LEAD: A Web-Based Suicide Prevention and Mental Health Promotion Program for Adolescents

Administration Manual

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Introduction to LEAD

The LEAD Program is a web-based suicide prevention and mental health promotion program that assists adolescents in developing adaptive social support networks and learning skills for modifying negative thoughts and emotions. LEAD consists of two brief, web-based modules that target adolescent's perceptions of being a burden on others as a means for reducing suicide risk among youth. This manual provides an overview of suicide prevention for youth, discusses the need for additional suicide prevention efforts, and provides the theoretical background for LEAD. The LEAD program is then described in detail and specific recommendations are provided for the use of LEAD, including the recommended assessments and follow-up contacts, are provided. Finally, a series of appendices provides copies of assessment materials, handouts, and checklists to assist with the implementation of LEAD. This information provides the appropriate background information necessary to successfully implement LEAD in a variety of settings.

Who can use LEAD?

LEAD has been designed for use in a variety of settings and situations – and to be administered by a wide range of providers. We use the generic term "counselor" in this manual but recognize that the adult overseeing LEAD may not have that title. LEAD may be utilized by trained mental health professionals, including licensed professional counselor, social workers, therapists, and psychologists. In addition, LEAD can be successfully utilized by school counselors, youth leaders, religious leaders, coaches, grief support counselors, and other caring adults in a position to identify at-risk youth and provide a supportive, caring environment.

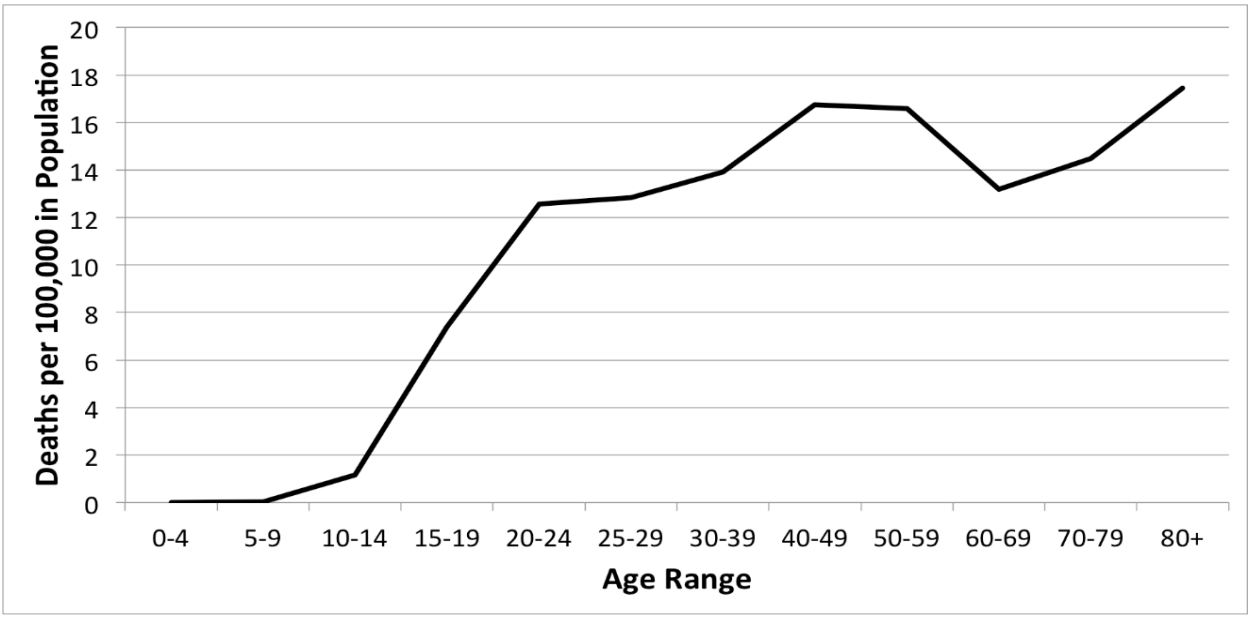
Adolescent Suicide-Related Behaviors in Adolescence

Adolescent suicide-related behaviors are a significant health problem in the United States. Suicide is the second-leading cause of death for individuals between the ages of 13-34 years (Centers for Disease Control and Prevention, 2018). From 2000-2010, the suicide rate among adolescents ages 13-17 years was 4.34 per 100,000, accounting for more than 10,000 deaths over that period (Centers for Disease Control and Prevention, 2014). The rate of suicide increases sharply beginning with the onset of adolescence and remains elevated throughout adulthood.

Critically, suicide attempts and suicidal ideation are also frequent during adolescence. The Youth Risk Behavior Surveillance System, a nationally-representative survey of more than 15,000 United States high school students from over 158 schools, indicates that 17.7% of high school students seriously considered suicide, 13.6% made a suicide plan, and 8.6% made a suicide attempt in the previous 12 months (Kann et al., 2016). Data from the 2010 Minnesota Student Survey, a survey of more than 70,000 9th and 12th grade students, concur, with 13.5% of youth reporting suicidal ideation or a suicide attempt in the past year (Taliaferro & Muehlenkamp, 2014).

The high rates of suicidal ideation and suicide attempts, coupled with the sharp increase in suicide deaths during this period, indicate a need to address suicide risk during the adolescent years.

Figure 1. Deaths by Suicide in the United States, 2001-2010



Of course, suicide ideation and suicide risk do not suddenly appear in adolescence. While suicide itself is rare prior to the onset of adolescence, suicide ideation frequently begins earlier, appearing in pre-adolescence. Data from the Middle School Youth Risk Behavior Survey indicates that between 16.1% and 24.8% of middle school youth have seriously considered suicide in the previous 12 months, and 5.8% to 12.5% report making a suicide attempt in the same period (Centers for Disease Control and Prevention, 2017). Risk factors for suicide also develop early, with depressive symptoms, interpersonal problems, and underdeveloped coping skills evident in childhood and early adolescence (National Institute of Health, 2018). Nor are these early signs of risk unique to suicide-related behaviors; difficulties with coping, poor social support, and interpersonal difficulties are associated with a number of mental, social, and emotional difficulties (Ozbay et al., 2007; Hamid et al., 2014).

The elevated rates of suicidal ideation and suicide attempts during adolescence indicate the enormity of the unaddressed mental health burden associated with suicide-related behaviors. Given that approximately 3% of adolescents report having made a suicide attempt requiring medical care in the previous 12 months (Centers for Disease Control and Prevention, 2016), suicide-related behaviors represent a substantial source of preventable burden on the medical care system in the United States. The economic impact of suicide and suicide attempts among 15-24 year olds has been estimated at over $15.5 billion in 2013 alone (Shepherd, Gurewich, Lwin, Reed, & Silverman, 2016).

Taken together, these data point toward adolescence as a key period for addressing suicide risk and demonstrate a need to reach this population with suicide-focused prevention programs. The National Strategy for Suicide Prevention (United States Department of Health and Human Services, 2001) and the 2010 Progress Review of the National Strategy for Suicide Prevention (Suicide Prevention Resource Center and SPAN USA, 2010) both declared suicide and suicide-related behaviors a national public health problem and recommended research to develop and evaluate effective therapies for clinical and non-clinical suicide risk. The United States Surgeon General's Call to Action to Prevent Suicide (United States Department of Health and Human Services, 1999) also included a call to develop and implement safe and effective programs to address adolescent suicide risk. Luckily, efficacious suicide prevention efforts have the potential to substantially reduce suicide risk and suicide. Suicide deaths ARE preventable. Preventing suicide, and addressing related mental, social, and emotional health issues, requires a variety of intervention and treatment approaches – and needs to start early, addressing issues as they develop. There is some truth to the adage "an ounce of prevention is worth a pound of cure." By providing supportive interventions, it is possible to assist youths' social and emotional development while reducing their risk of suicide.

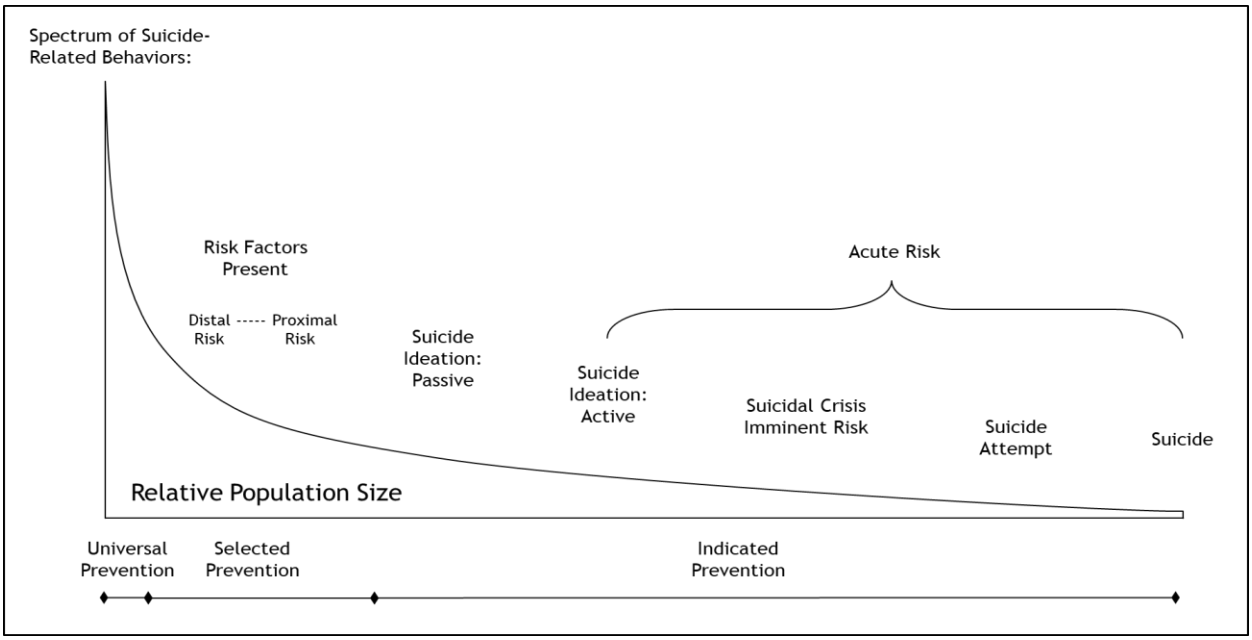
An Overview of Suicide Prevention

Efforts to reduce the rate of suicide are generally referred to as "prevention" efforts. Prevention includes any intervention that occurs prior to the onset of a disorder (or, in this case, death by suicide) and can be subdivided into universal, selected, and indicated phases (Munoz, Mrazek, & Haggerty, 1996). Universal prevention focuses on broad, population-wide approaches within which targets are not identified on any criteria of increased risk. Well-known examples of universal prevention strategies include mandating seatbelts to prevent injury resulting from traffic collisions and adding fluoride to drinking water to prevent tooth decay. Universal programs are applied to a population at-large, without regard to factors that may increase an individual's risk for the outcome in question. Within suicide prevention, universal programs focus on risk identification and training "gatekeepers" – individuals who can recognize the warning signs of suicide, ask individuals if they are having suicidal thoughts, and take appropriate actions to place the at-risk person into the care of trained professionals (Isaac et al., 2009; Lancaster et al., 2014; Wyman et al., 2010; Zenere & Lazarus, 1997). Universal programs also include broad suicide risk screening programs and efforts to reduce the stigma associated with suicide.

Selected prevention includes programs delivered to a subset of the general population deemed to be at increased risk of a negative outcome as determined by some predefined risk factor. Examples of selected prevention programs include providing flu vaccines to medical professionals and elderly individuals (both of whom are at higher risk of contracting the flu) or providing free breakfasts to low- income children to ensure their nutritional needs are met before starting the school day. Within suicide prevention, selected prevention programs provide interventions for at-risk youth, prior to the onset of suicidal ideation. Selected prevention programs include the Teen Options for Change (TOC; King, Gipson, & Horwitz, 2014) and Links to Enhancing Teens' Connectedness

(LET's CONNECT; Gipson, King, Opperman, & Ewell-Foster, 2014) programs. Relatively few selected prevention programs exist, but they have the potential to impact youth before they become acutely suicidal. LEAD falls within this domain, providing a brief skills-focused prevention program to address risk markers known to be associated with suicide ideation.

Figure 2. The Landscape of Suicide Prevention Efforts



Finally, indicated prevention includes programs that are directed toward individuals with detectable, subthreshold levels of a disorder that has not yet reached a diagnostic level. Here, examples include depression prevention programs for adolescents reporting sad mood but falling below diagnostic criteria for Major Depressive Disorder or introducing a dieting intervention for overweight individuals in order to prevent obesity. The bulk of existing suicide prevention efforts falls within the realm of indicated prevention. Examples include the use of rapid-response teams to link suicidal emergency department patients to outpatient services (Greenfield, Lawson, Hechtman, Rousseau, & Platt, 2002; Latimer, Gariepy, & Greenfield, 2014), dialectical behavior therapy (Katz, Cox, Gunasekara, & Miller 2004; Rathus & Miller, 2002), multisystemic therapy (Huey et al., 2004), skills-based treatment (Donadlson, Spirito, & Esposito-Smythers, 2005), individual cognitive-behavioral therapy (Esposito-Smythers, Spirito, Kahler, Hunt, & Monti, 2011), and crisis hotlines for urgent counseling (Gould, Cross, Pisani, Munfakh, & Kleinman, 2013). Inpatient hospitalization, use of psychiatric emergency departments, and crisis counseling also constitute indicated prevention.

Effective suicide prevention requires an integrated network of suicide prevention efforts at multiple levels, providing numerous opportunities for youth to be identified as at-risk and receive appropriate care. In other words, building a network of suicide prevention

that can effectively reduce the rate of suicide will require a combination of universal prevention to increase awareness and decrease stigma, selected prevention to reduce risk by addressing risk factors and warning signs associated with suicide risk, and indicated prevention to address risk when universal and selected prevention programs were insufficient. Building such a vast network of suicide prevention will require investment and action from a wide range of organizations, including schools, community organizations, religious institutions, physical and mental health systems, and government institutions.

Indicated prevention efforts are, perhaps, the best known, and most commonly used interventions. However, indicated approaches are often intensive and require extensive risk management and monitoring of high-risk youth. Perhaps the single greatest limitation of indicated approaches is the disjunction between the high degree of need at a community or population level and the comparative scarcity of available services. Because indicated prevention approaches are (a) highly intensive and (b) involve managing high-risk patients, they are typically provided by licensed mental health professionals who can dedicate substantial resources to an individual child.

The expansion of universal and selected prevention approaches is intended to reduce the need for high-intensity, high-cost indicated approaches. That is, the more providers can address and mitigate suicide risk at the universal and selected stages of prevention, the fewer youth will reach a point where indicated approaches are required. Since universal and selected prevention approaches, like LEAD, are typically less intensive and less expensive than indicated prevention approaches, it is possible to deliver them outside of dedicated mental health systems, such as in schools, community centers, and religious institutions. Further, universal and selected approaches are often designed to be delivered by caring, supportive, invested adults who may have some experience providing mental health services but who are not dedicated solely to suicide prevention efforts. Finally, by developing universal and selected approaches that require minimal input from providers, these programs can be more easily implemented by already busy, overworked professionals who want to contribute to suicide prevention but who have limited available time and effort.

Theoretical Background: The Importance of Perceived Burdensomeness

LEAD is a brief, web-based, selected preventive intervention. As such, it targets youth at-risk for suicide ideation and attempts to promote adaptive mental health strategies. To understand the focus of LEAD, a brief overview of its theoretical background is necessary.

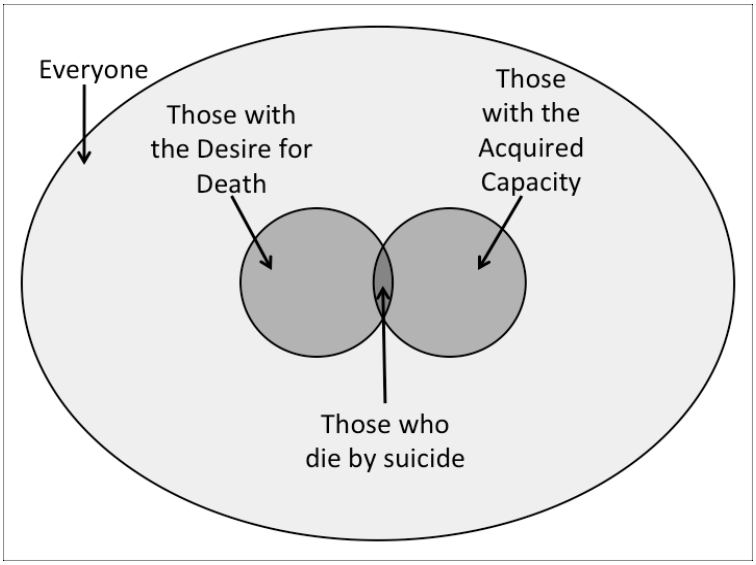
LEAD is based on the Interpersonal-Psychological Theory of Suicide, which proposes that dying by suicide requires both the ability to end one's own life (called the acquired capability to enact lethal self-injury) and the desire to do so (called the desire for death; Joiner, 2005). The desire for death is an individual's subjective desire to cease living. It is roughly equivalent to suicide ideation (Van Orden et al., 2008). The desire for death, or suicide ideation, is comprised of two factors: a sense of perceived burdensomeness (e.g., "My life is a drain on others") and thwarted belongingness (e.g., "There is nobody I can turn to"; Joiner, 2005). These factors may result from a variety of circumstances,

but their presence is thought to underlie the desire for death. Critically, since perceived burdensomeness and thwarted belongingness are subjective perceptions of current life states, rather than stable conditions, both may be addressed via preventive interventions.

Thwarted belongingness is comprised primarily of the belief that one's interpersonal relationships are unsatisfactory. The core component of thwarted belongingness is a perception of social isolation or disconnection from others (Joiner, 2005). Thwarted belongingness encompasses a number of other risk factors for suicide ideation, including poor family connectedness, a perceived absence of caring adults, and social isolation (e.g., Eisenberg & Resnick, 2006; Halpert, 2002). Thwarted belongingness also includes a lack of social support and chronically strained relationships with family, close friends, and romantic partners, which have been associated with more severe suicidal behaviors in adolescence (e.g., Pettit et al., 2011) and adults (e.g., Chen et al., 2013).

Decades of research highlight the importance of belongingness-related factors for youth's mental, social, and emotional health: active, helpful social supports are critical to the development of healthy, resilient, youth. Thwarted belongingness isn't unique to suicide ideation either. Belongingness-related problems (i.e., poor social support, loneliness) have been linked to a wide variety of maladaptive outcomes for youth, including depression, lower self-esteem, emotional stress, poor school outcomes, anxiety, and lower mental health stability (Verhagen, Lodder, & Baumeister, 2018; Vaz et al. 2014). It may be particularly important for youth to have active adult supports (Weinstein, Mermelstein, Hedeker, Hankin, & Flay, 2006). Thus, identifying and communicating with a supportive adult is one of the central targets of LEAD. By building and activating youths' social support networks, LEAD seeks to reduce youths' sense of thwarted belongingness.

Figure 3. The Interpersonal-Psychological Theory of Suicide



Perceived burdensomeness is comprised primarily of the belief that one's self has become a burden on others (Van Orden et al., 2010) or that one's existence is a drain on the resources of others or on society as a whole (Joiner, 2005). Individuals who perceive themselves to be a burden on others believe that their worth or ability to contribute is less valuable than their cost to others. Put another way, perceived burdensomeness is the result of a cost/benefit analysis of one's life – in which the individual believes their death may have more value than their continued existence. Perceived burdensomeness often manifests, among adolescents, as concerns regarding financial or time demands on parents or caregivers, or as a sense of guilt for demanding the resources or attention of others. This may be particularly true when adolescents' families are under stress or when financial resources are strained. These beliefs, especially when coupled with a belief that one does not give back to others or that one's presence is not of value to others, may result in an overall perception of perceived burdensomeness.

Perceived burdensomeness is thus conceptually related to perceptions of worthlessness, lack of purpose, self-esteem, and a need to feel useful and contribute to others (Baumeister & Leary, 1995). Recent research has identified associations between perceived burdensomeness and a variety of maladaptive youth outcomes, including anxiety, depression, decreased interpersonal trust, suicide ideation, and life stress (Hill, Del Busto, Buitron, & Pettit, 2018; Hill, Penner, Vanwoerden, & Mellick, 2018; Buitron et al., 2016). Thus, to address perceived burdensomeness, it is critical to help adolescents develop a sense of worth or contribution to others. This is the second central target of LEAD – identifying ways to contribute to others' lives and develop a sense of purpose and value.

Interventions that successfully generate improvements in either (or both) of these factors should prove efficacious for reducing or preventing suicidal ideation. However, a number of recent studies have suggested that perceived burdensomeness, relative to thwarted belongingness, may be a stronger risk factor for suicidal ideation. (Anestis & Joiner, 2011; Bryan et al., 2012; Hill & Pettit, 2012; Lamis & Lester, 2012; Merchant, 2010; Monteith et al., 2013; O'Keefe et al., 2014; Van Orden et al., 2008; Wong et al., 2011). These studies indicate that it may be at least as important, if not more important, to address perceived burdensomeness in suicide prevention programs, rather than focusing on thwarted belongingness alone. Thus, while LEAD focuses on reducing perceptions of thwarted belongingness **and** perceived burdensomeness, perceived burdensomeness is the primary factor used for identification of participant and for evaluating the success of the program. Furthermore, to date, LEAD is the only selected prevention program to address perceived burdensomeness among adolescents.

The LEAD Program

The LEAD program is a selected, computer-based prevention program to reduce perceived burdensomeness and thwarted belongingness. The LEAD Program draws on cognitive-behavioral principles and contains two brief, online modules. The two modules are completed approximately one week apart and can be completed online. Each module requires approximately 30 minutes to complete and is self-guided by the

adolescents. Each module of the LEAD program contains four parts: Learn, Explore, Assess Your Options, and Do. The program begins with a greeting and introduction, including an explanation of what it means to feel like a burden on others. Table 1 presents a summary of the LEAD modules and phases.

Table 1. Summary of LEAD Modules and Phases

Phase	**Module 1**	**Module 2**
Learn	Introduction to the LEAD program; explanation of perceived burdensomeness; psychoeducational presentation of Affect-Behavior-Cognition Triangle.	Brief review of psychoeducational material presented in Module 1.
Explore	Identification of target relationship and situations in which perceptions of burdensomeness occur/do not occur.	Identical to Module 1.
Assess Your Options	Generation of activities to reduce perceived burdensomeness via support seeking and activity scheduling.	Identical to Module 1.
Do	Detailed planning and scheduling of identified activities to increase perceived behavioral control and likelihood of completion of activities.	Identical to Module 1.

Learn. Following the greeting and introduction, the LEAD program then moves into the first phase, Learn, a psychoeducational phase created on the basis of cognitive-behavioral theory. It begins by introducing the Affect-Behavior-Cognition Triangle, presented in Figure 3 as a thoughts-actions-emotions triangle, which has been used in various formats in cognitive-behavioral treatments for depression (e.g., the Adolescents Coping with Depression Course; Clarke, Lewinsohn, & Hops, 1990), also known as the Affect-Behavior-Cognition model (Pluzinski & Qualls, 1986). The Learn phase uses a series of short vignettes geared toward adolescents' experiences to explain what thoughts, emotions, and actions are and how they can influence each other. It also introduces adolescents to the concept of manipulating one element of the thoughts-actions-emotions triangle in order to influence the other elements (e.g., to stop your negative thoughts from influencing your emotions, you could engage in a behavior that boosts your emotional state and distracts you from the negative thoughts). The final vignette ties this concept back to burdensome thoughts, showing adolescents one situation in which burdensome thoughts may arise and, in turn, result in further depressed moods. The Learn phase is critical to the subsequent phases as the concepts introduced in this phase form the basis for the active intervention components in the Explore and Assess Your Options phases. The goal of the Learn phase is to

introduce adolescents to the concept that thoughts and emotions can be intentionally and proactively modified. With this understanding, adolescents are equipped to then consider modifying their own negative thoughts and emotions in the following phases.

Explore. In the Explore phase, adolescents identify the people, places, and events in which they most commonly have burdensome thoughts. Adolescents first identify all the individuals upon whom they perceive themselves to be a burden. The adolescents are then asked to select a target person, the person upon whom they most often perceive themselves to be a burden or the relationship they would most like to address. The adolescent's experience of perceived burdensomeness with this individual then becomes the target of the remainder of the intervention.

Next adolescents explore times when they have felt like a burden on this target individual. They are encouraged to generate specific examples and describe them. The adolescents also identify times in which they have contributed to the target individual's life or made that person's life easier or more enjoyable. In this section, adolescents are encouraged to think of multiple responses and to be as specific as possible. The process of successfully generating counter-examples, times when the adolescent's relationship with the target individual has not been experienced as burdensome, is intended as a potentially therapeutic exercise. Generating counter-examples is congruent with the cognitive therapy-based approach in which negative cognitions or beliefs are stated and then challenged by means of identifying evidence or counter-examples that contradict the stated cognition or belief (Beck, Liese, & Najavits, 2005). Finally, responses to these items are stored and appear later in the program, during the Assess Your Options phase, to assist the adolescents in identifying potential activities for reducing their perception of burdensomeness on the target individual.

Assess Your Options. The third phase of LEAD is Assess Your Options, where adolescents explore ways to reduce burdensome thoughts. Assess Your Options draws on two cognitive-behavioral approaches: support seeking/challenging distorted cognitions through evidence acquisition (or "reality-checking"; Beck, Rush, Shaw, & Emery, 1979) and activity scheduling (Clarke, Lewinsohn, & Hops, 1990). Consistent with previous phases, adolescents are guided through these exercises via a series of short vignettes.

Adolescents begin with an exercise to challenge their distorted cognitions via hypothesis-testing with regard to their burdensome cognitions. Guided by a vignette, adolescents are shown an example in which the burdensome cognition is clearly not shared by the target individual. The adolescent is then encouraged to identify a safe, supportive adult with whom they might express their own feelings and perceptions. That is, because perceived burdensomeness may often be a distorted perception of reality, the process of acquiring evidence that disconfirms the cognition may be helpful (e.g., "I think I am a burden on my mom, but my mom does not think that I am a burden on her."). Adolescents are prompted to explore what they might say and how they could explain their thoughts and emotions to their safe, supportive adult. The adolescent then has the opportunity to draft how they would initiate such a conversation, including what they might say, when, and where. Expressing their feelings and perceptions to this adult also serves to activate the adolescents' social support network in an adaptive manner,

leading to additional positive interactions over time and thus reducing thwarted belongingness.

Then adolescents begin an exercise that parallels pleasant activity scheduling, a common method of behavioral activation for depression (Cuijpers, van Straten, & Warmerdam, 2007; Mazzucchelli, Kane, & Rees, 2009). In this section, adolescents identify activities that will allow them to contribute to the target individual's life in some manner or to share an experience with the target individual that will be positive and non-burdensome (e.g., helping mom by taking care of a younger sibling, planning a pleasant activity, such as a movie night, to spend with the target individual). Adolescents are prompted to consider situations in which they have not perceived themselves to be a burden and are reminded of the events they reported in the Explore phase. Again, through example vignettes, as well as via examples provided by the program and on the basis of the situations they have previously identified as times when they did not perceive themselves to be a burden, adolescents are encouraged to identify activities that allow them to contribute to the life of their target person. Once some possible activities have been generated, adolescents are asked to rate the difficulty of completing each activity and the likelihood they will complete each activity. Consistent with the Theory of Planned Behavior (Ajzen, 1991), these ratings are intended to help guide adolescents to select the activity over which they have the greatest perceived behavioral control. Adolescents are encouraged to review their ratings and select the option that they think they are both likely to do and that will be easy for them to complete.

Do. The final phase of the intervention module is the Do phase, where teens plan when and where to do the activities they have identified. The adolescents are prompted to schedule the two activities they selected in the Assess Your Options phase, one to speak to a safe, supportive adult and another to plan an activity to contribute to the target person in some way. Adolescents identify specific days, times, and places for their selections and plan ways to remind themselves of the planned activities, to maximize the likelihood that they complete the activities. For example, adolescents can elect to program a reminder into their phone or record the event on a calendar or daily planner. The detailed planning of each activity is meant to encourage the adolescent's perceived behavioral control, that is, to increase their perception of being in a position to execute the planned activity. Using careful planning to minimize potential obstacles to completing the planned activities is intended to increase the likelihood that adolescents complete the planned activities.

Module 2. The second LEAD module begins with a shortened Learn phase, to serve as a review of the psychoeducational material presented in the first module. Then the Explore, Assess your Options, and Plan phases are repeated, with different vignettes to provide a different set of examples. The purpose of the second module is two-fold: First, it provides a larger "dose" of treatment by providing adolescents with a second opportunity to plan and carry out activities to reduce perceptions of burdensomeness on their target individual or to select a different individual for the second module. Second, repetition of the module is intended to help adolescents learn the skills that comprise the LEAD intervention (i.e., hypothesis-testing to challenge

distorted cognitions and activity scheduling), so that the adolescents are able to remember and use these skills in the future.

The Role of the Counselor

While LEAD was designed to be adolescent-driven, the role of the counselor in delivering LEAD remains central to the intervention process. It is crucial that an intervention targeting interpersonal risk factors includes an interpersonal component and an interaction with a caring, supportive person. Thus, the role of the counselor has been reduced, but certainly not eliminated. The primary role for the counselor in the delivery of LEAD is three-fold:

(a) First, the counselor identifies those for whom LEAD is a suitable intervention and provides youth with an opportunity to access and complete the intervention. This can occur through a formal screening process, such as screening entire classrooms or groups of youth with a questionnaire or as part of an individual assessment. Additional information about this process is available in the Screening section of this document.

(b) Second, the counselor assists youth in navigating the LEAD program. In particular, youth often struggle to identify safe, supportive adults, particularly when adolescents do not view parents as a viable option. Further, youth may struggle with how to express their thoughts and feelings to supportive adults (through the use of good communication skills, such as “I statements”). Finally, youth may have difficulty identifying suitable activities to “give back” to the adults in their lives. All of these areas are places where a brief consultation with a counselor can provide support, while demonstrating a positive, youth-focused interaction with a safe, caring adult. Thus, counselors are encouraged to be present when LEAD is being completed or to follow-up with youth to ensure they navigated the program successfully.

(c) Third, counselors are responsible for following up with youth to ensure that those in need of more intensive services receive appropriate recommendations. The brief nature of LEAD makes it ideal for providing a “course correction,” nudging youth back onto a more adaptive developmental trajectory. However, that brief nature also means that LEAD may not be sufficient to assist youth who require more intensive services to address serious mental, social, and emotional health issues. By providing youth with follow-up assessments, counselors demonstrate a caring, supportive relationship, ensure that youth in need of additional services receive them, and ensure that youth do not “fall through the cracks.”

A brief note on our use of the term “counselor”: LEAD has been designed for use in a variety of settings and situations – and to be administered by a wide range of providers. We use the generic term “counselor” in this manual but recognize that the adult overseeing LEAD may not have that title. LEAD may be utilized by trained mental health

professionals, including licensed professional counselor, social workers, therapists, and psychologists. In addition, LEAD can be successfully utilized by school counselors, youth leaders, religious leaders, coaches, and other caring adults in a position to identify at-risk youth and provide a supportive, caring environment.

Evidence Supporting the Efficacy of LEAD

The LEAD intervention was first developed at Florida International University and was evaluated among adolescents from the greater Miami area. It was first examined in an open trial, and substantial modifications were made to the intervention based on feedback from adolescents. LEAD was then subjected to a randomized controlled trial of 80 adolescents, aged 13-19 years. A randomized controlled trial (or RCT) is considered the standard for evaluating a psychological intervention program like LEAD. In an RCT, participants are assessed for eligibility, complete an assessment, and are then assigned (at random) to one of two groups. The first group is the intervention group; youth in this group completed the program and were assessed again afterward. The second groups serve as a comparison; in the RCT of LEAD, this second group was a “waitlist” group. The waitlist group was asked to wait, complete an assessment just like the intervention group, and then, after the study, was offered the LEAD program.

Adolescents interested in participating in a research study “to find out whether a computer program can help you change your thoughts and feelings” were assessed for perceived burdensomeness. Those who reported elevated levels of perceived burdensomeness were randomly assigned to either receive the LEAD intervention or to be placed on a “waitlist.” At post-intervention, adolescent youth who completed the LEAD program reported lower perceived burdensomeness as compared with those in the waitlist control group (d=.47). At follow-up, adolescent treatment completers reported significantly lower perceived burdensomeness (d=.77), thwarted belongingness (d=.82), and depressive symptoms (d=.69), as compared with a waitlist control. The LEAD intervention study also showed pre-to-post and pre-to-follow up decreases in suicidal ideation across intervention groups, though suicidal ideation was mild across the sample (Hill & Pettit, 2016).

Following this study, based on feedback from the adolescents, the intervention was further modified to reduce reliance on reading skills and provide intervention content in video form. This updated version was piloted among middle school students, to ensure the changes were acceptable to youth.

Administering the LEAD Intervention

Accessing the LEAD Components

Each of the components of LEAD, discussed in more detail below, are available on the LEAD program website (www.LEADintervention.weebly.com). Each of the LEAD components (screening instrument, pre-treatment assessment, LEAD Modules 1 and 2, post-treatment assessment, and follow-up assessment) have unique links. Each of these links sends the participant to a Qualtrics survey. The Qualtrics survey software system uses the web-browser, requiring an active internet connection, and provides a platform for administering surveys and intervention modules on a secure, HIPPA compliant server. To facilitate counselor review of the pre-treatment, post-treatment, and follow-up assessments, these assessments contain embedded email triggers, so that the counselor receives an automated email response upon completion. That email contains pertinent information from the assessment, which counselors may utilize in the manner outlined in each section, below.

Tools for Successful Implementation

The Appendices contain additional tools to assist in the implementation of LEAD. First, to help guide providers in the delivery of LEAD, a check-list is provided that outlines the individual steps. A provider can simply mark off each step as it is completed, to ensure that all assessments and modules are successfully implemented. To further assist providers, a “Tips for Providers” handout is also provided in the Appendices. This sheet is a collection of hints and tips collected over the lifetime of the LEAD program to assist in the delivery of LEAD and to help ensure that each step goes smoothly. Finally, the Appendices also contain a Flow Diagram that depicts the steps of LEAD and their corresponding time frame. This form also provides providers with an opportunity to plan out the LEAD intervention before beginning implementation, to try and minimize potential scheduling conflicts.

LEAD Screening

Given that LEAD is a selected prevention program, a screening is critical to determining if LEAD is an appropriate intervention for a specific adolescent. Screening can be done with individual youth or with groups of youth. The LEAD screener uses 4 items from the Interpersonal Needs Questionnaire, a well-validated questionnaire that assesses perceived burdensomeness. A paper version is available in the Appendix. It is recommended that, when screening larger groups of youth, the screening items be embedded within a larger survey or needs assessment.

The brief nature of LEAD means that the intervention is narrowly focused on addressing burdensome cognitions, as a means for changing maladaptive cognitions and activating adolescents’ existing social support networks. Adolescents without significant levels of perceived burdensomeness will not likely benefit from LEAD and an alternative intervention may be more appropriate. Additionally, for adolescents without perceived burdensomeness, completing an intervention that does not align with their internal

experiences may lead to a negative impression of both the program and of mental health services more broadly.

Perceived burdensomeness items are derived from the Interpersonal Needs Questionnaire (INQ; Van Orden, Cukrowicz, Witte, & Joiner, 2012). For the perceived burdensomeness screen, 4 items have been selected as most appropriate for large-scale screening in a school setting. Participants respond to each item using a 7-point Likert scale. Higher scores indicate greater perceptions that one is a burden to others (perceived burdensomeness). Prior research has supported the factor structure, internal consistency, and convergent validity of the subscales in adolescents (Hill et al., 2015). For perceived burdensomeness, a score of ≥12, approximately the 85th percentile, has been interpreted as indicative of elevated perceived burdensomeness. This threshold is consistent with research on the LEAD program, but may be adjusted at the discretion of the program provider. For example, while a cutoff of ≥12 is recommended, a large institution may wish to implement a higher cut off in order to limit the number of youth for whom LEAD is recommended.

The Consent Process

Once youth are identified, appropriate consents for counseling must be obtained, as appropriate to the setting. If your setting requires a consent form signed by a parent or guardian prior to providing counseling, the procedures and protocols for your institution or setting should be followed.

The Pre-Treatment Assessment

Once youth are identified and consent is obtained, youth may be provided the pre-treatment assessment and LEAD Module 1. In general, it is recommended that youth receive the pre-treatment assessment and Module 1 within two to three weeks of the screening/needs assessment. The pre-treatment assessment provides the counselor with a selection of mental health-related information to (a) inform the need for additional and/or alternative assessments or interventions and (b) provide a baseline from which to evaluate improvement following completion of the intervention.

The pre-treatment assessment includes a brief demographic questionnaire, then moves into the core assessment instruments: The pre-treatment assessment also contains the Short Mood and Feelings Questionnaire (Angold et al., 1995), a 13-item screen for depressive symptoms and the GAD-7 (Spitzer, Kroenke, Williams, & Lower, 2006) a brief, 7-item scale assessing symptoms of generalized anxiety disorder. Both have been validated for use with adolescents. Next is the Interpersonal Needs Questionnaire (INQ; Van Orden, Cukrowicz, Witte, & Joiner, 2012), a 10-item scale assessing both perceived burdensomeness (5-items) and thwarted belongingness (5-items). The pre-treatment assessment concludes with items assessing school engagement, grit/perseverance, sense of purpose, and self-understanding. As noted above, upon completion of the pre-treatment assessment, counselors receive an email summary of the youth's responses.

Elevated SMFQ and GAD-7 scores may indicate that additional assessment and, possibly, treatment for depressive symptoms or anxiety may be appropriate. Use of LEAD may result in reductions in these scores, particularly depressive symptoms, so monitoring of depressive symptoms and anxiety is suggested (which can be accomplished via the post-treatment and follow-up assessments). It is recommended that the provider be available during the assessment process to answer any questions or address any concerns that may arise during the assessment process.

Module 1

Upon completion of the pre-treatment assessment, the first LEAD module should be provided. As cognitions of perceived burdensomeness frequently fluctuate over time, re-assessment is recommended after a delay greater than one week to ensure that perceived burdensomeness is present at or near the time of the intervention.

The first LEAD module can be accessed on the study website (www.LEADintervention.weebly.com) under the "LEAD Program" tab. The adolescent may complete the web-based module on their own. Most adolescents will require approximately 30 minutes to complete the first module. LEAD requires at least a 4th grade reading level and should be completed on an internet connected computer with speakers or headphones to allow the adolescent to listen to instructional videos and vignettes. It is recommended that the counselor be present during module administration should adolescents have any questions during the module. However, the module does not require active assistance from the counselor.

Youth are prompted to print the final page of the intervention module, which contains a summary of Module 1. Specifically, this page indicates the safe adult youth identified, the outline of what youth would like to say to that safe adult, and the activity youth identified as a means of contributing to others' lives. A print out of the final page of the module is intended to serve as a reminder to the adolescent of the activities selected. The counselor should briefly check-in with the adolescent to answer any questions or address any concerns that may have arisen during the program. The counselor should also review the print out to ensure that the adolescent selected an adult, that the youth's message uses good communication skills, and that the activity selected is feasible. If not, guidance can be provided to assist the youth in selecting more appropriate choices. This check-in is expected to require approximately 3-5 minutes per child.

Module 2

The second module should be completed in a manner similar to the first module, at an interval of approximately one to two weeks. A one-week minimum interval is recommended so that adolescents have sufficient time to complete the activities they scheduled during the first module. The recommendation to complete Module 2 within two weeks is designed to reinforce learning of the skills taught in the LEAD intervention.

The Post-Treatment Assessment

First and foremost, the post-treatment assessment provides information regarding the adolescent's current thoughts and experiences and can be compared to the pre-treatment assessment scores to determine if scores improved during the intervention period. In addition, the post-treatment assessment can be used to identify when additional intervention is indicated, with regard to perceived burdensomeness, social support, depressive symptoms, and anxiety.

In form, the post-treatment assessment is accessed in a similar manner, contains similar scales, and provides similar summary data as the pre-treatment assessment. The post-treatment assessment should begin with the same subject ID as the pre-treatment assessment, so that the program provider can link the adolescent's scores to the earlier assessment. Demographic information is not present in the post-treatment assessment, but the clinical scales remain the same (the INQ, SMFQ, GAD-7). The post-treatment assessment also incorporates the four item Satisfaction with Service Scale (Athay & Bickman, 2012; Bickman et al., 2010) to assess adolescents' satisfaction with LEAD.

The post-treatment assessment should be conducted 1-2 weeks after Module 2 and requires approximately 10-15 minutes for most adolescents to complete. As with the pre-treatment assessment and modules, the post-treatment assessment is available on the study website.

The Follow-up Assessment

A follow-up assessment is included to facilitate additional monitoring of at-risk youth and referral to additional services as needed. In the original randomized controlled trial of LEAD, adolescents who completed the intervention reported increased benefits six weeks after completion of LEAD, beyond the immediate reduction in perceived burdensomeness reported at the post-treatment assessment (Hill & Pettit, 2016). Thus, the follow-up assessment may reveal additional improvements beyond those reported in the post-treatment assessment. Any additional concerns that remain at this time should be addressed as appropriate.

The follow-up assessment should be conducted six to eight weeks after the post-treatment assessment. In form, the follow-up assessment is identical to the post-treatment assessment. The follow-up assessment is available on the study website.

Copies of all assessment instruments are provided in the Appendices.

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Appendix A: Measures Used in LEAD

Assessment instruments for the pre-treatment, post-treatment, and follow-up assessments.

LEAD Screening Tool

Interpersonal Needs Questionnaire

The following questions ask you to think about yourself and other people. Please respond to each question by using your own current beliefs and experiences. Not what you think is true in general, or what might be true for other people. Please base your responses on how you've been feeling recently. There are no right or wrong answers: we are interested in what you think and feel.

The scale ranges from (1) "Not at all true for me" to (7) "Very true for me."

		Not at all true for me						Very true for me
1.	These days the people in my life would be better off if I were gone.	1	2	3	4	5	6	7
2.	These days the people in my life would be happier without me.	1	2	3	4	5	6	7
3.	These days I think the people in my life wish they could rid of me.	1	2	3	4	5	6	7
4.	These days I think I make things worse for the people in my life.	1	2	3	4	5	6	7

Total: _____

Van Orden, K. A., Cukrowicz, K. C., Witte, T. K., & Joiner, T. E. (2012). Thwarted belongingness and perceived burdensomeness: Construct validity and psychometric properties of the Interpersonal Needs Questionnaire. *Psychological Assessment, 24*(1), 197-215.

Link to full scale:https://psy.fsu.edu/~joinerlab/measures/INQ-15.

Other Assessment Measures

Perceived Burdensomeness and Thwarted Belongingness: The Interpersonal Needs Questionnaire (Van Orden et al., 2012, Hill et al., 2014) is a 10-item scale that assesses both perceived burdensomeness and thwarted belongingness. The first five items constitute the perceived burdensomeness scale, with the remaining five items addressing thwarted belongingness. Youth select responses on an anchored scale that ranges from (1) *Not at all true for me*, to (4) *Somewhat true for me*, to (7) *Very true for me*. Total scores for perceived burdensomeness range from 5-30; total scores for thwarted belongingness range from 5-30.

Interpersonal Needs Questionnaire
The following questions ask you to think about yourself and other people. Please respond to each question by using your own current beliefs and experiences. Not what you think is true in general, or what might be true for other people. Please base your responses on how you've been feeling recently. There are no right or wrong answers: we are interested in what *you* think and feel. The scale ranges from (1) "Not at all true for me" to (7) "Very true for me."
1. These days the people in my life would be better off if I were gone.
2. These days the people in my life would be happier without me.
3. These days I think my death would be a relief to the people in my life.
4. These days I think the people in my life wish they could rid of me.
5. These days I think I make things worse for the people in my life.
6. These days, I feel like I belong.
7. These days, I am fortunate to have many caring and supportive friends.
8. These days, I feel disconnected from other people.
9. These day, I often feel like an outsider in social gatherings.
10. These days, I am close to other people.

Depressive Symptoms: The Short Mood and Feelings Questionnaire (Sharp, Goodyer, & Croudace, 2006; Tharpar & McGuffin, 1998) is a 13-item scale that assesses depressive symptoms. Youth select responses based on their experiences in the previous two weeks, with options including *True, Sometimes,* and *Not True.* Total scores range from 0-26, with scores over 8 indicating that further evaluation for depression is recommended.

Short Mood and Feelings Questionnaire

This form is about how you might have been feeling or acting recently.

For each question, please check how much you have felt or acted this way in the *past two weeks.*

If a sentence was true about you most of the time, check TRUE.

If it was only sometimes true, check SOMETIMES.

If a sentence was not true about you, check NOT TRUE.

	TRUE	SOMETIMES	NOT TRUE
1. I felt miserable or unhappy			
2. I didn't enjoy anything at all			
3. I felt so tired I just sat around and did nothing			
4. I was very restless			
5. I felt I was no good any more			
6. I cried a lot			
7. I found it hard to think properly or concentrate			
8. I hated myself			
9. I was a bad person			
10. I felt lonely			
11. I thought nobody really loved me			
12. I thought I could never be as good as other kids			
13. I did everything wrong			

Anxiety: The GAD-7 (Spitzer, Kroenke, Williams, & Löwe, 2006) is a 7-item scale that assesses anxiety symptoms. Youth select responses based on their experiences in the previous two weeks, with options ranging from *Not at all* to *Nearly every day.* Total scores range from 0-21, with scores of 5, 10, and 15 indicating mild, moderate, and severe anxiety, respectively.

GAD-7

Over the last 2 weeks, how often have you been bothered by the following problems?

	Not at all	Several days	More than half the days	Nearly every day
1. Feeling nervous, anxious or on edge				
2. Not being able to stop or control worrying				
3. Worrying too much about different things				
4. Trouble relaxing				
5. Being so restless that it is hard to sit still				
6. Becoming easily annoyed or irritable				
7. Feeling afraid as if something awful might happen				

Positive Youth Development Items: Items addressing positive character traits and protective factors are drawn from the Youth Civic and Character Measures Toolkit (Syvertsen, Wray-Lake, & Metzger). These brief scales address aspects of positive youth development (school engagement and grit/perseverance) that the program seeks to strengthen.

Positive Youth Development Scale

Please answer the following questions.

	Strongly disagree	Disagree	Somewhat disagree and somewhat agree	Agree	Strongly agree
1. I want to do well in school.					
2. I pay attention in class.					
3. I take school seriously.					
4. When I get stuck on something I'm working on, I keep trying until I figure it out.					
5. I almost always finish things that I start.					
6. I am a hard worker.					

Satisfaction with LEAD: The Satisfaction with Services Scale – Youth Version (Reimer et al., 2012) is a 4-item scale that satisfaction with services received. Youth select responses based on their experiences with a given intervention program. Total scores range from 0-12, with greater scores indicating greater satisfaction with the intervention. The Satisfaction with Service Scale is part of the larger Peabody Treatment Progress Battery, used to assess youths' progress through a treatment program.

Satisfaction with Services Scale for Youth Please answer the following questions about your experience with LEAD.				
	No, Definitely Not	No, Not really	Yes, Generally	Yes, Definitely
1. Did you get the kind of services you think you needed?				
2. Were the services you received the right approach for helping you?				
3. If a friend were in need of similar help, would you recommend our services to him or her?				
4. If you were to seek help again, would you seek it from us?				

Appendix B: Tools to Assist with Implementing LEAD

LEAD Checklist

Screen & Consent

□ Assess youth for eligibility for LEAD using the perceived burdensomeness survey.

□ Acquire consent for providing services, as per the standard procedures in your organization

Pre-Test and Module 1

□ Pull youth to take Pre-Test & Module 1 (www.LEADintervention.weebly.com >> Pre-Test/Module 1)

□ Monitor youth to ensure they are watching the videos and reading passages

□ Have youth print out their plan (final intervention page)

□ Discuss Module 1 briefly with each youth

- Ensure youth selected a safe *adult,* not a peer
- Ensure activity selection is reasonable/achievable
- Ask youth to identify any potential obstacles to completing their activities and

□ Schedule Module 2, based on dates provided by Tracking Log

Module 2

□ Pull youth to take Module 2 (www.LEADintervention.weebly.com >> Module 2)

□ Monitor youth to ensure they are watching the videos and reading passages

□ Have youth print out their plan (final intervention page)

□ Discuss Module 2 briefly with each youth

- Ask youth about Module 1 activity completion, discuss any obstacles, and identify methods for overcoming obstacles
- Ensure youth selected a safe *adult,* not a peer
- Ensure activity selection is reasonable/achievable

□ Schedule Post-Test, based on dates provided by Tracking Log

Post-Test

□ Have youth complete Post-Test (www.LEADintervention.weebly.com >> Post-Test)

- Review email summary
- Encourage youth to continue using the skills learned during LEAD to plan activities for themselves.

□ Schedule Follow-Up, based on dates provided by Tracking Log

Follow-Up

□ Have youth complete Post-Test (www.leadintervention.weebly.com >> Follow-up)

- Review email summary
- Encourage youth to continue using the skills learned during LEAD to plan activities for themselves.

Tips for Counselors

Screen

- Identify eligible youth via screening for perceived burdensomeness.

Consent

- Seek appropriate consent to treatment as required in your setting.

Pre-Test/Module 1

- For group administration of up to 10 youth at a time can be given the Pre-test and Module 1 in a computer lab. Any more and completing a brief check-out with each youth may be difficult.
  - For privacy, it may help to leave an open seat between youth, if possible.
  - Having headphones, if available, also increases privacy.

- Before youth leave, be sure to check to ensure they have completed the program appropriately.
  - Youth may struggle to select an adult they can talk to: Aunts/uncles, grandparents, coaches, and youth pastors, can all be good options.
  - Youth often prefer to open up to peers. You may point out that adults have been through many experiences and can provide good advice. Peers may be good listeners, but they may not be able to help us in a tough situation.
  - *Individual and extended conversation with youth may be needed if they feel like they cannot talk to their parents or any adults at all.*

- Have youth print out the final page of the survey. This provides a reminder of what the youth planned to do and includes the script of what they can say to their safe adult. A script can help "break the ice" as they open that line of communication.

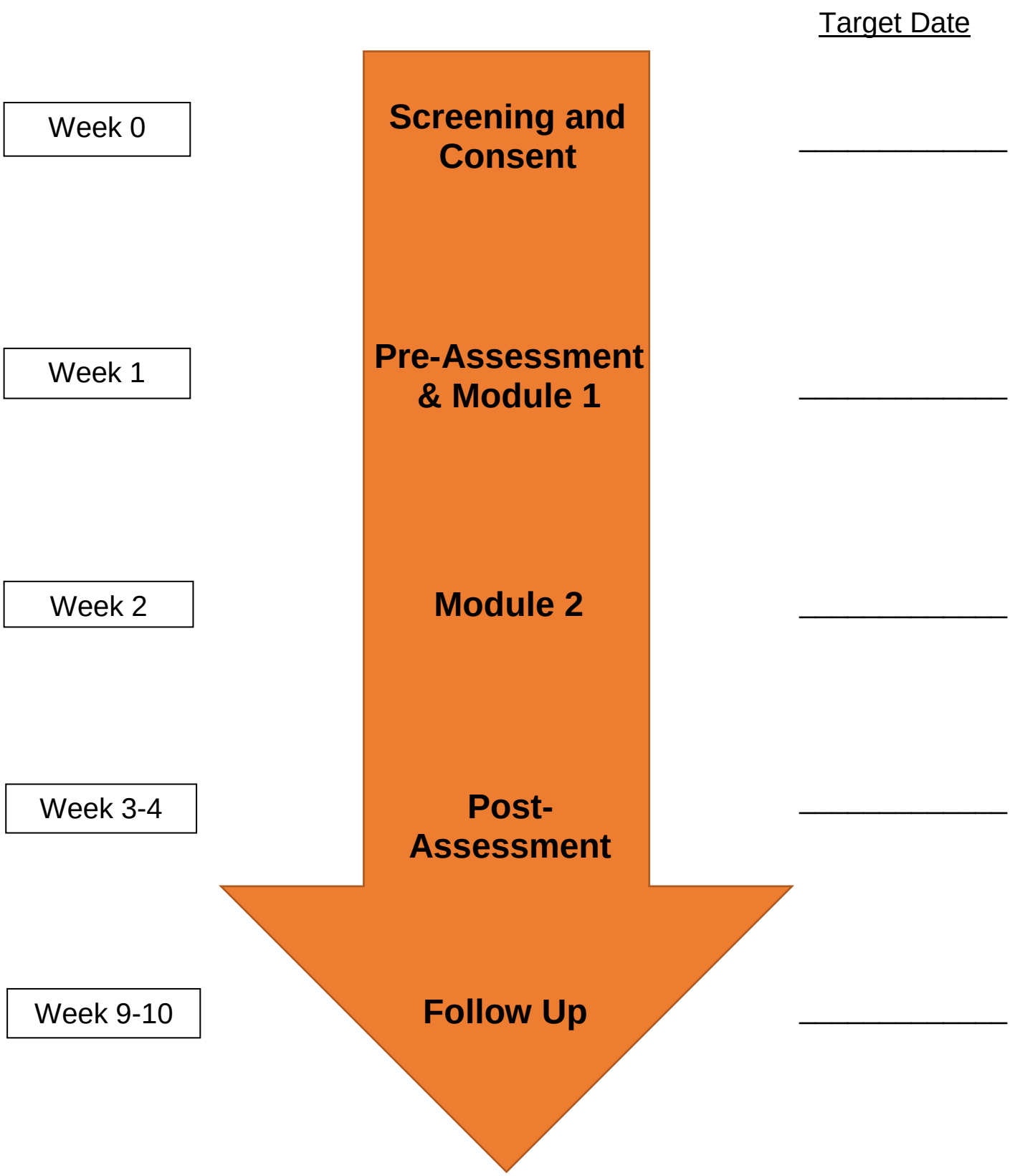
Module 2

- Ask youth if they have completed the activities from Module 1 (talking to an adult, doing their planned activity). Talk about obstacles that may make it difficult and how they can overcome them.

Post-Test/Follow-up

- These assessments are great for identifying youth in need of individual counseling. You can call parents and suggest individual counseling at any point. You can also create small groups or other individual counseling plans to help youth develop coping skills as needed.

LEAD Timeline



Participant Tracking Sheet

Name	Screening	Pre-Test/Module 1	Module 2	Post-Test/Follow-Up