Pediatric Adolescent Depression, Assessment and Principals of Treatment

Syed Shujat Ali Naqvi, MD, DFAPA, DFAACAP
Distinguished Fellow American Psychiatric Association
Distinguished Fellow American Academy of Child & Adolescent Psychiatry

CRITERIA FOR MAJOR DEPRESSIVE EPISODE IN ADULTS, CHILDREN AND ADOLESCENTS

- Five (or more) of the following symptoms have been present during the same two-week period and represent a change from previous functioning; at least one of the symptoms is (1) depressed mood or (2) loss of interest or pleasure.

CRITERIA FOR MAJOR DEPRESSIVE EPISODE IN ADULTS, CHILDREN AND ADOLESCENTS

- **Adults**

Depressed mood most
Of the day, nearly every
Day, as indicated by
Subjective report or
Observation made by
Others.

Markedly diminished
Interest or pleasure in all, or
Almost all activities most of
The day, nearly every day

Significant weight loss when not
Dieting, or weight gain or
Decrease or increase in appetite
Nearly every day

Insomnia or hypersomnia nearly every day

Psychomotor agitation or retardation
Nearly every day

Fatigue or loss of energy nearly every day

Feeling of worthlessness or excessive or
Inappropriate guilt nearly every day

Diminished ability to think or concentrate or
Indecisiveness, nearly every day

Recurrent thoughts of death, recurrent suicidal ideation without a
Specific plan or a suicide attempt or a specific plan for committing
Suicide.

- **Children and Adolescents**

Mood can be depressed or irritable. Children with immature
Cognitive-linguistic development may not be able to describe
inner
Mood states and therefore may present with vague physical
Complaints, sad facial expression, or poor eye contact. Irritable
Mood may appear as “acting out”; reckless behavior; or hostile,
Angry interactions. Adult-like mood disturbance may occur in
older
Adolescents.

Loss of interest can be in peer play or school activities.

Children may fail to make expected weight gain rather than losing weight.

Similar to Adults

Concomitant with mood change, hyperactive behavior may be Observed.

Disengagement from peer play, school refusal, or frequent school Absences may be symptoms of fatigue.

Child may present self-deprication. Delusional guilt usually is not Present.

Problems with attention and concentration may be apparent as Behavioral difficulties or poor performance in school.

There may be additional nonverbal cues for potentially suicidal Behavior, such as giving away a favorite collection of music or Stamps.

RISK FACTORS FOR CHILD AND ADOLESCENT DEPRESSIVE DISORDERS

- Biomedical Factors

  Chronic illness (e.g., diabetes)
  Female Sex
  Hormonal changes during puberty
  Parental depression or family history of depression.
  Presence of specific serotonin-transporter gene variants.
  Use of certain medications (e.g., isotretinoin [Acutane])

- Psychosocial Factors

  Childhood neglect or abuse (physical, emotional or sexual)
  General Stressors including socieconomic deprivations
  Loss of a loved one, parent or romantic relationship

- Other Factors

  Anxiety Disorder
  Attention-deficit/hyperactivity, conduct or learning disorders
  Cigarette smoking
  History of depression

CRITERIA FOR MAJOR DEPRESSIVE EPISODE IN ADULTS, CHILDREN AND ADOLESCENTS

- Symptoms do not meet the criteria for mixed bipolar disorder.
- Symptoms cause clinically significant distress or impairment in social, occupational, or other important areas of functioning.
- Symptoms are not caused by the direct physiologic effects of a substance or a general medical condition.
- Symptoms are not caused by bereavement- i.e., after the loss of a loved one, the symptoms persist for longer than two months or are characterized by marked functional impairment, morbid preoccupation with worthlessness, suicidal ideation, psychotic symptoms, or psychomotor retardation.

- Same as adults
- Clinically significant impairment of social or school functioning is present. Adolescents also may have occupational dysfunction.
- Similar to adults
- Psychotic symptoms in severe major depression, if present, are more often auditory hallucinations (usually criticizing the patient) than delusions.

KEY CLINICAL DECISION POINTS FOR DEPRESSIVE DISORDERS

Question	Action
Is this depression caused by a general medical condition, a medication or both?	Rule out other causes of depressive mood Disorders
Is this depression related to drug or alcohol abuse?	Determine whether secondary to or Complicated by substance abuse
Is this depression related to a reaction to a stressful life event?	Consider a diagnosis of adjustment Disorder
Is this a chronic, mild Depression?	Consider dysthymic disorder
Is this another type of depressive Disorder?	Consider minor depression, bipolar Depression, depression caused by Seasonal affective disorder, or atypical Depression
Is this major depression?	Apply DSM-IV criteria. Assess for severity And psychotic features
Is there a coexisting mental illness?	Dysthymic disorder, anxiety disorders, attention-deficit/ Hyperactivity disorder, oppositional defiant disorder and Substance use disorder are common comorbidities.
Is this a dangerous depression?	Perform suicide task assessment

Clinical Depression in Children and Adolescents (Remember DUMPS)

- **D- Definite personality change**

A youth who has previously been a good student and suddenly or even gradually becomes Defiant, disagreeable, distant, disorganized.

- **U- Undeniable Drop in Grades**

A student whose grades go from As to Cs over a Semester or who starts to avoid school altogether

- **M- Morbid Preoccupation**

A youth whose compositions dwell on death and disaster or who voices Suicidal thoughts or who engages in self destructive behaviors

- **P- Pessimism / Psychosis**

A youth who is calm, depressed, demoralized and sees no joy in anything acute onset of Depressive hallucinations and/or delusions

- **S- Somatic Complaints Without Physical Basis**

A youth who spends more time in the nurses' office than in the classroom.

MDD Assessment

- Assess severity and suicidality

Consider Hospitalization

- Assess Comorbidity

Should comorbid disorder be treated first

- Assess psychosocial stressors

Treat school related problems

Treat parent psychopathology

- Assess cognitive ability and support system

Consider CBT or IPT

Rating Scales

- Children's Depression Rating Scale (HDRS doesn't rate teen relevant depressive symptoms)
- Self Rating Scales- CDI, BDI, DSRS
- Visual Analog Scales for target symptoms
- Clinical Global Improvement Scale
- Measures of Psychosocial Functioning

Baseline Labs for MDD

CBC + Platelets

BUN, creatinine, calcium

Liver function tests

Free T4/TSH

Substance Abuse Panel

pregnancy test for sexually active, "unprotected females"

Treatment

- Biological
- Psychological
- Social
- Spiritual

Pharmacotherapy of Unipolar Depression in Adolescents

- Acute single episode
- Recurrent episodes
- Chronic depressions

General Considerations

- Two current FDA-approved medications for treatment of depression in youth. Fluoxetine & Ecitalopram
- Using medications in adolescents for adolescents with depression is generally “off-label” use
- The majority of studies at present fail to support the idea that in general treatment with antidepressant medications is better than the use of placebo
- Recently there has been increasing scientific support the use of SSRI’s in adolescents with depression

First Line Agents: the SSRI's

Generic	Trade	Starting Dose (mg)	Max Dose (mg)	Frequency
Fluoxetine	Prozac	5-10	60	qD
Sertraline	Zoloft	12.5-25	200	qD,BID
ECitalopram	Lexapro	5-10	60	qD

Second Line Agents

Generic	Trade	Starting Dose	Max Dose	Frequency
Venlafaxine	**Effexor XR**	**37.5 mg**	**225 mg**	**qD**
Bupropion	**Wellbutrin SR**	**100 mg**	**400 mg**	**BID**
Mirtazipine	**Remeron**	**7.5-15 mg**	**45 mg**	**qD**

Pharmacotherapy of Adolescent Depression: What We Don't Know

- Efficacy of non-SSRI, non-TCA antidepressants
- Relative efficacy of antidepressant medication compared to other treatment appropriates (i.e., psychotherapy)
- Longer-term durability of antidepressant benefits
- What to do in the treatment-resistant depression case
- What to do in the chronic case (Dysthymic Disorder, chronic MDD)
- How co-morbidity (medical, psychiatric) affects short-term and long-term outcomes

Guidelines for Choosing Medication

- Severity
- Other family members' response
- Recurrent depression
- Chronic depression
- Has not responded to psychotherapy
- Convenience to family
- Psychosocial stressors

The Treatment for Adolescents with Depression Study (TADS)

- Multi-site clinical research study comparing short- and longer-term effectiveness of medication and psychotherapy for depression in adolescents aged 12 to 17

- Thirteen academic and community clinics across the country were involved in the $17 million federally funded, peer reviewed and monitored clinical research study

- For the 439 participants studied in TADS, the trial was designed to test best-practice care for depression, also known as Major Depressive Disorder (MDD)

- The first participant entered TADS in spring 2000 and the last one in the summer 2003

Study Design

- Fluoxetine – medication alone
- Clinical management with placebo alone
- Cognitive-behavior therapy (CBT)
- Combination of both medication and CBT

Summary of the Study

The TADS study showed:

- Fluoxetine and cognitive-behavioral therapy combined produced the best success rate in treating 71 percent of participants improved at the end of 12 weeks of treatment;
- Medication alone was also an effective treatment; 61 percent of participants improved;
- CBT Improved 44 percent of the cases;
- Placebo improved 35 percent (on the latter two, the difference is not statistically significant)

Study Findings

Efficacy: Fluoxetine + cognitive behavioral therapy>Placebo

Efficacy: Fluoxetine + cognitive behavioral therapy>Fluoxetine

Efficacy: Fluoxetine + cognitive behavioral therapy>Cognitive behavioral therapy

Efficacy: Fluoxetine>Cognitive behavioral therapy

Study Conclusions

- Fluoxetine + cognitive behavioral therapy is more effective than fluoxetine alone and cognitive behavioral therapy alone in the treatment of adolescents with depression
- Cognitive behavior therapy is associated with greater tolerability compared with fluoxetine in adolescents with depression

COMMON AVERSE EFFECTS OF SSRIs

- **With SSRI use**

Akathisia or motor Restlessness

Dizziness

Drowsiness

Gastrointestinal symptoms

Headache

Treatment-emergent agitation or Hostility

Tremor

- **With decrease or discontinuationof SSRI**

Dizziness

Drowsiness

Fatigue

Headache

Impaired concentration

Lightheadedness

Nausea

CLINICAL RECOMMENDATION

	Evidence Rating	References
Tricyclic antidepressants should not be used to treat childhood or adolescent depression.	**A**	**18, 40 , 41**
Selective serotonin reuptake inhibitors have limited evidence of effectiveness in children and adolescents and should be reserved for treatment of severe major depression.	**B**	**42-44**
Cognitive behavior therapy is effective for the treatment of mild to moderate depression.	**A**	**18, 37-39**
Children and adolescents taking antidepressants should be monitored closely for suicidal thoughts and behavior.	**C** **C**	**53** **29**
Depression should be treated for a minimum of six months.		

Anti depressants and the risk of Suicidal behaviors
Jick H, Kaye JA, Jick SS.
JAMA. Jul.2004

Retrospective matched case controlled study in UK General Practice
159,810 first time users of 4 antidepressants and suicidality.1993-1999
Flouxetine, Amitryptyline, paroxetine & Dothiepin

Results: The risk of Suicidal behavior is similar among users of Amitryptyline, Flouxetine & Paroxetine compared to Dothiepin.
The risk of suicidal behavior increased in the first month of the start of treatment
DAY 1-9 OF INCREASED SIGNIFICANCE OF RISK.

No significant difference on people aged 10 to 19.

FDA Warning on Antidepressants

Summary of Careful monitoring

- If depression worsens or suicidality emerges consider changing antidepressant therapy
- Activating symptoms may be a signal of worsening depression and or suicidality
- In case of discontinuation consider tapering versus abrupt stoppage
- Before starting treatment a thorough screen for BPD
- A detailed education to patients and care givers for sign and symptoms of emerging suicidality and prompt reporting to the treating clinician

Symptoms of Activation Syndrome

- Anxiety
- Agitation
- Panic attacks
- Insomnia
- Irritability
- Hostility
- Impulsivity
- Akathisia (severe restlessness)
- Hypomania
- Mania

Antidepressants named in FDA Public health Advisory

- Flouxetine
- Sertraline
- Paroxetine
- Fluvoxamine
- Citalopram
- Ecitalopram
- Bupropion
- Venlafaxine
- Nefazadone
- Mirtazapine

Practice parameters at the Pediatric Psychopharmacology Clinic CSMC.

- Informed consent in letter and spirit with detailed patient and caregiver education
- CBT treatment of first choice in mild to moderate depression
- Fax back report from the caregiver on day 7 vis a vis Activation syndrome
- Avoidance of Paroxetine and Venlafaxine as the first or second line agent in <18 yrs
- Vigilance & Close monitoring in the first 30 days

Course of Illness

- 90% of children and adolescents recover from an index episode of depression within 1-2 years
- New episodes reported in 54-72% of youths followed up for 3-6 years

How long to treat

- Residual symptoms have been shown to predict relapse
- Longer acute treatment results in fewer residual symptoms
- General consensus is to treat for at least 6 months after acute treatment response, most suggest full dose continuation therapy for 9 months. For multiple depressions, up to 3-5 years.

Psychosocial Treatments

- Cognitive Behavioral Therapy

Changing thoughts and behavior improves mood
Involves diaries and homework
Remission: CBT 60%, family therapy 37%,
Supportive therapy 39%

- Interpersonal Therapy

Focuses on interpersonal issues like; Grief and Loss, interpersonal roles and difficulties, role Transition, choosing personal values.

- Effective communicating
- Problem solving skills
- Recovery: IPT-75%, controls 45%

Practical Psychotherapy of Adolescent Depression

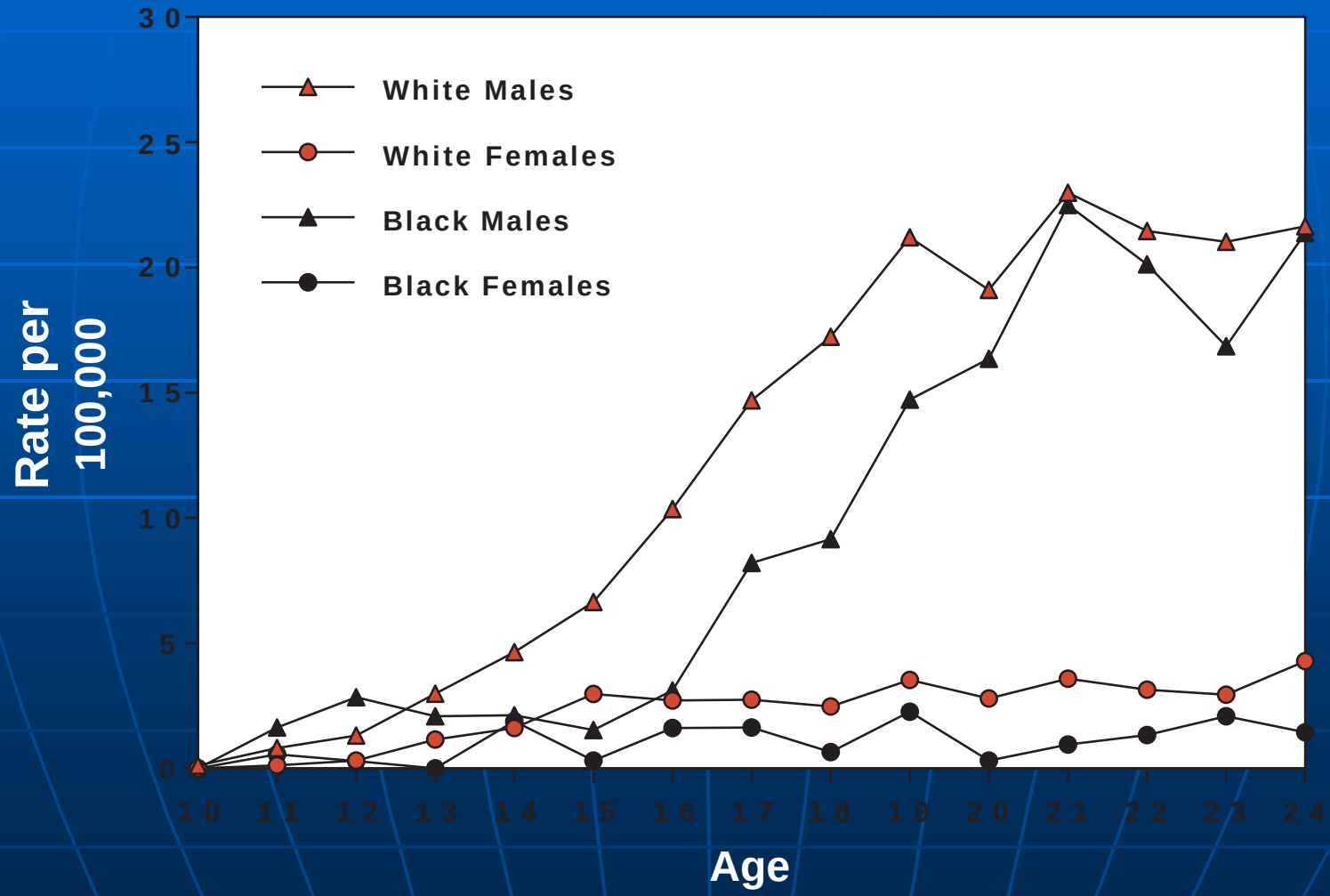
- Monitor Suicidal Risk
- Educate Patient Family
- Provide Explanatory Models
- Treat Depressed Parent
- Find Appropriate Therapeutic Environment

PUFA Omega 3 study in Adolescent Depression

- This research study is to investigate the efficacy and safety of polyunsaturated fatty acids (PUFAs), a nutritional supplement,
- for the treatment of depression in adolescents ages 13 to 17 diagnosed with major depressive disorder. Cognitive behavioral therapy (CBT) (a type of counseling), combined with polyunsaturated fatty acids (PUFAs), should enhance the effectiveness of treatment for major depression when compared to therapy alone.
- Polyunsaturated fatty acids (PUFAs) are established nutritional supplements

SUICIDE RATES DURING ADOLESCENCE

— UNITED STATES, AGES 10–24, 2001 —



CDC 2003 (WISQARS)

Suicide Risks in Youth

- Greatest in males 15-17 years
- Risk of a teen who has made a prior attempt
- Screening of youth (mid-adolescent) at risk appears to have a higher prevention pay off then education
- In adolescent suicide victims, 4 factors accounted for 90% of the suicides

Bipolar Disorder (mixed episodes)

Comorbid substance abuse

No treatment

Availability of firearms

- Compared to community controls, adolescent suicides had more MDD, Mixed BP, substance abuse, conduct disorder, prior suicidal behavior.

FREQUENCY OF SUICIDAL IDEATION AND ATTEMPTS

— U.S. HIGH-SCHOOL STUDENTS, AGE 15–19, YRBS
(2001, N=13,601)

	RATE	N
Ideation	**19.0%**	**3.8 million**
Attempt	**8.8%**	**1.8 million**
Attempt received medical attention	**2.6%**	**520,000**
SUICIDE (age 15–19)*	**.008%**	**1,611**

*** Anderson 2002; Grunbaum et al. 2002 (YRBS), U.S. Census 2000**

RISK FACTORS AND PROTECTIVE FACTORS FOR SUICIDE IN CHILDREN AND ADOLESCENTS

- **Biodemographics**

Age: late teens through early 20's, 20% of teenagers Contemplate suicide, and 8% attempt it

- **Sex**

Ideation and attempts more common in females, completed suicides five times more common in males

- **Ethnicity**

Teenage suicides are more common in whites and Hispanics than in blacks; rates are highest in Native American teens and lowest in Asian teens and those from the Pacific Islands.

- **Protective or Low-risk factors**

Black female child

MOST COMMON DIAGNOSES IN TEEN SUICIDESS

	MALE *(N=213)*	FEMALE *(N=46)*
Depression	**50%**	**69%**
Antisocial	**43%**	**24%**
Substance Abuse	**38%**	**17%**
Anxiety	**19%**	**48%**

66% of 16- to 19-Year-Old Male Suicides Have Substance/Alcohol Abuse

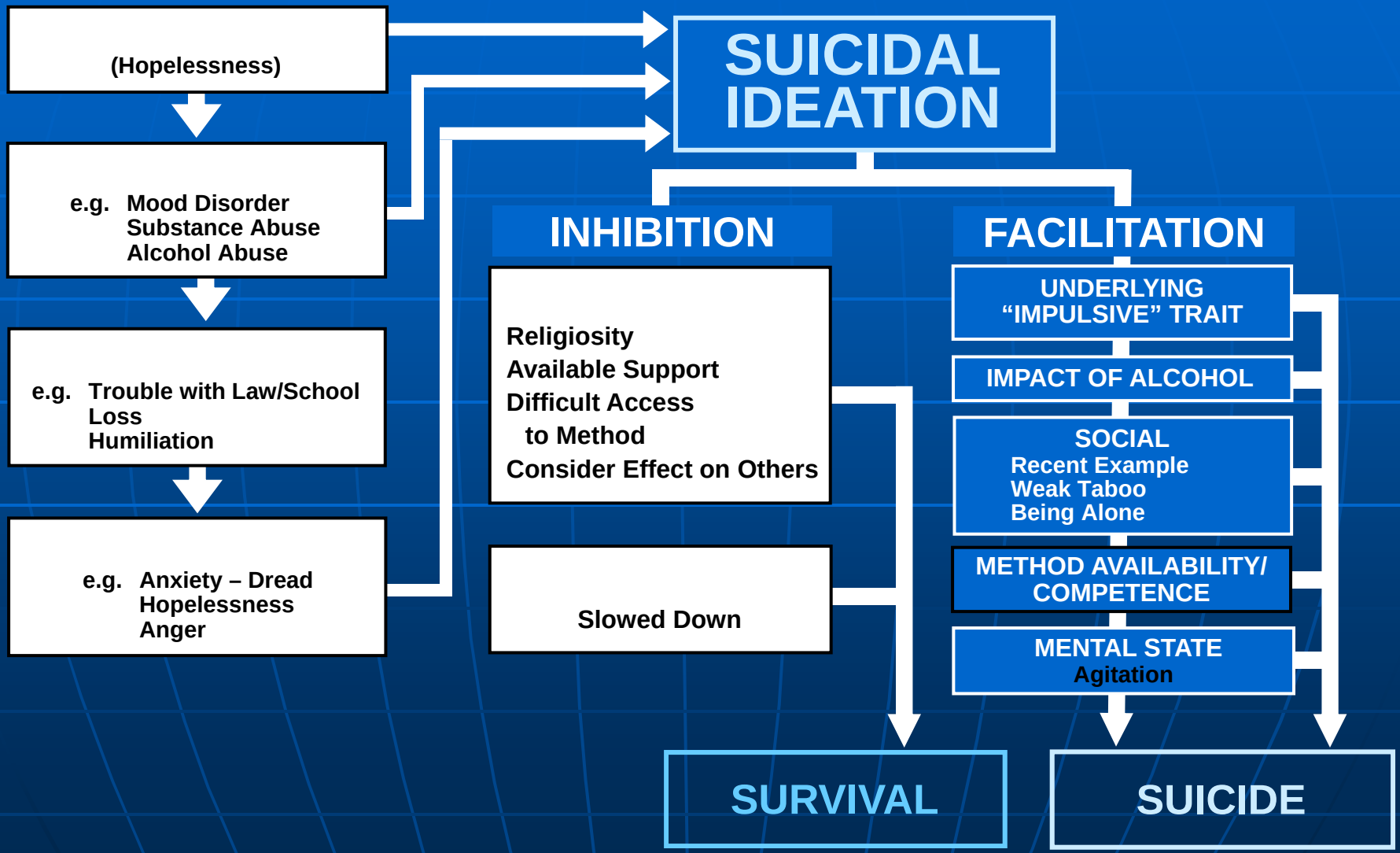
Brent et al. 1999, Shaffer et al. 1996

OTHER FACTORS THAT PREDISPOSE TO SUICIDE

- Imitation
- Biological abnormalities that predispose to impulsive response to stress
- A family history of suicide

HOW SUICIDES OCCUR

— PATHWAYS TO AND FROM IDEATION —



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DECLINING SUICIDE RATES

- **More psychopharmacologic treatment**
- **Better recognition of adolescent depression**
- **Some combination of the above**

DEPRESSED TEENS WHO COMMIT SUICIDE DO NOT TAKE THEIR MEDICATIONS

—UTAH YOUTH SUICIDE STUDY, N=49

Prescribed antidepressants	**24%**
Antidepressants found at autopsy	**0%**

Gray et al. 2003

RISK FACTORS AND PROTECTIVE FACTORS FOR SUICIDE IN CHILDREN AND ADOLESCENTS

- **History**

Major depression:
Increases the risk of
Suicide 12-fold for both
Sexes, especially if
Hopelessness is a
symptom.

Substance abuse:
Increases the risk of
Suicide about twofold

Conduct disorder: linked to
One third of suicides in
Adolescent boys and increases
Overall risk twofold

Current stressors or losses (e.g.,
Trouble in school or with the law, loss
of romantic relationship, unwanted
Pregnancy, intense humiliation)

Physical or sexual abuse

Minimal communication with parents

- **Protective or Low-risk factors**

No current depression

No current alcohol or substance abuse

Good problem-solving and coping skills

No current stressors or losses

No history of physical or sexual abuse

Close supportive family relationships and
Good communications with parents

Availability of parental support and close
Supervision during stressful life event

Strong religious belief or faith

Positive, hopeful outlook about future with
Specific positive and concrete plans and
Goals

Ability to articulate reasons to live

Ambivalence about suicide.

RISK FACTORS AND PROTECTIVE FACTORS FOR SUICIDE IN CHILDREN AND ADOLESCENTS

History of Suicidal Behavior	**Protective or low-risk factors**
Suicidal thoughts with Plan: specific plans for Suicide and the means To carry it out, including Nonverbal suicidal Behaviors	No active suicidal thoughts or intent;
	No nonverbal suicidal behaviors
Previous suicide attempt: One of the strongest Predictors of completed Suicide	No history of suicidal attempt
Family history of suicide and Depression	No family history of suicide
Availability of firearms or toxic substances	No access to firearms or toxic substances

RISK FACTORS AND PROTECTIVE FACTORS FOR SUICIDE IN CHILDREN AND ADOLESCENTS

- **Contagion Effect**

Media coverage of suicide: imitation plays a Part in suicidal behavior, often following Intense media coverage of a celebrity Suicide or a string of suicides in school.

- **Protective or low-risk factors**

No extensive media coverage of suicide.

Emergency Room Management of Suicidal Adolescent

- Urgent & Appropriate Medical Care
- Admission Criteria:

Medical necessity.

Abnormal mental state.

Persistent wish to die.

Highly lethal or unusual method.

Severe agitation.

Principles of Pharmacological Treatment

The laws of psychopharmacology

By Robert Sovner

The Laws Of Psychopharmacology

The right Drug does not fix the wrong Environment

The Laws Of Psychopharmacology

Drugs treat disorders not behaviors

The Laws Of Psychopharmacology

Never crack a walnut with a sledeghammer

The Laws Of Psychopharmacology

When dealing with a lit firecracker, first put out the fuse; then douse the explosive if you have to

The Laws Of Psychopharmacology

The brain prefers to have its neuroreceptor activity increased rather than antagonized

The Laws Of Psychopharmacology

Everything happens sometimes

The Laws Of Psychopharmacology

Yesterdays miracles still work

The Laws Of Psychopharmacology

Never let a physician find you interesting

The Laws Of Psychopharmacology

The brain changes slowly and so should we

The Laws Of Psychopharmacology

Learning “verbal and non-verbal”

The Laws Of Psychopharmacology

Final words: These laws are descriptive not prescriptive

Spirituality for the Psychopharmacologist

- Please give me the strength to change the things which I can, give me insight into the things which I cannot and let me have the wisdom to know the difference.

Spiritual issues

- Learning to live with a hole in your heart which may be permanent

- Those of us who are afraid to loose there face will soon have no face to loose.

  Confucious,1000BC.

- Unconditional Forgiveness.

  Stanford

Spirituality for the Caregiver

Hope
Faith
Trust