# Clinical Lecture Series Depression and Suicide in Children and Adolescents

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# Suicide in the Young

#### Tripled in the last 35 years; 10 -14 year olds, rates up 120%

- Decreasing onset of puberty
- Increased alcohol use / gun access
- Environmental pollutants
- Increased rate at all ages
- Anticipation

#### Third leading cause of death

- 1<sup>st</sup> accidents
- 2<sup>nd</sup> homicide (15-24), malignancy (10-14)



### **Demographics**

- Late spring / early summer: highest rates
- Rates rise with age: highest among white males in their 70's and 80's
- More people use guns than drugs
  - Kids 58%
  - Teens 74%
  - NC higher than U.S. rate
  - Availability = increased risk



### **Demographics**

- Females attempt more, males succeed more
- Most do not leave notes
- More rural than urban
- More common than homicide
  - suicide 10.7 per 100,000
  - homicide 6.2 per 100,000
- Increase after natural disasters

# Parents and professionals seriously underestimate depression in children / teens

- Under 10, rate low, but not impossible
- 90% attempt at home
- 70% with parents at home
- 1 in 5 high school students has seriously considered
- 1% occur before age 15
- 25% occur between ages 15-25
- 50-300 attempts for every completion



#### Efforts in Prevention

- Limit access to methods
- Mass media coverage
- Religious proscriptions
- Desecration of corpse
- Crime against the state
- Telephone / internet crisis lines
- Primary medical care assessment
- School prevention programs
- Gatekeeper programs



### School Suicide Prevention Programs

#### Stress model

- Normalizes the behavior
- Overemphasizes frequency
- Ignores contagion effect
- "Could happen to anybody" model

#### Biological model

- 90-95% of suicides have identifiable mental illness
- Computerized screening; interview high risk kids
- Effective at getting kids treatment

# School Prevention Programs

#### SOS - Signs of Suicide

Educate teens that depression is a treatable illness and equip them to respond

- Cost-effective
- Evidence-based
- Easily implemented
- www.mentalhealthscreening.org (781-239-0071)

### Gatekeeper Programs

**ASIST:** Applied Suicide Intervention Skills Training

- Two-day
- Injury Prevention: (919)715-6452, dhhs.state.nc.us
- info@livingworks.net

QPR: Question, Persuade, Refer

- 2 4 hour
- qprinstitute.com



#### Suicide: Causes

- Most explanations are too simplistic: never the result of single factor or event.
- No single CAUSE of suicide; only CAUSES.
- Highly complex interaction of biological, psychological, cultural, sociological factors.



# Multiple risk factors increase risk

- Mental disorders
- Substance abuse
- History of trauma
- Traits: impulsiveness
- Relationship loss
- Economic hardship
- Isolation

# 90 - 95% of suicides have clearly identifiable mental illness

- Depression
- Bipolar disorder
- Schizophrenia
- Substance abuse
- Borderline personality



# Risk: number of times expected rate

<ul> <li>Prior attempt</li> </ul>	38x	<ul><li>Personality d/o</li></ul>	8x
<ul><li>Depression</li></ul>	20x	<ul><li>Anxiety d/o</li></ul>	7x
<ul><li>Bipolar d/o</li></ul>	15x	<ul> <li>Incarceration</li> </ul>	9x
<ul> <li>Schizophrenia</li> </ul>	8x	- AIDS	8x
<ul><li>Subs abuse</li></ul>	6-14x	<ul><li>Cancer</li></ul>	2x
<ul> <li>Exposure as child 9x</li> </ul>		<ul><li>Pregnancy</li></ul>	(-)5x

2-14x

- GLBT

# Increased Suicide Risk in Children and Adolescents

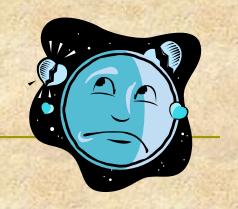
- Bipolar Disorder
- Depression
- ADHD
- Disorders of child maltreatment:
  - Conduct Disorder
  - Borderline Personality Disorder
  - PTSD
- Anxiety Disorder
- Substance abuse

#### Illness in Adults vs. Children

- Early childhood disorders more likely:
  - hereditary
  - chronic
  - severe
- Symptoms differ in same disease
- At different ages, symptoms may vary



- Don't want to die;
   want to end intolerable pain.
- Most suicidal crises last very brief time: minutes, hours, days
- Half of all attempts occur with 5 minutes premeditation
- Although act itself may be impulsive, going downhill a long time
- 70% give some warning



Depression and unhappiness are not the same.

Unhappiness: normal grief, bereavement, situational depression, reactive depression exogenous – originating from outside

Depression: biochemical, clinical, biological endogenous – originating from inside

### Depression in Young People

Usually first diagnosed in early 20s

3% of children (5-6% with mild / moderate)

Rates the same for boys and girls

3 – 8% of adolescents

- After puberty, girls twice the rate of boys
- One in 11 kids before age 14

Bipolar disorder: depressive episode

1% of population



# Pediatric Depression Symptoms - Physical

- Change in appetite
- Change in sleep
- Change in libido (teens)
- Fatigue not relieved by rest
- Slowed responses
  - movement, speech
- Physical complaints
  - headaches, stomachaches, pains



# Pediatric Depression Symptoms: Emotional



- Increased irritability / aggression
- Frequent sadness (empty, numb)
- Persistent boredom / apathy
- Low self-esteem (unworthy, guilty)

# Pediatric Depression: Symptoms: Cognition

- Poor concentration
- Difficulty problem solving
- Difficulty decision making
- Sensitive to rejection
- Negative thought patterns
  - pessimism, catastrophizing, critical
  - hopeless, helpless, self-defeating



# Pediatric Depression Symptoms: Behavioral

#### School problems

attitude, performance, absence, worry

Isolation

Difficulty in relationships

Suicidal communication / acts

- Running away
- Preoccupation with death drawings, music

# Pediatric Depression

- More likely recurrent
- Subsequent episodes more severe and shorter time between episodes
- Depression vs. dysthymia
- Onset insidious or gradual
- Untreated, usually lasts5-6 months to 2 years



# How to help:

- Educate person and family
  - Causes of illness
  - Realistic expectations
  - Course of illness and recovery
  - Responsibility for treatment
  - Role of stress and thinking
- Encourage treatment takes time

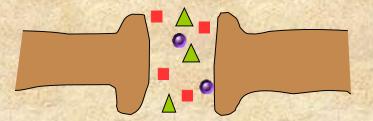
# Depression: Causes



- Biology:
  - changes in brain structure and chemistry
  - hereditary vulnerability
- Environment:
  - stresses can trigger and/or worsen episodes
- Cognition:
  - thoughts / beliefs

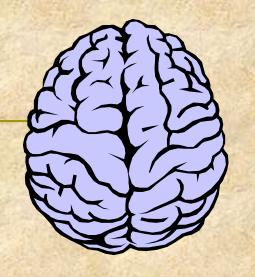
### Serotonin

- Central in regulating:
  - mood
  - sleep
  - addictive behaviors
  - impulsivity / aggression
  - perception of pain



# Depression: Changes in the brain

- Low levels of neurotransmitters
- Loss of brain cells (glia)
- Lack of nerve growth factor
- Over-activity of limbic system; area 25
- Decreased blood flow / metabolism
- High levels of cortisol
- Blunted TSH



# **Hereditary Risk**

- In general population: one in 10
- Close relative: 2 3 times greater
- Both parents: 7 times greater
- Gene for decreased serotonergic functioning
- Family, twin and adoption studies show influence beyond heredity



#### Childhood trauma

- Elevates risk of suicide / mental disorder
- Greater number = greater risk
  - greatest risk is 5 or more
- Greater severity = greater risk
  - Sexual abuse: duration, relationship, force, penetration
- Disrupts development by:
  - lasting changes in anatomy and physiology
  - stress response dysregulation
  - vulnerability to subsequent traumas
  - deficits in normal social learning

#### Childhood trauma

Sexual abuse - highest risk of suicide of all types of child maltreatment

- Increases risk independent of psychopathology
- 25 times those without
- Puts males at greater risk:
   4 11 times vs. 2 4 times
- Effective treatments available, but most kids don't get treatment



#### **Environmental Influence**



#### Influences:

stigma vs. acceptability: society and family
 2 – 3 times more likely to have family member with history of suicide

#### stressors / risk factors:

- economic hardship
- available methods
- use of alcohol

#### protective factors:

- support: migration, religion, population density
- access to treatment

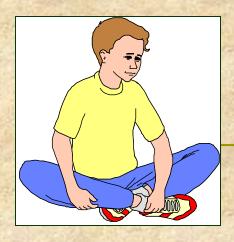


# **Cognitive Distortions**



#### Thoughts / beliefs common to depressed kids:

- I'm not as good as others, I'm worthless.
- Mistakes prove I'm no good.
- No one will ever like me. My parents don't love me.
- Nothing will ever change. My life is ruined.
- Suicide is a way out of this pain. I can't take it.
- I can't live without this person.



### **Explanatory Style**

#### Tend to interpret

- bad events as:
  - permanent (will last forever)
  - pervasive (will affect other parts of life)
  - personal (has something to do with them)
- good events as:
  - random / accidental
  - external (caused by something outside them)

# Feedback Loop



- Chemistry interacts with thinking
- Thinking interacts with stress
- Stress interacts with chemistry

### Possible Consequences

- Underachievement / failure in school
- Social failure = poor support
- Increased punishment
- Low self-esteem
- Drug use / abuse
- Kindling effect: relapse / worsening



Balance risk of meds vs. risk of not being treated

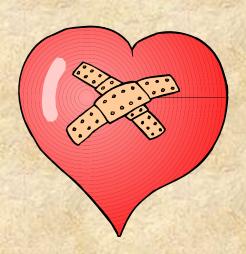
# Depression results in:

#### Lowered immune system functioning

- Four times higher rates of illness / death
  - Heart attack
  - Bone loss
  - Nursing home admission
  - Premature delivery

#### Death

- One in 6 with depression
- One in 5 with bipolar disorder



#### **Treatment / Intervention**

#### Medication

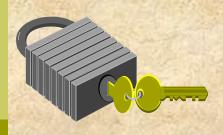
Treats the chemical imbalances

#### Cognitive Behavioral Therapy

Changes the negative thought patterns that reinforce and worsen feelings

#### Environmental changes

- Reduce stress: abuse, conflict, sleep
- Increase protective factors: skills
- Hospitalization: safety/intensive treatment



#### Treatment in children and adolescents

#### Medications

- TCAs ineffective or harmful
- No use: ECT / MAOIs / St John's Wort
- SSRIs effective
- Placebos some effectiveness



#### Meds combined with CBT

- Increases response rate
- Reduces relapse risk

## Youth and Antidepressants

- 2004 FDA black-box warning
  - Prescriptions for ages 5-18 fell more than 50%
  - Teen suicides jumped a record 18%
- Treatment puts 2 3% people at <u>temporary</u> risk, but untreated depression is far more lethal. (10%+)
- Antidepressants save lives;
   untreated depression kills.

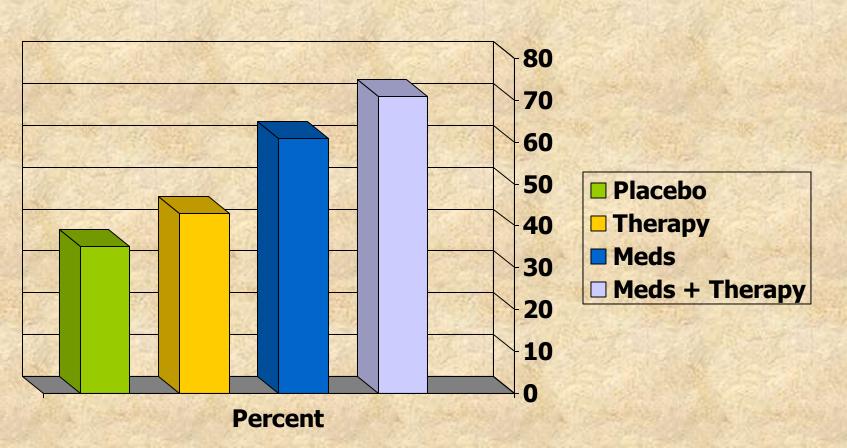
# Cognitive Behavioral Therapy

- Identify automatic thoughts and learn to modify
- Dispute:
  - require proof that thought is true
  - if no proof exists...replace with alternate, realistic explanation



- Hundreds of studies proving its efficacy
- Those who have attempted suicide and are treated with CBT are 50% less likely to try again.

# Percentage of patients (12-17 y.o.) showing improvement



March, JS et al, JAMA, 2004

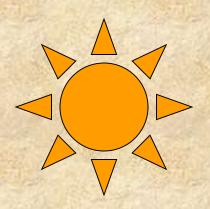
### Unfortunately,

- Two-thirds of children do not see a doctor or therapist within a month of beginning drug treatment
- More than half have still not had a mental health visit by three months.

## **Environmental Changes**

#### **Reduce stress**

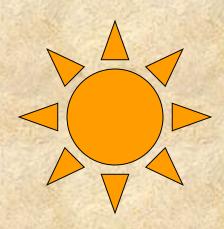
- child abuse / neglect / sexual abuse
- conflict: family, bully, teacher
- sleep / exercise / nutrition
- social concerns / hygiene
- unmet spiritual needs
- extracurricular over-commitment



## **Environmental Changes**

#### Increase protective factors:

- Social skills
  - making friends
  - assertiveness
  - empathy
  - reading social situations
  - negotiating / setting limits
- Optimism
- Coping skills: managing stress / emotions



## **Protective Factors**

- Perception that important adult cared about them
- School connectedness (teachers care, treat fairly)
- School safety
- Parental presence before and after school
- Parent / family connectedness / caring
- GPA
- Religious identity
- Counseling services offered by school
- Number of parent / child activities

Three or more reduced risk of suicide in adolescents by **70-85%.** 

### New research / resources

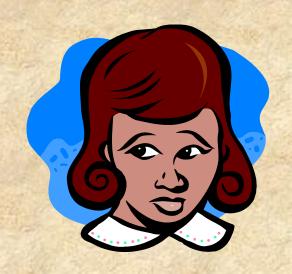
- School-based programs
  - 5<sup>th</sup>- 6<sup>th</sup> graders taught prevention class: half as likely to develop depression (Beardslee)
- Authentic Happiness: Seligman
  - Book and website
  - The Optimistic Child
- Beyondblue
  - Beyondblue.org
- Penn Resiliency Project
  - Adaptivlearning.com

## Hospitalization considered if:

- Episode accompanied by:
  - severe weight loss
  - agitation
  - psychotic features
- Intent to harm self or others
- Unable to do self-care / follow instructions

# Signs of elevated risk

- hopelessness
- helplessness
- insomnia
- anxiety
- ambivalence



Remember, this is a child with a handicap. The child cannot always help behaving in the ways a child with that illness does.

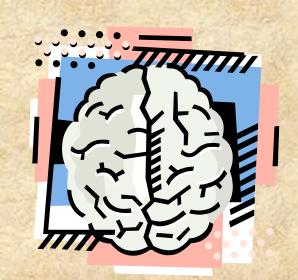
But, the parent can.

Paraphrased from: Dr. Russell Barkley



# Childhood Bipolar Disorder

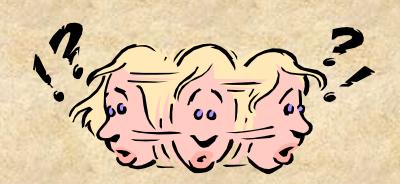
- Inherited
- Illness of brain biochemistry;
   dysfunction of the
   limbic / paralimbic system
- Life stressors worsen the illness



- Recognized in children since 1995
- Onset in early childhood = more severe

## Bipolar: risk of suicide

- Lifetime rate is 20% during depressive episode (1 in 5)
- Highest first few years after diagnosis
- High rate of non-compliance among teenagers
- High rate of substance abuse
- High comorbidity



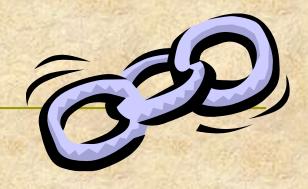
# Childhood Bipolar Disorder Treatment / Interventions



- Medication
  - relief of symptoms
- Family focused treatment
  - prevent damage to relationships
- Education / Therapy
  - prevent relapse
  - reduce stress



## Comorbidity



#### More than one illness is the norm

- ODD almost never seen alone
- CBD before age ten 90% have coexisting illness
- 65% of maltreated children have three or more coexisting illnesses
- Depression, ODD and ADHD coexist most commonly
- Substance abuse often coexists in adolescence
- Learning disabilities

#### Prevention

- Skills training: coping, hopelessness
- Gatekeepers training: identify and get treatment for kids at risk
- Reduce access to methods, especially to guns
- Target special populations (children in foster care)
- Reduce barriers to treatment



# Beliefs that are common, but aren't true...

- Talking about it will give them the idea.
- Suicide occurs with little or no warning.
- If act was not fatal, it means it was only an attention-seeking behavior.
- Suicide occurs because of a stressful event.
- If they want to die, they will just keep trying until they succeed.
- Intervening takes away a person's right to individual choice.

# If you recognize some of those beliefs are part of your thinking...

...it will likely impair your ability to help a person at risk of suicide.

## How to help: What to say

- Don't accuse of faking or attention seeking;
   take comments seriously
- Don't use "logic" or "bluff"
- Don't appear too afraid you may be, but if you look too much so, they may not tell you more
- Say, "has times you're depressed" rather than "depressed" kid

# **Estimating Risk**

- Age
- Gender
- Stress
- Symptoms \_\_\_\_

Subjective:

Their view, not yours!

- Current suicide plan
- Prior suicidal behavior
- Resources



## How to help: What to do

- Decrease physical distance: sit close, touch, put arm around
- Reduce pain in every possible way
- Limit access to easy, lethal methods
- Increase support and protection
- Expect difficult behavior: uncooperative, ungrateful, angry
- Recognize lack of evidence supporting use of no-harm contracts

### **Aftermath**

- Loss of child most devastating bereavement
- Support groups need to be specific to suicide survivors and have change-oriented guidance
- Redefine as "incurably ill"
- Few professionals address survivor needs: often treat family as dysfunctional

### **Aftermath**

- Tell children the truth
- Display concern for survivors
- Legal action rare, based on failure to protect
- Debriefing for those involved
- Confidentiality does not end at death
- Consultation and review for self
- Expect intrusive stress
- Help define as severe illness



## Aftermath support

- Parents of Suicide POS
  - angelfire.com/mi2/parentsofsuicide
- Friends and Family of Suicide FFOS
  - angelfire.com/ga4/ffos/support
- Compassionate Friends
  - compassionatefriends.org
- Survivors of Suicide Loss Support groups (SOS) in Raleigh and Chapel Hill