OVERVIEW

As a platform for this *Adjunct Guide to Driving With Care*, we begin by presenting a number of prominent concepts and theories that provide a conceptual framework for understanding, interpreting and predicting the development, dynamics, and outcome of adolescent problems. We look at theories that are particularly relevant to understanding the causal and dynamic factors of underage AOD use and abuse and underage impaired driving (UID). An effort is made to relate each of these theories to underage drinking and UID.

SUMMARY OF SELECTED CONCEPTUAL THEORIES

Although there are a number of important and credible conceptual orientations that can help in understanding the causal and dynamic factors of UID, we select eight that cover the essential psychosocial elements of UID. These are:

◗ Social Learning Theory (SLT)

◗ Problem Behavior Theory (PBT)

◗ Theory of Planned Behavior (TPB)

◗ Social Norms Theory (SNT)

◗ Transitional Teens Theory (TTT)

◗ Cognitive-Behavioral Therapy (CBT)

◗ Acquired Preparedness Model (APM)

◗ Social and Community Responsibility Theory (SCRT).

Social Learning Theory (SLT)

We consider social learning theory (SLT: Bandura, 1969, 1973, 1977a, 1986; Bandura & Walters, 1963) as providing a broad-band explanation for both desirable and undesirable behavioral outcomes. It includes a broad array of theory and practice in learning and change and encompasses both cognitive and behavioral approaches. It moves beyond the narrower behavioral perspective defined by the early behaviorists (e.g., Miller & Dollard, 1941; Skinner, 1938, 1953) and includes the cognitive perspective. Cognitive learning assumes that there are psychological factors that influence behavior.

However, SLT also holds that behavior is influenced by environmental factors, and not just psychological or cognitive factors. Thus, SLT assumes that psychological and environmental factors combined influence the development of specific behaviors.

SLT stresses the importance of attending to and modeling the behaviors, cognitions (e.g., attitudes and beliefs) and emotions of others. SLT sees an interactive process between cognitive, behavioral, and environmental influences (Ward & Gryczynski, 2009).

There are three principles that help define SLT.

◗ Observational learning is achieved when the modeled behavior is structured or organized and then rehearsed symbolically, and then overtly enacted. Retention of that behavior occurs when the modeled behavior is coded into words, labels or images.

◗ The adoption of the modeled behavior is strengthened when the outcomes of that behavior are valued, seen as important to the individual or lead to desirable and expected outcome.

◗ The modeled behavior is more likely to be integrated by the observer when the model has characteristics similar to the observer, there is a cognitive-behavioral connection with the model, the model is admired by the observer, and the behavior that is adopted has practical or functional value.

SLT defines four requirements for learning and modeling behavior.

- **Attention** to the modeling events in the environment and the characteristics of the observer to attend to those events (emotional, perceptual set, arousal level).

- **Retention,** which is the cognitive component involving remembering what one observed, coding, organizing and rehearsing it at the cognitive level.

- **Reproduction** or the ability to reproduce or copy the behavior which includes observing the self reproducing the behavior and feedback of the accuracy of that reproduction.

- **Motivation** or behavioral consequence that justifies wanting to adopt the behavior which includes self-reinforcement.

Rotter's (1954) work on social learning involved the desire to avoid negative consequences, the likelihood of engaging in a behavior if the expectation is that it will lead to positive outcomes, and the reinforcement of the behavior when it does lead to positive outcomes. Bandura expanded on the social learning concepts of Rotter and Miller and Dollard (1941).

Social learning theory can be used to explain the development of deviant behavior, substance use and abuse and impaired driving. Theoretically, if an individual never observed these behaviors, then those behaviors would never be learned. If a child or adolescent never was exposed to substance use, to individuals committing crimes, or to impaired driving, theoretically the individual would never adopt the behavior. Once it is adopted, the behavior leads to positive consequences or outcomes, e.g., acceptance by the group, sense of power, attention of peers, establishment of a group role that instills a sense of pride, etc. The degree of positive reinforcement will determine whether the behavior is continued. Group norms become a power base for this reinforcement.

SLT has its limitations with respect to explaining certain behaviors learned under certain conditions. For example, it is conceivable that a child could commit a crime having never observed someone committing a crime.

However, in today's world, that is quite unlikely. Observing and modeling behavior can be very subtle. Certainly, many circumstances will determine the individual's exposure to potential models. The important factor is that once the behavior is adopted, internally coded, and reproduced in such a manner that it leads to some kind of positive reinforcement, that behavior will continue to be reproduced. However, behavioral outcome may be perceived to be undesirable to the individual, decreasing the probability that the behavior will continue.

Emerging out of Bandura's SLT is self-efficacy theory (1982, 1986, 1995, 1997). He saw outcome expectancy as the individual's judgement that a certain behavior will lead to a certain and desired outcome. He defined self-efficacy as the belief that one can successfully engage in a behavior that is required to produce a desired outcome. Bandura sees self-efficacy as a critical factor in cognitive and behavioral change since it determines the execution of learned cognitive and behavioral coping skills.

Problem Behavior Theory (PBT)

Problem behavior theory (PBT: Jessor, 1987, 1991, 1998; Jessor & Jessor, 1977) is a broad-band and widely used theory to explain dysfunction and maladaptation in adolescence. The fundamental premise of PBT, developed initially from Merton's (1957) concept of anomie and Rotter's (1954) social learning theory, is that all behavior emerges out of the structure and interaction of three systems.

- The **behavior system** includes both problem and conventional behavior structures. Problem behavior is defined as behavior that departs from the social and legal norms of society and causes social control response from external sources. Underage drinking, risky and impaired driving, and deviancy are seen as problem behavior. Conventional behaviors are those that are socially and normatively expected and accepted.

- The **personality system** involves a composite of persistent enduring factors and includes the *motivational-instigation structure,* determined by value placed on achievement and independence; the *personal belief structure*, related to a person's con-

cept of self relative to society; and *personal control structure*, which gives a person reasons to not participate in problem behavior. Problem behavior often results from personality patterns related to low achievement, focus on independence, favorable attitudes towards deviancy, adoption of values that are counter to social expectations and lower self-esteem.

◗ The **perceived environment** system includes two structures: *distal*, inclusive of a person's relationship to their support network, and *proximal*, which deals with a person's environment in relationship to available models of behavior. Problem behavior in the environment often elicits high peer approval, peer models, low parental control, support and influence, and incompatibility between parent and peer expectations.

PBT holds that when the personality system and perceived environment system clash, behavioral problems become manifest (Jessor, 1987). The most prominent features of the adolescent personality include: impulsivity; risk-taking; perceived invulnerability ("can't happen to me"); struggling to find personality identity; errors in thinking due to being locked into normative peer culture ("everybody does it"); and rebellion towards authority. These features, coupled with the disturbances in psychosocial adjustment, clash with the norms and expectations of the culture and society (drive sober) resulting in problem behavior (possession of alcohol, driving after drinking). We can develop effective interventions when we see UID as part of the behavioral system that interacts with the personality and environment.

From a PBT perspective, underaged individuals who are at high risk for becoming involved in impaired driving behavior may fit the following pattern:

◗ a predominate behavior structure featuring normalized images of drinking and driving

◗ low value placed on achievement and success

◗ a poorly developed personal control structure

◗ and a perceived environment steeped in role models and opportunities (e.g., peers that approve drinking, peers that drink and drive) that

support drinking and driving.

Some problem behavior is based on age-graded norms whereas others are not. For example, alcohol use for the underage is considered to be a component of problem behavior, but not for adults. In most states, any use of alcohol before driving constitutes impaired driving (based on zero-tolerance laws). Impaired driving, regardless of age, is considered to be problem behavior.

A large research project conducted by Klepp and Perry (1990), using PBT, found that perceived environmental, personality and behavioral factors were able to account for a large proportion of the observed variance in impaired driving as well as in the prediction of the onset of impaired driving. This study identified the following five factors that were most predictive of DWI conduct and which provide a foundation for developing UID prevention and intervention programs:

◗ intentions to drink and drive

◗ experiences riding with a drinking driver

◗ having decided not to drive because of having too much to drink

◗ marijuana use and

◗ history of experiencing problems with parents, friends or school because of drinking.

Of particular importance to adolescent problem behavior is Jessor's 1991 restructuring of PBT to include the concepts of protective and risk factors. Protective factors provide the controls to prevent or mitigate problem behavior and include parental support and sanctioning, positive and prosocial peer and adult role models. Risk factors that increase or support problem behavior include: peer and adult role models for substance use and deviancy; and exposure to situations where there are opportunities to engage in problem behaviors.

PBT shows that problem behaviors are related, and that any single problem behavior, such as impaired driving, must be viewed within the complex system of both adaptive and problem behavior, personality, and the perceived environment. Attempts to develop in-

tervention strategies for the UID client must address all of these systems. By treating all behaviors (not just drinking behavior), non-alcohol related accidents and problems might decrease as well. The specific lessons and sessions in the education and treatment protocols of *Driving With Care* attempt to do just this: to address the UID client's behavioral, personality and perceived environment systems.

Theory of Planned Behavior (TPB)

The theory of planned behavior (TPB) was developed by Ajzen (1989, 1991, 2001) and is seen as an extension of the theory of reasoned action (Ajzen & Fishbein, 1980; Fishbein & Ajzen, 1975). The theory of reasoned action holds that the intention (motivation) to perform a certain behavior is dependent on whether individuals evaluate the behavior as positive (attitude), and if they judge others as wanting them to perform the behavior (subjective norm).

TPB builds on this theory and holds that all behavior is not executed under purposeful control and that behaviors can be on a continuum from total control to complete lack of control. Both internal factors (cognitive skills, knowledge, emotions) and external factors (situations or environment) determine the degree of control.

TPB is based on the connection of attitudes and behaviors. Behavior is based on and guided by three kinds of beliefs and cognitive outcomes.

◗ **Behavioral beliefs**: Beliefs about the expected or likely outcome of the behavior which produces a favorable or unfavorable **attitude towards the behavior** (outcome).

◗ **Normative beliefs**: Beliefs about what others expect (normative expectations) and the desire of the individual to follow those expectations. These beliefs result in the degree of social pressure to comply (outcome) or **subjective norm** (they think others, e.g., peers, want them to perform the behavior).

◗ **Control beliefs**: Beliefs about factors that exist that will either advance or block the performance of the behavior resulting in the degree of **perceived behavioral control** (outcome).

All of these outcome factors - attitude towards the behavior, subjective norm, and perceived behavioral control - combine to determine the behavioral intention. For example, the more favorable the attitude towards the behavior, and the more favorable the subjective norm, and the greater the perceived control, the potential of the intention to perform the behavior increases in strength.

The attitude towards the behavior is represented by the person's positive or negative feelings about doing the behavior. The subjective norm is the individual's perception of whether others think the behavior should be performed. Behavior control is the individual's judgment around the ease or difficulty of performing the behavior.

The concept of perceived control in TPB is similar (if not the same) as Bandura's concept of self-efficacy. It is the belief or judgment that one can successfully perform a behavior under certain conditions.

We can use impaired driving as an example.   The intention to drive after drinking and actually driving impaired is strengthened when individuals have the belief that nothing bad will happen, that they have not had that much to drink, they will make it to their destination OK, and there is an expectation of feeling power to drive with friends in the car, even with a few drinks (**behavioral beliefs**). There is also power in driving impaired with peers in the car who hold the **normative belief** that it is OK to drive after drinking. The behavior and attitude towards the behavior is further strengthened when there is the belief that their peers expect them to show confidence and drive impaired (**subjective norm**). The behavior of driving after drinking is further advanced and reinforced when: the outcome is handling the situation OK; the experience of power in being the only person with a car and license to drive; and the perception that "I've not had that much to drink and I am handling it" (**control belief**).

Social Norms Theory

Social norms theory (SNT: Berkowitz, 2003, 2005; Perkins, 2003) had its start with the research in the 1980s by Perkins and Berkowitz who found college

students typically exaggerated their beliefs around the drinking habits and consumption of other students and that these misperceptions were at significant variance with the actual drinking patterns and consumption norms. The social norms approach is that of correcting these misperceptions in order to reduce extreme drinking. SNT is generally based on social learning theory and, more specifically, theory of planned behavior and reasoned action theory (Myers, 2006).

SNT holds that subjective norms, or the perceived expectations of others or of peer groups who approve or disapprove of a particular behavior, along with attitudes towards the behavior are determinants of that behavior. SNT posits that people are highly influenced by what they think their peers are doing or thinking and then conform to what **they believe** is the norm, or social expectation. This perception can cause people to overestimate problem behaviors and underestimate healthy behaviors. These misperceptions tend to increase problem behaviors and decrease behaviors that are healthy because people act in agreement with what they think is the norm or normal (National Social Norms Resource Center, 2008). SNT also posits that subjective norms that come from incorrect assessment of what others do will influence social behavior (Berkowitz, 2005; DeJong, 2003; DeJong et al., 2006).

For example, even though 25% of Americans do not drink, many have the perception that "everyone drinks" or "everyone parties." One study showed that college students perceived that 60% of their peers drink three or more times a week. The survey actually showed that 33% drink that often (National Social Norms Resource Center, 2008).

The first objective of intervention is to get individuals to understand their subjective perception of the behaviors of their peers and what they think the normative behaviors of their peers are (subjective norms), and then to get them to compare these with the actual normative behavior. A further step is to relate their subjective norms to healthy norms. If individuals can understand the perceptions of their peers, they will be more apt to identify unhealthy and harmful behaviors, and in response, begin to identify and even

normalize healthy behaviors (UCASA, 2008).

Social norms include a broad array of attitudes, beliefs and behaviors, including cultural tradition, community standards and mores, customs, shared beliefs and common behavioral patterns (Ferris State University, 2008). The power of social norms is that they influence people in either unhealthy or healthy ways. For example, if we perceive that most people care about others, we are more likely to care about others and treat others in a positive way. If we perceive that most people drink heavily at parties, we are likely to do the same. The studies provided in *Chapter 2* around riding with drivers who are impaired, or the higher probability that a person will drive impaired if having ridden with an impaired driver, provide support for SNT.

SNT offers an intervention approach based on social norm marketing. There are numerous studies that have supported the efficacy of social norm intervention or social norm marketing. A study of 18 different colleges over a three year period found that social norm interventions were associated with lower perception of students drinking and lower consumption levels (Perkins and Craig, 2006). Other studies have shown a reduction of high-risk drinking (more than five drinks in one sitting in the past two weeks) on college campuses ranging from a 44% reduction over a 10 year period on one campus to a 20 to 40% reduction over periods of three to five years on several campuses (friendsdrivesober, 2008).

An intervention designed to reduce drinking among student athletes also showed a reduction of misperceptions of alcohol consumption. During the intervention period, there was also a decline in individual consumption, high-risk drinking and alcohol-related consequences (LaBrie et al., 2008). A study by DeJong et al. (2006) also supports the social norms marketing or campaigns approach. Their study found that the social norms approach can attenuate favorable drinking beliefs and drinking behavior.

Although there has been empirical support for social norm marketing on college campuses, the program is not without its critics. A study by Wechsler et al. (2003) evaluated the success of social norms market-

ing campaigns on several college campuses by comparing the drinking rates over a five year period with those of campuses that had no social norm marketing campaigns. They concluded that the two groups did not differ on seven measures of alcohol use. A number of researchers have challenged the methodology of this study and concluded that the social norms marketing campaigns used on the campuses in the study did not "meet minimum quality standards consistent with social norms theory" (Myers, 2006, p. 40).

In spite of this contrary finding, there is strong literature support for SNT and market campaigning with institutions that have large populations of underage persons. The National Institute of Alcoholism and Alcohol Abuse Task Force designated social norms marketing as a "promising" strategy on the basis of several written case studies including reports from a number of colleges and universities where "dramatic changes were achieved after social norms marketing campaigns were introduced" (Myers, 2006).

SNT campaigns should follow a number of criteria to be successful (Myers, 2006). These include: 1) accurate information must be given to the individuals involved so that they can compare their own alcohol use frequency, quantity and patterns with the norm so that they can align their perceptions and expectations with reality; 2) the delivery of the information must use basic communication principles (Berkowitz, 2003, 2004; 2005).

Following are the main elements of SNT:

◗ The SNT approach is based on the assumption that actions are often based on misinformation about or misperceptions of the attitudes and/or behaviors of others

◗ When these misperceptions are interpreted as real, they reinforce the behavior that is adopted around these misperceptions

◗ There is often a passive acceptance of these misperceptions with little effort to change them

◗ The misperceptions are self-reinforcing in that they support problem behaviors that are falsely believed to be normative and act to discount opinions and action that indicate them to be false

and see these opinions as being nonconforming

◗ When accurate information about the actual norms are given to individuals, they begin to express them as consistent with the accurate, healthier norms and the adoption of these new beliefs put up barriers to problems behaviors inconsistent with the actual norms.

Transitional Teens Theory (TTT)

TTT (Voas & Kelley-Baker, 2008) provides a framework for understanding trajectories into adolescent substance abuse and UID. Transitional teens represent the 15- to 17-year-old age group which Voas and Kelley-Baker describe as "encompassing the first 3 years of high school and the point at which teenagers first become eligible to drive" (p. 93).

This is the stage and period when the adolescent begins to travel outside the home, either in a car or public transportation, and away from the supervision of parents and adults. It is a period when teens experience expanded horizons which can include various risks such as riding with peers who are novice drivers, exposure to opportunities for AOD use, and peer support and pressure for AOD consumption, if not heavy consumption. Because of the automobile or public transportation, the teen may travel into areas of greater traffic and crime risks, and because of the absence of parent supervision, be exposed to sexual risk-taking. Voas and Kelley-Baker call this a stage in that members of the group share common traits, are affected by similar environments, and share common experiences and skills such as driving a motor vehicle or riding in a vehicle with peers absent of parental supervision.

The transitional teen model defines four key elements that significantly affect and influence behavior: 1) the developmental dynamics and status of the adolescent; 2) parental influence; 3) social, environmental and community influences; and 4) peer influences. The latter three are considered to be external influences. All of the four can operate as either risk or protective factors that influence adolescent behaviors, development and decisions.

During this period, parental influence and supervision decreases, and time independent of that influence increases. The automobile is a "vehicle" that enhances this independence from parents. The protective components of the community and environment provide some substitution for the decrease in parental supervision. These influences include laws regulating underage driving and drinking and impaired driving. The structure of the school environment also provides protective factors during this period. Adult role models, e.g., ministers, coaches, can also provide a protective effect that can counterbalance the teen moving away from the supervision of the home.

The environment can also present risk factors for the transitional teen. Because of the mobility within the community, via the motor vehicle, and public transportation for teens who cannot afford a car, or whose peers do not have motor vehicles, teens can access neighborhoods and communities that are high-risk for AOD use and even exposure to crime.

It is inevitable that the teen will experience more and more independence from adult influences during this period. Most relevant during this transition is the peer group, and more specifically, what Voas and Kelley-Baker call the small affinity group, that is defined by the number of teens that can fit into an automobile. This small group, because of the car, can travel away from the home environment's supervisory regulations to locations where they perceive themselves to have more control over their own behavior. However, this self-control may be a distortion since they may find themselves in environments in which they are less familiar and in less control.

The risk increases when the small affinity or intimate group has deviant behavior norms. The effect of these norms was mitigated to a large degree as long as there was supervision by adults to counter these norms or impose compliance expectations and controls. Again, the vehicle gives the affinity group opportunity to escape supervision of the home and other adults and go to environments where these normalizing factors are not operating. In essence, whereas away-from-home transportation destinations prior to traveling in a vehicle with peers was controlled and limited by parents and adults, during this transitional period, these con-

trols are now attenuated or even absent. The result is opportunity for exposure to risk environments and risk-taking behaviors, viz, AOD use and sexual behavior. Again, the level of this risk is determined by the degree to which the affinity group is deviant from normalizing influences.

The transitional teen theory provides a framework for understanding and addressing UID. This period has profound influence on later teens and early adulthood. Both the risk and protective factors that operate during the transitional teen period continue to operate into the advanced teen and early adult years. As described in Chapter 5, around 10% of the impaired driving samples were in the underage group. However, the influences operating in the middle and late teens that contribute to problem and risk-taking behavior may not manifest into impaired driving patterns until later years - even up to middle and late adulthood. In other words, they can operate as a sleeper-effect. The mean age for first offenders arrested in the three samples described in *Chapter 5* is 27 years. Certainly, factors other than those that develop in the underage period contribute to adult impaired driving patterns. Yet, it is good to keep in mind that, on the average, a DWI offender drove from 800 to 1,000 times before being arrested for a first offense. Thus, for most DWI offenders, impaired driving patterns have been persistent and relatively consistent prior to first arrest.

The mitigation of potential risks during the transitional teen period is bound up with the degree of supervision that parents exercise and willingness of the community to enforce laws that place limitations on driving behavior, e.g., no teen passenger during the provisional licensing period; no nighttime driving, etc. It would be expected that youth in this period of 15- to 17-year-olds whose parents manage or monitor vehicle access will be at lower risk for both crash involvement and involvement in nondriving problems related to AOD use, such as risky sex and violence (p. 95).

Voas and Kelley-Baker cite studies by Hartos et al. (2004) and Simons-Morton et al. (2004) that support this theory and provide evidence that youth whose parents take time to provide supervision and clear rule-definition with respect to vehicle access and driv-

ing expectations display improved driving behavior. Other evidence supporting the value of community supervision of transitional teen drivers is provided by the studies showing the efficacy of graduated driving licensing (GDL) laws and zero-tolerance (ZT) laws requiring a zero BAC for underage drivers. These will be discussed in later chapters.

Cognitive-Behavioral Therapy (CBT)

Cognitive-Behavioral Theory (CBT) and approaches emerged from two paths: cognitive theory and therapy; and behavioral theory and therapy. The development of behavioral therapies in the late 1950s and 1960s provided the foundation of the behavior component of cognitive-behavioral therapy. The roots of this development go back to the early work of Pavlov, Skinner, Watson, and others in the first half of the 20th century. The early focus was on changing behaviors through the management of anxiety, and applying contingency reinforcements to desirable behaviors and behavioral change.

Contemporary behavior therapy places the focus on current determinants of behavior with an emphasis on changing overt behavior guided by specific treatment objectives (Kazdin, 1978). It involves environmental change and social interaction using approaches that enhance self-control (Franks & Wilson, 1975) and a focus on client responsibility and the therapeutic relationship (Franks & Barbrack, 1983). The common intervention approaches used in behavioral therapy are coping and social skills training, contingency management, modeling, anxiety reduction and relaxation methods, self-management methods and behavioral rehearsal (Glass & Arnkoff, 1992).

Cognitive therapy is premised on the idea that our view of the world shapes the reality that we experience. The cognitive approach was a reaction to the narrow view of early behavioral psychology which did not attend to, and even rejected, the importance of the effect of the inside-the-mind happenings on behavioral outcomes.

Cognitive therapy began mainly with the work of Albert Ellis and Aaron Beck who introduced cognitive restructuring therapies beginning in the 1950s and 1960s. Beck is often seen as the founder and developer of cognitive therapy in his work with depression in the early 1960s (Leahy, 1996).

The underlying principle of contemporary cognitive therapy is that disturbances in behaviors, emotions and thought can be modified or changed by altering the cognitive processes (Hollen & Beck, 1986). In simplistic terms, "cognitive therapy is based on the simple idea that your thoughts and attitudes -- and not external events -- create your moods (Burns, 1989, p. xiii). Thus, emotions are experienced as a result of the way in which events are interpreted or appraised (Beck, 1976). It is the meaning of the event that triggers emotions rather than the events themselves (Salkovskis, 1996a, p. 48).

Cognitive psychology assumes an interplay between thought, emotion and action. Freeman and colleagues (1990) note, "the cognitive model is not simply that thoughts cause feelings and actions" (p. 6). Emotions and moods can change cognitive processes. Actions can have an influence on how one sees a particular situation.

The common intervention thread across the spectrum of cognitive therapy is cognitive restructuring. The more specific approaches are: 1) restructuring cognitive distortions found in negative thinking, maladaptive assumptions, and automatic thoughts; 2) self-instructional training; 3) problem solving; 4) mental coping skills; 5) relaxation therapy; 6) modeling strategies; and 7) specific cognitive techniques such as thought stopping, thought replacement, thought conditioning, thought countering, etc.

Although behavioral therapies and cognitive restructuring approaches seemed to develop in parallel paths, over time, the two approaches merged into what we now call cognitive-behavioral therapy. Bandura's work on behavioral modification, social learning theory, and how internal mental processes regulate and modify behavior provided an important bridge in the merging of behavioral and cognitive approaches (1969, 1977a).

Following the work of Ellis and Beck, the different approaches to cognitive therapy and cognitive re-

structuring were blended with the elements of behavioral therapy. Examples of this blending include coping skills training and self-instructional training (Meichenbaum, 1975, 1977, 1985, 1993a, 1993b). Other blending approaches include problem solving, assertiveness and other social skills training, and managing relationship stress.

Contemporary CBT, then, is an integration of the key components of behavioral and cognitive therapy. It is common to see cognitive restructuring as the cognitive part of CBT and social skills training as the behavioral component of CBT.

An important combining element of CB approaches is the principle of **self-reinforcement**. It represents a main component of social learning theory (Bandura, 1977a, 1978, 1997). This concept simply states that cognitive and behavioral changes reinforce each other. When changes in thinking lead to positive behavior outcomes, the outcomes strengthen both the behavior and the cognitive structures that lead to those outcomes. In turn, the changes in thinking reinforced by the changes in behavior further strengthen those behavioral changes. It is not just the reinforcement of the behavior that strengthens the behavior; it is the reinforcement of the thought structures leading to the behavior that strengthens the behavior.

CBT provides a critical perspective in understanding the causative and dynamic factors of impaired driving. The CB approach has many of the components of PBT described above, and focuses on the behavioral, personality and perceived environment (cognitive) systems. It also rests on many of the concepts of social learning theory.

The CB approach is one the foundational models for the education and treatment protocols of *Driving With Care* (DWC). The reader is referred to the *Driving With Care Provider's Guide*, *Chapters 9* and *11* (Wanberg, Milkman & Timken, 2005) and Chapter 4 of *Criminal Conduct and Substance Abuse Treatment: Strategies for Self-Improvement and Change* (*SSC*), the *Provider's Guide* (Wanberg & Milkman, 2008a) for a thorough review of the CB approach and its application to offender education and treatment.

The DWC education and treatment protocols draw from all of the conceptual orientations outlined above. However, we use CB theory to provide an explanation of the cognitive component of impaired driving behavior. Very simply, basic cognitive structures and processes are operating in the impaired driving offender in such a manner to prevent responsible behavior towards self, others and the community. DWI education and treatment begins by modifying and changing the surface, short-term and more accessible structures which we call thought habits - expectancies, appraisals, attributions and decisions - that lead to impaired driving behavior. We then move to working on changing the deeper or long-term structures - the beliefs, attitudes and perception of self-efficacy - that underlie the proximal or surface structures that lead to impaired driving. A major focus in this approach is to help clients learn skills to manage high-risk exposures (e.g., high-risk thinking, situations) that lead to both alcohol and other drug relapse and DWI recidivism.

In addressing the education and treatment of DWI offenders, including UID clients, we utilize the two traditional focuses in CB learning and change: **cognitive restructuring** and **social skills training**. However, we go beyond these two methods and include a third approach: **social and community responsibility therapy (SCRT)** and its focus on social-community responsibility skills training (SCRST). These three approaches are the focus of *Driving With Care* for both adults and UID clients.

Acquired Preparedness Model (APM)

Smith and Anderson (2001) present a risk model for understanding the development of adolescent problem drinking based on personality and learning factors. They combine personality factors based on traits that are predictive of alcohol problems and that have genetic loadings with learning factors that are more environmentally determined. The combination of these two risk factors create what they call an acquired preparedness for the development of alcohol use and abuse problems.

Interwoven with this model is the crucial stage of development where the adolescent is faced with, and

engages in the task of differentiating themselves from parents and family, and broadening their range of experiences beyond family and parental protection and control. This leaves them with having to confront the challenges of controlling urges and managing potentially risky behaviors, while at the same time managing their interpersonal and social experiences. These challenges potentially have positive or negative outcomes. One area of challenge they face is drinking alcohol, which some researchers conclude is part of this development process (see Smith & Anderson, 2001, for discussion on this issue).

One personality trait cluster that Smith and Anderson identify, and that increases the risk of this "normal" developmental challenge of teenage drinking, is "trait disinhibition" which involves the combination of "disinhibition, impulsivity, or behavioral undercontrol (Sher & Trull, 1994; Sher et al.,1991). Smith and Anderson provide documentation to suggest that this cluster represents a stable personality trait pattern that is found in childhood, has significant genetic loadings, and is predictive of early-onset of drinking and the development of drinking problems (see p. 111).

When this personality trait cluster is combined with environmentally based learning factors, such as expectations around the outcomes of drinking, the risk of problem outcomes related to alcohol use in adolescence is significantly increased. "These two sets of factors combine to create what we will call an *acquired preparedness* for alcohol-related problems" (p. 111). The risk of adolescent problem drinking, based on this acquired preparedness, is increased because of the challenge of impulse control in adolescence and the management of rewarding and meaningful relationship and social experiences.

Relevant to Smith and Anderson's model, the literature defines three personality traits that are risk factors for the development of problem drinking. These are: emotional reactivity to external events or neuroticism/emotionality; extraversion and sociality; and impulsivity or disinhibition. They suggest that the first two do not show strong evidence of being predictive of alcohol problems, but argue that the latter trait has good evidence of predicting alcohol problems.

There is evidence that individuals with the disinhibition trait are more likely to take risks with their drinking, mainly to seek greater rewards, but may end up with greater punishment. They also fail to accurately evaluate or anticipate the risks of their behaviors (Smith & Anderson, 2001). Disinhibited individuals are "more likely to learn the reinforcing consequences of events and less likely to learn the punishing consequences." They have a "general tendency to learn the rewards more strongly than the punishments for a given behavior" (pp. 116-117).

What completes the Smith and Anderson model is expectancy theory which is the cognitive connection between this high-risk trait for alcohol problems in adolescence and the environmental learning conditions for alcohol use. Expectancy theory is based on the concept that associations between a behavior and desired outcomes become cognitions that are stored in the memory. The stored information are the expectancies associated with the behavior. These associations influence decisions. Expectations of a desired outcome will reinforce the behaviors that lead to that outcome. With respect to drinking, information regarding the positive or negative outcomes related to alcohol use are stored in the memory. The decision to drink is based on this stored information or expectancy of the outcomes of drinking.

Smith and Anderson (2001) review the research that provides strong support for alcohol expectancy theory - that the expectation of certain outcomes of alcohol use reinforce drinking behavior. Alcohol expectancy has robust correlations with drinking behavior in both adults and adolescents (p. 120).

In summary APM holds that adolescents who fit the disinhibited personality trait - disinhibition, impulsivity and behavioral undercontrol - are ready to learn the positive reinforcing aspects of risk-taking behavior more than they are ready to learn the punishing aspects of risk-taking behavior. When this readiness (disinhibition) is combined with alcohol-expectancy learning - or other drug-expectancy learning - there is a bias towards positive drinking expectancies over negative expected outcomes. Alcohol expectancies, enhanced by disinhibition, can predict the onset of alcohol use and related problems. This model is ap-

plicable to some adolescents as they navigate through the various developmental tasks and stages of adolescence, particularly those who tend to fit the disinhibited personality pattern. Smith and Anderson make it clear that the APM can help identify "one sub-group of high-risk adolescents" and is not necessarily applicable to all adolescents.

There are a number of intervention spinoffs from the APM. First, it would be helpful for providers to identify those individuals who tend to fit the disinhibited pattern. The APM sees these persons as high risk for developing AOD problems.

Second, since APM stresses the importance of expectancy outcomes of AOD use, expectancy intervention or challenge is one approach. This might involve reducing positive expectancies from AOD use, particularly with the disinhibited group.

Third, broadening the perceptual outcomes of drinking is another approach. Most adolescents who drink are locked into the good or positive outcomes. Focusing attention on the bad outcomes will help balance the perception of the good outcomes, and make the memory of bad outcomes of drinking more accessible. This would involve helping adolescents develop memory structures of bad outcomes, even if the individual has not experienced the particular outcome. However, just exposing adolescents to examples of the bad outcomes is not sufficient. There must be some personal identification with the bad outcome being illustrated. Changing the cognitive structures that identify the positive associations with drinking to positive associations with non-drinking events and behavior would be part of this approach.

Social and Community Responsibility Theory (SCRT)

This theory holds that individuals engage in irresponsibility and even harmful behavior towards others and the community because of deficits in cognitive skills that determine moral reasoning and moral and community responsibility. The work of Piaget (1932/1965) followed by the work of Kohlberg (1976, 1984) provided sound theory and research (Colby & Kohlberg, 1987) for not only understanding moral reasoning

and development, but for developing strengths that can lead to moral reasoning and caring. Moral development and related strengths progress in stages.

Initial stages of the development of moral judgment involves: doing what is right in order to avoid punishment and because it was labeled as right by an authority; or to get something in return. **The next stages** involve doing what is right and wrong at the relationship and broader social level. At the relationship level, what is right will foster or nurture a relationship and what is wrong will harm a relationship. At the broad social level, what is right will enhance and serve the social system or what keeps one on track with respect to social obligations. **The highest level** of moral development broadens moral responsibility to universal considerations and to principles of justice: Right is based on fulfilling responsibilities we have agreed to as members of society, yet allowing for morally-based objections to societal norms that can lead to changing society as a whole.

These cognitive deficits can lead to irresponsible and harmful behaviors to other individuals and prevent individuals from understanding the impact of their behavior on others, or they prevent egocentric empathy. Social and community responsibility theory extends this further and sees these deficits as having impact on the person's relationship to the community. These deficits prevent the person from having sociocentric or relational empathy.

Sociocentric or relational empathy is a way of being connected so as to create contextual awareness and relational consciousness (O'Hara, 1997). Sociocentric empathy brings the person to the awareness of the harm and injury that the abuse of substances causes and involvement in impaired driving can bring or does bring to others and to the community.

These foundational theories have emerged as significant forces in defining approaches to addressing deviant, antisocial and criminal conduct (Ross & Fabiano, 1985; Little & Robinson, 1986; Wanberg & Milkman, 1998, 2006, 2008a; Yokley, 2008). When these cognitive deficits are modified and changed to prosocial and responsibility reasoning, they lead to behaviors that respect the rights of others, comply

with the laws of society, care about the welfare and safety of others, contribute to the good of others and society, and behaviors that result in productive harmony with society.

CHAPTER REVIEW

This chapter presents several psychosocial and learning theories and concepts that promote our understanding of the causal and dynamic factors related to UID. We selected theories and conceptual orientations that help us understand both the cognitive and behavioral components of UID and the external influences that come to bear on the development and continuation of UID behaviors.

SLT (Social Learning Theory) provides a broad-band understanding of the psychosocial influences on learning, particularly with respect to peer, parenting and other adult modeling for risk-taking behaviors of alcohol use, poor driving habits and UID. These behaviors are learned through attending to the modeling events (environmental), remembering what is observed (the cognitive component), reproducing the copied behavior and getting feedback for the accuracy of that reproduction (behavior component), and motivation or behavioral consequence that justifies inculcating the behavior which is self-reinforcing (outcome).

PBT (Problem Behavior Theory) also provides us with a broad-band understanding of UID. It shows how problem behaviors are related and that any single problem behavior, such as impaired driving, must be viewed within the complex system of behavior, personality and the perceived environment. Attempts to develop intervention strategies for the UID client must address all of these systems. By treating all behaviors (not just drinking behavior), non-alcohol related accidents and problems might decrease as well.

TPB (Theory of Planned Behavior) is based on the connection of attitudes and impaired driving behavior. Beliefs about the expected outcome of drinking and impaired driving produce either a favorable or unfavorable attitude towards those behaviors. They are beliefs about what others expect or normative beliefs, and they can result in a degree of social pressure to comply to the behavior or the subjective norm or what the person thinks others expect. The normative beliefs can lead to deviant behavior or conforming and prosocial behavior. Control beliefs, or beliefs that advance or block performance, result in perceived behavioral control. Perceived self-control is based on the ease with which drinking or driving after drinking can be accomplished. Following intervention, perceived self-control is the ease with which not drinking and not engaging in other risk-taking behavior can be performed.

SNT (social norms theory) helps us understand that youth will exaggerate what peers are doing with respect to drinking, or driving after drinking. Intervention involves helping UID clients see that their interpretation of the norm that "everyone gets drunk," or "everyone drinks three or four or even more at a party," or "everyone takes the risk of driving after drinking," is a misperception, and presents the actual norms that counter this misperception. The premise is that people are highly influenced by their perception of what their peers do and what they think their peers expect of them. They will want to follow the norms of their peers, and thus, engage in behavior that is closer to those norms. SNT is essentially based on social learning theory and the theory of planned behavior.

TTT (Transitional Teens Theory) helps understand trajectories into adolescent and adult substance abuse and impaired driving. It focuses on the 15- to 17-year-old age group during which years the underaged start their voyage away from home and from parent and adult supervision, facilitated by the motor vehicle. Such excursions are done in small affinity groups (number that fit into a car) allowing for horizons to be expanded including exposure to various risks such as riding with peers who are novice drivers, exposure to opportunities for AOD use and even heavy drinking, and sexual behavior. Most relevant during this transition is the peer group, and more specifically, the small affinity groups. The level of risk depends on the behavior norms of the small affinity or intimate group. The more deviant the norms, the higher the risks, e.g., drinking, heavy drinking, taking risks by drinking and driving. The risk and protective factors that operate during the transitional teen period

continue to operate into the advanced teen and early adult years.

CBT (Cognitive Behavioral Therapy) provides the education and treatment foundation for addressing the various conditions and circumstances of adolescence, and are relevant to our focus of UID. It pulls together most of the elements of the other theories presented in this chapter into evidence-based approaches that address the prevention of relapse (into underage drinking and drug use) and recidivism (into impaired driving). CB approaches address the elements of the environment (external events), the personality (cognitive structures) and behavioral outcome that contribute to UID and provide a strong skills approach to preventing relapse and recidivism.

APM (Acquired Preparedness Model) provides a more specific focus on the development and maintenance of alcohol use and use problems in some adolescents. APM identifies two risk factors for this development: a personalty trait - disinhibition - that is predictive of alcohol use and problems in some adolescents; and an environmental learning approach based on expectancy theory - stored memories that associate drinking with positive outcomes. The combination of these two risk factors increases the risk of alcohol problem development in adolescence, and provides a foundation for expectancy challenge intervention approaches.

Finally, SCRT (Social and Community Responsibility Theory) is premised on the concept that individuals engage in irresponsible and even harmful behavior towards others and the community because of deficits in cognitive structures and skills that determine moral reasoning and moral and community responsibility. These cognitive deficits prevent individuals from understanding the impact of their behavior on others and not only prevent egocentric empathy, but prevent the individual from having sociocentric or relational empathy. Sociocentric or relational empathy creates contextual awareness and relational consciousness. It brings the person to the awareness of the harm and injury that the abuse of substances causes and involvement in impaired driving can bring or does bring to others and to the community. When these cognitive deficits are modified and changed to prosocial and responsibility reasoning, they lead to moral and community responsibility and behaviors that engage in productive harmony with society.

All of these approaches provide some understanding of the development and maintenance of alcohol and other drug use and abuse in adolescents. Although each has its own unique contribution to further our understanding of underage drinking and underage impaired driving, they have much in common. It is helpful to apply these various models when conceptualizing the dynamics and causative factors of underage drinking and underage impaired driving.