how best to bundle related services into a comprehensive intermediate-level service array within systems of care (Huang et al., 2005).

A Model of Care for Extended Day Treatment

The proposed model of care for EDT in this paper draws upon developmental theories that guide the treatment philosophy and core activities that promote positive outcomes. For example, attachment theory (Bowlby, 1969) suggests that EDT should seek to restore positive and secure attachments to primary caregivers, since many children referred to intermediate-level mental health programs are negatively impacted by maltreatment and trauma exposure (Booth, Rose-Krasnor, McKinnon, & Rubin, 1994; Kochanska, 2001). Ecological systems theory (Bronfenbrenner, 1989) emphasizes that child development is influenced by multiple factors and contexts that are situated within individuals, families, peer groups, schools, neighborhoods, cultures, and policies, each of which interact with one another to influence development. Thus, EDT should take into account these multiple levels of influence in its service delivery approach (Stormshak & Dishion, 2002). Finally, positive youth development (PYD) theory provides a strengths-based framework for structuring environments and activities that promote opportunities for empowerment, leadership, and decision-making among youth (Larson, 2000; Tebes et al., 2007), and suggests that service systems view youth not as problems, but as individuals with strengths and resources that must be developed (Catalano, Berglund, Ryan, Lonczak, & Hawkins, 2004).

In combination, these theories inform the development of models of care for comprehensive intermediate-level mental health programs, such as EDT and similarly conceived treatments. EDT programs must address the differing ages and developmental levels of participating youth; appreciate the negative impact of disruptions in critical attachments resulting from trauma,

maltreatment, or loss; provide services that are ecologically informed; and promote youth strengths, competencies, and resilience.

Core service components

EDT, like other intermediate-level behavioral health services, requires a comprehensive, integrated array of treatment components focused on promoting the social, emotional, and behavioral functioning of participating youth. Identifying the core services for all EDT programs allows for consistency of service delivery across sites. Table 1 lists recommended core service components for EDT.

As shown in Table 1, eleven service components are specified for EDT: Comprehensive assessment, treatment planning, structured therapeutic milieu, psychiatric evaluation and medication management, family therapy, group therapy, individual therapy, 24-hour crisis services, therapeutic recreation and expressive therapies, positive youth development activities, and discharge planning. Many of these services are also applicable to other intermediate-level mental health services, but provide an integrated amalgam of services most appropriate for EDT (Vanderploeg et al., 2007).

Comprehensive assessment for children entering EDT requires structured intake interviews with the child and at least one parent or primary caregiver, a home visit, assessment measures, and psychiatric evaluation and medication management, if indicated. An interdisciplinary treatment team guides individualized service delivery for each youth in EDT. Individual, family, and group therapy constitutes the core of clinically-oriented treatment, using evidence-based practices whenever possible. In addition, the structured therapeutic milieu, positive youth development activities, and recreational/expressive therapies (e.g., art, music, athletic activities) are additional components of a comprehensive menu of clinical services. Because EDT participants return home at the end of the treatment day, 24-hour crisis response services may be needed during the evening and overnight hours. Finally, discharge planning is an important core service that is emphasized early in treatment. The relationship of levels of care to discharge planning is described in more detail below.

Levels of care

EDT services must also be responsive to the changing acuity among youth as they enter and progress through the program. An effective way to address this issue is to develop levels of care within EDT. Establishing levels of care within EDT or other intermediate-level multi-component treatment programs fosters the accommodation of individual youth and family treatment needs, shifts services so that they are consistent with maintaining treatment gains, and gradually increases utilization of natural supports and less intensive community services (Robinson et al., 1999; Robinson 2000). Children in each level of care have access to all core service components, but the intensity and frequency of center-based services is intended to gradually decrease while participation in natural supports and community services is increased during each level.

In Connecticut, three levels of care have been advanced (Vanderploeg et al., 2007). Intensive EDT (5 days per week) provides services to children with the highest level of acuity and treatment need with the goal of stabilizing symptoms. Standard EDT (3–5 days per week) provides services to children with moderate acuity with the goals of continued stabilizing of symptoms and establishing connections to natural supports and community services. Transitional EDT (2 to 3 days per week) provides services to children with low to moderate acuity, with the goals of maintaining treatment gains and increasing further the child and family's utilization of natural supports and community services. Progression through these levels of care is closely associated with a primary goal of intermediate-level mental health care

in a comprehensive service array--to incorporate recovery and community reintegration early in the treatment process (Friesen, 2007).

A focus on evidence-based practices

An emphasis within the model of care for EDT described here is that, to the extent possible, service components reflect evidence-based practices. Over the past several years, there has been a dramatic shift in the emphasis and adoption of evidence-based treatments in children's behavioral health (Hoagwood, Burns, Kiser, Ringeisen, & Schoenwald, 2001). Typically, implementation of evidence-based treatments emphasizes the adoption and dissemination of single service initiatives (Franco, Soler, & McBride, 2005; Whittaker et al., 2006; Zazzali et al., 2008), and there has been less focus on incorporating evidence-based treatments into comprehensive, multi-level, and multimodal interventions such as EDT. Because EDT and similar programs often utilize multiple treatment modalities (e.g., individual, family, group therapy, structured therapeutic milieu) for a broad age range of youth (i.e., 5 to 17 years old), with diverse diagnoses and presenting problems (e.g., disruptive behavior disorders, depression, anxiety, trauma), a number of evidence-based treatments would be required to address the individualized needs of EDT participants. These are reflected in the array of service components summarized earlier.

Before evidence-based treatments can be integrated effectively in a statewide provider network, however, numerous implementation challenges and tasks must be addressed. Research demonstrates that adoption of evidence-based treatments in community mental health agencies requires that agency leaders and clinicians have a strong interest in evidence-based treatments, and that potential treatments fit within the agency's overall mission (Zazzali et al., 2008). Furthermore, adoption and implementation is known to be impacted by such factors as staff education and training in evidence-based treatments, attitudes toward research, and organizational context (Aarons, 2005; Nelson & Steele, 2007). On the other hand, strong agency leadership, support to providers, and partnerships with universities facilitates implementation of evidence-based treatments (Proctor et al., 2007). States must address these factors to prepare their statewide network of community-based agencies to implement evidence-based treatments--an undertaking that can require significant time and financial resources (Bruns et al., 2008; Fixsen et al., 2005).

Workforce composition and training

The EDT workforce needs qualified professionals with training and experience in delivering mental health interventions to children and adolescents with emotional and behavioral disorders and their families. We recommend four positions at each site to implement EDT. These include: direct care staff members, clinicians, an EDT site director, and a child and adolescent psychiatrist. Table 2 presents staff-to-client ratios, minimum degree requirements, and roles and responsibilities of each position.

Additional positions do not necessarily require hiring more staff, but can be filled by existing staff members who take on an additional role within EDT. Since EDT emphasizes family involvement, a family engagement specialist can be useful to programs that experience difficulties engaging and retaining parents and family members in treating youth with emotional and behavioral disorders. The EDT model also specifies that recreational and expressive activities are an important aspect of treatment. Thus, a trained and licensed recreational or art therapist can be especially critical to an EDT program. Similarly, one staff member should take on the coordination of PYD activities to ensure that after school activities provide coordinated opportunities for youth engagement and leadership. Finally, given the emphasis the model places on data collection, quality assurance, and program improvement,

a designated specialist in this area could enhance program implementation through continuous quality monitoring.

Recent research and scholarship has recognized that workforce staffing and training needs are an emerging concern in the children's behavioral health arena, particularly in the context of expanding evidence-based treatment implementation. For example, Huang, Macbeth, Dodge, and Jacobstein (2004) identified a shortage of practitioners in children's behavioral health as well as the existence of a common mismatch between practitioners' training and the services that they are required to provide. As a result, some have called for federal, state, and private entities to strengthen the behavioral health training infrastructure and expand training activities (Hoge, Huey, & O'Connell, 2004; Olin & Hoagwood, 2002).

Staff development and training is necessary in order for EDT providers to adhere to the design, guidelines, and intent of the treatment model. This includes the delivery of pre-service and in-service training modules for EDT staff members. Pre-service training is common to many human service settings, and can include such topics as crisis management, de-escalation and, mandated reporting as well as CPR, blood-borne pathogens, and medication administration, among others. In contrast, in-service training is usually related to the model of care itself. Given that enhanced models of care often constitute a substantial change in existing practices, one training module should be set aside to describe the essential elements of the new model of care. For EDT, additional in-service training modules could include: theories of child development; the impact of trauma on children and adolescents; screening and assessment procedures; evidence-based practice in community-based service settings; cultural competence; and data collection and reporting.

Data collection and reporting

EDT, like other behavioral health services, benefit from data collection and reporting mechanisms that allow managers and other stakeholders to assess the quality of the services provided, and the outcomes associated with these services. This requires states to ensure that outcomes-based evaluation, quality assurance, and continuous quality improvement methodologies are included as integral elements of the model of care, and that experts responsible for these activities are a part of early and ongoing planning, implementation, and monitoring efforts (Bickman & Noser, 1999). Such efforts require adequate information systems, clear theories of change, reliable measures, attention to family privacy and confidentiality, continuous data feedback, and stakeholder collaboration (Dickens, 1994; Huang et al., 2005).

Specific data elements to be collected will vary according to the needs of youth and families and the goals of each state's behavioral health system. Thus, general guidelines for data collection and reporting that are critical to assessing implementation and outcomes will be discussed here. We recommend that an EDT planning team identify a common set of performance indicators related to costs, fidelity to the model, and outcomes. Longitudinal data collection is preferred to allow for tracking of changes over time and periodic reporting to the appropriate state mental health authority (e.g., semi-annually). States can then compare each site's performance on these indicators to predetermined benchmarks, established by documenting the outcomes of a high-performing individual site or group of sites. Youth-level outcomes (e.g., indicators of social, emotional, and behavioral functioning, continued placement in the home and school), should be collected and reported minimally at the time of program intake and discharge, although post-discharge follow-up assessments of youth-level outcomes, although difficult to obtain, can be critical to examining the long-term effects of interventions (Patton, Hetrick, & McGorry, 2007). In comparing sites to one another on outcomes, states should take into consideration differences in the characteristics of children and families at each site, when such differences are related to outcomes. Risk adjustment

methodologies such as case mix adjustment can be used to control for pre-treatment differences in the populations served across sites, allowing for a fairer assessment of each site's performance (Hendryx, Dyck, & Srebnik, 1999; Phillips, Kramer, Compton, Burns, & Robbins, 2003).

We recommend that results from these data collection and reporting procedures be reported in aggregate form as well as shared with individual provider sites. Site-specific reporting is essential for instituting a continuous quality improvement approach whereby each site identifies a set of performance indicators for improvement, develops and implements a plan of action to address this area of performance, and assesses the impact of these interventions over a pre-determined span of time (Bickman & Noser, 1999).

Recommendations for Implementing EDT in a Statewide System of Care

Simply providing access to information about a new program or practice is insufficient to ensure that it is implemented as planned, or with the intended outcome. Rather, successful statewide implementation of a model of care requires effective collaboration among model developers and key stakeholders (Rosenheck, 2001). Large-scale implementation has been defined as “a specified set of activities designed to put into practice an activity or program of known dimensions” (Fixsen et al., 2005). Below we specify four steps that are critical to implementing EDT within statewide systems of care.

Establish a collaborative planning team

Perhaps the most important factor in the statewide implementation of a new program or practice is the involvement of diverse stakeholders working as a team toward common goals for system reform (Bruns et al., 2008). In Connecticut, EDT model development, adoption, and implementation has been guided by a collaborative planning team composed of key stakeholders, including the Department of Children and Families, the Behavioral Health Partnership (Connecticut's administrative service organization), provider agencies, evaluators and researchers, family advocates, and consumers. The planning team is jointly responsible for model development and adoption, reviewing all policies and procedures so that they are aligned with the newly adopted model, developing a budget funding plan, and monitoring implementation. Planning teams also benefit from having a detailed logic model to guide implementation activities (Hernandez, 2000; Tebes, Kaufman, & Connell, 2003).

Phase-in implementation using pilot models

State providers may find it difficult to adopt fully a comprehensive model of care due to practical barriers, such as the availability of financial or staff resources and the involvement of key stakeholders. However, implementation is likely to be more successful when implementation is phased in (Fixsen et al., 2005) and services are procured through a request for proposals (RFP) process (Bruns et al., 2008). Sometimes implementing the full model in pilot sites that are demographically, clinically, or geographically representative can also identify trouble spots prior to full implementation (Fixsen et al., 2005). In addition, piloted and phased-in implementation approaches provide opportunities to establish data reporting systems to monitor and evaluate services, an often overlooked but critical component of the implementation process (Tebes et al., 2003).

Use evaluation data to inform model implementation

Program and system evaluation and performance monitoring is essential to any implementation process (Kaufman et al., 2006). Evaluators can provide guidance in selecting the data elements to be collected to monitor adoption and implementation, fidelity, and outcomes assessment. (Tebes et al., 2003). For comprehensive models such as EDT, evaluation can also identify

elements of the model associated with optimal youth, family, and service system outcomes (Vanderploeg et al., 2007). Finally, integrating data collection and evaluation into the culture of service delivery can yield information that enables states to make more informed decisions regarding service planning, including the selection of evidence-based treatments (Wotring, Hodges, Xue, & Forgatch, 2005).

Invest in staff training to implement and sustain the model of care

Glisson (2002) shows that successful incorporation of technological innovation into community-based organizations attends to the organization's social ecology. Such training addresses agency practices and customs most effectively when it attempts to fit the model to the organizational mission as best as possible (Zazzali et al., 2008). Training is also more effective when staff evaluation data from the model is linked to community-based care and services (Aarons, 2005; Nelson & Steele, 2007; Proctor et al., 2007). Finally, states that invest in training community-based providers enhance buy-in and readiness to implement and sustain the new model of care (Fixsen et al., 2005).

Conclusion: Model Development as an Approach to Systems Reform

The current paper described a model of care for Extended Day Treatment, a comprehensive, multi-modal, intermediate-level behavioral health service for youth with emotional and behavioral disorders. EDT focuses on providing a range of intensive services to children and adolescents who remain in their homes, schools, and communities. The development of such a comprehensive model of care specifies and organizes services, promotes program replication with fidelity across sites, provides a focus for in-service training, and advances evaluation, quality improvement, and outcomes assessment, within a statewide system of care.

Model development also is an effective approach to system reform. Such a conceptualization is consistent with recommendations from the Subcommittee on Children and Families of The President's New Freedom Commission. Recommendations from the Commission describe an approach to systems reform that relies on collaborative model development among key stakeholders so as to stimulate effectiveness research in real-world treatment settings (Huang et al., 2005).

Model development encompasses several specific goals related to systems reform. A comprehensive model of care includes specification of the theoretical rationale for treatment, core service components, and implementation elements. In specifying core service components, the model encourages implementation of multiple, related evidence-based treatments that can address a wide range of presenting problems and diagnoses (Whittaker et al., 2006). Furthermore, model development specifies important implementation practices that advance effective service delivery, including staff training, data collection, and program evaluation activities. And finally, the process of model development can be repeated for the array of comprehensive programs that comprise a statewide service system, thus promoting system-level reform as well. Ideally, the result is an integrated, seamless network of services in a statewide continuum of behavioral health care, with overlapping goals, data collection and reporting mechanisms, and expected outcomes. The model of EDT presented here is an example of one component contributing to such a process.

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Table 1**EDT Core Service Components**

Service Component	Description of Service Component
Comprehensive assessment	Includes structured intake interview with parent and child, psychiatric evaluation and medication management (as needed), home visit, and administration of assessment measures.
Treatment planning	The potential tasks of an interdisciplinary treatment team are to: formulate multi-axial diagnoses; create service plan; identify child and family strengths, identify clinical issues and focus of treatment, develop measurable clinical goals, expected outcomes, and target dates; specify units of service, identify criteria for termination; develop discharge plan.
Structured therapeutic milieu	Refers to the organization of the treatment environment, the activity-based interventions designed to enhance adaptive functioning and reduce problem behaviors, and elements of youth-staff interaction. The milieu can help youth develop positive attachments with adult staff; and build skills in anger management, peer socialization, problem solving, and trauma recovery.
Psychiatric evaluation and medication management	Psychiatric assessment is recommended only when indicated, based on the findings of the comprehensive intake assessment and the recommendations of the treatment team. Medications typically are administered by psychiatrist of APRN.
Family therapy	Family therapy refers to treatment involving the child or adolescent, at least one parent or current caregiver, and a clinician. The specific amount of family therapy varies depending on clinical acuity and age of the youth.
Group therapy	Group therapy refers to treatment involving two or more children or youth concurrently, and a clinician. The number of expected hours of group therapy varies depending on clinical acuity and age of the youth.
Individual therapy	Individual therapy refers to treatment involving a clinician-youth dyad. The number of expected hours of individual therapy varies depending on clinical acuity and age of the youth.
Twenty-four hour crisis services	Children participating in EDT are maintained in their homes and communities. Because off-site crises may result in hospitalization, EDT programs should have a crisis plan in place to address off-site emergencies that occur during non-EDT hours.
Therapeutic recreation and expressive therapies	Therapeutic recreation and expressive therapies include activities that supplement traditional clinical treatment, directed toward meeting specific goals on the master treatment plan. Potential activities may include supervised physical activities, arts and crafts, music, and supervised community outings.
Positive youth development activities	Positive youth development refers to an orientation toward practice that emphasizes youth participation in activities that are designed to promote their competencies, empower them to become active decision-makers in their life, take on opportunities for leadership and individuation, and form positive collaborative relationships with supportive and caring adults.
Discharge planning	Discharge planning is integrated into treatment early. A discharge plan can include identification of community and clinical support structures, linkage to mental health providers, schools, and community or neighborhood organizations.

Table 2

EDT Staffing Recommendations

Title	Staffing Level	Minimum Degree Required	Role and Responsibilities
Direct Care Staff	1 for every 4 contracted slots	Bachelors	Manage the daily activities of participants in the therapeutic milieu.
Clinician	1 for every 8 contracted slots	Masters	Plan and deliver clinical interventions in the milieu, and in individual, family, and group treatment modalities.
Site Director	1 site director at each site	Masters	Oversee all clinical and administrative operations of the EDT site.
Psychiatrist	5 hours of coverage for every 20 contracted slots	M.D. or D.O.	Provide medical oversight for the EDT program.

Note. Table represents general guidelines for workforce composition. All workforce practices should comply with local, state, and federal guidelines.