



Clinical Practice Guideline for Assessing and Managing the Suicidal Patient

Magellan Clinical Practice Guideline Task Force

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Providing Feedback on the Guidelines

Magellan welcomes feedback on adopted clinical practice guidelines. All suggestions and recommendations are taken into consideration in our review. Comments may be submitted to:

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Introduction

This updated guideline presents an overview of essentials and nuances to complement the American Psychiatric Association's (APA's) *Practice Guideline for the Assessment and Treatment of Patients With Suicidal Behaviors*, which although no longer current, provides detailed information that is still relevant (APA, 2003). The reader may find it helpful to refer to this historical document for context and more detail regarding any particular topic herein.

Magellan's update incorporates selected information from the American Psychiatric Association's more current, *Practice Guidelines for the Psychiatric Evaluation of Adults, Third Edition*; The World Health Organization's report, *Preventing Suicide: a Global Imperative* and recently published studies and trials reporting results that add to the knowledge base on both suicidal ideation and suicide. Current resources are significant for the development of a comprehensive strategy to effectively prevent suicide (APA, 2003; APA, 2016; and World Health Organization [WHO], 2014).

In the preparation of the 2000 and 2002 guidelines, we conducted a thorough literature review including a review of guidelines on schizophrenia, major depression, substance abuse and bipolar disorder. In the preparation of this 2016 revision, along with available practitioner input, Magellan conducted another review of published scientific literature through January 2016. These guidelines continue to constitute a living document to be improved and refined in light of new clinical knowledge and technology. Accordingly, practitioners' comments are welcomed.

Although this guideline is divided into separate sections relating to epidemiology, assessment, and management, these areas overlap and must be considered as interrelated within the context of suicide prevention and management.

The assessment and management of suicidality is among the most important functions exercised by mental health professionals. The imperative of keeping the patient safe constitutes not only the most important clinical objective, but the core of good risk management as well. The principles outlined in this document represent Magellan Healthcare's best practice guidelines with regard to assessing and managing the patient who presents with suicidal potential.

It is expected that clinicians who are members of Magellan's provider network and Magellan care managers incorporate these recommendations in their systematic approach to this aspect of clinical practice. Ultimately, clinical judgment used consistently within the standards of good clinical practice results in effective suicide assessment and management. The guidelines presented here do not replace the clinician's good clinical judgment in light of the individual patient's clinical status and the best available assessment and treatment options. Additionally, this guideline does not supersede Food and Drug Administration (FDA) determinations or other actions regarding withdrawal or approval of specific medications or devices and their uses. It is the responsibility of the treating clinician to remain current on medication/device alerts and warnings that are issued by the FDA and other regulatory and professional bodies, and to incorporate such information in his or her treatment decisions.

At the present time, mental health professionals cannot reliably predict suicide in an individual. Despite vast literature on the subject, there is no “gold standard” and no single test or method of assessment that identifies the patient most at risk. The basic goal of the assessment, therefore, is to identify, characterize, quantify and manage those factors that constitute clinical risk. Along with proper documentation, such activities constitute the backbone of safe practice patterns. It should be recognized, however, that safety is a relative concept and risk is inherent in health care. As pointed out in the American Psychiatric Association Practice Guideline for the Assessment and Treatment of Patients With Suicidal Behaviors, one must balance the “competing goals of encouraging the patient’s independence yet simultaneously addressing safety” when working with suicidal patients (APA, 2003).

It should also be noted that many suicide screening tests have been developed, primarily based on studies of completed suicides, but to date none have proven adequate predictors in the individual case. Attempts to screen the general population based on such data identify both false positive and false negative cases. Likewise, variability in the methods used to assess suicidal behaviors in epidemiological studies has shown that the wording of the questions yields differing estimates. The research team of Nock et al. indicated that, “...questions about ‘thoughts of death’ generate higher prevalence estimates for suicide ideation than questions asking about ‘seriously considering suicide,’ and questions requiring endorsement of an intent to die from self-injury yield lower estimates of suicide attempts than questions asking simply whether a person has made a ‘suicide attempt’ ” (Nock et al., 2008). While psychometric tests have value, especially with regard to quantifying and tracking depression, the severity of depression and the specific diagnostic category of depression do not always predict suicide.

This being the case, clinical guidelines for assessing and managing the suicidal patient must be directed toward those who might attempt suicide rather than those who will attempt suicide. It is hoped that understanding of and adherence to a guideline such as this will help decrease the likelihood of completed or attempted suicide, although it is also understood that the goal of complete suicide eradication, even within the context of optimal psychiatric practice, is not presently attainable. It is in this spirit that these guidelines are presented.

I. Executive Summary

(A discussion of changes/new information under each topic in this updated CPG based on a literature review through January, 2016)

This updated guideline complements the American Psychiatric Association’s (APA’s) *Practice Guideline for the Assessment and Treatment of Patients With Suicidal Behaviors*, which although no longer current provides detailed information that is still relevant (APA, 2003). Magellan’s update incorporates selected information from the American Psychiatric Association’s more current, *Practice Guidelines for the Psychiatric Evaluation of Adults, Third Edition*; The World Health Organization’s report, *Preventing Suicide: a Global Imperative*; and recently published studies and trials through January 2016 reporting results that add to the knowledge base on both suicidal ideation and suicide. Current resources are significant for the development of a comprehensive strategy to effectively prevent suicide (APA, 2003; APA, 2016; and World Health Organization [WHO], 2014).

Although this guideline is divided into separate sections relating to epidemiology, assessment, and management, these areas overlap and must be considered as interrelated within the context of suicide prevention and management.

Demographics and Epidemiology

The Center for Disease Control and Prevention (CDC) reported in 2015 that in the United States suicide was the 10th leading cause of death for all ages in 2013. In 2013, 41,149 people killed themselves. Among persons aged 15-34, suicide was the second leading cause of death in 2013. It was the fourth leading cause of death among persons aged 35-44, the fifth among persons aged 45-54, the eighth among those aged 55-64 and the seventeenth among persons aged 65 and older. Suicide decedents tested positive for alcohol, antidepressants and opiates (including heroin and prescription pain medications) at rates of 33.4 percent, 23.8 percent and 20.0 percent, respectively. During 2013, the estimated percentage of adults aged ≥ 18 years having serious thoughts about suicide was 3.9 percent. Percentages differed within this age group: 7.4 percent of adults aged 18 to 25; 4.0 percent of adults aged 26 to 49; and 2.7 percent of adults aged 50 or older. During the same year, the estimated percentage of adults aged ≥ 18 years who made a suicide plan in the past year was 1.1 percent. Percentages within this age group were: 2.5 percent of adults aged 18 to 25; 1.35 percent of adults aged 26 to 49; and 0.6 percent of adults aged 50 or older. An estimated 0.6 percent of adults aged 18 or older attempted suicide in the past year (CDC, 2015).

The CDC Morbidity and Mortality Weekly Report (MMWR) for March 6, 2015 reported that suicide is the second leading cause of death among persons aged 10 to 24 years in the United States. The three most common mechanisms for suicide are firearms, suffocation (including hanging) and poisoning (including drug overdose) (CDC, 2015). An analysis of mortality data for the period 1994-2012 from the National Vital Statistics System found that, during that period, suicide rates by suffocation increased on average, for females by 6.7 percent and males by 2.2 percent annually. These rates, occurring across demographic and geographic subgroups, are concerning as suffocation, as a suicide mechanism, has a higher lethality rate than firearms or poisoning. The CDC has advised clinicians to be aware of these current trends to more accurately assess risk and educate patients and families. They also advised that media coverage providing details about suicide incidents and clusters may exacerbate risk for “suicide contagion” among vulnerable young people.

Among high school students in the U.S. during 2013, 22.4 percent of females and 11.6 percent of males in grades 9-12 seriously considered attempting suicide in the previous year. A suicide plan was made by 16.9 percent of female students and 10.3 percent of male students. Suicide was attempted one or more times in the previous 12 months by 10.6 percent of female students and 5.4 percent of male students (CDC, 2015).

In the last few years, cyberbullying has become a much talked about issue in the media. Bullying has always been negatively associated with mental health, but with increased usage of electronic technology and of social media, e.g., Facebook and Twitter, cyberbullying has made possible “all-day” harassing, humiliating or threatening of our youth.

Comprehensive List of Known and Emerging Risk Factors – see Magellan’s Tipsheet, *Assessing and Managing the Suicidal Patient: Keeping the Patient Safe*, for Guidance in Assessing and Weighing Risk Factors (Magellan 2016)

Although there is not one single cause of suicide, an individual’s risk for suicide may be increased by several factors, such as:

- Epigenetic and genetic biomarkers, e.g., SKA2 (Guintivano et al., 2014)
- History of or current depression or other psychiatric disorders, e.g., substance use disorder, schizophrenia, post traumatic stress disorder
- History of psychiatric hospitalization and emergency department visits related to psychiatric issues
- Current or recent alcohol or drug abuse
- Prior or current suicidal ideation, suicide plan(s) or suicide attempts (including aborted or interrupted attempts)
- Prior intentional self-harm or injury without suicidal intent (Carroll et al., 2015)
- Discharge from emergency department or inpatient psychiatric care within first year after discharge
- Symptoms of anxiety, including panic attacks
- “Suicidal contagion” – influence of media on suicidal behavior (“copycat” suicides)
- Parental history of suicide attempt or violence
- History of trauma, e.g., chronic traumatic encephalopathy (Fralich et al, 2016; Iverson, 2016)
- Physical illnesses, e.g., HIV-AIDS, Huntington’s disease and other illnesses
- Individuals with cancer (American Psychosocial Oncology Society, Association of Oncology Social Work and Oncology Nursing Society, 2013)
- Feeling alone, social isolation, lack of social support
- Feelings of hopelessness
- Interpersonal losses or rejections
- Impulsivity
- Community stressors, e.g., acculturation and dislocation stresses; disaster, war and conflict, discrimination (WHO, 2014)
- Chronic medical conditions such as – physical or mental pain
- Cognitive impairment
- Psychosocial stressors, e.g., financial, legal, school, occupational, social, terminal medical illness
- Personal relationship conflicts, separation or divorce
- Being a member of lesbian, gay, bisexual, transgender and questioning (LGBTQ) youth (American Academy of Pediatrics, 2013)

- Abuse as a child
- Sleep disturbances (Perlis et al., 2015; Bernert et al., 2014)
- Easy availability of lethal means, such as guns or lethal doses of prescription medication (Swanson et al, 2015; Niederkrotenthaler et al., 2014)
- Local epidemics of suicide
- Barriers to accessing mental health treatment
- Unwillingness to seek help due to stigma
- Advanced paternal age
- Perpetrator of bullying or being a victim of bullying (Sibold et al., 2015; Holt et al., 2015)
- Early separation from military service and discharge that is not honorable (Reger et al., 2015).
- Parental death from suicide or from other causes in childhood – before the child reaches age of 18 years (Guldin et al., 2015)
- Social isolation, spousal bereavement or functional impairment in older adults
- Stigma against individuals seeking treatment for substance use disorders, other mental health problems and suicidal behaviors
- Difficulties in accessing healthcare
- At-risk populations, e.g., Veterans, the elderly population.

Military Service

A recent retrospective cohort study found no evidence that military deployment in support of Operation Enduring Freedom or Operation Iraqi Freedom increased the rate of suicide mortality among U.S. military personnel (n=3.9 million) compared with service members who never deployed in support of these conflicts (Reger et al., 2015). However, researchers found early separation (less than four years) from military service and discharge that were not honorable were suicide risk factors. This study included service members who served in the US military from 2001-2007; suicide mortality was followed to 2009, regardless of separation from military service. Similarly elevated risks for suicide were found among those who separated from service, regardless of whether they had been deployed. Service members who deployed, but were not separated from service had no higher rates than those who did not deploy and were not separated from service. Authors presented possible explanations for the higher rate of suicide among those who had less than four years of service: difficulty in transitioning from military to civilian life; loss of shared military identity; difficulty developing a new social support system; difficulties finding meaningful work; feelings of being a burden to others. They also suggested that service members with mental health problems may have been more likely to be discharged early. Authors found modestly higher rates of suicide for service members discharged under not honorable conditions those than discharged under honorable conditions. Authors concluded that the increasing suicide rate during the last decade among members of the US Armed Forces and veterans is concerning, but the results of this study do not support speculation that deployment to combat is associated with military suicides. However, they suggested future

research to “examine combat injuries, mental health and other factors that may increase suicide risk. It is possible that such factors alone and in combination with deployment increase suicide risk” (Reger et al., p. 568).

Parental Death

Another recent population-based cohort study examined the long-term risks of suicide after parental death and how the risk differed by cause of parental death, age of child at the time of parental death, sex, time since bereavement, birth order, socioeconomic status and parental psychiatric history (Guidin et al., 2015). The study included data from nationwide registers from 1968 to 2008 that included children (n=189,094) whose parent died before the child reached 18 years (the bereaved cohort) as well as children (n=1,890,940 whose parent did not die before the child reached 18 years (the control cohort). Results showed parents in the bereaved cohort had several psychiatric disorders, low socioeconomic status, nine years or less of education and were more likely to be older than those in the control cohort. During 25 years of follow-up, findings showed that suicide was higher among boys than girls in both cohorts, and the risk of suicide was 82 percent higher for children bereaved by parental death by suicide than for children whose parent died of accidental death (after adjusting for factors such as age, country and sex). The risk of suicide was high for at least 25 years after death of the parent. Authors concluded that the increased risks of suicide after parental death include shared genetic dispositions, psychological stress, social changes related to the death of the parent and environmental factors. They suggested that future health efforts should be focused on helping children who have lost a parent cope with bereavement (Guidin et al., 2015).

Another longitudinal study examining the familial transmission of suicidal behavior found an almost five-fold increased risk of suicide attempt in offspring of parents who had attempted suicide (Brent et al., 2015). This prospective study, conducted from 1997-2012, included offspring (n=701) of probands (334) with mood disorders, with 57.2 percent of probands having made a suicide attempt. This study found that 6.3 percent of the offspring had attempted suicide before participation in the study and 4.1 percent made a suicide attempt during the follow-up of five years. Researchers found the increased risk of suicide even when controlling for familial transmission of mood disorder and that “impulsive aggression was an important precursor of mood disorder and could be targeted in interventions designed to prevent youth at high familial risk from making a suicide attempt” (Brent et al., p.166).

Lesbian, Gay, Bisexual, Transgender and Questioning Youth (LGBTQ)

A policy statement of the American Academy of Pediatrics on office-based care for lesbian, gay, bisexual, transgender and questioning youth (LGBTQ) noted that “the effects of homophobia and heterosexism can contribute to health disparities in mental health with higher rates of depression and suicidal ideation, higher rates of substance abuse, and more sexually transmitted and HIV infections” (American Academy of Pediatrics, 2013, p. 198). The statement notes that although being a member of LGBTQ group is not, in itself, a risk factor, “the presence of stigma from homophobia and heterosexism often leads to psychological distress, which may be accompanied by an increase in risk behaviors” (AAP, p. 198). The policy statement advised pediatricians to educate themselves about organizations that serve sexual minority youth and families, support gay-straight alliances, support parents in adjusting to needs of LGBTQ child, support and affirm

transgender adolescents, and be welcoming and teen-friendly to all patients, regardless of sexual orientation (AAP, 2013).

Cyberbullying

In the last few years, cyberbullying has become a much talked about issue in the media. Bullying has always been negatively associated with mental health, but with increased usage of electronic technology and of social media, e.g., Facebook and Twitter, cyberbullying has made possible “all-day” harassing, humiliating or threatening of our youth. A recent meta-analysis estimated the association between bullying involvement and suicidal ideation and behaviors (Holt et al., 2015). Findings demonstrated that an increased risk for suicidality was associated with bullying involvement; being a victim of bullying was associated with the greatest risk. Results indicated that in any capacity, involvement in bullying is associated with both suicidal ideation and behavior. A recent study using the 2013 National Youth Risk Behavior Survey (YRBS) examined the relationships among physical activity, sadness, and suicidality in bullied adolescents in the United States (Sibold et al., 2015). Data-analysis showed that exercise was shown to have positive effects on mental health. Exercising lowered the odds of sadness, suicidal thoughts, and suicidal attempts in students who exercised 4-5 days a week compared with students who exercised 0-1 day per week, and exercise for 4 or more days per week was associated with reduction of approximately 25 percent in suicidal ideation and suicidal attempt in students who were victims of bullying. Authors concluded that exercise should be a consideration for management of both sadness and suicidality in bullied children (Holt et al., 2015).

Sleep Disturbances

A current review of literature on suicide rates by time-of-day focused on the incidence of suicidal ideation and behavior occurring at night (Perlis et al., 2015). Authors reported results of a systematic review that found factors, i.e., poor sleep quality, insomnia and nightmares, significantly and independently predicted an increased risk for suicidal ideation, suicide attempts and death by suicide. They examined how sleep disturbance confers risk by focusing on circadian fluctuations in frontal lobe/executive function and proposed, “when one is awake when not biologically prepared to be awake (i.e., not sleep sated and/or in a circadian phase that is associated with alertness and higher cognitive functioning), the consequence is a kind of brain activity that is associated with poor executive function” (Perlis et al., p. 105). Focusing on circadian fluctuations in frontal lobe/executive function, authors proposed that suicides occurring at night may be explained by a neurobiological/neuropsychological vulnerability. Authors emphasized the need to identify sleep disturbances, including wakefulness during the traditional sleep period, to identify suicide risk and the need to provide treatment for sleep disturbance to reduce the risk of suicidal ideation and suicidal behavior. Additionally they suggested that “allocating increased mental health resources during the circadian night may serve to reduce the incidence of suicide attempts and/or death by suicide” (Perlis et al., 2015).

A longitudinal case-control cohort study of majority male community elders aged 66 years or older examined the relative independent risk for suicide associated with poor subjective sleep quality during an observation period of 10 years (Bernert et al., 2014). In this community sample, suicide decedents (n=20) were matched with control subjects (400) randomly selected from the sample (on age, sex and study site). Sleep quality was evaluated with the Sleep Quality Index (SQI) administered during the baseline interview.

Authors reported that self-reported difficulty falling asleep and nonrestorative sleep at baseline specifically predicted increased risk of suicide death. However, only nonrestorative sleep significantly predicted increased risk after adjustment of depressive symptoms. Authors suggested further research to explain this relationship.

Chronic Traumatic Encephalopathy (CTE)

News reports have recently focused on the association between chronic traumatic encephalopathy (CTE) and repeated concussions or traumatic brain injuries in persons taking part in sports activities such as football. While a causal association between suicide and CTE has been suggested in media stories, Iverson noted that “the science underlying the causal assumption between repetitive neurotrauma, depression, suicide and the neuropathology believed to be unique to CTE is inconclusive” (Iverson, 2016). Author stated further, “former National Football League players, for example, are at lower, not greater, risk for suicide than men in the general population” (Iverson, p.9). Author went even further in questioning whether media coverage may reinforce suicidal ideation in at-risk athletes (“suicide contagion”). He suggested the need for further research cautioning, “conceptualizing suicide as being the result of small focal epicenters of tau, or a progressive degenerative tauopathy, is currently scientifically premature, overly simplistic and potentially fatalistic” (Iverson, 2016, p. 13).

In a recent longitudinal cohort analysis of adults (n=235,110) with diagnosis of a concussion in Canada over a 20-year period beginning in 1992, researchers assessed the long-term risk of suicide after concussions occurring on weekends or weekdays in the community (Fralick et al., 2016). Half of the patients in the study were men, and the mean age of patients was 41 years. The majority of patients had none of the following: formal medical imaging, additional diagnosed fractures, prior hospital admissions, prior suicide attempts or prior psychiatric diagnoses. Suicide deaths over a median follow-up of 9.3 years numbered 667 (equivalent to 31 deaths per 100,000 patients annually – three to four times the population norm), and the mean time from concussion to suicide was 5.7 years. Researchers found an approximate one-third increase in suicide risk after a weekend concussion compared to a weekday concussion. Other factors found to be associated with long-term risk of suicide included: prior suicide attempt (single most powerful predictor), prior psychiatric diagnosis, especially substance abuse, male sex and low socioeconomic status. In this study, the most common mechanism was poisoning followed by asphyxiation. Researchers concluded, “the long-term risk of suicide among those with a concussion was three times the population norm and was even higher if the concussion occurred on a weekend” (Fralick et al., 2016, p. 5). They suggested that deaths from suicide can be prevented by greater attention to the long-term care of patients after a concussion.

Accessibility to Guns

A policy mini-symposium described epidemiologic evidence related to the risk of gun violence and suicide linked to psychiatric disorder (Swanson et al, 2015). Authors noted that although studies show that the large majority of individuals with serious mental illnesses are never violent, media accounts of mass shootings reinforce a popular belief that mental illness often results in violence. According to the Centers for Disease Control and Prevention (CDC), suicides account for about 60 percent of firearm fatalities in the United States (CDC, 2013). Authors reported that suicide risk factors include “self-harm” (the strongest association), concurrent substance abuse, psychological symptoms, e.g., hopelessness, and psychiatric disorders such as depression. However, suicide literature

shows that the availability of lethal means, such as firearms, and exposure to media reporting of suicide are also strong risk factors. Authors emphasize that policies addressing gun violence and suicide must not stigmatize individuals with serious mental illness and should not discourage them from seeking treatment. They conclude, “Policymaking at the interface of gun violence prevention and mental illness should be based on epidemiologic data concerning risk to improve the effectiveness, feasibility and fairness of policy initiatives” (Swanson et al, 2015).

Self-Harm

A recent systematic review and meta-analysis examined 170 studies describing investigated risk factors for repetition of self-harm, both fatal and non-fatal (Carroll et al., 2015). Authors noted that repeat self-harm has been associated with a further increased risk of suicide, and that patients presenting to a hospital more than once for self-harm have double the risk of subsequent suicide compared with those presenting only once. Incidence of repeat self-harm with fatal outcome was 1.6 percent, 3.9 percent, and 4.2 percent in one year, five years, and 10 years, respectively. Studies including follow-up after 10 years suggested further increased risk. The most common method used in patients presenting self-harm was self-poisoning, while the patients using self-injury represented higher risk for fatal repetition. In their conclusion, authors estimated that one out of every 25 self-harm patients will die of self-harm in the 10 years following first presentation. Risk of suicide was greatest in older patients, males and those using methods other than self-poisoning. Authors reported, “despite over 30 years of research in the area, the incidence of non-fatal repeat self-harm has not changed and this highlights the need for new approaches” (Carroll et al., p. 8).

Mental Health Treatment Within Two Months Before Suicide Death

A recent study examining data from 18 states reporting to the National Violent Death Reporting System (NVDRS) between 2005 and 2010 assessed associations between mental health treatment within two months before suicide death, personal characteristics and circumstances of suicide among suicide decedents (Niederkröthaler et al., 2014). Authors found that nearly a third of the almost 58,000 suicides among persons above 18 year of age recorded in NVDRS had received some type of mental health treatment within two months before suicide. Males and those of race-ethnicities other than non-Hispanic white were associated with lower odds of receiving treatment, and lower odds often were associated with suicides by firearms. This study found that suicide decedents who had poisoned themselves with drugs had received mental health treatment before their suicides, and had received prescribed substances often involved in their deaths. Authors advised that “drugs should be prescribed only in small package size to at-risk individuals to prevent suicide” (Niederkröthaler et al., p. 387).

Epigenetic and Genetic Biomarkers

A recent study used genome-wide screening techniques to identify a genetic and epigenetic biomarker with high prediction accuracy capable of predicting suicidal ideation and suicide attempt in a prospective manner from blood (Guintivano et al., 2014). Researchers analyzed postmortem brain tissue of a very small group of suicide decedents and found higher than average levels of chemical modification, or methylation, around a gene known as SKA2 compared with people who died from other causes. Additionally, this study found heightened SKA2 methylation in blood samples of persons with major depression or bipolar

disorder and considered at risk of suicidal behaviors. Authors indicated that DNA methylation may be the primary factor that confers risk of suicide. “The postmortem brain data were generated in the prefrontal cortex, a brain region with inhibitory connections to the HPA axis and responsible for decision making, inhibition of negative thoughts and impulsivity” (Guintivano et al., p. 1294). Authors concluded that the findings of this study suggest the potential of early screening of those at risk for suicide ideation and suicide attempt may be possible with the development of a simple blood test. They further concluded that future studies must be conducted to further evaluate and test this methodology in larger populations (Guintivano et al., 2014).

Assessment and Lethality

The American Psychiatric Association Practice Guidelines for the Psychiatric Evaluation of Adults recommends:

- The initial psychiatric evaluation of a patient should include all risk factors with both patient characteristics as well as environmental features to identify patients who are at increased risk for suicide;
- The initial psychiatric evaluation of a patient who reports current suicidal ideation should include assessment of patient’s intended course of action, access to suicide methods, possible motivations for suicide, reasons for living, quality/strength of therapeutic alliance and history of suicidal behavior in biological relatives;
- The initial psychiatric evaluation of a patient who reports prior suicide attempts should include assessment of details of attempt including method, potential lethality, etc.; and
- The clinician should document an estimation of the patient’s suicide risk, including all risk factors (APA, 2015).

The APA guidelines caution:

Although standardized scales to identify individuals at high suicide risk may be useful clinically (e.g., opening communication with patients), no evidence has shown that scales have clinically useful specificity or sensitivity or predictive value. The guidelines emphasize clinician’s judgment in estimating the individual patient’s risk of suicide (APA, 2015).

Screening for Suicide Risk in Primary Care

U.S. Preventive Services Task Force (USPSTF) reviewed the evidence on both the accuracy and reliability of instruments used to screen for increased suicide risk, benefits and harms of screening to prevent suicide in adolescents, adults and older adults in primary care. They found no direct evidence that screening was associated with improved health outcomes in adolescents and adults who do not have an identified psychiatric disorder (U.S. Preventive Services Task Force, 2014).

Several groups, e.g., The American Academy of Pediatrics, The American Medical Association and The American College of Obstetricians and Gynecologists, recommend that pediatricians ask questions about mood disorders and suicidal thoughts, behaviors,

emotions or other factors that may indicate depression or suicidal thoughts during routine health visits (U.S. Preventive Services Task Force, 2014).

Patient Health Questionnaire for Depression (PHQ-9) Questionnaire

The PHQ-9 is used as a standard depression questionnaire in clinical practice. In a recent study, electronic records from a large integrated health system were used to link PHQ-9 response from outpatient visits (primary care or mental health specialty providers) to subsequent suicide attempt or suicide death (Simon et al., 2013). Questionnaires were completed by outpatients during depression treatment (n=84,418), aged 13 and older. Questionnaires were completed from 2007 to 2011 with some patients completing multiple questionnaires. From this sample, medical records, insurance claims and death certificates documented approximately 700 subsequent suicide attempts and 46 suicide deaths. Analysis of the results found responses to item 9 addressing thoughts of death or self-harm included: “not at all,” “several days,” “more than half the days,” and “nearly every day.” The group reporting “more than half the days” or “nearly every day” accounted for 53 percent of suicide attempts and 54 percent of suicide deaths. Researchers emphasized that although the findings showed that item 9 of the PHQ-9 identifies outpatients at increased risk of suicidal behavior, this result does not justify screening in the general population. They also noted that excess risk of suicide attempt emerged over several days, continuing to grow for several months. Researchers emphasized that “suicidal ideation should be viewed as an enduring vulnerability rather than simply a short-term crisis” (Simon et al., p. 1201).

A later study evaluated whether the suicide mortality analyses reported by Simon et al. in the above study extend to patients in the Veterans Health Administration (VHA) (Louzon et al., 2016). Researchers collected PHQ-9 assessments (n=301,492) conducted by the VHA from October 2009 to September 30, 2010 and assessed suicide mortality through September 30, 2011 using National Death Index data. Compared with a response to item 9 addressing thoughts of death or self-harm of “not at all,” responses of “more than half the days” and “nearly every day” were associated with 115 percent and 185 percent increased risks of suicide, respectively. Authors concluded, “Higher levels of suicidal ideation, indicated by item 9 of the PHQ-9, were associated with increased risk of suicide in the VHA system” (Louzon et al., 2016).

The PHQ-2, a shorter version, may be administered prior to the PHQ-9. It asks only two questions about symptoms of depression and may also ask about suicidal thoughts and feelings. Other screening tools include the Emergency Medicine Network’s ED-Safe Patient Safety Screener for emergency departments, the Suicide Prevention Resources Center’s Decision Support Tool, the SAFE-T Pocket Card and the Columbia-Suicide Severity Rating Scale (C-SSRS).

Screening for Suicide Risk in the Emergency Department

In an analysis of data from the first two phases of the Emergency Department Safety Assessment and Follow-up Evaluation (ED-SAFE) study, researchers sought to identify which patient characteristics have the strongest association with suicide outcomes in the 12 months after an index emergency department (ED) visit (Arias et al., 2016). This study included adults (n=874) with a median age of 37 years presenting to one of eight general medical EDs with current suicide ideation (66 percent of participants) or suicide attempt (34 percent of participants) during the past week. Outcome data were available for 90 percent of the participants at follow-up assessment time points through chart reviews and

telephone follow-up assessment over a 12-month period. Analysis of the data found factors associated with predicting suicide outcomes within 12 months after the index ED visit were a high Columbia Suicide Severity Rating Scale (C-SSRS), documentation of an ED visit within the past six months, current alcohol misuse and a history of nonsuicidal self-injury. Researchers concluded that an understanding of these factors will help to guide improved suicide screening and interventions in the ED (Arias et al., 2016).

Trauma Center Screening and Intervention for Comorbid Substance Use and Mental Disorders and Suicide

A recent study, utilizing a questionnaire, assessed screening, intervention and referral practices related to alcohol and drug use problems, post-traumatic stress disorder (PTSD), depression and suicide at level I and II trauma centers (n=518) in the U.S. (Love and Zatzick 2014). Results showed that more than 80 percent of the trauma centers routinely screened for alcohol and drug use problems. Routine screenings for depression, PTSD and suicide were only 23 percent, 7 percent and 49 percent, respectively. Authors noted that the higher levels of screening and intervention for alcohol use problems are in response to the American College of Surgeons' mandate that trauma centers screen for alcohol use problems and that level I centers provide brief intervention for those who screen positive. They suggest the need for enhanced "screening and intervention procedures for highly prevalent, comorbid mental disorders, such as PTSD, depression and suicidality" (Love and Zatzick, p. 922).

Psychosocial Distress Screening in Cancer Care Centers

Psychosocial distress screening, a new patient care standard set by the American College of Surgeons Commission on Cancer (CoC) to be met by 2015, required that CoC-accredited cancer centers must integrate and monitor distress screening and, if needed, refer patients to psychosocial health care services (Lazenby et al, 2015). Both quantitative and qualitative data were collected from program applicants in this 2013 and 2014 cross-sectional study. Authors noted that less than half of the applicant institutions had begun distress screening 14 months before the compliance deadline and noted that "cancer centers need guidance in developing the five-step distress screening process and support during the rollout of their distress screening programs" (Lazenby et al., p. 8). They further noted that participants did not know when to screen, which distress screening tools to use and which clinicians to conduct screening and evaluate results.

Managing the Suicidal Patient ***Prevention Services***

A recent large survey of mental health facilities (n=8,459) in the U.S. examined facility-level characteristics associated with whether the facilities offered (1) suicide prevention as part of the supportive services and practices offered at the facility or (2) follow-up after discharge as core components of health care services (Kuramoto-Crawford et al., 2016). The facilities included in this study were participating in the 2010 National Mental Health Services Survey (N-MHSS) sponsored by the Substance Abuse and Mental Health Services Administration (SAMHSA). Authors reported analysis of the data showing that most of the facilities offered suicide prevention services or had standard operating procedures for outcome follow-up after discharge. However, one of five facilities did not have either service in place (lack of suicide risk assessment, management and prevention). Characteristics of facilities offering neither of the services included: less likely to provide comprehensive

support services or special programs for veterans, less likely to treat both substance use and mental health services, and less likely to be accredited. Authors emphasized the continued need to improve suicide prevention services in the mental health care system.

In the foreword to a recent report by the World Health Organization, *Preventing Suicide: A Global Imperative*, Dr. Margaret Chan states, “the taboo and stigma surrounding suicide persist and often people do not seek help or are left alone. And if they do seek help, many health systems and services fail to provide timely and effective help” (WHO, 2014). This report noted that the foundation of successful suicide prevention is the identification of suicide risk factors (usually no single cause or stressor) and appropriate interventions. The report noted that “by far the strongest indicator for future suicide risk is one or more prior suicide attempts” (WHO, p. 40). Within this report, “suicide attempt is used to mean any non-fatal suicidal behavior and refers to self-inflicted poisoning, injury or self-harm which may or may not have a fatal intent or outcome” (WHO, p. 12). Authors noted the difficulty in assessing suicide intent, surrounded by ambivalence or concealment. The World Health Organization has organized interventions for suicide prevention in a framework including three kinds of interventions: (1) universal preventions increasing access to care, strengthening social support and alteration of the physical environment, (2) selectively targeting vulnerable groups based on characteristics, e.g., age, sex, family history and (3) strategies targeting vulnerable individuals, e.g., individuals with history of suicide attempt or showing early signs of suicidal potential.

Emergency Department Intervention and Follow-Up Program

A recent study assessed the acceptability and perceived usefulness of a novel intervention implemented in five Department of Veterans Affairs emergency departments (EDs) (Stanley et al., 2016). A sample of veterans (n=100) who had presented to the ED for a suicide-related concern, while not meeting requirements for hospitalization, received a crisis management tool, i.e., combined Safety Planning Intervention (SPI) with structured follow-up and monitoring (SFU) by telephone. The SPI provided a list of coping skills and social supports to be used if suicidal thoughts emerged, while the SFU included a brief evidence-based intervention. It included a telephone call to monitor the patient, e.g., mood check and suicide risk assessment, adherence to follow-up treatment recommendations within seven days of ED visit by highly trained project staff, etc. Additional calls occurred weekly until first outpatient visit, after which participants were contacted to assess acceptability and usefulness of participants’ satisfaction with the SPI and SFU. Results found that most of the participants noted that the intervention was both helpful in preventing further suicidal behavior and in fostering treatment engagement. Researchers noted that this intervention provides a basic level of care for patients seen in the ED (not requiring hospitalization) with a suicide crisis. They are discharged with a referral to outpatient care.

Pharmacological Prevention of Suicide

In a recent review of literature, authors found evidence that the appropriate use of antidepressants can effectively treat and protect depressed patients from suicide (Rihmer and Gonda, 2013). However, authors also noted that since the risk of suicidal behavior in depressed patients taking antidepressants is relatively more frequent in the first two weeks of treatment, psychiatrists must consider risks of suicidality when prescribing antidepressants for patients with depressive disorders where the risk of suicide is very high. Authors noted studies evidencing the anti-suicidal effect of lithium in both bipolar

and unipolar major mood disorders. Studies showed that the risk of suicides and suicide attempts in patients with unipolar depression was 88 percent lower with versus without lithium treatment. Studies suggested that when the patient with one or more suicide factors does not respond to lithium, the clinician should retain lithium and combine it with another mood stabilizer. Authors also discussed recent results of studies showing that some atypical antipsychotics have acute antidepressive (quetiapine and olanzapine-fluoxetine combination) and long-term mood-stabilizing effect (quetiapine, olanzapine and aripiprazol) in patients with bipolar disorder. Authors emphasized the need for psychotherapies and psycho-social interventions to increase the effectiveness of pharmacotherapy for suicide prevention for patients with severe unipolar major depression and bipolar disorder (Rihmer and Gonda, 2013).

Antidepressant Initiation and Suicide Risk

A recent study examined changes in antidepressant use and suicidal behavior by young people after FDA warning and media coverage (Lu et al., 2014). Researchers accessed automated healthcare claims data from 11 health plans in the US Mental Health Research Network (2000-2010). This study included data from adolescents aged 10-17 (n=1.1 million), young adults aged 18-29 (n=1.4 million, and adults aged 30-64 (n=5 million). Authors noted the complexity of the relationship between antidepressant use and suicidal behavior, and suggested that although treatment with antidepressants may reduce the pre-existing risk of suicidal ideation generally, the finding may not hold up for young people. They suggested that in adolescents and young adults, short term increases in suicidal ideation and behavior may be precipitated by antidepressant treatment. Studies of the FDA warning have found large declines in antidepressant use in children and adolescents after the warning, with the decline spilling over to adults (not a target of the warnings). Other changes after the FDA warnings included no increase in alternative treatments, e.g., psychotherapy, atypical antipsychotics, and no increased monitoring of patients, although suggested by the boxed warnings. In this study which provided empirical evidence about changes in suicide attempts and completed suicide, authors found an abrupt decline in the use of antidepressant use by young adults, reversing the previously upward trend. In the second year after the warning, a 31.0 percent reduction in use of antidepressant use was found at the same time as the occurrence of a sharp increase in psychotropic drug poisonings. Reductions in antidepressant use and increase in psychotropic drug poisonings were also found in young adults and decreased antidepressant use was found in adults. Authors noted that this was the first study to provide evidence that suicide attempts increased rather than decreased after the FDA warning. Increases in suicide attempts, i.e., psychotropic drug poisonings, were 21.7 percent among adolescents and 33.7 percent among young adults. Authors suggested that the increase in suicide attempts may be a consequence of under-treatment of mood disorders. They concluded that the FDA warning and media attention may have “led to unexpected and unintended population level reductions in treatment for depression and subsequent increases in suicide attempts among young people” (Lu et al, p. 4).

In an analysis of seven years of cross-sectional data (NSDUH) of adolescents aged 12-17 (n=over 100,000), Busch et al. found that adolescents with probable depression, when compared to other adolescents, experienced increased delinquency, use of tobacco and use of illicit drug, and decline in grade point average following the FDA black box warnings regarding antidepressant use in young people (Busch et al., 2014). Authors noted the lack of evidence suggesting any substantial replacement of antidepressant therapy with

behavioral therapies, e.g., counseling. Authors suggested that the FDA warning moved adolescents toward less effective treatments, noting, “Some children who previously would have received combination treatment received psychotherapy alone. Others moved from antidepressant treatment alone to no evidence-based treatment” (Busch et al., p. 5). Authors also reported that youth suicides were flat or declining in the years preceding the warnings among those aged 10-19, but girls aged 10-19 experienced a sharp increase in suicides – over 30 percent in 2004.

Electroconvulsive Therapy (ECT) in Suicide Prevention

A recent article reviewed two large National Institute of Mental Health-supported studies of continuation treatment after successful ECT in depressed patients: the CORE study (4-hospital collaborative study) and the CUC study (3-hospital collaborative study) (Fink et al., 2014). Technical parameters of the ECT treatment in each study differed as CORE used bilateral placement and CUC used right unilateral electrode placement. Outcomes were based on ratings in the Hamilton Depression Rating Scale (HAMD) at baseline and at remission. In the patients (n=444) referred for ECT in the CORE study, the remission rate for patients completing the course of treatment (n=355), based on item three of the HAMD (evaluating presence/severity of suicidal thoughts/actions) was 85.6 percent. The CUC study used the same rating scale and reported similar resolution of suicidal ideation. Researchers noted the greater decrease in the suicide items scores compared to the overall Hamilton depression scores. They concluded that ECT continues to be underutilized due to exaggerated fears of memory loss, and that “evaluation and referral for ECT should be integral to the management of patients considered at suicide risk, with the expectation that ECT will quickly reduce suicidal drive and thus, the mortality rate” (Fink et al., p. 7).

Psychosocial Therapy after Deliberate Self-Harm

In a matched cohort study examining short-term and long-term effects of psychosocial therapy for people after deliberate self-harm, researchers compared outcomes from recipients (5,678) who received psychosocial therapy to that of recipients (17,034) who did not receive psychosocial therapy (Erlangsen et al., 2015). All of the people had history of deliberate self-harm. Over an almost 20-year follow-up period, those who received psychosocial therapy, e.g., dialectical behavior and psychodynamic approaches, had fewer subsequent acts of self-harm, fewer suicides and fewer deaths from any cause compared with those who did not receive psychosocial treatment. Researchers reported that at the 20 year follow-up, the lower risk of repeated self-harm reported suggested that 145 repeated episodes of self-harm were avoided. Additionally, the lower risk of suicide in the treatment group was reported to suggest that 30 suicide deaths were prevented. The fewer deaths from any cause in the group receiving psychosocial therapy suggested an avoidance of 153 deaths. Researchers noted the “protective effect for suicide after long-term follow-up, which favour the use of psychosocial therapy intervention after deliberate self-harm” (Erlangsen et al., p. 49).

Dialectical Behavior Therapy for High Suicide Risk

In a single-blind randomized clinical trial from 2004-2010, researchers evaluated the importance of the skills training component of dialectical behavior therapy for high suicide risk in individuals with borderline personality disorder (Linehan et al., 2015). They compared the effects of skills training plus case management (DBT-S), individual therapy plus activities group (DBT-I, and standard DBT, which includes individual therapy and skills training. The study involving one year each of treatment and follow-up included

participants (n=100) with personality disorder who had the following: at least two suicide attempts and/or nonsuicidal self-injury act (NSSI) during the past five years, an NSSI or suicide attempt in the past eight weeks, and a suicide attempt in the past year. All three treatment conditions were comparably effective at reducing suicide attempts and suicide ideation, while DBT and DBT-S were more effective in reducing NSSI acts as well as improving other mental health problems than DBT without skills training.

Brief Cognitive-Behavioral Therapy Effects on Post-Treatment Suicide Attempts in a Military Sample

A randomized controlled trial evaluated brief cognitive-behavioral therapy effects on post-treatment suicide attempts in active-duty Army soldiers (n=152) who either attempted suicide or experience suicidal ideation with intent (Rudd et al., 2015). Participants who had previously attempted suicide or experience suicidal ideation were randomly assigned to treatment as usual or treatment as usual plus brief CBT. Brief CBT was purposefully brief to accommodate time demands of a military setting and it focused on skills development and emphasized internal self-management. Both groups received usual care, e.g., individual and group psychotherapy, psychiatric medication, substance abuse treatment and support groups is needed. The CBT group also received twelve outpatient individual psychotherapy, weekly or biweekly, with each session lasting 60 minutes (after the first session which lasted 90 minutes). CBT participants were provided a small pocket-sized notebook (“smartbook”) where they recorded “lessons learned” and relapse prevention plans. Researchers noted that the groups did not differ significantly at baseline regarding psychiatric diagnoses, history of previous suicide attempts or medications. During the two-year follow-up, 13.8 percent of participants in brief CBT made at least one suicide attempt compared with 40.2 percent of participants in treatment as usual. Researchers noted this finding is supportive of the assertion that “suicidal thoughts and behaviors should be targeted as a unique treatment goal separate from psychiatric diagnosis and symptom severity. In other words, effective treatment of risk for suicidal behavior does not require complete remission of a psychiatric diagnosis or symptom severity but rather the development of core skills in the areas of emotion regulation, interpersonal functioning and cognitive restructuring” (Rudd et al., p. 447). Researchers concluded that brief outpatient treatment focusing on skills training can be effectively implemented in a military setting to reduce suicide attempts among military personnel who have made a previous suicide attempt or are experiencing suicidal thoughts.

Effects of Cognitive Behavioral Therapy (CBT), Interpersonal Psychotherapy (IPT), Pharmacotherapy, and Placebo on Suicidality

Acknowledging the complex relationship between depression and suicide, and the ambiguity concerning whether treatments for depression can reduce suicidal ideation, researchers conducted analysis on the National Institute of Mental Health’s (NIMH’s) Treatment for Depression Research Collaborative (TDCRP) sample, which included CBT, IPT, medication and placebo treatment groups (Weitz et al., 2014). In this study, participants (n= 239) who met criteria for a current major depressive episode and reported suicidal ideation on the Hamilton Rating Scale for Depression (HRSD) or Beck Depression Inventory (BDI) were randomly assigned to 16 weeks of treatment with CBT, IPT, imipramine (150-300 mg per day) plus clinical management or placebo plus clinical management. At baseline, 61.4 percent and 62.1 percent of the sample reported suicidal ideation on the HRSD and the BDI, respectively, and 8 percent of the sample reported having made a past suicidal gesture. A significant decrease in suicidal ideation from

baseline to post-treatment occurred in all conditions, including placebo, suggesting the decrease may be a result of spontaneous remission. However, imipramine plus clinical management and IPT alone reduced HRSD suicidal ideation scores significantly more than placebo plus clinical management. BDI suicidal ideation scores (a self-report measure) were the same among active treatment groups and placebo. Researchers suggested, “treatments for depression including antidepressant medications and psychotherapy (IPT) reduce suicidal ideation in patients that exhibit mild to moderate suicide risk, thus contributing some preliminary evidence to support existing treatment guidelines for depression and suicide” (Weitz et al., p. 102). Researchers also noted “the relationship between the change in depression scores from baseline to post-test and change in suicidal ideation scores are highly significant, meaning that a decrease in depression was associated with a decrease in suicidal ideation” (p.102). Limitations of this study include the use of only question on the BDI and on the HRSD to measure change in suicidal ideation and the exclusion of patients with moderate to severe suicidal ideation. Nonetheless, researchers noted how this study helps in the understanding of the interdependence of depression and suicide and increases the body of evidence showing treatments for depression can also reduce suicidal ideation.

II. Suicide Statistics: Demographics and Epidemiology

The Center for Disease Control and Prevention (CDC) reported in 2015 that in the United States suicide was the 10th leading cause of death for all ages in 2013. In 2013, 41,149 people killed themselves. Among persons aged 15-34, suicide was the second leading cause of death in 2013. It was the fourth leading cause of death among persons aged 35-44, the fifth among persons 45-54, the eighth among those aged 55-64 and the seventeenth among persons aged 65 and older. Suicide decedents tested positive for alcohol, antidepressants and opiates (including heroin and prescription pain medications) at rates of 33.4 percent, 23.8 percent and 20.0 percent, respectively. During 2013, the estimated percentage of adults aged ≥ 18 years having serious thoughts about suicide was 3.9 percent. Percentages differed within this age group: 7.4 percent of adults aged 18 to 25; 4.0 percent of adults aged 26 to 49; and 2.7 percent of adults aged 50 or older. During the same year, the estimated percentage of adults aged ≥ 18 years who made a suicide plan in the past year was 1.1 percent. Percentages within this age group were: 2.5 percent of adults aged 18 to 25; 1.35 percent of adults aged 26 to 49; and 0.6 percent of adults aged 50 or older. An estimated 0.6 percent of adults aged 18 or older attempted suicide in the past year (CDC, 2015).

The CDC Morbidity and Mortality Weekly Report (MMWR) for March 6, 2015 reported that suicide is the second leading cause of death among persons aged 10 to 24 years in the United States. The three most common mechanisms for suicide are firearms, suffocation (including hanging) and poisoning (including drug overdose) (CDC, 2015). An analysis of mortality data for the period 1994-2012 from the National Vital Statistics System found that, during that period, suicide rates by suffocation increased on average, for females by 6.7 percent and males by 2.2 percent annually. These rates, occurring across demographic and geographic subgroups, are concerning as suffocation, as a suicide mechanism, has a higher lethality rate than firearms or poisoning. The CDC has advised clinicians to be aware of these current trends to more accurately assess risk and educate patients and families. They also advised that media coverage providing details about suicide incidents and clusters may exacerbate risk for “suicide contagion” among vulnerable young people.

Among high school students in the U.S. during 2013, 22.4 percent of females and 11.6 percent of males in grades 9-12 seriously considered attempting suicide in the previous year. A suicide plan was made by 16.9 percent of female students and 10.3 percent of male students. Suicide was attempted one or more times in the previous 12 months by 10.6 percent of female students and 5.4 percent of male students (CDC, 2015).

In the last few years, cyberbullying has become a much talked about issue in the media. Bullying has always been negatively associated with mental health, but with increased usage of electronic technology and of social media, e.g., Facebook and Twitter, cyberbullying has made possible “all-day” harassing, humiliating or threatening of our youth.

Rates and Ratios

Data maintained by the National Vital Statistics System of the Centers for Disease Control and Prevention (CDC) on annual suicide mortality in the United States) shows suicide was the 10th leading cause of death for all age groups combined in 2010, accounting for approximately 38,364 suicides, more than 1.0 percent of all U.S. deaths. From 1991-2000, suicide rates declined among both males and females, but from 2000 to 2010 suicide rates gradually increased among both sexes to a total of 12.4 per 100,000 (National Vital Statistics Reports March 2011; NIMH 2011; CDC 2012).

Suicide is the 3rd leading cause of death among youths aged 10-24 in the United States, resulting in approximately 4,600 lives lost each year. Of all the reported suicides in this group, 19 percent of the deaths were females and 81 percent were males, but females reported more attempted suicides. More youths survive suicide attempts than die (CDC 2012).

Other important information on suicide reported by the CDC includes:

- The suicide rate is the same for both sexes until mid-adolescence (aged 15-19) at which time the rate among males increases dramatically relative to the rate among females. This trend continues with just under six times as many males as females, aged 20 to 24, dying by suicide. Suicide rates for males are highest among those aged 74 and older (36.1 per 100,000) and highest for females among those aged 45-54 (8.8 per 100,000). During their lifetime women attempt suicide about two to three times as often as men.
- Data from The National Violent Death Reporting System shows that in 2009 one-third of those who died by suicide were positive for alcohol at the time of death, 23 percent for antidepressants, and 20.8 percent for opiates, including heroin and prescription pain killers.
- Suicide is the second leading cause of death for American Indians/Alaska Natives aged 15-34 years, with a rate of 20.0 per 100,000 and 1.8 times higher than the national average for that age group.
- The lowest rates of suicide in ethnic groups are for Hispanics (6.0 per 100,000), Non-Hispanic Blacks (5.1 per 100,000) and Asian and Pacific Islanders (6.2 per 100,000). This does not, however, hold true during adolescence where Hispanic and

Black (non-Hispanic) female high school students in grades 9-12 reported a higher percentage of suicide attempts, 11.1 percent and 10.4 percent, respectively, than their White (non-Hispanic) counterparts (6.5 percent).

- From 1999-2003, suicide rates were higher among those who were 65 years of age and older than groups who were younger. The suicide rates among the 25 to 64 year age group increased to surpass the rate of those 65 and older in both 2004 and in 2006, and the rate has been increasing since.
- In 2009, 13.8 percent of U.S. high school students reported that they had seriously considered attempting suicide during the 12 months preceding administration of the Youth Risk Behavior Surveillance Survey. Also, 6.3 percent of the students reported that they had actually attempted suicide one or more times during the same period.

Profiles

- The National Institute for Mental Health (NIMH) reported that suicide was the seventh leading cause of death for males and the 15th leading cause of death for females in 2007. Almost four times as many males as females die by suicide (NIMH 2011).
- Repeated suicide attempters are primarily female, suffering from a high rate of personality disorders.
- Morbidity for nonfatal, self-inflicted injuries is significant. Data reported from hospitals in 2008 indicated 376,306 people were treated in emergency departments for such events. Among those treated, some 163,489 people were hospitalized due to self-inflicted injury where the majority of these patients were female (58 percent).
- Completers are primarily male, suffering from a major Axis I mental disorder, and often (more than 60 percent) make a single suicide attempt. Male suicide attempters are at high risk for eventual completion.
- Although most deaths from suicide occur in the community setting, i.e., 77 percent occur in the home, some patients commit suicide while hospitalized in psychiatric and medical settings.
- It has been estimated that there may be from eight to 25 attempted suicides for every one completed suicide (NIMH, 2011).

Methods

- Firearms, suffocation, and poison are by far the most common methods of suicide overall. However, men and women differ in method used to commit suicide:
 - Males: firearms (56 percent); suffocation (24 percent); poisoning (13 percent)

- Females: firearms (30 percent); suffocation (21 percent); poisoning (37.4 percent) (NIMH 2011)
- Youths between 10 and 24 years of age: firearms (45 percent); suffocation (40 percent); poisoning (8 percent) (Centers for Disease Control and Prevention 2014).
- During the period 2003-2009, there were 286 suicidal events in the U.S. National Parks where 68 percent were fatal and 83 percent were among males while using the two most common methods, i.e., firearms (33 percent) and falls (19 percent). Other methods used were poisoning (7 percent), cut/pierce (6 percent) and transportation (6 percent).
- There is an association between psychotic illness, especially schizophrenia and attempted suicide by jumping from a height. After reviewing medical trauma files from 160 survivors of jumps (>3 meters) in Australia, findings showed that 44 percent of survivors have a psychotic illness and 19.4 percent of survivors had an undiagnosed and untreated psychosis with delusional beliefs (Nielsen et al., 2010).

Comprehensive List of Known and Emerging Risk Factors – see Magellan’s Tipsheet, *Assessing and Managing the Suicidal Patient: Keeping the Patient Safe*, for Guidance in Assessing and Weighing Risk Factors (Magellan 2016).

Although there is not one single cause of suicide, an individual’s risk for suicide may be increased by several factors, such as:

- Epigenetic and genetic biomarkers, e.g., SKA2 (Guintivano et al., 2014)
- History of or current depression or other psychiatric disorders, e.g., substance use disorder, schizophrenia, post traumatic stress disorder
- History of psychiatric hospitalization and emergency department visits related to psychiatric issues
- Current or recent alcohol or drug abuse
- Prior or current suicidal ideation, suicide plan(s) or suicide attempts (included aborted or interrupted attempts)
- Prior intentional self-harm or injury without suicidal intent (Carroll et al., 2015)
- Discharge from emergency department or inpatient psychiatric care within first year after discharge
- Symptoms of anxiety, including panic attacks
- “Suicidal contagion” – influence of media on suicidal behavior (“copycat” suicides)
- Parental history of suicide attempt or violence
- History of trauma, e.g., chronic traumatic encephalopathy (Fralich et al, 2016; Iverson, 2016)
- Physical illnesses, e.g., HIV-AIDS, Huntington’s disease and other illnesses
- Individuals with cancer (American Psychosocial Oncology Society, Association of Oncology Social Work, and Oncology Nursing Society, 2013)

- Feeling alone, social isolation, lack of social support
- Feelings of hopelessness
- Interpersonal losses or rejections
- Impulsivity
- Community stressors, e.g., acculturation and dislocation stresses: disaster, war and conflict, discrimination (WHO, 2014)
- Chronic medical conditions such as pain – physical or mental pain
- Cognitive impairment
- Psychosocial stressors, e.g., financial, legal, school, occupational, social, terminal medical illness
- Personal relationship conflicts, separation or divorce
- Being a member of lesbian, gay, bisexual, transgender and questioning (LGBTQ) youth (American Academy of Pediatrics, 2013)
- Abuse as a child
- Sleep disturbances (Perlis et al., 2015; Bernert et al., 2014)
- Easy availability of lethal means, such as guns or lethal doses of prescription medication (Swanson et al., 2015; Niederkrotenthaler et al., 2014)
- Local epidemics of suicide
- Barriers to accessing mental health treatment
- Unwillingness to seek help due to stigma
- Advanced paternal age
- Perpetrator of bullying or being a victim of bullying (Sibold et al., 2015; Holt et al., 2015)
- Early separation from military service and discharge that is not honorable (Reger et al., 2015).
- Parental death from suicide or from other causes in childhood – before the child reaches age of 18 years (Guldin et al., 2015)
- Social isolation, spousal bereavement or functional impairment in older adults
- Stigma against individuals seeking treatment for substance use disorders, other mental health problems and suicidal behaviors
- Difficulties in accessing healthcare
- At-risk populations, e.g., veterans, the elderly population.

Military Service

A recent retrospective cohort study found no evidence that military deployment in support of Operation Enduring Freedom or Operation Iraqi Freedom increased the rate of suicide mortality among U.S. military personnel (n=3.9 million) compared with service members who never deployed in support of these conflicts (Reger et al., 2015). However, researchers found early separation (less than four years) from military service and discharge that were

not honorable were suicide risk factors. This study included service members who served in the US military from 2001-2007; suicide mortality was followed to 2009, regardless of separation from military service. Similarly elevated risks for suicide were found among those who separated from service, regardless of whether they had been deployed. Service members who deployed, but were not separated from service had no higher rates than those who did not deploy and were not separated from service. Authors presented possible explanations for the higher rate of suicide among those who had less than four years of service: difficulty in transitioning from military to civilian life; loss of shared military identity; difficulty developing a new social support system; difficulties finding meaningful work; feelings of being a burden to others. They also suggested that service members with mental health problems may have been more likely to be discharged early. Authors found modestly higher rates of suicide for service members discharged under not honorable conditions those than discharged under honorable conditions. Authors concluded that the increasing suicide rate during the last decade among members of the US Armed Forces and veterans is concerning, but the results of this study do not support speculation that deployment to combat is associated with military suicides. However, they suggested future research to “examine combat injuries, mental health and other factors that may increase suicide risk. It is possible that such factors alone and in combination with deployment increase suicide risk” (Reger et al., p. 568).

Parental Death

Another recent population-based cohort study examined the long-term risks of suicide after parental death and how the risk differed by cause of parental death, age of child at the time of parental death, sex, time since bereavement, birth order, socioeconomic status and parental psychiatric history (Guldin et al., 2015). The study included data from nationwide registers from 1968 to 2008 that included children (n=189,094) whose parent died before the child reached 18 years (the bereaved cohort) as well as children (n=1,890,940 whose parent did not die before the child reached 18 years (the control cohort). Results showed parents in the bereaved cohort had several psychiatric disorders, low socioeconomic status, nine years or less of education and were more likely to be older than those in the control cohort. During 25 years of follow-up, findings showed that suicide was higher among boys than girls in both cohorts, and the risk of suicide was 82 percent higher for children bereaved by parental death by suicide than for children whose parent died of accidental death (after adjusting for factors such as age, country and sex). The risk of suicide was high for at least 25 years after death of the parent. Authors concluded that the increased risks of suicide after parental death include shared genetic dispositions, psychological stress, social changes related to the death of the parent and environmental factors. They suggested that future health efforts should be focused on helping children who have lost a parent cope with bereavement (Guidin et al., 2015).

Another longitudinal study examining the familial transmission of suicidal behavior found an almost five-fold increased risk of suicide attempt in offspring of parents who had attempted suicide (Brent et al., 2015). This prospective study, conducted from 1997-2012, included offspring (n=701) of probands (334) with mood disorders, with 57.2 percent of probands having made a suicide attempt. This study found that 6.3 percent of the offspring had attempted suicide before participation in the study and 4.1 percent made a suicide attempt during the follow-up of five years. Researchers found the increased risk of suicide even when controlling for familial transmission of mood disorder and that “impulsive aggression was an important precursor of mood disorder and could be targeted in

interventions designed to prevent youth at high familial risk from making a suicide attempt” (Brent et al., p.166).

Lesbian, Gay, Bisexual, Transgender and Questioning Youth (LGBTQ)

A policy statement of the American Academy of Pediatrics on office-based care for lesbian, gay, bisexual, transgender and questioning youth (LGBTQ) noted that “the effects of homophobia and heterosexism can contribute to health disparities in mental health with higher rates of depression and suicidal ideation, higher rates of substance abuse, and more sexually transmitted and HIV infections” (American Academy of Pediatrics, 2013, p. 198). The statement notes that although being a member of LGBTQ group is not, in itself, a risk factor, “the presence of stigma from homophobia and heterosexism often leads to psychological distress, which may be accompanied by an increase in risk behaviors” (AAP, p. 198). The policy statement advised pediatricians to educate themselves about organizations that serve sexual minority youth and families, support gay-straight alliances, support parents in adjusting to needs of LGBTQ child, support and affirm transgender adolescents, and be welcoming and teen-friendly to all patients, regardless of sexual orientation (AAP, 2013).

Cyberbullying

In the last few years, cyberbullying has become a much talked about issue in the media. Bullying has always been negatively associated with mental health, but with increased usage of electronic technology and of social media, e.g., Facebook and Twitter, cyberbullying has made possible “all-day” harassing, humiliating or threatening of our youth. A recent meta-analysis estimated the association between bullying involvement and suicidal ideation and behaviors (Holt et al., 2015). Findings demonstrated that an increased risk for suicidality was associated with bullying involvement; being a victim of bullying was associated with the greatest risk. Results indicated that in any capacity, involvement in bullying is associated with both suicidal ideation and behavior. A recent study using the 2013 National Youth Risk Behavior Survey (YRBS) examined the relationships among physical activity, sadness, and suicidality in bullied adolescents in the United States (Sibold et al., 2015). Data-analysis showed that exercise was shown to have positive effects on mental health. Exercising lowered the odds of sadness, suicidal thoughts, and suicidal attempts in students who exercised 4-5 days a week compared with students who exercised 0-1 day per week, and exercise for 4 or more days per week was associated with reduction of approximately 25 percent in suicidal ideation and suicidal attempt in students who were victims of bullying. Authors concluded that exercise should be a consideration for management of both sadness and suicidality in bullied children (Holt et al., 2015).

Sleep Disturbances

A current review of literature on suicide rates by time-of-day focused on the incidence of suicidal ideation and behavior occurring at night (Perlis et al., 2015). Authors reported results of a systematic review that found factors, i.e., poor sleep quality, insomnia and nightmares, significantly and independently predicted an increased risk for suicidal ideation, suicide attempts and death by suicide. They examined how sleep disturbance confers risk by focusing on circadian fluctuations in frontal lobe/executive function and proposed, “when one is awake when not biologically prepared to be awake (i.e., not sleep sated and/or in a circadian phase that is associated with alertness and higher cognitive

functioning), the consequence is a kind of brain activity that is associated with poor executive function” (Perlis et al., p. 105). Focusing on circadian fluctuations in frontal lobe/executive function, authors proposed that suicides occurring at night may be explained by a neurobiological/neuropsychological vulnerability. Authors emphasized the need to identify sleep disturbances, including wakefulness during the traditional sleep period, to identify suicide risk and the need to provide treatment for sleep disturbance to reduce the risk of suicidal ideation and suicidal behavior. Additionally they suggested that “allocating increased mental health resources during the circadian night may serve to reduce the incidence of suicide attempts and/or death by suicide” (Perlis et al., 2015).

A longitudinal case-control cohort study of majority male community elders aged 66 years or older examined the relative independent risk for suicide associated with poor subjective sleep quality during an observation period of 10 years (Bernert et al., 2014). In this community sample, suicide decedents (n=20) were matched with control subjects (400) randomly selected from the sample (on age, sex and study site). Sleep quality was evaluated with the Sleep Quality Index (SQI) administered during the baseline interview. Authors reported that self-reported difficulty falling asleep and nonrestorative sleep at baseline specifically predicted increased risk of suicide death. However, only nonrestorative sleep significantly predicted increased risk after adjustment of depressive symptoms. Authors suggested further research to explain this relationship.

Chronic Traumatic Encephalopathy (CTE)

News reports have recently focused on the association between chronic traumatic encephalopathy (CTE) and repeated concussions or traumatic brain injuries in persons taking part in sports activities such as football. While a causal association between suicide and CTE has been suggested in media stories, Iverson noted that “the science underlying the causal assumption between repetitive neurotrauma, depression, suicide and the neuropathology believed to be unique to CTE is inconclusive” (Iverson, 2016). Author stated further, “former National Football League players, for example, are at lower, not greater, risk for suicide than men in the general population” (Iverson, p.9). Author went even further in questioning whether media coverage may reinforce suicidal ideation in at-risk athletes (“suicide contagion”). He suggested the need for further research cautioning, “conceptualizing suicide as being the result of small focal epicenters of tau, or a progressive degenerative tauopathy, is currently scientifically premature, overly simplistic and potentially fatalistic” (Iverson, 2016, p. 13).

In a recent longitudinal cohort analysis of adults (n=235,110) with diagnosis of a concussion in Canada over a 20-year period beginning in 1992, researchers assessed the long-term risk of suicide after concussions occurring on weekends or weekdays in the community (Fralick et al., 2016). Half of the patients in the study were men, and the mean age of patients was 41 years. The majority of patients had none of the following: formal medical imaging, additional diagnosed fractures, prior hospital admissions, prior suicide attempts or prior psychiatric diagnoses. Suicide deaths over a median follow-up of 9.3 years numbered 667 (equivalent to 31 deaths per 100,000 patients annually – three to four times the population norm), and the mean time from concussion to suicide was 5.7 years. Researchers found an approximate one-third increase in suicide risk after a weekend concussion compared to a weekday concussion. Other factors found to be associated with long-term risk of suicide included: prior suicide attempt (single most powerful predictor), prior psychiatric diagnosis, especially substance abuse, male sex and low socioeconomic

status. In this study, the most common mechanism was poisoning followed by asphyxiation. Researchers concluded, “the long-term risk of suicide among those with a concussion was three times the population norm and was even higher if the concussion occurred on a weekend” (Fralick et al., 2016, p. 5). They suggested that deaths from suicide can be prevented by greater attention to the long-term care of patients after a concussion.

Accessibility to Guns

A policy mini-symposium described epidemiologic evidence related to the risk of gun violence and suicide linked to psychiatric disorder (Swanson et al, 2015). Authors noted that although studies show that the large majority of individuals with serious mental illnesses are never violent, media accounts of mass shootings reinforce a popular belief that mental illness often results in violence. According to the Centers for Disease Control and Prevention (CDC), suicides account for about 60 percent of firearm fatalities in the United States (CDC, 2013). Authors reported that suicide risk factors include “self-harm” (the strongest association), concurrent substance abuse, psychological symptoms, e.g., hopelessness, and psychiatric disorders such as depression. However, suicide literature shows that the availability of lethal means, such as firearms, and exposure to media reporting of suicide are also strong risk factors. Authors emphasize that policies addressing gun violence and suicide must not stigmatize individuals with serious mental illness and should not discourage them from seeking treatment. They conclude, “Policymaking at the interface of gun violence prevention and mental illness should be based on epidemiologic data concerning risk to improve the effectiveness, feasibility and fairness of policy initiatives” (Swanson et al, 2015).

Self-Harm

A recent systematic review and meta-analysis examined 170 studies describing investigated risk factors for repetition of self-harm, both fatal and non-fatal (Carroll et al., 2015). Authors noted that repeat self-harm has been associated with a further increased risk of suicide, and that patients presenting to a hospital more than once for self-harm have double the risk of subsequent suicide compared with those presenting only once. Incidence of repeat self-harm with fatal outcome was 1.6 percent, 3.9 percent and 4.2 percent in one year, five years and 10 years, respectively. Studies including follow-up after 10 years suggested further increased risk. The most common method used in patients presenting self-harm was self-poisoning, while the patients using self-injury represented higher risk for fatal repetition. In their conclusion, authors estimated that one out of every 25 self-harm patients will die of self-harm in the 10 years following first presentation. Risk of suicide was greatest in older patients, males and those using methods other than self-poisoning. Authors reported, “despite over 30 years of research in the area, the incidence of non-fatal repeat self-harm has not changed and this highlights the need for new approaches” (Carroll et al., p. 8).

Mental Health Treatment Within Two Months Before Suicide Death

A recent study examining data from 18 states reporting to the National Violent Death Reporting System (NVDRS) between 2005 and 2010 assessed associations between mental health treatment within two months before suicide death, personal characteristics and circumstances of suicide among suicide decedents (Niederkrötenhaler et al., 2014). Authors found that nearly a third of the almost 58,000 suicides among persons above 18 year of age recorded in NVDRS had received some type of mental health treatment within

two months before suicide. Males and those of race-ethnicities other than non-Hispanic white were associated with lower odds of receiving treatment, and lower odds often were associated with suicides by firearms. This study found that suicide decedents who had poisoned themselves with drugs had received mental health treatment before their suicides, and had received prescribed substances often involved in their deaths. Authors advised that “drugs should be prescribed only in small package size to at-risk individuals to prevent suicide” (Niederkröthenthaler et al., p. 387).

Epigenetic and Genetic Biomarkers

A recent study used genome-wide screening techniques to identify a genetic and epigenetic biomarker with high prediction accuracy capable of predicting suicidal ideation and suicide attempt in a prospective manner from blood (Guintivano et al., 2014). Researchers analyzed postmortem brain tissue of a very small group of suicide decedents and found higher than average levels of chemical modification, or methylation, around a gene known as SKA2 compared with people who died from other causes. Additionally, this study found heightened SKA2 methylation in blood samples of persons with major depression or bipolar disorder and considered at risk of suicidal behaviors. Authors indicated that DNA methylation may be the primary factor that confers risk of suicide. “The postmortem brain data were generated in the prefrontal cortex, a brain region with inhibitory connections to the HPA axis and responsible for decision making, inhibition of negative thoughts and impulsivity” (Guintivano et al., p. 1294). Authors concluded that the findings of this study suggest the potential of early screening of those at risk for suicide ideation and suicide attempt may be possible with the development of a simple blood test. They further concluded that future studies must be conducted to further evaluate and test this methodology in larger populations (Guintivano et al., 2014).

The APA guidelines contain a table with a comprehensive list of factors associated with increased risk for suicide; the reader is referred to that table for additional information (APA, 2003).

Among salient trends:

- More than 90 percent of suicides are associated with a mental disorder.
- The strongest risk factors for suicide are depression, alcohol abuse, cocaine use and separation or divorce (NIMH, 2011).
- A previous suicide attempt is more predictive in males.
- Violence within the past year indicates an increased risk of suicide (Conner et al., 2001).
- Homosexual youth, bisexual youth and victims of child abuse are at greater risk for suicide attempts.
- Being diagnosed with HIV-AIDS increases suicide risk during all phases of the illness. The greater prevalence of comorbid psychiatric conditions in the antiretroviral therapy (ART) era along with biological processes, i.e., degradation of L-tryptophan as precursor to serotonin, and social vulnerability factors, i.e., stress of living with a stigmatized illness, have heightened the suicide risk for these patients (Robertson et al., 2006; Carrico et al., 2007; Carrico 2010; Kalichman et al., 2000).

In a recent study examining the association between advancing paternal age at childbearing and increased risk of psychiatric and academic problems in offspring, researchers performed a population-based cohort study of everyone born in Sweden from 1973 until 2001 (n=2,615,081). They documented the associations between paternal age at childhood and psychiatric disorders (autism spectrum disorder, ADHD, schizophrenia, suicide attempts, bipolar disorder, substance use disorders) in offspring, finding that a child born to a 45-year-old father is 13 times more likely to have ADHD than a child born to a 24-year-old father and 2.5 times more likely to have suicidal behavior or a substance use problem. Children born to a 45-year-old father were 3.5 times more likely to have autism, and almost 25 times more likely to have bipolar disorder than offspring of a 24-year-old father. Researchers indicated that the findings are consistent with the hypothesis that offspring morbidity may result from new genetic mutations occurring during spermatogenesis (Nauert 2014).

The more recent American Psychiatric Publishing *Textbook of Psychiatry (5th Edition)* also contains a comprehensive chapter on suicide (Hales et al., 2008, chapter 43). This chapter further specifies that the purpose of a competent suicide risk assessment is to identify modifiable, treatable risk and protective factors that inform the patient's treatment and safety management needs rather than predicting who will commit suicide. These risk and protective factors should be assessed dimensionally as low, moderate or high according to the individual clinical presentation of the patient.

The conceptual model proposed in this chapter enumerates assessment factors in the individual, clinical and interpersonal relations domains. Risk factors that are significant within one year of assessment include: (1) panic attacks, (2) psychic anxiety, (3) loss of pleasure/interest, (4) alcohol abuse, (5) depressive turmoil (mixed states), (6) diminished concentration and (7) global insomnia. In addition, the following factors are associated with suicide some two to ten years following assessment: (1) suicidal ideation (command hallucinations), (2) suicide intent, (3) hopelessness and (4) prior attempts (lethality).

Another important concept detailed in the chapter is the distinction between suicide ideation versus intent, whereby...“suicidal ideation can be passive, fleeting, intermittent, active and intense, with or without the intent to die. Suicide intent is the subjective expectation and desire to die by a self-destructive act.”(Hales et al., 2008, chapter 43).

It is generally believed that those who attempt suicide (“attempters”) represent a different population from those who complete suicide (“completers”). As noted previously, attempters are primarily females suffering from a high rate of personality disorders and they are often repeaters of suicide attempts. Conversely, completers are primarily males suffering from a major Axis I mental disorder, 60 percent of whom make a single suicide attempt. Male attempters are at a higher risk for eventual completion than female attempters.

Beghi et al. reviewed studies (n=76) to identify risk factors for the repetition of suicide attempts (fatal or nonfatal) (Beghi M et al., 2013). Based on their review, a previous suicide attempt, depression, sexual abuse in childhood and personality disorders were identified as predictors of nonfatal suicide attempts. Predictors of fatal suicide attempts were identified as previous suicide attempts and older age. Suicidal ideation was identified as a risk factor for completed suicides, but was not as strong for repeated suicide attempts. Authors concluded that the most consistent predictors for initial nonfatal suicide attempt and suicide, i.e., suicide ideation, alcohol or substance abuse/dependence and depression,

have not been reported as strong predictors for nonfatal repetition. They also stressed that the need for a suicide assessment is not to predict suicide, but to evaluate suicidality, especially in the period following a suicide attempt and before discharge from emergency department. They also emphasized that after discharge, patients, especially those with depression, bipolar disorder or schizophrenia, should not be lost in aftercare (Beghi M et al., 2013).

There are differences between those who complete suicide in the first year after contact with the health care system and those who complete suicide after a longer period of time. The first group is characterized by acute turmoil, high levels of psychic as opposed to somatic anxiety, and profound biological disturbance, such as global insomnia, anhedonia and impaired concentration. Patients who are discharged from hospitals appear to fall into this short-term risk group, with high rates of suicide during the ensuing year, especially for those patients admitted due to a suicide attempt or ideation (Bostwick et Pankratz, 2000). The risk is especially high in the month following discharge from a mental health facility.

The latter, long-term risk group is comprised of predominantly patients with chronic mental disorders associated with high levels of hopelessness and despair.

Homicide-Suicides

Homicide-suicides (HSs), also referred to as extended suicides, murder-suicides or dyadic death, are widely reported in the media and affect whole communities (Panczak et al., 2013). In a systematic review and meta-analysis, researchers compared perpetrators of HS with perpetrators of homicides or suicides finding some differences between groups of perpetrators. History of attempted suicide was more common in persons dying by simple suicide than from perpetrators of HS, and the use of firearms was more prevalent among HS perpetrators. Another review of literature carried out in several countries including the U.S. over the past 60 years on the prevalence of mental illness among the perpetrators of HS found that the most frequent disorders reportedly associated with HS were depression, substance abuse and psychosis (Roma et al., 2012). Authors pointed out HS may occupy a distinct epidemiological domain, having similarities with both homicide and suicide, and that individuals who kill themselves after killing another person(s) have been considered to be psychiatrically disturbed. Authors suggested that better understanding of HS is important to improve prevention; they focused on the need for socioeconomic data, information related to cultural and religious factors, psychiatric evaluations, data on previous episodes of violence and information on the possession of firearms (Roma et al., 2012).

III. Assessing Suicide Lethality

The American Psychiatric Association Practice Guidelines for the Psychiatric Evaluation of Adults recommends:

- The initial psychiatric evaluation of a patient should include all risk factors with both patient characteristics as well a environmental features to identify patients who are at increased risk for suicide;

- The initial psychiatric evaluation of a patient who reports current suicidal ideation should include assessment of patient’s intended course of action, access to suicide methods, possible motivations for suicide, reasons for living, quality/strength of therapeutic alliance and history of suicidal behavior in biological relatives;
- The initial psychiatric evaluation of a patient who reports prior suicide attempts should include assessment of details of attempt including method, potential lethality, etc.; and
- The clinician should document an estimation of the patient’s suicide risk, including all risk factors (APA, 2015).

The APA guidelines caution:

- Although standardized scales to identify individuals at high suicide risk may be useful clinically (e.g., opening communication with patients), no evidence has shown that scales have clinically useful specificity or sensitivity or predictive value.
- The guidelines emphasize clinician’s judgment in estimating the individual patient’s risk of suicide (APA, 2015).

Screening for Suicide Risk in Primary Care

- U.S. Preventive Services Task Force (USPSTF) reviewed the evidence on both the accuracy and reliability of instruments used to screen for increased suicide risk, benefits and harms of screening to prevent suicide in adolescents, adults and older adults in primary care. They found no direct evidence that screening was associated with improved health outcomes in adolescents and adults who do not have an identified psychiatric disorder (U.S. Preventive Services Task Force, 2014).
- Several groups, e.g., The American Academy of Pediatrics, The American Medical Association and The American College of Obstetricians and Gynecologists, recommend that pediatricians ask questions about mood disorders and suicidal thoughts, behaviors, emotions or other factors that may indicate depression or suicidal thoughts during routine health visits (U.S. Preventive Services Task Force, 2014).

Patient Health Questionnaire for Depression (PHQ-9) Questionnaire

- The PHQ-9 is used as a standard depression questionnaire in clinical practice. In a recent study, electronic records from a large integrated health system were used to link PHQ-9 response from outpatient visits (primary care or mental health specialty providers) to subsequent suicide attempt or suicide death (Simon et al., 2013). Questionnaires were completed by outpatients during depression treatment (n=84,418), aged 13 and older. Questionnaires were completed from 2007 to 2011 with some patients completing multiple questionnaires. From this sample, medical records, insurance claims and death certificates documented approximately 700 subsequent suicide attempts and 46 suicide deaths. Analysis of the results found responses to item 9 addressing thoughts of death or self-harm included: “not at all,” “several days,” “more than half the days,” and “nearly every day.” The group reporting “more than half the days” or “nearly every day” accounted for 53 percent of suicide attempts and 54 percent

of suicide deaths. Researchers emphasized that although the findings showed that item 9 of the PHQ-9 identifies outpatients at increased risk of suicidal behavior, this result does not justify screening in the general population. They also noted that excess risk of suicide attempt emerged over several days, continuing to grow for several months. Researchers emphasized that “suicidal ideation should be viewed as an enduring vulnerability rather than simply a short-term crisis” (Simon et al., p. 1201).

- A later study evaluated whether the suicide mortality analyses reported by Simon et al. in the above study extend to patients in the Veterans Health Administration (VHA) (Louzon et al., 2016). Researchers collected PHQ-9 assessments (n=301,492) conducted by the VHA from October 2009 to September 30, 2010 and assessed suicide mortality through September 30, 2011 using National Death Index data. Compared with a response to item 9 addressing thoughts of death or self-harm of “not at all,” responses of “more than half the days” and “nearly every day” were associated with 115 percent and 185 percent increased risks of suicide, respectively. Authors concluded, “Higher levels of suicidal ideation, indicated by item 9 of the PHQ-9, were associated with increased risk of suicide in the VHA system” (Louzon et al., 2016).
- The PHQ-2, a shorter version, may be administered prior to the PHQ-9. It asks only two questions about symptoms of depression and may also ask about suicidal thoughts and feelings. Other screening tools include the Emergency Medicine Network’s ED-Safe Patient Safety Screener for emergency departments, the Suicide Prevention Resources Center’s Decision Support Tool, the SAFE-T Pocket Card and the Columbia-Suicide Severity Rating Scale (C-SSRS).

Screening for Suicide Risk in the Emergency Department

- In an analysis of data from the first two phases of the Emergency Department Safety Assessment and Follow-up Evaluation (ED-SAFE) study, researchers sought to identify which patient characteristics have the strongest association with suicide outcomes in the 12 months after an index emergency department (ED) visit (Arias et al., 2016). This study included adults (n=874) with a median age of 37 years presenting to one of eight general medical EDs with current suicide ideation (66 percent of participants) or suicide attempt (34 percent of participants) during the past week. Outcome data were available for 90 percent of the participants at follow-up assessment time points through chart reviews and telephone follow-up assessment over a 12-month period. Analysis of the data found factors associated with predicting suicide outcomes within 12 months after the index ED visit were a high Columbia Suicide Severity Rating Scale (C-SSRS), documentation of an ED visit within the past six months, current alcohol misuse and a history of nonsuicidal self-injury. Researchers concluded that an understanding of these factors will help to guide improved suicide screening and interventions in the ED (Arias et al., 2016).

Trauma Center Screening and Intervention for Comorbid Substance Use and Mental Disorders and Suicide

- A recent study, utilizing a questionnaire, assessed screening, intervention and referral practices related to alcohol and drug use problems, post-traumatic stress disorder (PTSD), depression and suicide at level I and II trauma centers (n=518) in the U.S. (Love and Zatzick 2014). Results showed that more than 80 percent of the trauma centers routinely screened for alcohol and drug use problems. Routine screenings for

depression, PTSD and suicide were only 23 percent, 7 percent and 49 percent, respectively. Authors noted that the higher levels of screening and intervention for alcohol use problems are in response to the American College of Surgeons' mandate that trauma centers screen for alcohol use problems and that level I centers provide brief intervention for those who screen positive. They suggest the need for enhanced "screening and intervention procedures for highly prevalent, comorbid mental disorders, such as PTSD, depression and suicidality" (Love and Zatzick, p. 922).

Psychosocial Distress Screening in Cancer Care Centers

- Psychosocial distress screening, a new patient care standard set by the American College of Surgeons Commission on Cancer (CoC) to be met by 2015, required that CoC-accredited cancer centers must integrate and monitor distress screening and, if needed, refer patients to psychosocial health care services (Lazenby et al, 2015). Both quantitative and qualitative data were collected from program applicants in this 2013 and 2014 cross-sectional study. Authors noted that less than half of the applicant institutions had begun distress screening 14 months before the compliance deadline and noted that "cancer centers need guidance in developing the five-step distress screening process and support during the rollout of their distress screening programs" (Lazenby et al., p. 8). They further noted that participants did not know when to screen, which distress screening tools to use and which clinicians to conduct screening and evaluate results.

A multilevel, evidence-based program for the prevention of suicide, the Optimizing Suicide Prevention Programs and their Implementation in Europe (OSPI Europe), has been implemented and evaluated in four European regions, focusing on a general public awareness campaign, training of priests and pharmacists as well as other community facilitators, and training of general practitioners (GPs). The training program aims to increase the GPs ability to detect, diagnose and treat depressive disorders and deal with suicidality. The intervention also includes public relations activities, training sessions for community facilitators, e.g., priests, social workers, geriatric care givers, teachers and the media. A study conducted in Germany found that by educating GPs using training sessions and videos, there was a significant decline in the suicide rate in the region (Keller, 2014).

A. General Questions

The following four general questions are provided for consideration in formulating a consistent and salient approach to effectively assess suicidal lethality.

1. *Who should receive a suicide assessment?*

A suicide assessment should be conducted on any new patient who meets DSM-5 criteria for mental or substance use disorder, or any patient who otherwise has any other identified potential risk factors. Patients with psychiatric disorders have significantly higher rates of suicide attempts when compared to the general community, 29 percent compared to 5 percent (Oquendo, 2004).

2. *What are the components of a suicide assessment?*

There are two components to a suicide assessment:

- The elicitation and elaboration of suicidal ideation, and
- The identification and quantification of risk factors for completed suicide.

3. *At what point(s) should such an assessment take place?*

Ordinarily a suicide assessment should occur at the point of entry into treatment, i.e., at the initial visit with a mental health professional, and periodically thereafter, as indicated by the patient's symptomatology. If, at the time of the initial assessment, a patient meets criteria for a major psychiatric disorder and/or manifests any degree of suicidal risk, then the patient should be monitored for suicidal risk at each session thereafter.

4. *How should such assessment be documented?*

The clinical record should reflect that the suicide risk assessment has taken place, what the findings are, and what intervention plans are in place to contain, manage or mitigate the identified suicidal risk. The ideation and risk, along with the positive and negative findings, should be noted in the clinical record, either in the mental status exam section or in a clinical note.

B. Assessing Suicidal Ideation

Kaplan et al. notes that although there is a high level of correlation in a patient's responses to suicide-related questions between a self-administered questionnaire and the same questions posed in a face-to-face interview, there are often discrepancies on questions concerning current suicidal ideation (Kaplan et al, 1994). The authors found that patients tended to admit current suicidal ideation on self-administered tools more so than in a face-to-face interview.

It is surmised that perhaps the patient fears that a positive response to this question might have "unwanted" consequences, such as hospitalization. The authors suggest that during an initial evaluation, patients may feel more comfortable responding to basic questions regarding suicidal ideation and behaviors on a self-administered questionnaire, more so than with an interviewer. Another study supports this conclusion (Brown et al, 2003).

The assessment of suicidal ideation proceeds along a gradient, from least to most severe, with a specific line of inquiry as part of the assessment of mental status:

- Beginning with general questions about the consideration of self-harm, the interviewer should ask whether thoughts of death or suicide have occurred; if so, how often and how persistently. Are they fleeting, periodic or constant? Do they occur under specific circumstances? Are they increasing, decreasing or remaining constant?
- Thoughts should be characterized as passive, e.g., "I would be better off dead," or active, e.g., "Sometimes, when I am driving my car, I get the impulse to drive into other cars."

- Any thoughts noted should then be elaborated upon using the patient’s own language. Specifically, what are the thoughts?
- The patient should be asked whether there have been suicidal impulses, whether there is current intent, and if so, is there a plan? Details of the plan (method, time and place) should be reviewed and documented in the clinical record. The patient should be asked about whether any rehearsal (mental or through action) has taken place and whether there have been any attempts made thus far.
- Past history of similar thoughts, wishes, impulses, plans or attempts should be obtained.
- The patient with a plan should be asked about the availability of means and/or whether there is a plan/intent to obtain any means, e.g., plan to purchase a gun.
- As part of the evaluation, the interviewer should make a determination about the patient’s attitude toward suicide, which may range from acceptance of its inevitability or desirability (ego syntonic) to ambivalence or rejection (ego dystonic).
- The patient should be asked about barriers to suicide. What are the reasons for living and those for dying? How has the patient managed to evade the act of suicide thus far?
- Is there anything different now or anticipated to be different in the near future?
- Has the suicidal ideation been shared with anyone else besides the therapist? Who is or could be helpful in managing the ideation? This calls for the involvement of family and/or significant others. Family and/or significant others can assist in obtaining data about the patient and provide containment and feedback during treatment. Sometimes, suicidal communications may be made to family and/or significant others rather than to a health care professional. Optimally, as part of the safety plan, such collaboration should be with the patient’s permission.

C. Assessment Tools

Although there is no single recommended method to screen for suicidality, certain scales highlight current evidence-based assessment and treatment recommendations for patients at risk for suicide-related behaviors (Duffy et al., 2011). In a systematic review of screening instruments and their efficacy for the U.S. Preventive Services Task Force, O’Connor et al. discussed the difficulties in assessing suicide risk, e.g., attempt by some persons to conceal suicidal thoughts or the expression of suicidal thoughts by others who have no serious intention to kill themselves. They found only minimal evidence from two studies suggesting that screening tools are effective in identifying increased risk for suicide in adults and older adults in primary care, and they concluded that future research is essential to determine the effectiveness of screening in adolescents to reduce suicide (O’Connor et al., 2013).

Below are some of the tools often used in the assessment of potential suicide risk:

1. *Suicide Intent Scale (SIS)*

The literature offers some helpful suicide assessment tools. Mieczkowski et al., and Spirito et al. reported their findings on suicide attempters by using the Suicide Intent Scale (SIS) (Mieczkowski et al., 1993; Spirito et al., 1996). The SIS is designed to evaluate various factors pertinent to suicidal intent associated with a previous suicide attempt. The SIS elicits both the subjective and objective aspects of suicide intent.

Mieczkowski et al. reported that SIS scores of Lethal Intent were often at the highest end of the scale for suicide attempters who made serious suicide attempts. Additionally, those who completed suicide were found to have a higher score on the Objective Planning section of the SIS than those who attempted suicide. The authors indicated that Lethal Intent and Objective Planning sub-scales may be useful assessment tools for defining distinct components of intent.

Spirito et al.'s research revealed three factors noteworthy of consideration in assessing adolescent attempters:

- The purpose, expectation of lethality, seriousness, ambivalence about living and the concept of reversing the attempt
- The patient's isolation, timing, precautions against being discovered and acting to gain help
- The degree of premeditation and planning.

The authors explain that an adolescent's suicidal intentions "are not adequately explained by the SIS." The authors suggest it may be useful to consider the subjective factors (expected outcome) and objective factors (planning activities), which have been shown to be specific to the adolescent population versus a total score when conducting assessments on adolescent suicide attempters.

2. *Chronological Assessment of Suicide Events (CASE)*

Shea set out to reduce the number of poorly done suicide assessments by developing the Chronological Assessment of Suicidal Events (CASE) interviewing strategy (Shea, 1998). The strength of the interview strategy is that it is reliable regardless of how tired or overwhelmed the clinician may be, or how hectic the clinical environment. In the CASE interview, the clinician explores the following four regions in this order: (1) the presenting ideation and suicidal behavior, (2) any recent ideation and behaviors (over the preceding eight weeks), (3) past suicidal ideation and behaviors and (4) immediate ideation and plans for the future.

The clinician is invited to alter the format to meet the needs of the patient. The CASE approach is not characterized as a complete interview and should be used in conjunction with some other clinical interview, such as an initial or emergency room assessment.

3. *Beck's Scales*

Further assessment tools were outlined by Beck et al. who identified three scales for assisting in the assessment for potential suicidality (Beck et al., 1999):

- Scales for Suicide Ideation-Current (SSI-C), which attempts to measure current suicidal ideation
- Scales for Suicide Ideation-Worst (SSI-W), which attempts to measure suicidal ideation at its worst point in the patient's life
- Beck Hopelessness Scale (BHS), which attempts to measure the patient's level of hopelessness.

The SSI-C is a 19-item scale used to evaluate the current intensity of the patient's attitudes, behaviors and suicidal plans. The SSI-W evaluates the level of suicidality at a given point in time of a patient's life. The interviewer is instructed to ask the patient to recall the approximate date and circumstances when they experienced the most intense suicidal ideation. The patient is asked to keep this experience in mind as he/she answers the 19-item scale. Beck reported that the SSI-C and SSI-W have moderately high internal consistency and good concurrent and discriminant validity for psychiatric outpatients. The BHS is a scale of 20 true-false statements designed to assess the extent of positive and negative beliefs about the future. Beck notes that in developing an instrument to measure suicidality, the test's sensitivity is more important than the specificity. In Beck's study, the SSI-W was found to be a significant predictor of eventual suicide.

Although not as powerful as the SSI-W, Beck reports that when hopelessness is assessed over time, it may be a more accurate assessor than current hopelessness. Beck concludes that outpatients with high SSI-W scores who do not respond to therapy and have consistently high BHS scores are a particularly high-risk group for suicide.

Beck's study provides examples of evaluation tools designed to assist the clinician in better assessing the degree of suicide risk. It is extremely important to note that no screening tool is an absolute determinant for suicide risk. At best, evaluation tools assist the clinician in the risk assessment of an individual patient. A key conclusion from Beck is that "the evaluation of a patient's risk for suicide should never be based on a score of a single scale."

4. *Columbia Classification Algorithm of Suicide Assessment (C-CASA)*

The Columbia Classification Algorithm of Suicide Assessment (C-CASA) is a classification system that utilizes a definition of suicidality derived from empirical findings on the phenomenology of suicidality and identified predictive and risk factors (Posner et al., 2007). In order to enhance interpretability of pediatric antidepressant trial data to be used in their risk analysis, the Food and Drug Administration (FDA) commissioned a study by Columbia University/New York State Psychiatric Institute investigators to classify all events that could represent suicidality. The C-CASA tool was developed for this purpose and was subsequently used as the standardized suicidal rating system that provided data for the pediatric suicidal risk analysis of antidepressants conducted by the FDA.

The C-CASA tool has eight categories that distinguish suicidal events from non-suicidal events and indeterminate or potentially suicidal events and are grouped as follows:

- Suicidal events – completed suicide, suicide attempt, preparatory acts toward imminent suicidal behavior and suicidal ideation
- Non-suicidal events – self-injurious behavior, no suicidal intent and other, no deliberate self-harm
- Indeterminate or potentially suicidal events – self-injurious behavior, suicidal intent unknown.

The strength of the suicide classification system is in its ability to identify suicidal events comprehensively while limiting the over-identification of suicidal behavior. As a research-based classification, it has been redesigned to a prospective version as the Columbia-Suicide Severity Rating Scale (C-SSRS) for use in both clinical settings and during clinical research trials (Posner et al., 2007). In January 2008, the FDA notified drug makers that they would be required to study whether patients become suicidal during clinical trials. The FDA has adopted the C-SSRS for use by pharmaceutical companies in the systematic administration of a tool designed to track suicidal adverse events across a treatment trial in an effort to obtain better safety monitoring information and to avoid inconclusive results (Harris, 2008).

Prompted by the FDA ruling on the study of treatment-emergent suicidal events in all clinical trials, a consensus conference was convened in March 2009 with participants from academia, the pharmaceutical industry and government to further study this issue. This consensus recommended abandoning the term suicidality and recommended use of the specific terms suicidal ideation, suicidal behavior and suicide as appropriate. Operational definitions for these terms are in the process of formulation (Meyer et al., 2010).

5. The Suicide Trigger Scale (STS-2)

The Suicide Trigger Scale is a recently developed and validated scale designed to measure a distinct and novel clinical entity termed “the suicide trigger state.” Yaseen and research colleagues consistently noted that while suicidal ideation appeared to be more of a thinking process, the suicidal act itself was an affective state. (Yaseen et al., 2010) The investigational team described this state as marked by “ruminative flooding,” i.e., a confusing, uncontrollable and overwhelming profusion of negative thoughts. coupled with an acute, “frantic hopelessness,” i.e., a fatalistic conviction that life cannot improve and with an oppressive sense of entrapment and imminent doom. Yaseen et al. continued to describe this state where this feeling builds to an “intolerable, confused state in which patients feel that suicidal action is the only conceivable route of escape.” In addition, many patients experience “near psychotic somatization” and “somatic distortions.” The STS-2 tests for these symptoms showing a correlation of high scores and reported history of past suicide attempt and low scores with suicidal ideation only (Yaseen et al., 2010; page 2).

6. The Cultural Assessment of Risk for Suicide (CARS) Measure

The Cultural Assessment of Risk for Suicide (CARS) Measure, based on the Cultural Theory and Model of Suicide, is a new self-report instrument for detecting cultural suicide risk factors (Chu et al., 2013). It was administered to a sample of adults

(n=950) from the general population that was overly inclusive of ethnic and sexual minorities (African Americans, Asian Americans, Latinos or LGBTQ). Participants completed the following: a demographic questionnaire, the Cultural Assessment of Risk for Suicide (CARS), an item from the Beck Depression Inventory that assessed suicidal behaviors, the Suicide Ideation Scale and the Beck Hopelessness Scale. They also answered a question about past suicide attempts. The CARS included 52 items assessing four cultural risk categories of the Cultural Theory and Model of Suicide: cultural sanctions, idioms of distress, minority stress and social discord. Scores on the CARS were significantly and positively correlated with the Suicide Ideation Scale, The Beck Depression Inventory and the Beck Hopelessness Scale. Researchers concluded that CARS identifies cultural risk factors for suicide that have not been included on existing assessment measures and flags categories of suicide risk that should be considered in the development of culturally competent risk management plans. For example, an LGBTQ individual who scores high on family rejection or a Latina individual who scores high on the family conflict factor on the CARS may benefit from a suicide prevention plan that focuses on coping with family-triggered stress or integrates friends/community rather than family as key sources of support in times of crisis (Chu et al., 2013).

7. *The Columbia-Suicide Severity Rating Scale (C-SSRS)*

The Columbia-Suicide Severity Rating Scale (C-SSRS) was developed to provide a single measure to assess the severity of suicidal ideation and behavior and to track changes in each. Four constructs are measured in this instrument:

- Severity Subscale (wish to be dead, nonspecific active suicidal thoughts, suicidal thoughts with methods, suicidal intent, suicidal intent with plan)
- Intensity Subscale (frequency, duration, controllability, deterrents, and reasons for ideation)
- Behavior Subscale (actual, aborted and interrupted attempts; preparatory behavior; and nonsuicidal self-injurious behavior)
- Lethality Subscale (potential lethality of attempts rated on a 3-point scale).

The C-SSRS can be accessed at <http://www.cssrs.columbia.edu/>. An analysis of the C-SSRS in three multisite studies suggested that history of severe ideation accompanied by some intent to die may result in greater risk for suicidal behavior than a history of ideation without intent to die (Posner et al., 2011). Authors reported that these analyses of the CSSR showed that it is a standardized measure that permits comparison of findings across clinical populations as well as across research. Authors concluded that this data may help guide treatment recommendations for suicidal patients and suicide prevention efforts.

8. *The Performance in Practice (PIP) Physician Practice Assessment Tool for the Assessment and Treatment of Adults at Risk for Suicide and Suicide-related Behaviors*

The PIP tool presents evidence-based quality indicators as core components in the care of patients at risk for suicide-related behaviors (Duffy et al., 2011). Authors suggest it can serve as foundation for development and implementation of an approach to improve the assessment of patients with suicidal ideation and behavior. It was developed by identifying evidence-based assessment and treatment recommendations from practice guidelines of the APA, Veterans Administration and Department of Defense (VaDoD), and the National Institute for Health and Clinical excellence (NICE). The tool can be assessed at <http://focus.psychiatryonline.org/data/Journals/FOCUS/4268/foc00211000171.pdf>.

9. *The P4 Screener*

The P4 Screener is a simple algorithm asking questions about the 4Ps: past attempts, current plans, probability of an attempt and preventive factors and can be used as a brief screening for risk stratification of patients with potential thoughts of self-harm (Dube et al., 2010). The P4 Screener was evaluated in two randomized effectiveness trials: Stepped Care for Affective Disorders and Musculoskeletal Pain (SCAMP) participants and Indiana Cancer Pain and Depression (ICPAD) patients, finding that it triggered a suicide assessment by 17.6 percent of the SCAMP participants and 16.5 percent of INCPAD participants with the majority classified as minimal risk and only 1 percent as higher risk. Researcher suggested that the P4 screener is useful in assessing potential suicide risk in the clinical care of depressed patients (Dube et al., 2010).

10. *The Suicide Status Form (SSF)*

The Suicide Status Form (SSF) is a clinical assessment, treatment planning, tracking and outcome tool guiding the Collaborative Assessment and Management of Suicidality (CAMS) approach. In addition to quantitative rating scales, the SSF uses qualitative open-ended assessment items to assess suicidal risk. For example, there is opportunity for the patient to write responses to incomplete sentence prompts in their own words. Patients are also given the opportunity to list reasons for living as well as reasons for dying; they may answer the “one thing” question: “the one thing that would help me no longer feel suicidal would be _____.” CAMS is assessment heavy and focused on “therapeutic assessment,” with cardinal principles of collaboration, empathy with the suicidal wish and understanding the patient’s suicidal narrative (Jobes 2012).

11. *The Harkavy-Asnis Suicide Scale for Monitoring Risk Levels (HASS)*

The Harkavy-Asnis Suicide Scale for Monitoring Risk Levels (HAAS) is a self-report measuring tool for assessing a broad range of suicidal behavior and ideation, including passive suicidal ideation, more active suicidal ideation, suicide attempts and aborted suicide attempts in youths aged 10 to 18 (Asarnow et al., 2012). In an evaluation of the HAAS, it, along with the Diagnostic Interview Schedule for Children (DISC-IV), was administered to pediatric emergency department (ED) patients (n=131) with suicidal behavior approximately two months after they had presented in the ED. The rate of reported suicide attempts was substantially higher with the HASS (self-report) than with the DISC-IV (interviewer administered). Authors indicated that reporting of suicidal behavior may be especially sensitive and youths are often reluctant to report

thoughts of suicide due to the likelihood of psychiatric hospitalization. The suicide attempt scale of the HASS detected all of the youths who reported suicide attempt on the DISC-IV as well as some youths that were not identified on the DISC-IV.

D. Assessing Risk Factors

There is no certain way of predicting who will commit suicide. The assessment and weighing of risk factors alerts the clinician to those patients who should be monitored. In addition, the determination that a patient is at risk, whether or not ideation is present, shapes the treatment by introducing the objective of risk reduction. Please see Magellan's tipsheet, "Assessing and Managing the Suicidal Patient: Keeping the Patient Safe" which lists risk factors (also discussed below) and the top high-risk diagnoses for completed suicides including depression, especially with psychic anxiety, agitation and /or significant insomnia; bipolar disorder; alcohol and other substance use disorders; schizophrenia; borderline personality disorder; psychotic symptoms accompanied by psychopathology; and dementia accompanied by neuropsychiatric symptoms of depression in patients more than aged 60 (Magellan, 2014). The following section details general risk factors and those associated with specific diagnoses.

1. General risk factors

The presence of more than one risk factor increases the risk of suicide. The presence of a mental disorder may be regarded as a necessary factor, in that more than 90 percent of completed suicides are associated with the presence of such a disorder. Factors that may add increased risk for any patient with a mental disorder include:

- The presence of depression
- Psychopathology with psychotic symptoms (Kelleher et al., 2013)
- Recent or impending loss, such as a job or an interpersonal relationship (including that with a therapist)
- Recent loss of a child, especially if child has committed suicide and/or dies during early childhood (Qin and Mortensen, 2003)
- The presence of substance or alcohol abuse
- Access to guns
- A psychiatric hospitalization within the past year, especially for patients admitted due to a suicide attempt or ideation (Bostwick and Pankratz, 2000); a history of impulsive or dangerous behavior, especially self-destructive behavior
- Previous suicidal behavior or attempts; One study suggests that when an individual has made a deliberate act of self-harm his/her risk of death by suicide is as high as 66 times that of the general population in the first year after the act, and that the elevated risk continues over an extended period of time for as long as 20 years after the act (Hawton et al., 2003)
- A history of physical or sexual abuse
- A family history of suicide
- Social isolation

- The presence of a concurrent medical disorder characterized by chronicity, poor prognosis, poor physical functioning and/or persistent pain.

2. High-risk diagnoses

Diagnoses particularly associated with the risk of completed suicide are: (1) depressive disorders, including the full range of depressive disorders listed in the DSM-5), (2) bipolar and related disorders, (3) alcohol or other substance abuse or dependence, (4) schizophrenia spectrum disorder and other psychotic disorders, (5) borderline personality disorder and (6) dementia.

More recent studies have also found patients with the following diagnoses and conditions to be at increased risk for suicide ideation and/or attempts: (1) eating disorders, (2) adult survivors of childhood cancers even after many years of completed therapy, (3) patients who have had bariatric surgery – especially within the first three years, (4) young people (aged 11-16 years) with asthma and (5) obsessive-compulsive disorder – especially for unmarried persons, and when accompanied by symptoms of a sexual/religious dimension or symmetry/ordering obsession and compulsions, comorbid depressive disorder, posttraumatic stress disorder (PTSD), substance use disorders (SUD) and impulse-control disorders (Crow et al., 2009; Recklitis et al., Tindle et al., 2010; 2010; Kuo et al., 2010; Alonso et al., 2010; Torres et al., 2011).

In addition, a large, clinical, epidemiological, prospective study of psychiatric outpatients (n=1,231) with a wide range of diagnoses, i.e., depressive spectrum, bipolar affective, psychotic spectrum, anxiety spectrum, psychoactive substance abuse and eating disorders, showed that both frequent insomnia and recurrent nightmares were significantly and independently associated with an increased risk of suicide attempts (Li et al., 2010).

In a narrative review that studied risk factors for suicide, authors found that some known risk factors of suicide, e.g., being single, family history of suicide and psychoses, did not increase risk of suicide in individuals with bipolar disorder (Chesin et al., 2013). Studies showed that suicidal ideation combined with anxiety and agitation indicated elevated risk of suicide in patients with bipolar disorder. Other times of elevated risk included the period (weeks or months) following hospitalization or emergency room treatment. Authors found that elevated risk for suicide occurs during mixed and depressed episodes, early in the course of bipolar disorder and after lithium is discontinued (Chesin et al., 2013).

With the exception of alcoholism, suicides tend to occur early in the course of most psychiatric disorders (APA, 2003). Risk factors associated with these disorders appear to vary with the diagnosis. They should be assessed as part of the treatment planning process.

a. Depressive disorders and bipolar disorders

The most commonly associated diagnosis with suicide is depression. It is present in more than 60 percent of completed suicides (probably an underestimation of the true frequency). It is estimated that 15 percent of patients with major depression will eventually die by suicide. Counter intuitively, the severity of

depression and the presence or absence of psychosis may not be good indicators of suicidal risk. Similarly, more recent research has shown that the time spent depressed may be the major factor in determining the overall long-term risk (Holma et al., 2010). Patients with any type of depressive disorder should be assessed for suicidal risk. While the prevalence of suicide attempts in individuals with BP-I and BP-II are not statistically different, there is evidence suggesting that individuals with BP-II use significantly more violent and lethal methods than those individuals with BP-I (Novick et al., 2010). The following factors have been found to increase risk and should be systematically queried and the response documented:

1) The concurrent presence of anxiety

- Anxiety, especially psychic (as opposed to somatic) forms
 - Agitation and specific anxiety syndromes (obsessive-compulsive symptoms, though not necessarily meeting criteria for diagnosis of obsessive-compulsive disorder)
 - Turmoil (called by some “perturbation,”) especially when defensive breakdown is indicated.
1. The physical symptom of akathisia, occurring either alone or as a side effect of certain medications, may be characterized as physical restlessness and the subjective urge to move. The subjective aspects of akathisia may dominate without any motoric abnormality and are often mistaken for other conditions. When present, such akathisia should be carefully evaluated and treated. It is this side effect, along with other activating symptoms that are postulated to be connected to de novo suicidal behavior due to antidepressants, if that indeed occurs, or a worsening of already present suicidal behavior (Iqbal et al., 2007; Culpepper et al., 2004).
 2. A more recent study of depressed patients (n=1003) designed to evaluate the clinical characteristics and suicidality of subjects further corroborated the seriousness and potential lethality of anxious depression. Investigators found that after adjusting for the severity of depression, those in the anxious depression group had significantly younger onset age, had been suffering from depression for a longer period, were more likely to experience a recurrence and perceived a lower quality of life. Additionally, a significantly higher proportion of the anxious depressed group reported suicidal ideation and previous attempts (Seo et al., 2011).

2) Concurrent substance abuse or dependence

- Alcohol problems in depression are associated with a worse depression course, an increased risk for relapse and decreased likelihood of recovery from depression, increased suicide/death risk, worsening social function and increased health care utilization (Sullivan et al., 2005).

- Current use or abuse, whether or not these appear to constitute self-medication.
- Use of substances that promote disinhibition, which may increase the risk of impulsive acts or undermine judgment and restraint. Concurrent substance abuse in bipolar patients has been identified as a risk factor for attempts (Dalton et al., 2003).

3) Command hallucinations

- Hallucinations may be present in psychotic states and are thought to increase risk, though this has not been proven conclusively (Bourgeois et al., 2004; Bertelsen et al., 2007; Nordentoft 2007).
- The evaluator should ask whether the patient has received any signals or messages regarding self-harm.

4) Rapid shifts in mood

- Ask about fluctuations and lability of mood, e.g., from sadness to euphoria, irritability and anger.
- There is some suggestion that patients with Bipolar II disorders, with hypomania alternating (or co-existing with) depression, and patients with rapid cycling bipolar disorder, may be at a higher risk Dalton et al., 2003).
- Irritability or anger associated with impulsivity may indicate a patient especially prone to take (self-destructive) action.

5) Certain aspects of the depressive diagnostic criteria appear ominous:

- Severe insomnia, especially global insomnia, along with states of severe hopelessness, may increase risk. Research has postulated that instead of hopelessness per se, it may be the elements of pessimism, a factor combining negative outlook with less reason for living and the presence of aggressive/impulsive traits that may increase risk for a future suicide attempt. Therefore, psychotherapeutic techniques targeting pessimism may lower risk (Oquendo, 2004).
- Ask about these two symptoms in detail when they are present. Severe insomnia should be treated.

6) The presence of or access to a firearm

- Ask about access to firearms routinely. If a firearm is present, take steps to remove access during the episode of treatment and assess who is a safe person to restrict the patient's access to the gun(s).

- Many suicides are impulsive, and national statistics indicate that more than half of all suicides are committed with guns, especially handguns.
- Guns are especially likely to be associated with suicide in the young (adolescents) and in the elderly.

7) Medication history

- There is evidence suggesting that lithium discontinuation, especially if abrupt, leads to an increase in suicidal behavior, at least in the first year following lithium discontinuation (Baldessarini et al., 1999; Tondo et al., 1998).
- There is now strong evidence that in patients with mood disorders, i.e., unipolar depression, bipolar disorder, schizoaffective disorder, dysthymia and rapid cycling, maintenance lithium treatment is effective in the prevention of suicide, deliberate self-harm and death from all causes (Cipriani et al., 2005; Baldessarini et al., 2006; Tondo et al., 1998).

8) History of past attempt

A two-year prospective study of patients entering treatment with major depressive disorder revealed that the three strongest risk factors predicting a future suicide attempt were a history of a suicide attempt, cigarette smoking and the patient's subjective rating of the severity of their depression, as opposed to the clinician's objective rating of the severity of their depression (Oquendo, 2004).

9) Suicidal and nonsuicidal self-harm thoughts and behavior

In a recent study, adolescents (n=164) with major depressive disorder who were taking part in the Adolescent Depression Antidepressants and Psychotherapy Trial (ADAPT) were assessed for suicidal and nonsuicidal self-harm thoughts and behaviors during a 28 week period to determine whether clinical and psychosocial factors at baseline predict suicide attempts and nonsuicidal self-injury (Wilkinson et al., 2011). Findings showed that nonsuicidal self-injuries were as likely as suicide attempts in predicting future suicide attempts. Authors advised that depressed adolescents with self-injury require assessment and treatment at the same levels those who have made a suicide attempt (Wilkinson et al., 2011).

b. Alcohol/substance abuse or dependence

Individuals who carry a primary diagnosis of alcohol abuse, with a pattern of drinking over many years, and have a degree of suicidality, are generally considered a chronic rather than acute suicidal risk. However, as many as half of completed suicides (and probably many events characterized as "accidents," which may be covert suicides) involve drinking at the time of death.

1) Alcohol/drug use as self medication

It has been found that alcohol use is often related to suicide and suicide attempts through its use as a self-medication for the relief of depression. Alcohol is thought to disinhibit impulses to suicide (Gruenewald et al., 1995). Therefore, the clinician should routinely ask about substance abuse and depression as part of any suicide risk evaluation. In addition, inquiries about jeopardy with regard to important relationships and job, threats of incarceration or detention, or severe financial or other losses should be conducted. Positive and negative findings should be noted in the record. The presence of multiple risk factors in a given patient is highly significant.

2) Unrecognized withdrawal

Dlugacz et al. reviewed 17 attempted or completed suicides by inpatients in the North Shore-Long Island Jewish Health System and noted that unrecognized or under-treated alcohol withdrawal on medical units was the single most common precipitant for the suicidal behavior (Dlugacz et al., 2003). Thus, both the disinhibiting effect of intoxication and the agitation and anxiety of withdrawal can contribute to suicidality.

3) Cigarette smoking

Another interesting finding being demonstrated in the literature is the finding of cigarette smoking heightening the risk of future suicide attempts in high-risk patients, e.g., patients with major depression and types I and II bipolar disorder⁶ (Baethge et al., 2009). Although the reasons for this remain unknown, it has been demonstrated that cigarette smokers have lower serotonergic functioning and more aggressive/ impulsive traits, two factors that may mediate this heightened risk.

c. Schizophrenia/Psychotic symptoms

Between 20 and 40 percent of patients with schizophrenia attempt suicide at some point in their lives. While it has been widely reported over the last 30 years that this disorder carries a lifetime suicide rate of approximately 10 percent, recent adjustment after meta-analysis currently estimates that 4.9 percent of schizophrenics will commit suicide (Palmer et al., 2005). Also, recent data analyzing standardized mortality ratios (SMR) for people with schizophrenia show that of all specific-cause SMRs, suicide was associated with the highest estimate: 12 times greater than the general population (Saha et al., 2007). The risk for suicide is highest early in the onset of the illness. Suicide is most likely to occur in the young patient with schizophrenia who has experienced a great decline in performance and, therefore, diminished expectations with regard to the future. Yet, more recent study data also confirmed that in later life (>55 years of age), persons with schizophrenia continue to have a dramatically higher prevalence of suicidality compared to their age peers in the community, i.e., suicidal thoughts (43 percent vs. 6 percent) and suicidal attempts (30 percent vs. 6 percent) (Cohen et al., 2010).

Suicide often takes place during periods of remission, especially following hospitalization, rather than during acute psychotic states. A pattern of repeated

exacerbations and remissions, and especially the occurrence of depressive symptoms, carries high risk. The clinician should be alert to the presence of a subtle or covert thought disorder and should ask patients with schizophrenia about:

- 1) Dangerous behavior, perhaps under the influence of features of persisting delusions; e.g., overestimation of abilities, poor judgment in protecting self and excessive risk taking. Noncompliance with medication may represent one form of such behavior. A study published in 2003 appears to support this latter risk factor (Herings et al., 2003).
- 2) Concurrent substance abuse (it may be important to ask others, as well as the patient).
- 3) The presence of depression, which may center on the individual's response to having schizophrenia, as well as the family's response of disappointment and/or anger. Highlighting the importance of this aspect of the assessment is a Canadian study that noted poor ascertainment of depressive symptoms in the mental health records of many patients with schizophrenia who eventually committed suicide (Burgess et al., 2000). While it is true that some patients may become depressed after recognizing and accepting their disorder, treatment-related changes in awareness are generally associated with a positive outcome relative to suicide risk (Bourgeois et al., 2004).

One study found that in those patients who had previously attempted suicide, current command suicide hallucinations were a significant risk factor for a subsequent attempt (Bourgeois et al., 2004; Bertelsen et al., 2007; Nordentoft 2007; Harkavy-Friedman et al., 2003). Another more recent systematic review of 51 studies published since 2004, further elaborated on risk factors for suicide in individuals suffering with schizophrenia as being: (1) young, (2) male, (3) with a high level of education, (4) correlated with number of previous suicide attempts, (5) depressive symptoms, (6) active hallucinations and delusions and (7) the presence of insight. In addition, investigators found that a family history or suicide and comorbid substance misuse was positively associated with later suicide (Hor et al., 2010).

- 4) In a prospective cohort study of adolescents (n=1112) aged 13-16 years in the general population, researchers found that the presence of psychotic symptoms at baseline predicted a high risk of suicide attempts during a 12-month period (Kelleher et al., 2013). Among those with baseline psychopathology who reported psychotic symptoms, 34 percent reported a suicide attempt by 12 months. Authors concluded that there is a need for a new clinical focus on the assessment of psychotic symptoms which are far more prevalent in the general population than actual psychotic disorder (Kelleher et al., 2013).

d. Borderline personality disorder

This over inclusive diagnosis is most likely to be associated with parasuicidal rather than suicidal acts, but approximately 10 percent of patients who are

diagnosed as borderline personality disorder eventually commit suicide, usually after many previous suicidal or parasuicidal acts. Those who commit suicide most commonly qualify for a concurrent Axis I diagnosis (depression, substance abuse) at the time of suicide. The fact that such patients often use suicide as a manipulative threat and tend to be litigious, accounts for a great many hospitalizations. For these patients, hospitalization should be considered for short-term stabilization rather than for a prolonged stay.

According to Paris, many of these hospitalizations may be counter-therapeutic, in that they may divert focus from developing new coping mechanisms for exacerbations of chronic suicidality (Paris, 2002). Paris thus suggests that structured programs, such as partial hospital programs, may be a more appropriate level of care for many of these patients, to both address safety issues and allow for the development of new coping strategies. The APA Suicide Practice Guideline also notes, “For some patients, treatment in...an inpatient unit may foster dependency and a regressive, vicious cycle of intensifying suicidal thoughts requiring ever more restrictive care” (APA, 2003). Similarly, Bateman et al., found that psychodynamic treatment that is rooted in attachment and cognitive theory while integrated into a partial hospital program improved outcomes, e.g., suicide attempts and hospitalization, for patients with borderline personality disorder. Researchers suggested that this type of intervention addresses difficulties with affect, impulse regulation and interpersonal functions which act as triggers for acts of suicide and self-harm in these patients (Bateman et al., 2009). Suicide attempts are very common and may occur in an estimated 60 to 70 percent of patients with borderline personality disorder (Oldham, 2006). Risk factors for suicidal behavior in patients with borderline personality disorder are as follows:

- Prior suicide attempts
- Co-morbid mood disorder
- High levels of hopelessness
- Family history of completed suicide or suicidal behavior
- Co-morbid substance abuse
- History of sexual abuse
- High levels of impulsivity and/or antisocial traits.

In a published clinical review of treatment, Oldham notes that despite the ability to identify meaningful risk factors in patients with borderline personality disorder, we cannot with certainty predict future suicidal behavioral in an individual patient. This is a problem that confronts clinicians in the treatment of all patient populations with potential suicide risk (Oldham, 2006). As discussed in Section III, Assessing Suicide Lethality, use of the newly developed Columbia-Suicide Severity Rating Scale (C-SSRS) should assist providers in evaluating self-

injurious behavior and in distinguishing suicide attempts from non-suicide events in patients (Posner et al, 2007).

Despite these observations, the clinician should take suicidal threats in such patients seriously and develop a plan for containment, if indicated, and be mindful of the increased risk for the first month following discharge (Bostwick and Pankratz, 2000).

A two-year prospective study by Yen et al. examined the specific borderline personality diagnostic criteria that were most associated with suicidal behavior, defined in this study as any suicidal acts regardless of intent, and with suicide attempts, defined in this study as any suicidal behavior with any intent to die and at least some mild medical threat (Yen et al., 2004). The findings indicate that affective instability was the borderline personality criterion most associated with both suicidal behavior and suicide attempts. DSM-IV-TR describes affective instability as “intense episodic dysphoria, irritability or anxiety usually lasting a few hours and only rarely more than a few days” (DSM-IV-TR, 2004).

Other criteria discussed in this study found to be risk factors for suicidal behaviors were identity disorder and impulsivity. Interestingly, the study also found that a history of childhood sexual abuse was a risk factor for suicide attempts, but not suicidal behavior. This led the authors to suggest that this nosology and differentiation between behavior and attempts is useful and may lead to identification of risk factors that are specific for attempts only. A major recommendation from these authors is that affective instability in borderline personality disorder patients should be assessed for and treated if present.

Other more recent studies of individuals with borderline personality disorder have focused on a better understanding of the nature of suicide gestures/attempts and acts of deliberate self-harm (suicidal or non-suicidal) in this population. A study of risk factors for identified suicide attempters (n=40) with borderline personality disorder revealed that individuals who display high levels of trait impulsivity can and do plan attempts with significant medical consequence. These findings suggest that clinicians should carefully evaluate for preparedness and planning in patients who possess trait impulsivity or have had prior impulsive suicide attempts (Chesin et al., 2010).

Another study (n=70) conducted in Australia identified a complex range of reasons for any single event of deliberate self-harm (DSH) in patients with borderline personality disorder, i.e., to stop bad feelings, self-hatred, anger and frustration, to punish oneself, to find relief from a terrible state of mind and/or to relieve feelings of emptiness. While these investigators stressed that DSH is maladaptive and dangerous in patients with borderline personality disorder, study findings showed the reasons for such acts are the same whether that are meant to be suicidal or non-suicidal (Maddock et al., 2010).

e. Dementia

Kirwin, in a meeting of the American Association for Geriatric Psychiatry, informed delegates that the risk for suicide in elderly dementia patients is often

overlooked (Brauser, 2014). In addition, he told them that in 2004, the Veterans Administration found that 40 percent of veterans with mild to moderate dementia had guns in their homes. Injuries from firearms accounted for 72 percent of suicides among those aged 65 and older compared with 51 percent of all suicides from 2005 to 2010 according to the U.S. Centers for Disease Control and Prevention. In a study investigating the relationship between dementia and suicide, VA patients with dementia who died from suicide during 2001-2005 were compared with those who did not die from suicide (Seyfried et al., 2011). Investigators examined the relationship between dementia severity and suicide. Among the patients (n=294,952) aged 60 and over who received the diagnosis of dementia, 241 patients died during the study period. Findings from this investigation showed that comorbid depression was associated with increased suicide risk whereas comorbid schizophrenia was a potentially protective factor among these elder patients with dementia. The study also found that the majority of suicides occurred with new dementia diagnoses and the majority of patients with dementia took their lives with firearms. A noteworthy finding was that the patients who died by suicide were younger than those who did not take their lives. A strong predictor of suicide in this group was prescription of an anti-anxiety medication. Investigators suggested that based on their findings, dementia patients with accompanying neuropsychiatric symptoms, e.g., depression, are at higher risk for suicide than those with only cognitive symptoms. They concluded that patients aged 60 years and older who are in the early course of dementia and have accompanying neuropsychiatric symptoms of depression and anxiety are at greatest risk of suicide (Seyfried et al, 2011).

E. Special Populations

1. Age groups

a. Adolescents

When assessing adolescent patients, the following information may prove useful:

1) Rates

There is a vast amount of information available on adolescent suicide. An excellent review of this material can be found in the Practice Parameter for the Assessment and Treatment of Children and Adolescents With Suicidal Behavior, published by the American Academy of Child and Adolescent Psychiatry in July of 2001.²⁸ Here it is noted that suicide attempts before adolescence are rare, but a sharp increase occurs between 13 and 18 years of age. In addition, the lifetime rate of some kind of suicide attempt or gesture for high-school-aged children is 3 percent to 15 percent. It is also noted that suicide is the third leading cause of death among 15 to 24-year-olds. The suicide rate peaks in the 20 to 24 age range, particularly in males. As in adults, the rate of completed suicide is greater in adolescent males, and the rate of

suicide attempts is two to three times greater in female adolescents than in male adolescents.

2) Risk factors

Major depression is the most significant risk factor in girls, with some studies indicating a 20-fold increase in risk. The next most significant risk factor is a previous attempt. In boys, a previous attempt is the leading risk factor, followed by depression, substance abuse, and disruptive behavior. Stressful psychosocial life events and low levels of communication between parents and children appear to be significant risk factors. In addition, a pilot study conducted in Israel has shown there may be a significant association between ADHD and suicidal behavior in adolescents and particularly for girls with the inattentive type not medicated with an appropriate agent to treat the condition (Manor et al., 2010).

A longitudinal, population-based study of school-based adolescents aged 13-16 years (n=1112) found that psychotic symptoms in adolescents, especially those with existing psychopathology, appear to be a very high risk factor for suicidal attempts (Kelleher et al., 2013). Among adolescents with baseline psychopathology reporting psychotic symptoms, more than one-third reported a suicide attempt by 12 months. Authors wrote, “The presence of psychotic symptoms predicted a very high risk of suicide attempts during the following 12 months. Among adolescents with psychopathology, those who reported psychotic symptoms had a nearly 70-fold increased odds of acute suicide attempts compared with the rest of the population, but this risk was not significantly increased in those who did not report psychotic symptoms” (Kelleher et al., 2013).

Personality characteristics associated with increased risk include poor self-esteem or feelings of inferiority, underestimating one’s own competence and a sense of responsibility for negative events (Goodwin and Marusic, 2003). A family history of suicide also increases risk. Additionally, children with a history of physical and/or sexual abuse are at greater risk as are adolescent girls who were victims of forced sexual intercourse and engage in binge drinking. In addition, feeling unsafe going to school and being lesbian/gay/bisexual or unsure were highly relevant predictors for suicidal ideation and attempts in the adolescent population (Bruffaerts et al., 2010; Behnken et al., 2010; Jiang et al., 2010).

More recent clinical studies continue to demonstrate self-mutilation or recent self-injury (suicidal or non-suicidal), particularly in the presence of family dysfunction, as risk factors that frequently occur in adolescent suicide attempters, and therefore should be assessed (Guertin et al., 2001). Another large longitudinal study conducted in Australia of children aged 4-16 years (n=2,736) identified the following factors that increased a child’s risk for future hospitalization due to deliberate self

harm: (1) female sex, (2) primary caregiver being a smoker, (3) being in a step/blended family, (4) having more emotional/behavioral problems than other children, (5) living in a family with inconsistent parenting style and (6) having a teenage mother (Wilkinson et al.; Mitrou et al., 2010).

In a survey of older adolescents and young adults, i.e., college students, the associated factors for depression and suicide ideation were interpersonal violence, tobacco use and unwanted sexual experiences (Mackenzie et al., 2011).

3) Protective factors

Some mitigating factors against suicidal behavior in adolescents include:

- Fear of social disapproval
- Positive survival beliefs, e.g., beliefs about one's purpose in life and ability to persevere
- Having a reason for living

4) Patterns of mental health service use among adolescents (Husky et al., 2012)

- In a recent study assessing data from the National Comorbidity Survey-Adolescent Supplement, two-thirds of adolescents with suicidal ideation and one-half of those with either a suicide plan or suicide attempt had no contact with mental health specialist in past year (Husky et al., 2012)
- Mental health services were limited to a few visits for many adolescents with suicidal thoughts or behaviors (a minority receive four or more visits)
- Male adolescents with suicidal ideation were significantly less likely than female adolescents to receive any mental health services
- Male adolescents with a suicide plan were more likely than females adolescents to receive four or more treatments
- Many high risk adolescents are not receiving treatment

5) Suicide attempters

Management of adolescents who have recently attempted suicide is critically important since a prior suicide attempt is a strong predictor for eventual suicide completion (Spirito and Overholser, 2003). Adolescents often experience ongoing stress following a suicidal crisis, which can culminate in another suicide attempt. An essential aspect of the

evaluation is reviewing the recent attempt thoroughly. An evaluation of the degree of impulsivity in the past attempt versus the degree of significant planning can be helpful in guiding the focus of treatment from targeting impulsivity to targeting underlying depression and hopelessness. Additionally, one cannot be reassured by a previous attempt with low lethality since the adolescent may have had a high expectation of death with significant intent to die. Stressors or precipitants should be identified and most often are found to be difficulties in interpersonal relationships with parents and/or friends.

It is recommended that management include more frequent evaluations of ideation, intent and plans, since the presence of these factors in the context of continuing depression and hopelessness would present significant risk. One therapeutic technique that can aid the management process can be re-framing the suicide attempt as unsuccessful problem-solving, which leads to working with the adolescent and family to develop more effective problem-solving skills. Additionally, parents should be given psycho-education about suicide and be counseled to increase supervision, take suicidal statements seriously, and limit access to any lethal means. The article that discusses these points includes a list of risk and protective factors as well as a sample information sheet for parents (Spirito and Overholser, 2003).

b. Elderly

NIMH reported that the elderly, particularly older white males, have the highest suicide rate among all populations. Among white males aged 65 and older, risk goes up with age. White males aged 85 and older have a suicide rate six times that of the overall national rate. Some factors contributing to risk in this rapidly growing segment of the population that have been suggested include problematic alcohol or drug use, including medication misuse (Szanto et al., 2013). Suicide research studies often exclude older adults; a workgroup tasked by the American Association for Geriatric Psychiatry is currently developing recommendations for research into suicide prevention strategies for older adults (Szanto et al., 2013).

Suicidal ideation is a known risk factor for completed suicide, but among older adults thoughts of death are common and often reflect normal preparations of death. Some of the stressors leading to these thoughts may include physical illness, isolation, and disability, but it may be difficult to differentiate thoughts of death that are natural from those that reflect psychopathology. Limited social connectedness is also associated with suicidal ideation, nonfatal suicidal behavior and suicide in later life (Szanto et al., 2013). In a study investigating the relationship between dementia and suicide, authors found that patients aged 60 and over who are early in the course of dementia and who have accompanying neuropsychiatric symptoms of depression and anxiety are at risk high for suicide (Seyfried et al., 2011).

Reviewing the suicide risk of the elderly population, Conwell et al. found that older age was a significant indicator of more determined and planful self-destructive acts, less violent methods and fewer warnings of suicidal intent (Conwell, 1995).. The authors report that intervention in the midst of a suicidal crisis may be more difficult in the elderly because they are less likely to give warning to others, being less likely to speak to anyone about their plans.

However, since it has also been reported that somatic illness is a risk factor in the old elderly (aged 75 and older) and that over 70 percent of suicidal elderly see their primary care physician shortly before committing suicide, primary care physicians have a unique opportunity to detect suicidality in this age group. Particular attention should be paid to those old elderly who are both depressed and have somatic complaints, especially impaired vision (Waern et al., 2003). It also is reported that family conflict and loneliness are independent risk factors in the old elderly as being unmarried, living alone, having a low education level, a history of psychiatric treatment and previous suicide attempt are factors associated with suicide attempt in this population. Depression is not only under-detected in this age group, but under-treated as compared to the young elderly (Wiktorsson et al., 2010).

In addition to the somatic complaints factor already mentioned, depression in the elderly is associated with specific physical illnesses, especially respiratory conditions, malignancy, diabetes and neurological conditions, such as stroke. Significantly, one study found that 78 percent of suicide completers were newly diagnosed with medical problems, such as malignancy, prostatitis or stroke, or had a need for surgery (Purcell et al., 1999). Pain was also considered a major factor affecting life and comfort. These findings underscore the opportunity primary care physicians and other medical specialists have for early detection of depression.

A current systemic review (n=16 studies) of the literature on social factors and suicidal behavior in older adulthood found that social disconnectedness was associated with suicidal ideation, non-fatal suicidal behavior and suicide in later life (Fässberg et al., 2012). Studies showed that greater social support was associated with lower risk for suicide ideation, and the presence of a provider of social support, e.g., relative or friend, was associated with decreased likelihood of suicide. Loneliness was associated with greater risk of a suicide attempt in studies, especially among those aged above 75 (Fässberg et al., 2012). Findings from a survey of patients (n=153) with a mean age of 71 found that those who screened positive in the primary care setting for social disconnectedness have high levels of depressive symptom severity and a greater likelihood of suicide ideation/suicide behavior during their lifetime (Worcester 2013).

2. Occupations

a. Physicians

Numerous studies over the last 50 years have reported a higher incidence of suicide in physicians than in the general population. The risk ratio relative to the general population for male physicians has been reported to range from 1.1 to 3.4, and for female physicians from 2.5 to 5.7. These gender-based relative risk ratios lead to equalization of the actual suicide rate in physicians between males and females. This is in contrast to the general population, which has a higher rate for males to females of 4:1 (Hawton et al., 2009).

One large study reviewed self-report data from women physicians in the United States and found that female physicians did not have a higher rate of suicide attempts than the general female population (Frank and Dingle, 1999). However, findings from a Finnish study indicated that Finnish female physicians have a higher completed suicide rate than the general female population (Kubderman et al., 1997). Another more recent meta-analysis reported that physicians showed modestly higher (men) to much higher (women) suicide rates than the general population. Therefore, these researchers recommended pursuit of further studies to explore potential risk factors, i.e., drug abuse, depression, additional strain on societal roles, and possible avenues of intervention (Schernhammer et al., 2004).

Factors commonly blamed for a higher incidence of suicide in physicians, such as long working hours and demanding patients, do not seem to contribute as much as the reluctance of doctors to seek care for themselves. One of the reasons for this is their concern about the impact on their practice of being labeled with a psychiatric diagnosis. Some states, many hospitals, and malpractice insurance carriers ask about a history of psychiatric diagnosis as a proxy for impairment or instability. Physicians should be encouraged to seek appropriate treatment, and bureaucratic or organizational barriers to care should be removed (Center et al., 2003). Another factor related to the increased risk of suicide for physicians and other health care practitioners, i.e., veterinary surgeons, nurses, dentists, pharmacists, seems to be the easy access to poisons. Anesthesiologists are at particularly high risk (Hawton et al., 2009).

b. Dentists

There has long been a belief that dentists have a higher rate of suicide than many other professionals. One article cites the American Dental Association studies from the 1970s calling this conclusion into question. The author highlights a need for newer and less flawed research to quantify whether a higher relative risk exists for dental practitioners (Alexander, 2001).

c. Police Officers

A study was published in 2002 that sought to validate the hypothesis that New York City police officers have a higher suicide rate than the general population. After analyzing data on police deaths in New York City between 1977 and 1996, it was found that the rate in police officers was actually lower than in the general population (Mazurk et al., 2002). This may be related to

the routine psychological screening of police candidates. An important exception to this finding was that female police officers were four times more likely to commit suicide than their female general population counterparts. This statistic loses some strength since the absolute numbers were small. Risk factors for female officers included marital problems, job suspension and alcoholism. Suggestions by the authors were for counseling programs and education to begin early in police training and to repeat them periodically throughout police officers' careers. This is seen as a way to overcome the stigma and other barriers standing in the way of police officers seeking counseling programs.

F. Cultural Factors

It is of utmost importance that clinicians be educated, knowledgeable and sensitive to cultural differences among patients. Research is available regarding suicide risks associated with specific ethnic groups. Some key findings are provided here with respect to the Asian-American, Native American, and African-American communities, to assist clinicians in being attentive to these risks.

1. Asian-American

Purcell studied suicide in the elderly Asian population. Key risk factors for this population are depression, physical illness and loss. Results from the study showed that the mean age for suicide was 75 years, with the highest completion rate in the 80 years and older category (Purcellet al., 1999). Also, Asian and Pacific Islanders in the U.S. have one of the lowest suicide rates of ethnic racial groups in this country where the number died by suicide in 2007 was 6.2 per 100,000 (NIMH 2011).

The predominant method was hanging, followed by jumping, use of a firearm and poisoning. Almost half of the sample had seen a health care provider within six months of death. Seventy-nine percent of the sample committed suicide at home or on the surrounding property.

Active depression was the most common psychiatric illness. Only 15 percent had contact with a mental health provider within one month of death. Fifty-eight percent had a history of suicidal behavior. Fifty-three percent made one or more active attempts.

Only 45 percent of the subjects who were prescribed antidepressants showed evidence of taking medication in the toxicology reports. In findings consistent with other literature, the authors found that males tended to use more violent means (hanging, firearm, jumping) than females.

In Lester's article on Chinese-American suicidal behavior, the author found that Asian-Americans have a relatively low suicide rate compared to Caucasians (Lester, 1997). For example; in 1980 the figures were 13.2 per 100,000 for Caucasians compared to 8.3 per 100,000 for Chinese-Americans. Asian-Americans used hanging much more often than Caucasians and firearms less often. Lester concluded that gender and age patterns seem to be

affected strongly by ethnicity (older males more likely to suicide than females). The suicide rates and methods are also affected by the nation in which the Chinese live.

Finally, in the Asian population, under-reporting is a distinct possibility, since suicide is viewed as “shameful.”

2. Native American

Conversely, in the Native-American culture, suicides have often been honored. The concern is that today’s youth may seek attention and acceptance in their own suicides. Acculturation is a factor thought to contribute to the suicide rate. Resulting pressure from the dominant culture leads to a variety of changes in the non-dominant culture. American Indian and Alaskan Natives in the U.S. have one of the highest suicide rates of ethnic racial groups in this country where the number died by suicide in 2007 was 14.3 per 100,000 (NIMH 2011). Native Americans who attempted or completed suicide reveal influential factors such as grief over loss, and quarrels with relatives and friends (Vega and Gil, 1993). Rarely is cultural conflict mentioned. Problems related to acculturation may raise the stress level so much that additional stressors now precipitate suicide.

3. African-American

Research on African-American suicide has yielded some information about cultural-specific suicide risk factors. The combination of male gender, early adulthood and substance abuse may be associated with a greater risk for suicide among African-Americans. The 7.5 percent lifetime prevalence for suicide attempts among Caribbean black men was the highest among black Americans. However, non-Hispanic blacks in the U.S. have one of the lowest suicide rates of ethnic racial groups in this country where the number died by suicide in 2007 was 5.1 per 100,000 (NIMH 2011).

Additional precipitants identified for African-Americans were depression, family dysfunction, interpersonal discord/marital conflict, acting out/delinquency, psychiatric disorders and homosexuality/AIDS (Joe et al., 2006; Gibbs, 1997).

Conversely, the combination of strong religious beliefs, social supports and ethnic neighborhoods is purported to help reduce the effects of aging and poverty, thus reducing the suicide risk. In contrast to Caucasians, African-Americans tend to under-report suicidal ideation. This suggests that clinicians should use caution when relying on patient self-reports of depression and suicidal ideation as predictors of suicidal behavior in African-American youth.

4. Hispanic

The overall rate of suicides among Hispanics is low at about half that of the U.S. population as a whole (6.0/100,000 versus 11.26/100,000). (NIMH 2011)

The majority of suicide deaths among all Hispanics occur in men aged 85 or older, followed by men aged 80 to 84 and those aged 75 to 79. For Hispanic women, most suicide deaths occur in the 50 to 54 age range, followed by aged 45 to 49 and then aged 15 to 19 (Suicide Prevention Resource Center 2005, NIMH 2011). Closer examination of suicide rates among Hispanics and the effects of immigration, assimilation, affluence, economic advantage and ethnic inequality have also been reported. These sociological findings showed that immigrants have a higher suicide rate overall than native-born Hispanics. Also, Hispanic immigrants living in areas with smaller immigrant populations had higher suicide rates than their native-born counterparts. The opposite was true for Hispanics living in areas with larger immigrant populations where natives were at a higher risk (Wadsworth et al., 2007).

Hispanic subpopulations differ in suicidal behavior. The majority of suicides in Hispanics occur in Mexican-American populations, followed respectively by persons of unknown Hispanic, Central and South American, Puerto Rican and Cuban origin (CDC, 2006). Suicide attempt rates are highest among those of Puerto Rican ethnicity and lowest among those of Cuban ethnicity (Wendling 2005). There is evidence that adolescent Hispanic populations have a higher rate of suicide attempts than comparable non-Hispanic white populations (Vega and Gil, 1993). Risk factors for suicidal ideation and attempts in adolescent Hispanics are negative self-concept, derogation from parents and teachers, low social integration and low social support (Vega and Gil, 1993).

Hispanic adolescent females appear to have twice the prevalence of suicide attempts compared to African-Americans or white non-Hispanic females (Zayas et al., 2000). It has also been observed that suicide rates for these females are higher in the United States than in their countries of origin, suggesting a role for acculturation issues. It has also been observed that suicide attempts in this population typically occur in the context of progressively intense conflicts with the girl's parents over her romantic involvements in particular.

Other risk factors cited include having families with absent or under-involved fathers, low cohesiveness, pervasive familial/marital conflict and violence, and low parental support and warmth.

Among all Hispanic populations, culturally-based protective factors may operate to keep suicide attempts and completions at lower rates than the overall population (Oquendo et al., 2005). Specifically, moral objections to suicide, beliefs about responsibility to family, and mores regarding survival and coping may protect against suicide ideation, attempts and completions. In addition, among Mexican-Americans, being Mexican-born appears to protect against suicidal ideation and attempts compared with Mexican-Americans born in the United States (APA, 2003).

G. Other Groups

More recent research on the suicide risks for specific subpopulations have provided new information on vulnerabilities of these groups who may need special attention in the clinical assessment and treatment process. Some key findings are provided here with respect to these new groups.

1. Lesbian, Gay and Bisexuals

King et al. conducted a large systemic review and meta-analysis of the prevalence of mental disorder, substance abuse, suicide, suicidal ideation and deliberate self harm in lesbian, gay and bisexual (LGB) individuals. Results from this study showed that LBG individuals are at higher risk for suicidal behavior, mental disorder, substance misuse and dependence than heterosexual individuals. Also, in comparison to heterosexuals, there was a two-fold excess in risk of suicide attempts over a 12-month period in both men and women, and a four-fold excess risk in gay and bisexual men over a lifetime (King et al., 2008).

The King study also revealed that depression, anxiety, alcohol and substance misuse were at least 1.5 times more common in LGB individuals. Additionally, LB women were at particular risk of substance dependence, while the lifetime risk of suicide attempts was exceptionally high in GB men.

Another study examined specific family-rejecting reactions to sexual orientation and gender expression during adolescents as predictors of current health problems in LGB young adults. The research team of Ryan et al., surveyed white and Latino young adults and found that there was a clear link between specific parental and caregiver rejecting behaviors and negative health problems in young LGB adults (Ryan et al., 2009).

Specifically, LGB young adults who reported higher levels of family rejection during adolescence were 8.4 times more likely to report having attempted suicide, 5.9 times more likely to report high levels of depression, 3.4 times more likely to use illegal drugs and 3.4 times more likely to report having engaged in unprotected sexual intercourse compared with peers from families that reported no or low levels of family rejections.

Latino men reported the highest number of negative family reactions to sexual orientation in adolescence.

More recently, a large survey of 1,533 adolescents that varied in their risk profile was conducted to determine the relationship between sexual attraction status, i.e., same-sex, both sexes, opposite sex, and suicidal ideation. Findings from this study revealed the following: (1) Individuals noting attraction to both sexes reported the highest rates of recent and past suicide ideation and the highest rate of past suicide attempts, (2) Bisexual individuals score highest on measures of depression, anxiety, and negative affect, (3) Nonsexually experienced youth reporting opposite-sex attractions formed the lowest risk group and had the lowest rates of lifetime suicidal ideation and past suicide attempts and reported significantly fewer symptoms of depression and hopelessness (Langhinrichsen-Rohling et al., 2011), [Note: This high-risk

population is now formally designated as lesbian, gay, bisexual, transgender and questioning (LGBTQ) by the Substance Abuse and Mental Health Services Administration (SAMHSA) in their recently published strategic initiatives, *Leading Change: A Plan for SAMHSA's Roles and Actions 2011-2014* (HHS, 2011)].

2. Prisoners

Suicide rates in prisoners are estimated to be eight times higher than in the general population. Recent research by Fazel et al. has shown that for prisoners, the strongest associations with suicide were recent suicidal ideation, being accommodated in a single cell, a history of attempted suicide, evidence of mental disorder or history of alcohol use problems and detainee or remand status (Fazel et al., 2008).

Researchers argue that since some of these associations include potentially modifiable environmental and clinical factors, they may be targeted in suicide prevention strategies for these individuals in custody.

3. Victims, Perpetrators and Victim-Perpetrators of Bullying

Bullying is a specific form of peer aggression that has become a serious problem for young people in all communities. The findings of a systematic review of studies by Kim et al. confirmed that there were positive associations between all bullying types and suicidal risks. The strongest risks were demonstrated for Victim-Perpetrators (aggressive victims), both in the general population of children and adolescents and in populations with special needs (behavioral problems) or of LGB sexual orientation (Kim et al., 2008).

These findings were similar to a more recent study of online aggression (“cyber bullying”) involving teens harassed and mistreated over the Internet. Results from a large random sample survey (n=1,963) of middle-schoolers showed that those who experienced traditional bullying or cyber bullying, as either an offender or a victim, had more suicidal thoughts and were more likely to attempt suicide than those who did not. In addition, investigators reported that victimization was more strongly related to suicidal thoughts and behaviors than offending (Hinduja et al., 2010).

Another large study (n=5,614/aged 16-18 years) conducted in Greece found the same associations with suicidal ideations/behaviors among victims but not perpetrators of bullying where subjects' psychiatric morbidity was adjusted for in their analysis. However, the investigators encouraged further research in order to more fully understand the uncertainty regarding perpetrators and suicide risk, along with the category of pupils who observe bullying-related behavior as bystanders, but may also suffer psychic consequences (Stapinakis et al., 2011). Authors recommended the inclusion of screening and monitoring of suicidal signs and symptoms in victims, perpetrators or victim-perpetrators in anti-bullying programs since this may be an effective way of reducing suicidality in children and adolescents who have bullying experience.

4. Individuals With Financial Debt

Researchers in the United Kingdom conducted interviews with a large (n=7461) sample of respondents to a national survey of psychiatric morbidity of adults in England. In analyzing the data from 4.3 percent of the population who had thought about taking their own life in the past 12 months, the investigators found that the number of debts, source of the debt and reasons for the debt are key correlates of suicidal ideation. Specifically, those in debt were twice as likely to think about suicide after controlling for sociodemographic, economic social and lifestyle factors. Additionally, those with several debts were more likely to report suicidal ideation than those who had just one debt. The largest significant correlates were found for those with debts relating to shopping, housing and utilities. Investigators suggested the impact of financial downturns in the economic environment bears consideration in the assessment of suicidal potential (Meltzer et al., 2011).

5. Women Who Have Undergone An Abortion

Findings from previous studies over the past decades, including the most recent qualitative literature reviews, have produced conflicting conclusions on the association between induced abortion and adverse psychological outcomes. The largest to date meta-analytic review of research published (1995-2009) by Coleman, used 22 peer reviewed studies with 877,181 participants of whom 163,831 had experienced an abortion compared to groups that either had no abortion, had pregnancy delivered or had unintended pregnancy delivered (Coleman 2011).

Overall, the results revealed that women who had undergone an abortion experienced an 81 percent increased risk of mental health problems, and nearly 10 percent of the incidence of mental health problems was shown to be directly attributable to abortion. Coleman also noted population-attributable risk (PAR) percentages for the exposed sample, i.e., women who have undergone abortion, using pooled odds ratios derived from studies in the meta-analysis subdivided by outcome measures, i.e., anxiety, depression, alcohol use, marijuana use, all suicidal behaviors and suicide. The author reported a PAR of 34.9 percent for suicide, 20.9 percent for suicidal behaviors, 26.5 percent for marijuana use and 10.7 percent for alcohol use, 8.5 percent for depression and 8.1 percent for anxiety and specified the strongest effects were observed when comparing women who had an abortion with women who carried to term. The author concluded these composite results indicated that abortion is a statistically validated risk factor for the development of various psychological disorders and should inform the delivery of abortion services (Coleman 2011).

6. U.S. Military Service Members

According to the Final Report of the Department of Defense Task Force on the Prevention of Suicide by Members of the Armed Forces (August 2010), “in the five years from 2005 to 2009, more than 1,100 members of the Armed Forces took their own lives, an average of one suicide every 36 hours. (Note: Across

all Services, 1,277 suicides were confirmed by the Armed Forces Medical Examiner System [AFMES] for Calendar Years 2006-2010.) In that same period, the suicide rates among Marines and Soldiers sharply increased; the rate in the Army more than doubled”. The report cites “unprecedented demand on our Armed Forces and military families” in the years since 2002, where the manpower has been too low to meet the operational requirements of war. (DoD Task Force 2010, p. E1-2; DoDSER 2010; Rand Corp 2012).

There is a misconception that both combat and posttraumatic stress disorder are the typical scenarios related to the military suicide because the majority of military suicide victims had no history of deployment. Proximal causes for suicidal behaviors may be the more likely contributing factors or precipitants, i.e., relationship/discipline/legal problems and injury or illness (Bryan 2011). Another study examined the strength of the association between different types of psychiatric diagnoses and risk of suicide in all patients (n=3,291,891) receiving health care from the Veterans Administration system in the seven years after fiscal year 1999. This analysis reported that 7,684 veterans died by suicide and found that men with bipolar disorder and women with substance use disorders were at particularly elevated risk (Ilgen et al., 2011).

In recent years, suicidal behavior among military personnel has gained attention from health professionals, the media, and the government (Gradus et al., 2013). Soldiers have traditionally had lower rates of suicide relative to age and gender-matched civilians, but the rates in the Army began to exceed civilian rates in 2008, and since 2010 more U.S. soldiers have died from suicide than in combat (Insel, 2011). From 2001 to 2009, the rate of suicide in the U.S. Army increased from nine to 22 suicides per 100,000 (McKibben et al., 2013). The Study to Assess Risk and Resilience in Soldiers (Army STARRS), an National Institutes of Mental Health-Army collaboration, is performing an ongoing, prospective study of new and active duty soldiers (current enrollment - 17,000) to identify the factors responsible for the increase in suicide (Insel 2011).

The Department of Defense Suicide Event Report (DoDSER) Calendar Year 2011 Annual Report provides details of information gathered on suicides and suicide attempts among active duty Service members. Highlights include:

- Only 10.10 percent of suicides and 2.46 percent of suicide attempts occurred during deployments of Service Members (Iraq and Afghanistan)
- 46.69 percent of suicide decedents had a history of deployment in Afghanistan or Iraq and 8 percent of those had history of multiple deployments
- Direct combat experience was reported for 16.90 percent of suicide attempts and 15.33 percent of suicide decedents
- Service Members who were Caucasian, non-Hispanic or Latino, under aged 25, junior enlisted or high school educated, had increased risk for suicide compared to other demographic comparison groups

- Suicide rate of divorced Service Members was 55 percent higher than that of married service members
- Suicide decedents most frequently used firearms (59.93 percent) or hanging (20.56 percent) whereas drug overdose (59.79 percent) was the most frequent method for suicide attempt followed by injury with sharp/blunt object (11.98 percent)
- Drug and alcohol use were more common during nonfatal suicide events, with prescription drugs most frequently misused
- Most Service Members did not communicate their potential for self-harm with others prior to death by suicide or attempting suicide
- A prior history of self-harm was reported for 13.24 percent of suicide decedents and 28.66 percent of suicide attempts
- The majority of Service Members who died by suicide had no known history of a behavioral health disorder
- The majority of Service Members who attempted suicide had a known history of behavior health disorder
- When compared to suicides, known use of psychotropic medication was reported more frequently for suicide attempts
- Approximately 50 percent of Service Members included a known failure in a spousal or intimate relationship
- Known history of job loss and instability was related to 21.25 percent of suicides and 31.02 percent of suicide attempts.

IV. Managing the Suicidal Patient

A. Do I manage my patient based on the theory of suicide?

At present, there are two distinct theories of causation:

- Suicide derives from an individual's potential, evoked by the development of a mental disorder, especially depression. This hypothesis, which is not proven, is based on data suggesting certain common neurotransmitter and other biochemical features of successful suicides; or
- Suicide is a symptom of a mental disorder, and the disorder is causative.

The best answer at present is that neither biological nor genetic markers are of everyday clinical use, so the clinician should instead direct attention to the treatment strategies indicated in the following sections. Current literature suggests that although suicide is strongly associated with a mental disorder, i.e., depressive psychopathology, predisposition to suicide is distinct (Labonté et al., 2013). The

authors further report recent evidence suggesting that changes in DNA methylation may be involved in the neurobiological processes leading up to suicide. The alterations in methylation have been found in genes involved in the regulation of behavioral and cognitive processes in individuals with suicidal behaviors.

B. General Recommendations

An important distinction exists between the acute risk and the eventual risk of suicide. The presence of pervasive anxiety with depression, thought disorder with persecutory delusions and/or command hallucinations with schizophrenia should alert the clinician to the need for rapid symptom reduction and containment whether or not suicidal ideation is acknowledged.

It is also significant, in the therapeutic relationship, to work to establish a strong therapeutic alliance between the patient and clinician. Developing and establishing this alliance could enhance the therapeutic engagement between clinician and patient thus enabling for the clinical intervention to reduce suicidal risk.

C. General Treatment Strategies

- Conduct a thorough assessment
- Take steps to mitigate or eliminate identified risk factors
- Strengthen barriers to suicide, and
- Treat the associated disorder.

D. Specific Treatment Strategies

Suicide appears to occur when a mental disorder is present, intent develops and means become available. Additionally, help from mental health professionals, family or significant others, is unavailable or rejected. Specific treatment strategies that fall into the general categories noted above include the following:

1. Arrange for the removal of the patient's access to weapons, especially guns. Assess, identify and work with a family member, friend or authorities in assuring that the weapon is removed.
2. Address the abuse of substances in order to restore the patient to normal restraint and inhibition.
3. Assist with the strengthening of social resources through active involvement of family/significant others in containment.
4. Vigorously treat anxiety or agitation associated with depression and/or thought disorder, if present.
5. Assist the patient in planning and taking steps to stabilize job and family situations that are in jeopardy.

6. Identify and address dangerous behavior that may represent suicidal intent.
7. Make lethality an acknowledged and targeted issue.
8. Evidence can be found in the literature supporting the particular efficacy of specific psychotherapies for suicidal patients, such as cognitive-behavioral therapy (CBT), interpersonal psychotherapy (IPT) and dialectical behavioral therapy (DBT). It is, however, generally acknowledged that most forms of psychotherapy may be useful, providing the therapist develops a strong therapeutic alliance with the patient and conveys a sense of optimism and activity.
9. Inform and involve the patient's primary care physician and other clinicians to increase coordination of care across settings.
10. Employ family intervention to enhance effective family problem-solving and conflict resolution.
11. Be aware that time-limited, home-based interventions have limited efficacy for children and adolescents without major depressive disorder (Harrington et al., 1998).

E. When does suicidality require hospitalization?

The benefits of hospitalization should be compartmentalized and the question divided into two parts. First, is containment necessary? Second, are the unique medical resources of a hospital necessary to provide the treatment? When both severity and imminence of suicidal risk are present, a hospital is usually required to provide safe treatment. This situation is usually an emergency requiring immediate containment and intensive psychiatric treatment with close observation.

If hospitalization is selected as the safest and most appropriate level of care, it is important that discharge and aftercare planning is initiated quickly and that an outpatient follow-up visit is scheduled prior to the patient's discharge (Nelson et al., 2000).

However, hospitalization by itself does not end the suicidal threat. One study of completed suicides in a hospital setting revealed that one common contributing factor was poor communication of the severity of the suicidality between the emergency or admitting department and the treatment unit (Dlugacz et al., 2003). For hospitalization to achieve optimal containment and safety, it requires ongoing good clear communication between hospital units and between nursing shifts on each unit.

When severity is present without imminence, such as when the patient is ambivalent or rejecting of suicide as an option, and help is accepted and supports are present, other forms of containment may be considered (psychosocial, chemical and/or structural). The APA Suicide Practice Guideline advises that "patients should be treated in the setting that is least restrictive yet most likely to prove safe and effective," and "the benefits of hospitalization must be weighed against possible negative effects" (APA, 2003). The APA suicide guideline contains a table, reprinted in

this document, that outlines criteria for consideration when deciding about appropriate levels of care for patients with suicide risk.¹ For a detailed discussion of how the intensity and site of service should be determined, the clinician is referred to Table 1 in this document and to the Magellan Medical Necessity Criteria, which also address risk of self-harm in the Severity of Need section.

It is important to note that risk may fluctuate during an episode of care and such decisions call for continual review and updating. The patient must be aware that ongoing reassessment is available, even on an ongoing emergency basis. The patient needs to be instructed on how to access these services in a timely fashion.

After discharge from psychiatric inpatient care, particularly in the first few weeks, the risk of suicide is high. A national population-based retrospective case-control study in England examined the social and clinical factors associated with post discharge suicide in psychiatric patients (n=100), aged 18-65, who died by suicide within two weeks of hospital discharge (Bickley et al., 2013). This study found the greater incidence of suicides in the first week after discharge with risk factors during this period including a short admission and adverse life events, e.g. relationship breakups. Other factors showing a positive association with suicide included older age, male sex, history of self-harm and psychiatric comorbidity. Researchers concluded that discharged patients with high risk of suicide should receive immediate community follow-up after a short admission.

Table 1. Guidelines for Selecting a Treatment Setting for Patients at Risk for Suicide or Suicidal Behaviors*

<p style="text-align: center;"><u>ADMISSION GENERALLY INDICATED</u></p> <p>After a suicide attempt or aborted suicide attempt if:</p> <ul style="list-style-type: none">Patient is psychoticAttempt was violent, near-lethal or premeditatedPrecautions were taken to avoid rescue or discoveryPersistent plan and/or intent is presentDistress is increased or patient regrets survivingPatient is male, older than age 45 years, especially with new onset of psychiatric illness or suicidal thinkingPatient has limited family and/or social support, including lack of stable living situationCurrent impulsive behavior, severe agitation, poor judgment or refusal of help is evident <p>Patient has change in mental status with a metabolic, toxic, infectious or other etiology requiring further workup in a structured setting.</p> <p>In the presence of suicidal ideation with:</p> <ul style="list-style-type: none">Specific plan with high lethalityHigh suicidal intent. <p style="text-align: center;"><u>ADMISSION MAY BE NECESSARY</u></p> <p>After a suicide attempt or aborted suicide attempt, except in circumstances for which admission is generally indicated.</p> <p>In the presence of suicidal ideation with:</p> <ul style="list-style-type: none">PsychosisMajor psychiatric disorderPast attempts, particularly if medically seriousPossibly contributing medical condition, e.g., acute neurological disorder, cancer, infectionLack of response to or inability to cooperate with partial hospital or outpatient treatmentNeed for supervised setting for medical trial or ECTNeed for skilled observation, clinical tests, or diagnostic assessments that require a structured settingLimited family and/or social support, including lack of stable living situationLack of an ongoing clinical-patient relationship or lack of access to timely outpatient follow-up. <p>In the absence of suicide attempts or reported suicidal ideation / plan / intent but evidence from the psychiatric evaluation and/or history from others suggests a high level of suicide risk and a recent acute increase in risk.</p> <p style="text-align: center;"><u>RELEASE FROM EMERGENCY DEPARTMENT WITH FOLLOW-UP RECOMMENDATIONS MAY BE POSSIBLE</u></p> <p>After a suicide attempt or in the presence of suicidal ideation / plan when:</p> <ul style="list-style-type: none">Suicidality is a reaction to precipitating events, e.g., exam failure, relationship difficulties, particularly if the patient's view of the situation has changed since coming to emergency departmentPlan / method and intent have low lethalityPatient has stable and supportive living situationPatient is able to cooperate with recommendations for follow-up, with treater contacted, if possible, if patient is currently in treatment. <p style="text-align: center;"><u>OUTPATIENT TREATMENT MAY BE MORE BENEFICIAL THAN HOSPITALIZATION</u></p> <p>Patient has chronic suicidal ideation and/or self-injury without prior medically serious attempts, if a safe and supportive living situation is available and outpatient psychiatric care is ongoing.</p>
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*Reprinted with permission from American Psychiatric Association. (2003). Practice Guideline for the Assessment and Treatment of Patients with Suicidal Behaviors (APA, 2003).

F. Should contracts for safety be used?

Contracts for safety should not be used in the absence of a strong alliance with the patient, or in settings that do not provide the opportunity to monitor the patient over time, e.g., single session emergency care. Contracts should never substitute for developing a safety plan. Contracts run the risk of communicating to the patient that the therapist does not want to hear about suicidal ideation or wishes primarily to protect him/herself against liability. The risk under such circumstances is that the patient will interpret the contract as a form of rejection.

Contracts may be useful with some patients however, following a thorough evaluation and if based on evidence that the patient may be relied upon to honor them, as part of a general strategy of risk sharing. It should be noted that the routine use of contracting may create a false sense of security for the clinician and/or the patient.

Shea reminds clinicians that safety contracts are no guarantee of safety (Shea, 1998). Safety contracts can act best as deterrents when there is a powerful bond between the patient and the clinician. The more concrete the contract (written versus oral), the more likely it is to serve as a powerful deterrent. The sense of commitment and trust in a long-standing relationship between patient and clinician may cause the patient to hesitate in breaking his/her word. However, the deterrent power of a safety contract made with a first-time patient is significantly less.

Shea notes that it is best to avoid safety contracting with patients who exhibit agitated, psychotic or impulsive behavior, are intoxicated, or have characteristics that could increase the likelihood that the patient will be manipulative with regard to the safety contract, e.g., borderline and passive-aggressive personality characteristics.

In a literature review to assess empirical support for contracts for safety, authors found that support was extremely limited for any population and especially in adolescents (Garvey et al., 2009). They advise that contracting for safety may lead to adverse consequences for clinicians as well as for patients. A contract usually carries little significance in the determination of negligence as the suicidal patient, due to his or her illness, is unable to make healthful decisions. Authors cautioned that a contract for safety should not replace a thorough assessment of a patient's risk of suicide.

G. Prevention

Although a primary purpose of this guideline is to assist with suicide prevention, this section reviews several key prevention points.

A recent large survey of mental health facilities (n=8,459) in the U.S. examined facility-level characteristics associated with whether the facilities offered (1) suicide prevention as part of the supportive services and practices offered at the facility or (2) follow-up after discharge as core components of health care services (Kuramoto-Crawford et al., 2016). The facilities included in this study were participating in the 2010 National Mental Health Services Survey (N-MHSS) that was sponsored by the Substance Abuse and Mental Health Services Administration (SAMHSA). Authors reported analysis of the data showing that most of the facilities offered suicide

prevention services or had standard operating procedures for outcome follow-up after discharge. However, one of five facilities did not have either service in place (lack of suicide risk assessment, management, and prevention). Characteristics of facilities offering neither of the services included: less likely to provide comprehensive support services or special programs for veterans; less likely to treat both substance use and mental health services; and less likely to be accredited. Authors emphasized the continued need to improve suicide prevention services in the mental health care system.

In the foreword to a recent report by the World Health Organization, *Preventing Suicide: A Global Imperative*, Dr. Margaret Chan states, “the taboo and stigma surrounding suicide persist and often people do not seek help or are left alone. And if they do seek help, many health systems and services fail to provide timely and effective help” (WHO, 2014). This report noted that the foundation of successful suicide prevention is the identification of suicide risk factors (usually no single cause or stressor) and appropriate interventions. The report noted that “by far the strongest indicator for future suicide risk is one or more prior suicide attempts” (WHO, p. 40). Within this report, “suicide attempt is used to mean any non-fatal suicidal behavior and refers to self-inflicted poisoning, injury, or self-harm which may or may not have a fatal intent or outcome” (WHO, p. 12). Authors noted the difficulty in assessing suicide intent, surrounded by ambivalence or concealment. The World Health Organization has organized interventions for suicide prevention in a framework including three kinds of interventions: (1) universal preventions increasing access to care, strengthening social support, and alteration of the physical environment (2) selectively targeting vulnerable groups based on characteristics, e.g., age, sex, family history and (3) strategies targeting vulnerable individuals, e.g., individuals with history of suicide attempt or showing early signs of suicidal potential.

Depression is a foremost risk factor for suicide. Suicide rates increase with age. Older Caucasian males have a suicide rate up to six times that of the general population. One approach to preventing depression is through grief counseling for widows and widowers. Participation in self-help groups appears to ameliorate depression, improve social adjustment and reduce the use of alcohol and other drug abuse.

Primary care settings have been targeted to play a significant role in suicide awareness and intervention. Untreated/undiagnosed depression in primary care settings plays a significant role in suicide. As mentioned earlier in this guideline, more than 70 percent of older suicide victims were seen by their primary care physician within a month of their death, many with undetected depressive illnesses. Such data somewhat counters reports from the U.S. Preventive Services Task Force (USPSTF) in 2004 and 2009, which indicate a lack of published evidence to demonstrate the efficacy or harm of routine suicide screening in primary care in preventing suicide (Williams et al., 2009; Gaynes et al., 2004). Nonetheless, Magellan believes the preponderance of clinical evidence from preventive medicine indicates the value for enhanced screening and detection of depression and suicidality in the primary care setting. It has been observed that depression training for general practitioners reduces suicide. Also, weighting of risk factors in suicide prevention may be helpful to identify those persons who would warrant closer monitoring or more in-depth questions as to suicide potential. The APA guideline identifies these risk factors as “...being white male,

being single, having a diagnosis of affective disorder, schizophrenia, or alcoholism; having made a previous suicide attempt; or having personality-disorder traits, such as manipulateness and hostility” (APA, 2003).

One study demonstrated the effectiveness of enhancing physician knowledge through treatment guidelines and telephonic or in-person care management in decreasing suicidal ideation and depressive symptomatology in the elderly in primary care (Bruce et al., 2003). Detection and treatment strategies are also important for nursing home residents.

A systematic review of suicide prevention strategies by Mann et al. provided further support on the effectiveness of primary care physician education in depression recognition and treatment in suicide prevention. This review also revealed findings from studies showing that restricting access to lethal methods reduces suicide rates, e.g., firearms in Canada and Washington, D.C., barbiturates in Australia, domestic gas detoxification in Switzerland and the United Kingdom, and vehicle emissions in England. Educating community and institutional gatekeepers, e.g., clergy, first responders, pharmacists, geriatric caregivers, employees of schools, prisons and the military, etc., may also be effective in suicide prevention. This study describes gatekeeper education as instruction on suicide risk factors, policy changes to encourage help-seeking, availability of resources and efforts to reduce stigma. Mann noted that study findings to date on gatekeeper education show success in military institutions and therefore, more research is needed to determine its efficacy in other sectors of society (Mann et al., 2005). Similarly, a more recent systematic review on gatekeeper training as a preventative intervention for suicide showed that it positively affected the skills, attitudes and knowledge of gatekeeper trainees, but that further research was needed to determine if it can reduce suicide rates in a specific community (Isaac et al., 2009).

Suicide prevention is a much-sought-after therapeutic result. Kessler et al. offer some insight towards this outcome (Kessler et al., 1999). The authors utilize data on prevalence and risk factors of attempted suicide from the National Comorbidity Survey (NCS). The results indicate the highest risks of initial suicide ideation, plans, and attempters are for individuals in their late teens and early 20s. The progression from ideation to first onset of a plan, from a plan to first attempt, and from ideation to first attempt without a plan, were all highest in the first year after onset of the earlier stage. However, risk of a first-time attempt lacking a plan was limited to the first year after onset of ideation. Risk of a first attempt was substantially higher when a plan was involved. The authors note that risk of an attempt among ideators with a plan was very high in the onset year of the plan and continued for many years.

Co-morbidity was found to be a significant indicator of suicide attempts over the effects of individual disorders. The total number of disorders, rather than the type, was found to be the strongest indicator of suicide risk; however, patients with mood disorders remain at substantially higher risk than patients with any other disorders. The APA guideline presents a fairly detailed discussion of co-morbid disorders in Section B, VI, and the practitioner is referred to the APA guidelines for expanded specific information on the role of co-morbid disorders on suicide risk.¹ A study of 76 completed inpatient suicides, of which there are about 1,600 per year in the United States, pointed out that level of agitation and anxiety was more predictive of acute

risk than demographic or prior history predictors or severity of current depressive affect (Busch et al., 2003). Neither suicide “contracts,” denials of suicidal ideation, nor 15-minute “checks” were preventive of suicide in this study. The authors recommended close attention to the level of agitation, and line-of-sight observation for severely anxious or agitated patients.

A different aspect of suicide prevention was studied in New York by obtaining input from individuals with serious mental illness and a history of suicidal behavior in an effort to understand how this population copes with suicidal thoughts. (Alexander et al., 2009) In this study, 198 people engaged in Hope Dialogue, described by researchers as a “...1.5 hour conversation and workshop to examine techniques used by individuals to prevent a slide into darkness and despair.” Their results showed that participants’ first responses included spirituality, talking to someone, positive thinking, using the mental health system, considering consequences of suicide to family and friends, using peer supports and doing something pleasurable. Researchers noted that while most subjects had access to formal therapeutic supports, “Only 12 percent indicated that they considered the mental health system a frontline strategy...instead more frequently relying on family, friends, peers, and faith as sources of hope and support.” Due to these results, this research group argues that prevention efforts should acknowledge these findings and develop more consumer-driven tools into this aspect of care (Alexander et al., 2009).

School-based suicide prevention programs for adolescents remain the most commonly used prevention measures across the United States. A systematic review of 36 studies on the effectiveness of school-based suicide prevention programs was conducted where the interventions focused on: (1) enhancing awareness among students regarding suicide, (2) educating students to recognize signs of suicidal behavior and (3) providing students with information on available resources (Cusimano et al., 2010). Investigators were able to analyze eight studies meeting their inclusion criteria and methodological parameters. Results showed statistically significant improvements in student’s knowledge, attitudes and help-seeking behaviors. However, there were no reported findings on the reduction of suicide rates in these study groups necessitating further study on the impact of school-based programming for this critical outcome (Cusimano et al., 2010).

Another model of school-based suicide prevention in adolescents involves training “peer leaders,” i.e., youth opinion leaders, from diverse social cliques which include those who may also be at-risk for suicidal behaviors. A large randomized trial of the program, Sources of Strength, was conducted to examine its effectiveness in enhancing suicide protective factors among the trained peer leaders and the impact of their school-wide messaging among their fellow high school students. The trial was conducted with 18 high schools (six metropolitan; 12 rural), 452 peer leaders and 2,675 students comparing Sources of Strength against a wait-list control (Wyaman et al., 2010). The intervention trained designated peer leaders to communicate within their peer groups and encourage the identification and engagement of trusted adults in order to ask for help for their suicidal friends. Results of the study were positive in that trained peer leaders were four times more likely as were untrained peer leader to refer a suicidal friend to an adult. The largest gains were made for those entering with the least adaptive norms, lowest school engagement and fewest

connections to adults. Investigators noted this study demonstrated that the use of peer leaders was successful in suicide prevention mirroring the technique's effectiveness in substance abuse prevention, HIV prevention and other health promotion interventions and considered by many to be state-of-the art (Wyaman et al., 2010). The National Action Alliance for Suicide Prevention Research Prioritization Task Force's A Prioritized Research Agenda for Suicide Prevention: An action Plan to Save Lives 2014 presents community interventions to reduce suicide burden: firearm reduction, carbon monoxide shut-off and the Good Behavior Game (National Action Alliance for Suicide Prevention 2014). Task members reported that 10 percent of adult suicides in 2010 were from firearms and 1.5 percent of adult suicide resulted from carbon monoxide motor vehicle poisoning, suggesting that reducing access to firearms and having a carbon monoxide shut-off device in cars would avert suicide attempts and save lives. The Good Behavior Game (GBG), a program for early prevention with a potential to reach many elementary school children, is a teacher-implemented intervention to improve classroom behavior and introduce children to the role of being student as well as a community member (Kellam et al., 2011). GBG is an early prevention program, not targeting suicide prevention, but may avert a large number of suicide attempts and suicide deaths (National Action Alliance for Suicide Prevention 2014).

H. Medication

1. Pharmacological Prevention of Suicide

In a recent review of literature, authors found evidence that the appropriate use of antidepressants can effectively treat and protect depressed patients from suicide (Rihmer and Gonda, 2013). However, authors also noted that since the risk of suicidal behavior in depressed patients taking antidepressants is relatively more frequent in the first two weeks of treatment, psychiatrists must consider risks of suicidality when prescribing antidepressants for patients with depressive disorders where the risk of suicide is very high. Authors noted studies evidencing the anti-suicidal effect of lithium in both bipolar and unipolar major mood disorders. Studies showed that the risk of suicides and suicide attempts in patients with unipolar depression was 88 percent lower with versus without lithium treatment. Studies suggested that when the patient with one or more suicide factors does not respond to lithium, the clinician should retain lithium and combine it with another mood stabilizer. Authors also discussed recent results of studies showing that some atypical antipsychotics have acute antidepressive (quetiapine and olanzapine-fluoxetine combination) and long-term mood-stabilizing effect (quetiapine, olanzapine and aripiprazol) in patients with bipolar disorder. Authors emphasized the need for psychotherapies and psycho-social interventions to increase the effectiveness of pharmacotherapy for suicide prevention for patients with severe unipolar major depression and bipolar disorder (Rihmer and Gonda, 2013).

2. Antidepressant Initiation and Suicide Risk

A recent study examined changes in antidepressant use and suicidal behavior by young people after FDA warning and media coverage (Lu et al., 2014). Researchers accessed automated healthcare claims data from 11 health plans in the US Mental Health Research Network (2000-2010). This study included data from adolescents

aged 10-17 (n=1.1 million), young adults aged 18-29 (n=1.4 million, and adults aged 30-64 (n=5 million). Authors noted the complexity of the relationship between antidepressant use and suicidal behavior, and suggested that although treatment with antidepressants may reduce the pre-existing risk of suicidal ideation generally, the finding may not hold up for young people. They suggested that in adolescents and young adults, short term increases in suicidal ideation and behavior may be precipitated by antidepressant treatment. Studies of the FDA warning have found large declines in antidepressant use in children and adolescents after the warning, with the decline spilling over to adults (not a target of the warnings). Other changes after the FDA warnings included no increase in alternative treatments, e.g., psychotherapy, atypical antipsychotics, and no increased monitoring of patients, although suggested by the boxed warnings. In this study which provided empirical evidence about changes in suicide attempts and completed suicide, authors found an abrupt decline in the use of antidepressant use by young adults, reversing the previously upward trend. In the second year after the warning, a 31.0 percent reduction in use of antidepressant use was found at the same time as the occurrence of a sharp increase in psychotropic drug poisonings. Reductions in antidepressant use and increase in psychotropic drug poisonings were also found in young adults and decreased antidepressant use was found in adults. Authors noted that this was the first study to provide evidence that suicide attempts increased rather than decreased after the FDA warning. Increases in suicide attempts, i.e., psychotropic drug poisonings, were 21.7 percent among adolescents and 33.7 percent among young adults. Authors suggested that the increase in suicide attempts may be a consequence of under-treatment of mood disorders. They concluded that the FDA warning and media attention may have “led to unexpected and unintended population level reductions in treatment for depression and subsequent increases in suicide attempts among young people” (Lu et al, p. 4).

In an analysis of seven years of cross-sectional data (NSDUH) of adolescents aged 12-17 (n=over 100,000), Busch et al. found that adolescents with probable depression, when compared to other adolescents, experienced increased delinquency, use of tobacco and use of illicit drug, and decline in grade point average following the FDA black box warnings regarding antidepressant use in young people (Busch et al., 2014). Authors noted the lack of evidence suggesting any substantial replacement of antidepressant therapy with behavioral therapies, e.g., counseling. Authors suggested that the FDA warning moved adolescents toward less effective treatments, noting, “Some children who previously would have received combination treatment received psychotherapy alone. Others moved from antidepressant treatment alone to no evidence-based treatment” (Busch et al., p. 5). Authors also reported that youth suicides were flat or declining in the years preceding the warnings among those aged 10-19, but girls aged 10-19 experienced a sharp increase in suicides – over 30 percent in 2004.

Prescribed medications should be those that are necessary to treat the associated disorder. For guidance, the clinician is referred to Magellan’s other adopted guidelines on major depression, substance use disorders and schizophrenia, respectively (APA, 2000; AAA, 1995; APA, 2002). The APA guideline contains a thorough discussion of the medication, ECT and psychotherapy management of the suicidal patient (sections A, IV, A-B; and B, VI, D-E.) Additionally, the clinician is

referred to the APA guideline for the treatment of bipolar disorder (APA, 2002), specifically the sections on treating depressed or mixed states.

As indicated above, anxiety or agitation associated with depression generally should be treated symptomatically. A full discussion of the use of medications or other somatic therapies for the treatment of the disorders associated with suicidality is beyond the scope of these guidelines. However, the following general recommendations are offered:

1. Antidepressants

The choice of antidepressant is based on its scientific support, the unique manifestation of symptoms, and the patient's past response to treatment (when known). Also the patient's current medical condition and associated medications should be considered for their potential impact on pharmacokinetics and pharmacodynamics, as well as to prevent serious side effects or harm to the patient (see Magellan's Major Depressive Disorder guidelines)(APA, 2000).

Since suicidal behavior frequently occurs in the context of major depression, following established guidelines for medication regimens for depression is indicated. Conformance with HEDIS-based depression care guidelines, including rapid initiation of antidepressant medication therapy and at least three follow-up outpatient visits within the first 12 weeks of initiation, has been found to improve clinical outcomes (Rost et al., 2005).

The International Society for Bipolar Disorders (ISBD) Task Force reviewed findings from clinical studies on the use of antidepressants in bipolar disorder. Although the evidence concerning the value and risks of antidepressant treatment was limited, the Task Force suggested that non-antidepressant treatments should be considered as monotherapy before using antidepressants in bipolar depression. In cases where antidepressants are used, the consensus of the Task Force was that they should be prescribed along with a mood-stabilizing treatment. They also found little evidence showing that one type of antidepressant is more or less effective or dangerous than another, except that tri- and tetracyclics and venlafaxine are associated with a high risk of inducing pathologically elevated states of mood and behavior. The Task Force concluded that individual clinical cases and circumstances must be evaluated in determining whether to use antidepressants to treat depressive phases of bipolar disorder (Pacchiarotti et al., 2013).

Several classes of antidepressant medications are available, and the treatment generally begins with a non-monoamine oxidase inhibitor (non-MAOI) drug.

- a) Selective serotonin reuptake inhibiting drugs (SSRIs), such as fluoxetine (Prozac), sertraline (Zoloft), paroxetine (Paxil), fluvoxamine (Luvox) and citalopram (Celexa), are considered front-line medications for the treatment of major depressive disorders. (Seuhs et al., 2008; Perroud et al., 2009; Bhalia et al., 2010; Rucci et al., 2010) Because of the lethality of tricyclic antidepressants (TCA) when taken in overdose, TCAs are not recommended as first choices in treating the depressed patient who is suicidal. When

depression is associated with bipolar disorder, the first drugs of choice are usually mood stabilizers.

Although SSRIs have been implicated by some studies to increase suicidal ideation, prompting an FDA Advisory on March 22, 2004, studies have not conclusively confirmed a greater risk with this drug or class of drugs (Healy et al., 2003; Lapierre, 2003; Gibbons et al., 2007). In a large systematic review of randomized controlled trials, Fergusson et al. examined data from 702 trials representing 87,650 patients revealing that patients taking SSRIs were twice as likely to attempt suicide as patients taking placebo in the trials. However, it is important to note that further analysis of these pooled data revealed no increase in risk when only the number of completed suicides of patients taking SSRIs was compared with those taking placebo. Also, no significant differences were noted in the risk of suicide attempt in patients taking TCAs compared with those taking SSRIs (Fergusson et al., 2005).

In a later comparative safety study of SSRI antidepressants using population data from British Columbia (n=16,774), there were no meaningful differences in event rates, i.e., attempted or completed suicidal acts, comparing fluoxetine with citalopram, fluvoxamine, paroxetine, sertraline among children and adolescents aged 10 to 18 years. Tricyclic agents also showed risks similar to the SSRIs under study. (Schneeweiss et al., 2010[a]) Similarly, these researchers conducted a cohort study of adult users of antidepressants (n=287,543) and found no differences in suicide event rates with these same SSRIs, as well as other classes including serotonin-norepinephrine reuptake inhibitors (SNRIs), tricyclics and other new and atypical agents used in treating depression (Schneeweiss et al., 2010[b]).

In 2009, a systematic review of clinical trials conducted by the U.S. Preventive Services Task Force revealed that treatment of adolescents with SSRIs was associated with a small absolute increase in risk of suicidality, i.e., suicidal ideation, preparatory acts or attempts, but no deaths occurred in the trials analyzed. These findings, along with other professional associations and expert panels who have reviewed SSRI treatment and suicide risk, continue to support the premise that overall, the risk/benefit for SSRI use in pediatric depression appears to be favorable with careful monitoring. Further, a more recent longitudinal, observational study with prospective assessments over 27 years was conducted on a broadly generalizable cohort of patients. Specifically, these patients, aged 17 years and up, suffered episodes of depression, mania or schizoaffective disorder and were considered more “real world” in that they may have had other medical comorbidity and were receiving polypharmacy for these conditions. This propensity model showed that antidepressant therapy (using all classes of agents) was significantly more likely to be used when symptom severity was worsening. Findings showed that antidepressants were associated with a significant reduction in the risk of suicidal behavior and provided a protective effect (Leon et al., 2010). (For more information refer to: Practice Parameter for the Assessment and Treatment of Children and Adolescents with Depression published by the American Academy of Child and

Adolescent Psychiatry (AACAP) in 2007 and the Treatment and Ongoing Management Guidelines for Adolescent Depression in Primary Care (GLAD-PC) published by the North American Collaborative GLAD-PC Steering Group in 2007) (Williams et al., 2009; American Academy of Child and Adolescent Psychiatry 2007; Cheung et al., 2007; Nierenberg et al., 2011).

Studies demonstrate that suicidality is reduced as depression improves with the use of SSRIs (Gibbons et al., 2007). The U.S. Surgeon General's Report indicated that in depressed adults, SSRIs were found to reduce suicidal ideation and to reduce the frequency of suicide attempts in patients without major depression who had previously made at least one suicide attempt (Verkes et al., 1998; Letizia et al., 1996; Wernicke et al., 1997). More recently, two large meta-analyses published in 2009 have also shown that risk of suicide associated with use of antidepressants is strongly age dependent. (Stone et al., 2009; Barbui et al., 2009) Reviewing all research data submitted to the FDA, Stone et al., confirmed that compared with placebo, the increased risk for suicidality and suicidal behavior among adults less than 25 years of age approaches that seen in children and adolescents. Here, the net effect seemed to be neutral on suicidal behavior but possibly protective for suicidal ideation in adults aged 25-64 and to reduce the risk of both suicidality and suicidal behavior for those 65 years of age or older. (Stone et al., 2009) While also finding association with age, Barbui et al. found that exposure to SSRIs decreased the risk of suicide by over 40 percent among adults and decreased the risk by over 50 percent among elderly people. However, this research team found that exposure to SSRIs almost doubled the risk of suicide among adolescents (Barbui et al., 2009).

Researchers continue to analyze the meta-analytic findings of the association between use of antidepressants and increased suicide risk in order to understand more fully important factors relevant to this phenomenon. In this regard, Smith et al. reviewed FDA meta-analytic findings and results from the Treatment of Adolescents with Depression Study (TADS) trial and reported that an inverse relationship between multiple dose antidepressant half-life and the risk of suicidal ideation can be observed. Specifically, antidepressant medications with shorter half-lives are generally associated with greater risk of suicidal ideation/behavior. While these findings are tentative and need to be confirmed with further study, the author suggested possible potential mechanisms of antidepressants with shorter half-lives that may be relevant. These include more frequent, rapidly-occurring and intense discontinuation symptoms and an increased rate of initial serotonin blockage (Smith 2009).

Another important study on the safety of antidepressants was conducted by White et al. using U.S. poison control data for 2000-2004. In their analysis, medical outcome differences of reported antidepressant overdoses were quantified using a hazard index (number of major or fatal outcomes per 1,000 reported antidepressant ingestions). Amoxapine, maprotiline and desipramine had the highest hazard indices. Researchers reported that the tricyclic antidepressants, MAO inhibitors, maprotiline and bupropion were in

the more severe half of antidepressants as ranked by the hazard index. In contrast, all SSRIs, the combined serotonin and norepinephrine reuptake inhibitors, lithium nefazodone, trazodone and mirtazapine had ranked in the less severe half of antidepressant categories and had low hazard indices. These findings should be helpful to prescribers who wish to be informed by such updated comparative overdose severity data in their clinical decision making (White et al., 2008).

A more recent observational study of poisoning deaths due to antidepressant drugs was conducted in the United Kingdom using data from 2000-2006. The findings showed significant heterogeneity in the relative toxicity within the TCA group and that doxepin had a higher case fatality rate than amitriptyline. The relative toxicity index for venlafaxine was much lower than for TCAs but was considerably greater than for the SSRIs. The relative toxicity index for mirtazapine was slightly lower than that of venlafaxine. In addition, citalopram had a higher case fatality than other SSRIs (Hawton et al., 2010). Another important finding from the comparative analysis of antidepressant overdoses by White et al. is that of the 82,802 suicidal single-agent ingestions of identifiable antidepressants approved for use in the U.S.; cases occurred predominantly in females and peaked in teens. Additionally, peak fatal suicidal antidepressant ingestions occurred in the 45-49 year old age group. Authors revealed that suicidal ingestions of the SSRIs, SNRIs, and other antidepressants peaked in teens, lithium in the twenties, tricyclics and tetracyclics in the thirties and MAO inhibitors in the forties. Their findings showed that there was a greater prescribing of more toxic and older antidepressants in older age groups (White et al., 2008).

Because of the questions raised, it is advisable to monitor patients closely for the emergence of suicidal ideation or agitation, especially in the initial phases of treatment and at times of dosage change (Jick et al., 2004; Culpepper et al., 2004). This may be particularly important in treating children and adolescents (Gunnell and Ashby, 2004). As with all drugs, it is recommended that patients be observed for side effects and treatment altered accordingly, and that quantities be limited in cases where overdose is a risk.

The psychiatric community has given attention to a recent epidemiological study by Gibbons et al. confirming that in both the United States and the Netherlands, SSRI prescriptions for youths decreased by approximately 22 percent after the FDA and European Medicines Agency issued their warnings about a possible association between antidepressants and suicidal thinking and behavior (Moran 2007; Gibbons et al., 2007). In the Netherlands, the youth suicide rate increased by 49 percent between 2003 and 2005 and shows a significant inverse association with SSRI prescriptions. In the United States, youth suicide rates increased by 14 percent between 2003 and 2004, which is the largest year-to-year change in suicide rates in this population since the Centers for Disease Control and Prevention began systematically collecting suicide data in 1979. Researchers also noted that decreasing the number of SSRI prescriptions did not lead to

increases in alternative antidepressant treatments, e.g., newer non-serotonergic-specific antidepressants and tricyclics, as expected (Gibbons et al., 2007).

More recent analysis of pharmaceutical claims data from 2001-2005 (n=22,689 treatment episodes) showed that there was a substantial decrease in the use of paroxetine and increase in the use of fluoxetine for children based on specific FDA warnings and other information. However, there was an overall decrease in antidepressant usage and no increase in the recommended monitoring visits. (Busch et al., 2010) Another analysis conducted by the Centers for Disease Control and Prevention (CDC) using annual data (1998-2007) from the National Ambulatory Medical Care Survey (NAMCS) and the National Hospital Ambulatory Medical Care Survey (NHAMCS) demonstrated that children with major depressive disorder were not less likely to be prescribed an antidepressant as opposed to those who had another depression diagnosis (Chen et al., 2011).

An analysis of insurance data (2002-2005) from Hawaii revealed that variations in prescribing pattern of antidepressants were noted over time. Specifically, after the FDA black box warning, SSRIs with more evidence-based research supporting their safety and efficacy were least affected as were those that were less implicated by the FDA analysis of the possible link between SSRIs and suicidality. Specifically, there were sharp declines in prescribing citalopram and paroxetine and longer acting preparations whereas fluoxetine and sertraline showed increases in prescription rates (Hassanin et al., 2010).

- b) Atypical antidepressants, such as bupropion (Wellbutrin and Wellbutrin SR), venlafaxine (Effexor and Effexor XR), nefazodone (Serzone), and mirtazapine (Remeron), vary in their action and effect. There is indication that most are effective in the treatment of refractory and/or severe depression. Several have the additional effect of being helpful when anxiety or agitation accompanies depression. They are effective alternatives to SSRIs, and can be used as frontline agents (Seuhs et al., 2008; Bhalia et al., 2010).

In a recent randomized, double-blind, 8-week clinical trial, patients (n=74) with major depressive disorder and past suicide attempts or current suicidal thoughts received daily dose of paroxetine controlled release 25 mg or bupropion extended release 150 mg for weeks 1-2; paroxetine controlled release 37.5 mg or bupropion extended release 300 mg for weeks 3-4, and paroxetine controlled release 50 mg or bupropion extended release 450 mg for weeks 5-8 (Grunebaum et al., 2013). Researchers found that paroxetine treatment, more than bupropion, reduced affective/cognitive depression symptoms (closely with associated with suicidal ideation) in depressed patients (n=74) with suicidal thoughts or past attempted suicide for up to one month of follow-up).

A more recent analysis of data in the previously published Treatment of SSRI-Resistant Adolescent Depression (TORDIA) Study (n=334) was conducted in order to determine predictors of suicidal and non-suicidal

events for participants. Findings showed that in participants with high suicidal ideation, treatment with venlafaxine was associated with an increased rate of self-harm events compared to those treated with an SSRI. In addition, participants who received an anti-anxiety medication were more likely to experience both suicidal and nonsuicidal self-injury events (Brent et al., 2009). In contrast, a retrospective analysis of 9 double-blind studies comparing desvenlafaxine (n=1834) versus placebo (n=1116) showed that the odds of emergence or worsening of suicidality did not differ significantly between treatment groups of depressed adult patients (Tourian et al., 2010).

- c) For the patient who experiences agitation associated with depression, early and limited use of anxiolytics is indicated. As with all drugs that may produce dependence, the use of benzodiazepines should be avoided in the patient with active chemical dependence and carefully monitored with all patients.

2. *Antipsychotics*

In the treatment of schizophrenic suicidal patients, the atypical or second generation antipsychotics (SGAs), such as clozapine, risperidone, olanzapine, and ziprasidone, have been shown to be effective in reducing positive, and to a lesser degree, negative symptoms in schizophrenic patients who fail to respond to typical neuroleptics (Leucht, Corves et al., 2009; Leucht, Komossa et al., 2009).

Meltzer reports that in using clozapine, there is a potential to decrease the mortality rate by as much as 85 percent (Saunders et al., 2008; Meltzer, 1998; Meltzer, 2002). There is now much cumulative evidence that use of clozapine in patients with schizophrenia and high risk for suicide is beneficial. This is supported by FDA approval for using clozapine therapy to treat suicidal behavior in schizophrenia (Kasckow et al., 2011). Remington et al. reported that in the U.S. clozapine is recommended only after incomplete response to two antipsychotic trials even while permitted as a second-line treatment (although not recommended) (Remington et al., 2013). There is hesitancy in prescribing clozapine for patients due to safety issues, e.g., risk of agranulocytosis which requires special effort to monitor white blood cell counts. Clozapine use has remained flat from 1999 to 2006; authors suggest that shifting clozapine from third-line to second-line treatment may favorably affect outcome and should at least be considered (Remington et al., 2013). Also relevant to the discussion on use of psychotropic medications, is an FDA Alert that clinicians should consider when treating elderly patients. Specifically, this FDA Alert was issued notifying health care professionals that both conventional and atypical antipsychotics are associated with an increased risk of mortality in elderly treated for dementia-related psychosis (FDA Alert 6/16/08).

Other more recent studies have examined the impact of treatment with SGAs on suicidal behaviors in relevant patient populations. One post-hoc analysis (n=737) demonstrated that aripiprazole augmentation to antidepressant treatment in patients with major depressive disorder who had shown an inadequate response to previous antidepressant therapy was associated with a decreased risk of suicidality (Weisler et al., 2009). Another large epidemiological study (n=20,489

SGA users) diagnosed with either schizophrenia or bipolar disorder showed that compared to all other SGAs combined, aripiprazole was not associated with an increased risk of suicide events (Yood et al., 2010) Similarly, a pooled analysis of results of adult and pediatric completed randomized controlled trials (22 trials; n=5,123) revealed no significant differences in treatment-emergent suicidality risk in ziprasidone versus placebo treated subjects (Karayal et al., 2011).

3. *Lithium*

Although there are many medications used successfully to prevent or diminish mood instability in patients with bipolar disorder, studies have noted that lithium treatment significantly reduces the rate of suicides and suicide attempts in such patients (Tondo et al., 1998; Tondo et al., 2000; Cipriani et al., 2005). It should also be noted that discontinuing lithium treatment is associated with an increase in suicide morbidity and mortality, particularly in the first 12 months (Baldessarini et al., 1999). A recent systematic review and meta-analysis of 48 randomized controlled trials comparing lithium with placebo or active drugs in treatment of participants (n=6674) with unipolar and bipolar mood disorders assessed whether lithium has a specific preventive effect for suicide and self harm (Cipriani et al., 2013). Results of this study showed that lithium was more effective than placebo in reduction of the number of suicides, but the difference in risk of suicides between lithium and each active treatment was not significant. Lithium was also associated with a reduced risk of self-harm compared with carbamazepine (Cipriani et al., 2013).

4. *Anti-convulsants*

Anti-convulsant drugs may be used as mood stabilizers in bipolar disorder. In January 2008, the FDA published the following Safety Information Alerts:

FDA informed healthcare professionals that the Agency has analyzed reports of suicidality (suicide behavior or ideation) from placebo-controlled clinical studies of 11 drugs used to treat epilepsy as well as psychiatric disorders, and other conditions (FDA, 2008). In the FDA's analysis, patients receiving antiepileptic drugs had approximately twice the risk of suicidal behavior or ideation (0.43 percent) compared to patients receiving placebo (0.22 percent). The increased risk of suicidal behavior and suicidal ideation was observed as early as one week after starting the antiepileptic drug and continued through 24 weeks. The results were generally consistent among the eleven drugs. The relative risk for suicidality was higher in patients with epilepsy compared to patients who were given one of the drugs in the class for psychiatric or other conditions. Health care professionals should closely monitor all patients currently taking or starting any antiepileptic for notable changes in behavior that could indicate the emergence or worsening of suicidal thought or behavior or depression. The antiepileptic drugs (AEDs) included in the analyses include (some of these drugs are also available in generic form):

- carbamazepine (marketed as Carbatrol, Equetro, Tegretol, Tegretol XR)
- felbamate (marketed as Felbatol)

- gabapentin (marketed as Neurontin)
- lamotrigine (marketed as Lamictal)
- levetiracetam (marketed as Keppra)
- oxcarbazepine (marketed as Trileptal)
- pregabalin (marketed as Lyrica)
- tiagabine (marketed as Gabitril)
- topiramate (marketed as Topamax)
- valproate (marketed as Depakote, Depakote ER, Depakene, Depacon)
- zonisamide (marketed as Zonegran).

Although the 11 drugs listed above were the ones included in the analysis, FDA expects that the increased risk of suicidality is shared by all antiepileptic drugs and anticipates that the class labeling changes will be applied broadly.

More recent research has been conducted on the increased risk of suicide during anticonvulsant use since the FDA warning was issued. These findings have provided conflicting results. One review of published studies concluding that while suicidal risk may be increased among patients treated with various anticonvulsant drugs, the risk was somewhat better supported for patients diagnosed with epilepsy than for primary psychiatric disorders. The investigators called for more studies, particularly for lamotrigine and valproate, which are currently widely used in psychiatry. (Pompili et al. 2010) These findings conflict with those of a very large meta-analysis of data from clinical trials (cohort= 5,130,795) where investigators concluded their findings did not provide support for an association between antiepileptic drugs and suicide-related events among patients receiving AEDs for epilepsy. Moreover, the investigators did observe an association between current use of AEDs and suicidal events among patients with depression and also among patients who did not have epilepsy, depression or bipolar disorder (Arana et al., 2010). Another study (n=47,918) on use of these same drugs in the treatment of bipolar disorder concluded that their analysis found no evidence AEDs increase the risk of suicide attempts in patients with bipolar disorder. Moreover, the investigators noted that most AEDs and lithium were associated with reduction in rates of suicidal attempts relative to pre-treatment levels (Gibbons et al., 2009).

Three more recently published studies have attempted to critically examine and differentiate the risk of suicidal acts and combined suicidal acts or violent death with specific anticonvulsant drugs. The study by Paterno et al. reviewing 297,620 new treatment episodes of AEDs, found an increased risk for completed suicides, suicide attempts and other violent deaths for gabapentin, lamotrigine, oxcarbazepine and tiagabine compared with topiramate (Paterno et al., 2010). Andersohn and colleagues reported findings from their cohort study (n=44,300) showing that newer AEDs with a high potential of causing depression, i.e., levetiracetam, tiagabine, topiramate, vigabatrin, were associated with a three-fold increase risk of self-harm/suicidal behaviors compared with no use of AEDs in the past year while all other AEDs did not manifest an increased risk

(Andersohn et al., 2010). The Olesen study examined 6,780 registered suicides in the entire Swedish population in a 10-year period (1997-2006) and after calculating the increased odds ratio (OR) found that significant increased risk of suicide was associated with clonazepam (OR: 2.01), valproate (OR: 2.08), lamotrigine (OR:3.15), and phenobarbital (OR:1.96) in the initiation of treatment phase (Olesen et al., 2010).

In a randomized, double-blind two and one-half year trial comparing valproate and lithium treatment in patients (n=98) with bipolar disorder and past suicide attempts, researchers found no difference in time to suicide attempt or suicide event between patients treated with valproate or lithium (Oquendo et al., 2011). The prevalence for suicide attempt was 13.4 percent per year in this study, with no significant difference between groups. Researchers noted that this rate is higher than in most studies, most likely reflecting the high-risk nature of the patients. In conclusion, they suggested that both agents work equally well in this population.

5. *Other drugs*

Varenicline, a partial agonist that binds at the nicotinic $\alpha 4\beta 2$ receptor site, is a popular product used in smoking cessation programs along with other agents such as bupropion and nicotine replacement therapy. In July 2009, varenicline and bupropion were given a “boxed warning” by the FDA for possible increased risks for suicidal thoughts. A large cohort study was conducted in The United Kingdom (n=80,660) where patient outcomes were tracked for those prescribed nicotine replacement products (n=63,265), varenicline (n=10,973) and bupropion (n=6,422). Findings showed no clear evidence of an increased risk of self-harm, suicidal thoughts or depression in people prescribed varenicline compared with those prescribed other smoking cessation products (Gunnell et al., 2009).

A very large analysis was conducted by Robertson et al. using multiple linear regression of adverse events (AEs) occurring during randomized controlled trials (2004-2008). The data was submitted to the FDA Reporting System (AERS). Covering some 832 different drugs from all categories and 1,404,470 AEs, their findings showed that drugs associated with increased suicidal ideations are also associated with increased suicidal attempts or completions and may be considered as harbingers to more serious suicide attempts or completions. Regarding drugs used for psychiatric conditions, it was noted that paroxetine had a number of suicide attempts that were on the high end, where 1,323 suicide attempts out of 27,012 AERs (4.9 percent) was calculated for paroxetine (Robertson et al., 2009).

Ketamine In a double-blind, randomized, crossover, placebo-controlled study, researchers sought to replicate their previous finding that patients with bipolar depression experienced a rapid antidepressant response when they received a single N-methyl-D-aspartate (NMDA) antagonist ketamine infusion (Zarate et al., 2012). In this study, persons (n=15) with bipolar I or II depression maintained on therapeutic levels of valproate or lithium received a single intravenous infusion of either ketamine hydrochloride (0.5 mg/kg) or placebo on two test days (two weeks apart). Primary outcome measure was the Montgomery-Asberg Depression Rating Scale (MADRS) which rated depressive symptoms 60 minutes before the infusion,

40, 80, 110, and 230 post-infusion and on days 1, 2, 3, 7, 10, and 14 post-infusion. Results from the MADRS showed that patients receiving ketamine had a rapid antidepressant response. Patients receiving ketamine improved an average of 50 percent at 40 minutes, 45 percent at 230 minutes, and 41 percent at day 1 whereas patients receiving placebo improved an average of 5 percent at 40 minutes, 9 percent at 230 minutes, and 1 percent at day 1. Additionally, ketamine exerted measurable rapid antisuicidal effects compared to placebo in these patients with onset of this effect within 40 minutes to day 3. The Magellan Technology Assessment Report: Ketamine for the Treatment of Treatment-Resistant depression reports that although the early trials of ketamine were met with much enthusiasm, its treatment for depression is “highly investigational” and well-designed trials are needed to effectively evaluate safety and relapse-prevention strategies for repeated use of ketamine. Optimal dosing, alternative delivery routes and the risk of psychosis in patient populations is also needed (Magellan Health 2013).

I. Electro-Convulsive Therapy (ECT)

A recent article reviewed two large National Institute of Mental Health-supported studies of continuation treatment after successful ECT in depressed patients: the CORE study (4-hospital collaborative study) and the CUC study (3-hospital collaborative study) (Fink et al., 2014). Technical parameters of the ECT treatment in each study differed as CORE used bilateral placement and CUC used right unilateral electrode placement. Outcomes were based on ratings in the Hamilton Depression Rating Scale (HAMD) at baseline and at remission. In the patients (n=444) referred for ECT in the CORE study, the remission rate for patients completing the course of treatment (n=355), based on item three of the HAMD (evaluating presence/severity of suicidal thoughts/actions) was 85.6 percent. The CUC study used the same rating scale and reported similar resolution of suicidal ideation. Researchers noted the greater decrease in the suicide items scores compared to the overall Hamilton depression scores. They concluded that ECT continues to be underutilized due to exaggerated fears of memory loss, and that “evaluation and referral for ECT should be integral to the management of patients considered at suicide risk, with the expectation that ECT will quickly reduce suicidal drive and thus, the mortality rate” (Fink et al., p. 7).

ECT remains a viable option for the seriously depressed suicidal patient. Antidepressant drugs do not work quickly. ECT should be considered in all cases where a rapid response is essential (APA, 1990). This principle continues to be supported in published data from a NIH study (Consortium for Research in ECT Continuation ECT Study) of a large group of severely depressed patients, most of whom were hospitalized, documenting a rapid reduction in expressed suicidal intent in patients treated with ECT. Researchers in this study recommended that evidence-based treatment algorithms for major depressive mood disorder should include dichotomization according to suicide risk, as assessed by interview. For patients at risk, ECT should be considered earlier than at its conventional “last resort” position. Researchers noted that this is particularly important when one considers the risk of suicide and the delayed efficacy of medications in severely depressed patients (Kellner et al., 2005). Case et al. examined national patterns and trends in the use of inpatient

ECT in a national hospital sample (U.S.) from 1993-2009 finding that ECT use for severely depressed inpatients has fallen markedly (Case et al., 2013). Authors expressed concerns that severely depressed inpatients treated outside of large academic medical centers do not receive care in settings where ECT is conducted. New regulations expected to be issued by the FDA will determine whether ECT will retain high risk (Class III) status or be reclassified as intermediate risk (Class II) (Case et al., 2013).

The primary indications for ECT are:

- An urgent need for a rapid response, such as in the instances of imminent suicide, deteriorating physical condition, and/or intolerable suffering
- Treatment alternatives are riskier than ECT
- A history of superior response to ECT, and/or
- The patient understanding the risks/benefits of ECT and has expressly requested this treatment.
- Secondary indications for ECT are:
 - Demonstrable evidence of poor response to adequate pharmacotherapy or intolerable side effects, and/or
 - The patient's condition deteriorating to the point where the primary criteria for ECT are met.

J. Psychotherapy

1. Psychosocial Therapy after Deliberate Self-Harm

In a matched cohort study examining short-term and long-term effects of psychosocial therapy for people after deliberate self-harm, researchers compared outcomes from recipients (5678) who received psychosocial therapy to that of recipients (17034) who did not receive psychosocial therapy (Erlangsen et al., 2015). All of the people had history of deliberate self-harm. Over an almost 20-year follow-up period, those who received psychosocial therapy, e.g., dialectical behavior and psychodynamic approaches, had fewer subsequent acts of self-harm, fewer suicides, and fewer deaths from any cause compared with those who did not receive psychosocial treatment. Researchers reported that at the 20 year follow-up, the lower risk of repeated self-harm reported suggested that 145 repeated episodes of self-harm were avoided. Additionally, the lower risk of suicide in the treatment group was reported to suggest that 30 suicide deaths were prevented. The fewer deaths from any cause in the group receiving psychosocial therapy suggested an avoidance of 153 deaths. Researchers noted the “protective effect for suicide after long-term follow-up, which favour the use of psychosocial therapy intervention after deliberate self-harm” (Erlangsen et al., 2015).

2. Dialectical Behavior Therapy for High Suicide Risk

In a single-blind randomized clinical trial from 2004-2010, researchers evaluated the importance of the skills training component of dialectical behavior therapy for high suicide risk in individuals with borderline personality disorder (Linehan et

al., 2015). They compared the effects of skills training plus case management (DBT-S), individual therapy plus activities group (DBT-I, and standard DBT, which includes individual therapy and skills training. The study involving one year each of treatment and follow-up included participants (n=100) with personality disorder who had the following: at least two suicide attempts and/or nonsuicidal self-injury act (NSSI) during the past five years, an NSSI or suicide attempt in the past eight weeks, and a suicide attempt in the past year. All three treatment conditions were comparably effective at reducing suicide attempts and suicide ideation, while DBT and DBT-S were more effective in reducing NSSI acts as well as improving other mental health problems than DBT without skills training.

3. Brief Cognitive-Behavioral Therapy Effects on Post-Treatment Suicide Attempts in a Military Sample

A randomized controlled trial evaluated brief cognitive-behavioral therapy effects on post-treatment suicide attempts in active-duty Army soldiers (n=152) who either attempted suicide or experience suicidal ideation with intent (Rudd et al., 2015). Participants who had previously attempted suicide or experience suicidal ideation were randomly assigned to treatment as usual or treatment as usual plus brief CBT. Brief CBT was purposefully brief to accommodate time demands of a military setting and it focused on skills development and emphasized internal self-management. Both groups received usual care, e.g., individual and group psychotherapy, psychiatric medication, substance abuse treatment and support groups is needed. The CBT group also received twelve outpatient individual psychotherapy, weekly or biweekly, with each session lasting 60 minutes (after the first session which lasted 90 minutes). CBT participants were provided a small pocket-sized notebook (“smartbook”) where they recorded “lessons learned” and relapse prevention plans. Researchers noted that the groups did not differ significantly at baseline regarding psychiatric diagnoses, history of previous suicide attempts, or medications. During the two-year follow-up, 13.8 percent of participants in brief CBT made at least one suicide attempt compared with 40.2 percent of participants in treatment as usual. Researchers noted this finding is supportive of the assertion that “suicidal thoughts and behaviors should be targeted as a unique treatment goal separate from psychiatric diagnosis and symptom severity. In other words, effective treatment of risk for suicidal behavior does not require complete remission of a psychiatric diagnosis or symptom severity but rather the development of core skills in the areas of emotion regulation, interpersonal functioning, and cognitive restructuring” (Rudd et al., p. 447). Researchers concluded that brief outpatient treatment focusing on skills training can be effectively implemented in a military setting to reduce suicide attempts among military personnel who have made a previous suicide attempt or are experiencing suicidal thoughts.

There is a major role for psychotherapy in most cases of high suicidal risk. An attitude of empathic acceptance and allying with the patient’s pain and sense of desperation may be regarded as ancillary to other methods of treatment and basic to the establishment of the necessary alliance. The therapist should not try to avoid the issue of suicidality, but rather contain and manage it in conjunction with the patient, significant others, and/or other helpers in his/her life structure, as

indicated. It appears to be a significant factor to include family members and key support system people in the overall treatment “team.” Specifically, the family/significant others can be instrumental in limiting access to lethal medication and other means, as well as providing other ongoing support to the individual.

Psychotherapy should focus on the suicide risk itself, as a prelude to reducing it and allowing for other treatment objectives to emerge. Often such therapy may be targeted and brief. These treatment recommendations must be distinguished from questions about the type and role of psychotherapy in the treatment of the underlying disorder. Research also has shown that individual cognitive-behavioral therapy (CBT) was very effective in the short and medium term for adults when the treatment was directly focused on reducing some aspect of suicidal behavior (Tarrier et al., 2008).

Depending on the patient’s preferred mode of learning, suicidality may be contained and the patient engaged in the process of recovery from the associated disorder through behavioral, cognitive and psychodynamic forms of focused psychotherapy. It appears that a therapist who conveys a sense of optimism and activity may use most forms of psychotherapy successfully. In this regard, there have been published studies demonstrating significant improvements in suicidality for patients with borderline personality disorder who were treated with transference-focused psychotherapy, dynamically-informed psychotherapy or dialectical behavioral therapy (Linehan et al., 2006; Clarkin et al., 2007; McMMain et al., 2009).

An individual’s problem-solving orientation, i.e., positive, negative, rational, impulsivity-carelessness and avoidant styles, may affect treatment outcome, especially in regards to suicidality in adolescents. Findings from the Treatment for Adolescents with Depression Study (TADS) showed that among depressed teens (n=439; aged 12-17 years), a strong predictor of suicidality was an avoidant or impulsiveness/carelessness style of problem-solving. In addition, patients with higher positive problem orientation were likely to benefit more from treatment and those with low negative problem orientation show greater improvement. Investigators stressed that clinicians should be cognizant of these problem solving styles when administering cognitive behavioral therapies (Becker –Weidman et al., 2010).

In addition to cognitive-behavioral approaches, family-based treatments for youth suicidal behavior continue to be explored. Researchers at Children’s Hospital of Philadelphia studied Attachment-Based Family Therapy (ABFT) versus Enhanced Usual Care (EUC) in a randomized controlled trial (n=341) of suicidal adolescents between the ages of 12 and 17 years of age (Diamond et al., 2010). Investigators described ABFT as emerging from “interpersonal theories that suggest that depression and suicide can be precipitated, exacerbated, or buffered against by the quality of family relationships.” The goal of ABFT focused on “strengthening parent-adolescent attachment bonds to create a protective and secure base for adolescent development.” (Diamond et al., 2010, p.124) Key elements of ABFT include assisting the adolescent in understanding what prohibits him/her from turning to parents for help when contemplating suicide and then helping him/her

to discuss core conflicts with parents. Parents also must master tasks amplifying parental love and empathy, problem identification/solving and affect regulation skills. Results of this clinical trial were promising in that ABFT demonstrated significantly greater rates of change on self-reported suicidal ideation at post-treatment evaluation than EUC, while benefits were maintained at follow-up with a strong overall effect size (ES=0.97). Further study is warranted to confirm results in the population of depressed adolescents with suicidal ideation (Diamond et al., 2010).

In a recent narrative review of studies, authors reviewed the results of randomized controlled trials of brief interventions to reduce suicide risk among adults and adolescents as well as longer interventions for outpatients at risk for suicidal behavior (Chesin and Stanley 2013). The standard of practice remains to “treat in the setting that is least restrictive yet most likely to prove safe and effective” (APA, 2003). The Safety Planning Intervention (SPI) is a brief intervention developed from evidenced-based strategies that is rooted in cognitive therapy. The patient who remains at suicide risk and the provider together develop a written, personalized safety plan for patient reference after discharge from acute care settings. The six components of the SPI are: warning signs of suicidal crisis, internal coping strategies, social contacts that may distract from suicidal thoughts and urges, family members or friends that may offer help, professional and agency contacts to help resolve suicidal crises and means restriction. Authors stressed that the plan should be developed collaboratively and use of the safety plan in crisis should be rehearsed and barriers to using it should be addressed. Longer interventions, e.g., psychodynamic approaches, cognitive therapy, dialectical behavior therapy (DBT) and mindfulness-based cognitive therapy (MBCT), for outpatients at risk for suicidal behavior were examined. Evidence was strongest for the efficacy of DBT in preventing suicidal behavior and authors reported that only DBT has been shown to reduce suicidal behavior among persons with bipolar disorder (Chesin and Stanley 2013).

The National Action Alliance for Suicide Prevention Research Prioritization Task Force’s new report, *A Prioritized Research Agenda for Suicide Prevention: An Action Plan to Save Lives 2014*, cited studies finding outpatient psychotherapies reduce suicidal thinking and re-attempts among high-risk patients. Other studies showed that outpatient psychotherapies for youth with comorbidities, e.g., mental disorders and substance use disorders, may be effective for preventing suicide attempts. Psychotherapeutic interventions include monthly postcards, follow-up phone calls and in-person psychotherapy sessions (National Action Alliance for Suicide Prevention: Research Prioritization Task Force 2014).

K. Combination Treatment – Medication and Psychotherapy

Effects of Cognitive Behavioral Therapy (CBT), Interpersonal Psychotherapy (IPT), Pharmacotherapy, and Placebo on Suicidality

Acknowledging the complex relationship between depression and suicide, and the ambiguity concerning whether treatments for depression can reduce suicidal ideation, researchers conducted analysis on the National Institute of Mental Health’s (NIMH’s)

Treatment for Depression Research Collaborative (TDCRP) sample, which included CBT, IPT, medication and placebo treatment groups (Weitz et al., 2014). In this study, participants (n= 239) who met criteria for a current major depressive episode and reported suicidal ideation on the Hamilton Rating Scale for Depression (HRSD) or Beck Depression Inventory (BDI) were randomly assigned to 16 weeks of treatment with CBT, IPT, imipramine (150-300 mg per day) plus clinical management or placebo plus clinical management. At baseline, 61.4 percent and 62.1 percent of the sample reported suicidal ideation on the HRSD and the BDI, respectively, and 8 percent of the sample reported having made a past suicidal gesture. A significant decrease in suicidal ideation from baseline to post-treatment occurred in all conditions, including placebo, suggesting the decrease may be a result of spontaneous remission. However, imipramine plus clinical management and IPT alone reduced HRSD suicidal ideation scores significantly more than placebo plus clinical management. BDI suicidal ideation scores (a self-report measure) were the same among active treatment groups and placebo. Researchers suggested, “treatments for depression including antidepressant medications and psychotherapy (IPT) reduce suicidal ideation in patients that exhibit mild to moderate suicide risk, thus contributing some preliminary evidence to support existing treatment guidelines for depression and suicide” (Weitz et al., p. 102). Researchers also noted “the relationship between the change in depression scores from baseline to post-test and change in suicidal ideation scores are highly significant, meaning that a decrease in depression was associated with a decrease in suicidal ideation” (p.102). Limitations of this study include the use of only question on the BDI and on the HRSD to measure change in suicidal ideation and the exclusion of patients with moderate to severe suicidal ideation. Nonetheless, researchers noted how this study helps in the understanding of the interdependence of depression and suicide and increases the body of evidence showing treatments for depression can also reduce suicidal ideation.

Major depressive disorder has a point prevalence of 5 percent in adolescents and is associated with significant morbidity and family burden, as well as suicidal behavior and completed suicide (March et al., 2007). Recent research studies have been conducted to seek improvements in the treatment of depression in adolescents and suggest that combined treatment with medication and psychotherapy for suicidal patients may be beneficial in treating depressed adolescent patients with suicidal risk. However, clinical trials have shown mixed results in the treatment of depressed adolescents using the selective serotonin reuptake inhibitor (SSRI) or serotonin and norepinephrine reuptake inhibitor (SNRI) class of drugs and/or cognitive-behavioral therapy (CBT).

The Treatment for Adolescents with Depression Study (TADS) studied the effects of using fluoxetine (SSRI) or CBT alone or in combination. Combination therapy consistently showed superiority at all follow-up intervals. Suicide ideation decreased with treatment, but less so with fluoxetine therapy than with combination or CBT. Suicidal events were more common in patients receiving fluoxetine therapy (14.7 percent) than combination therapy (8.4 percent) or CBT (6.3 percent) (March et al., 2007).

These findings differed somewhat from two other published reports. Results from the NIH-funded Treatment of SSRI-Resistant Depression in Adolescents (TORDIA) trial

revealed that teenagers with difficult-to-treat depression, who do not respond to a first antidepressant medication, were more likely to get well if they were switched to another antidepressant medication with CBT rather than just switching to another antidepressant. These findings showed that for adolescents with depression not responding to an adequate initial treatment with an SSRI, the combination of CBT and a switch to another antidepressant resulted in a higher rate of clinical response than did a medication switch alone. However, a switch to another SSRI was just as efficacious as a switch to the SNRI, venlafaxine, and resulted in fewer adverse effects. This study also confirmed that there was no advantage of the combination of CBT and medication over medication alone on the incidence of suicidal adverse events. Researchers in this particular study noted that suicidality does not necessarily subside when depression does (Brent et al., 2008).

Related findings also come from a report of a large British clinical trial that showed no difference in the treatment effects of SSRI and specialty clinical care alone than with SSRI and CBT together with specialty clinical care. On average, there was a decrease in suicidal thoughts and self harm. However, there was no evidence of a protective effect of CBT on suicidal thinking or action (Goodyer et al., 2007). It still remains to be determined which patient subtypes and clinical settings the combination of CBT and treatment with an SSRI will be most advantageous to adolescents with depression (Vitiello 2009).

L. A Novel Intervention

The Problem-Solving and Comprehensive Contact Intervention (PS-CCI) was developed to facilitate the transition of a patient from the emergency department (ER) into outpatient care via an interactive, personalized problem solving interview conducted during admission to the ER and follow-up contact during a three-month period (Alonao and Stanley 2013). Patients are encouraged to identify and address past barriers to receiving treatment as well as other factors that may prevent them from currently engaging in outpatient treatment. Psychoeducation is provided to clarify any misconceptions about treatment; it includes goals of treatment, requirements from the patient and benefits to be gained. Follow-up contact includes a phone call and a postcard reminder during the week of the first outpatient appointment, followed by a monthly phone call for three consecutive months (Alonao and Stanley 2013).

Emergency Department Intervention and Follow-Up Program

A recent study assessed the acceptability and perceived usefulness of a novel intervention implemented in five Department of Veterans Affairs emergency departments (EDs) (Stanley et al., 2016). A sample of veterans (n=100) who had presented to the ED for a suicide-related concern, while not meeting requirements for hospitalization, received a crisis management tool, i.e., combined Safety Planning Intervention (SPI) with structured follow-up and monitoring (SFU) by telephone. The SPI provided a list of coping skills and social supports to be used if suicidal thoughts emerged, while the SFU included a brief evidence-based intervention. It included a telephone call to monitor the patient, e.g., mood check and suicide risk assessment, adherence to follow-up treatment recommendations within seven days of ED visit by highly trained project staff, etc. Additional calls occurred weekly until first outpatient

visit, after which participants were contacted to assess acceptability and usefulness of participants' satisfaction with the SPI and SFU. Results found that most of the participants noted that the intervention was both helpful in preventing further suicidal behavior and in fostering treatment engagement. Researchers noted that this intervention provides a basic level of care for patients seen in the ED (not requiring hospitalization) with a suicide crisis. They are discharged with a referral to outpatient care.

M. Risk Management

Attention to risk management issues is important since a certain number of suicides will occur despite a clinician providing optimal care and management. According to one estimate, 50 percent of those who die by suicide have seen a mental health provider at some point (HHS, 1999). Novice clinicians experience higher rates of suicide among their clients than more seasoned clinicians (APA, 1991). Sound risk management is not only good clinical practice, it can serve as a comfort in the event a practitioner experiences the death by a client to suicide and when documented adequately, as a legal defense against potential malpractice actions (American Academy of Suicidality, 2000).

Fears of a completed suicide can result in an overestimation of suicide risk, depriving a patient of their rights and misusing clinical resources, whereas worries related to malpractice claims and result in an underestimation of suicide risk, jeopardizing the safety of the patient and increasing the provider's liability (Bernert and Roberts 2012). Established guidelines and evidence-driven approaches in the assessment and management of suicide risk are of utmost importance in caring for patients at risk for suicide. Authors remind practitioners of several cardinal medical ethical principles in psychiatry shaping ethical approaches to the care of patients at risk for suicide: 1) respect for persons, 2) self-governance, 3) beneficence, 4) fidelity, 5) nonmaleficence, 6) veracity, 7) justice, 8) privacy and 9) integrity.

1. Informed Consent

The patient should be informed of procedures to be used in the evaluation and management of suicide risk, clinical decisions, and emergency assessment and referral practices (Bernert and Roberts 2012).

2. Documentation

Clinical records should be a clear indicator of the thought process of the clinician, especially with regard to decisions made about managing lethality. The APA guidelines contain a table that highlights the factors to document in a risk assessment and the critical junctures at which such risk assessment should be documented, and states that risk assessment and documentation of findings is an ongoing process, not an isolated event (APA, 2003).

The initial assessment provides the first opportunity to demonstrate with the documentation that a complete risk assessment has been conducted and that, if indicated, a safety plan has been developed and implemented (Shea, 1998). In addition to the initial assessment, the documentation should provide clear

evidence of the clinician's ongoing assessment of the patient's response to treatment, changes in the treatment plan, safety plan, and/or level of care with the rationale and potential impact on the patient's safety. The record should also include reference to interventions that were considered but not pursued, along with the rationale.

Sound lethality assessments, as described above, including both lethal ideation and risk assessment, are important safeguards against later claims of negligence or lack of care. Contacts with family, other treatment providers, and the patient (phone calls and letters as well as sessions), responses to failed appointments, noncompliance with treatment requirements and impasses in treatment should all be documented.

Improvements in clinical documentation can occur following systematic training in evidence-based suicide risk assessment. This has been demonstrated in a psychology and psychiatry training program where workshops included training on historical (past), clinical (present), risk management (future), core and protective risk factors for suicide and violence and medical-legal aspects of documentation of risk assessment (McNeil et al. 2008).

3. Collaboration and Issues of Confidentiality

Consultation and/or collaboration with other helpers, as well as with the patient and his/her family/significant others, and communication among principals in treatment are critical elements of good treatment as well as good risk management. Consultation with a senior colleague is recommended in formulating and supporting an appropriate treatment plan for clients at risk for suicide (APA, 2003).

Collaboration with the family after obtaining authorization from the patient should be ongoing. If circumstances warrant a breach of confidentiality, the clinician should weigh the risks and benefits of a breach. The clinician can make constructive responses to crisis situations that may not breach confidentiality but may still manage risk to acceptable levels; for example, listening to the patient's family members without making disclosures about the patient. Local and federal law may require disclosure of the patient's status to emergency personnel if necessary to assure the safety of the patient or others, and the clinician should be familiar with applicable laws and regulations.

4. Assessment of Patient Competence and Ability to Collaborate

Patients often fail to inform their therapists about suicidal ideation and behavior. Patients even may actively hide their suicidal intent from their therapists. Interview techniques are available that make it easier to elicit accurate information about suicidal ideation and intent with non-collaborative clients. For example, the therapist can exaggerate symptoms: "How many times this week did you think about suicide, 20 or 30" (Shea, 1999). It may be important to review with the patient the subject of suicide risk, and the risks of not keeping the therapist informed.

Also, associated with this strategy should be an assessment of the patient's competence with regard to this issue: i.e., does he/she understand the risks of failing to keep the therapist informed? The result of this process should be documented in the record. When the patient's competence is in question, e.g., actively psychotic patients, other actions may need to be considered, e.g., hospitalization, guardianship.

5. *Assessment and Managing*

Knowledge of and the use of the following are required in modern clinical practice: suicide risk factors/warning signs, standardized risk assessment frameworks, risk categorizations and decision-tree rules for managing patients, and suicidal symptom severity scales (Bernert and Roberts 2012). Evidence-based guidelines and materials should be used by clinicians in the treatment of patients.

N. Post-Prevention

1. *The Family*

Following a suicide, it is sound clinical practice to maintain contact with the decedent's family and to offer (at least brief, supportive) services to survivors. When treatment beyond brief support is required, referral to another clinician should be considered. For family members, referral to a specialized support group can be helpful. Since requirements for confidentiality do not cease with the patient's death, the provider should limit the amount of information communicated to family members to only what is necessary.

The brief supportive services should be guided by the need to facilitate grieving and decrease the risk of mood and anxiety disorders in the bereaved family members, particularly prepubertal children. This risk is further heightened in any family members who may have witnessed the suicide or had prior knowledge of the victim's problems and hence develop a degree of guilt. Helping counsel the remaining family members about their increased risk and being vigilant for warning signs is important. Major depressive disorder and post-traumatic stress disorder are two common disorders occurring in the bereaved and there is some evidence to suggest that the impact on family members can be long-term.

2. *The Clinician*

According to the American Psychiatric Association, completed suicide is a prevalent occurrence and at least half of psychiatrists can expect to face the death of a patient through suicide with significant impact on the clinician (APA, 2003). Clinicians who lose a patient to suicide frequently feel stress akin to that of losing a parent. Reviewing the circumstances leading to the suicide with an attorney and obtaining collegial support, such as consultation or supervision, are recommended to facilitate the clinician's own healing process.

A study surveying therapists after patient suicides revealed that at least one third of the study population experienced severe distress (Hendin et al., 2004).

The four factors identified that linked to distress were failure to hospitalize a

patient who then died, a treatment decision the therapist felt contributed to the suicide, negative reactions from the therapist's institution, and fear of a lawsuit. Two other notable findings from this study revealed that in retrospect, therapists who experienced distress wished they had involved the patient's family more in the treatment and communicated more with prior or concurrent treatment providers, among other regrets. These two findings underscore the importance of involving family or support system members when treating a patient with suicidal risk, as well as coordinating treatment with past and current providers.

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