Pediatric Office Hours

Depression in Children and Adolescents

SEPTEMBER 12, 2019

MICMT
Michigan Institute for Care Management & Transformation

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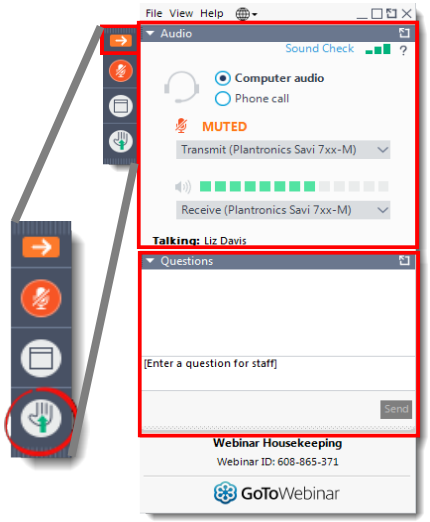

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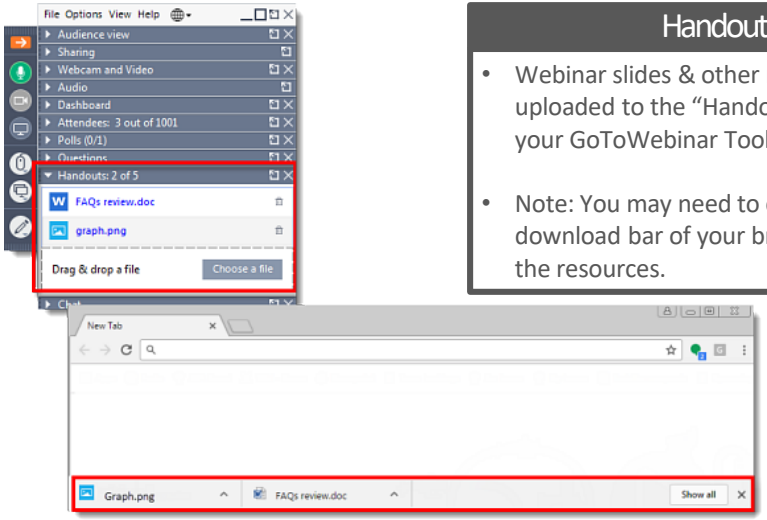

Handouts

- Webinar slides & other resources are uploaded to the “Handouts” section of your GoToWebinar Toolbar.
- Note: You may need to check the download bar of your browser to view the resources.

Thomas L. Atkins, MD

CHILD AND ADOLESCENT PSYCHIATRIST
GROVE EMOTIONAL HEALTH COLLABORATIVE

PCMH Initiative Introduction

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Pediatric Depression

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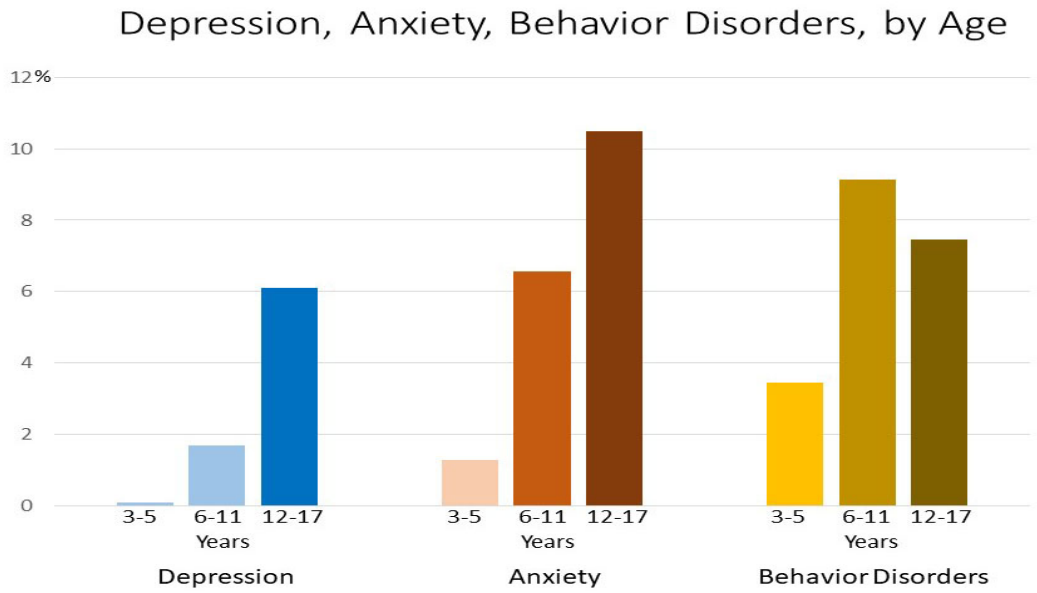
Depression and Suicide Epidemiology

Depression

- Depression before puberty is
  - Relatively rare (<2%)
  - More common in boys (1.5:1 ratio)
- From 12 – 18 prevalence
  - 10-17% in pop. studies
  - More common in females (2:1)
- Prevalence increasing since 2000



Bitsko RH, Holbrook JR, Ghandour RM, Blumberg SJ, Visser SN, Perou R, Walkup J. Epidemiology and impact of **healthcare provider diagnosed** anxiety and depression among US children. *Journal of Developmental and Behavioral Pediatrics* . Published online before print April 24, 2018

Leading Causes of Death in the United States (2016)

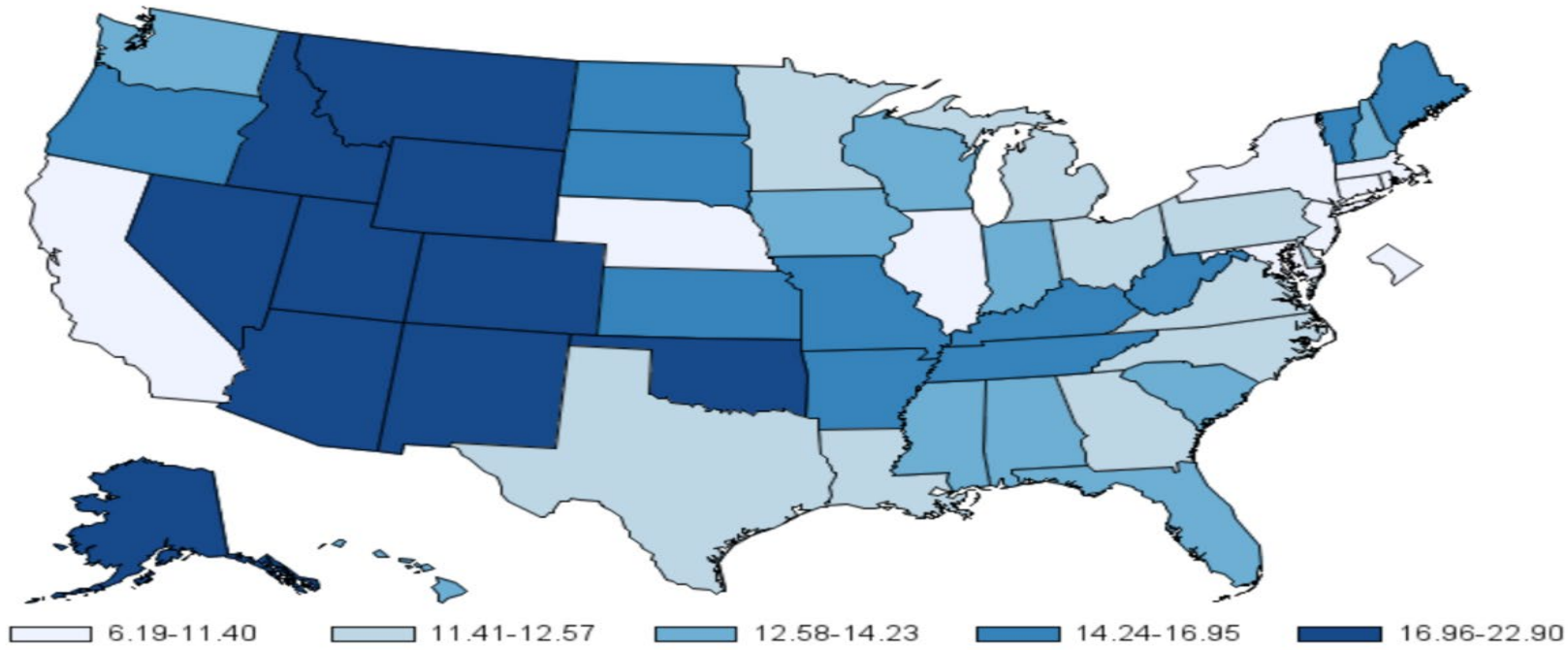
Data Courtesy of CDC

	Select Age Groups							
Rank	10-14	15-24	25-34	35-44	45-54	55-64	65+	All Ages
1	Unintentional Injury 847	Unintentional Injury 13,895	Unintentional Injury 23,984	Unintentional Injury 20,975	Malignant Neoplasms 41,291	Malignant Neoplasms 116,364	Heart Disease 507,118	Heart Disease 635,260
2	**Suicide 436**	**Suicide 5,723**	**Suicide 7,366**	Malignant Neoplasms 10,903	Heart Disease 34,027	Heart Disease 78,610	Malignant Neoplasms 422,927	Malignant Neoplasms 598,038
3	Malignant Neoplasms 431	Homicide 5,172	Homicide 5,376	Heart Disease 10,477	Unintentional Injury 23,377	Unintentional Injury 21,860	CLRD 131,002	Unintentional Injury 161,374
4	Homicide 147	Malignant Neoplasms 1,431	Malignant Neoplasms 3,791	**Suicide 7,030**	**Suicide 8,437**	CLRD 17,810	Cerebro-vascular 121,630	CLRD 154,596
5	Congenital Anomalies 146	Heart Disease 949	Heart Disease 3,445	Homicide 3,369	Liver Disease 8,364	Diabetes Mellitus 14,251	Alzheimer's Disease 114,883	Cerebro-vascular 142,142
6	Heart Disease 111	Congenital Anomalies 388	Liver Disease 925	Liver Disease 2,851	Diabetes Mellitus 6,267	Liver Disease 13,448	Diabetes Mellitus 56,452	Alzheimer's Disease 116,103
7	CLRD 75	Diabetes Mellitus 211	Diabetes Mellitus 792	Diabetes Mellitus 2,049	Cerebro-vascular 5,353	Cerebro-vascular 12,310	Unintentional Injury 53,141	Diabetes Mellitus 80,058
8	Cerebro-vascular 50	CLRD 206	Cerebro-vascular 575	Cerebro-vascular 1,851	CLRD 4,307	**Suicide 7,759**	Influenza & Pneumonia 42,479	Influenza & Pneumonia 51,537
9	Influenza & Pneumonia 39	Influenza & Pneumonia 189	HIV 546	HIV 971	Septicemia 2,472	Septicemia 5,941	Nephritis 41,095	Nephritis 50,046
10	Septicemia 31	Complicated Pregnancy 184	Complicated Pregnancy 472	Septicemia 897	Homicide 2,152	Nephritis 5,650	Septicemia 30,405	**Suicide 44,965**

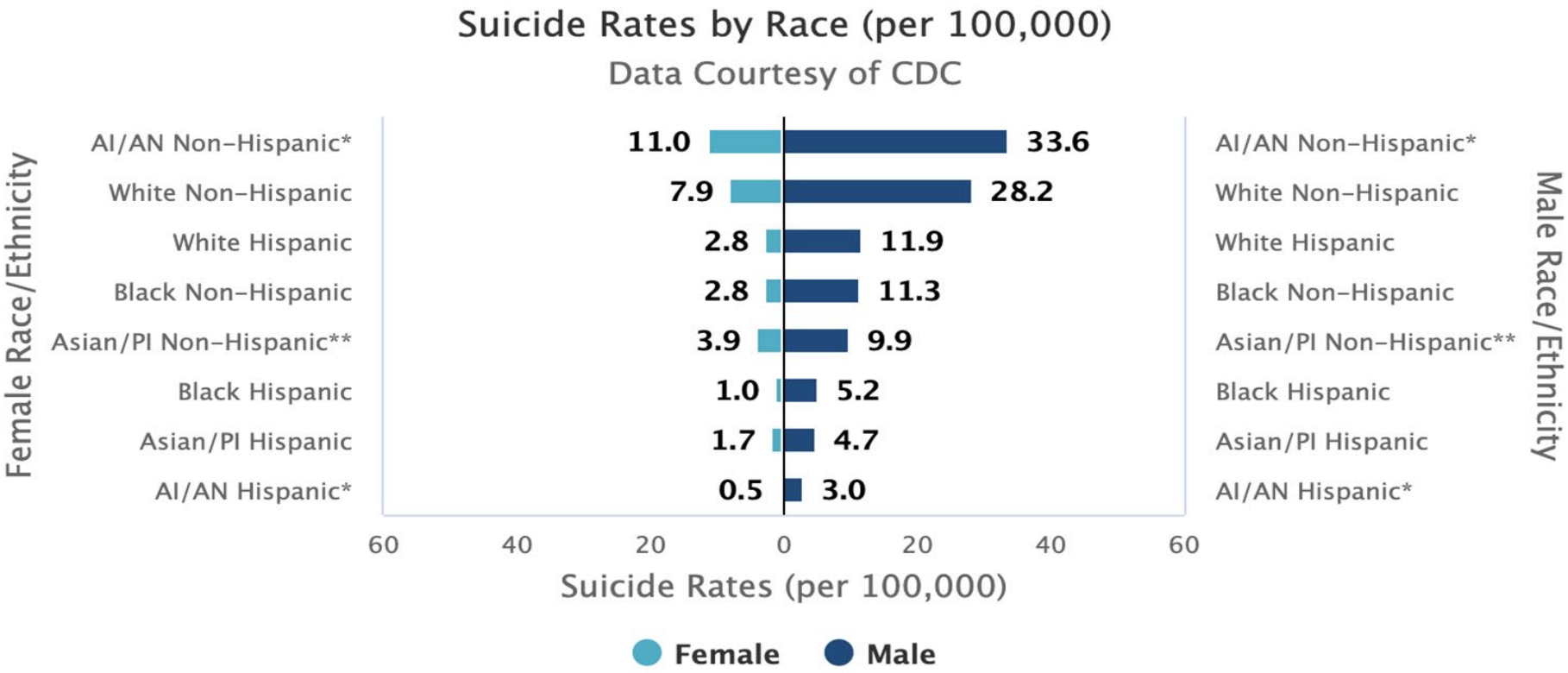
Second leading cause of death from age 10 - 34

Suicide Rates in the United States
(by state; per 100,000; average 2008–2014)

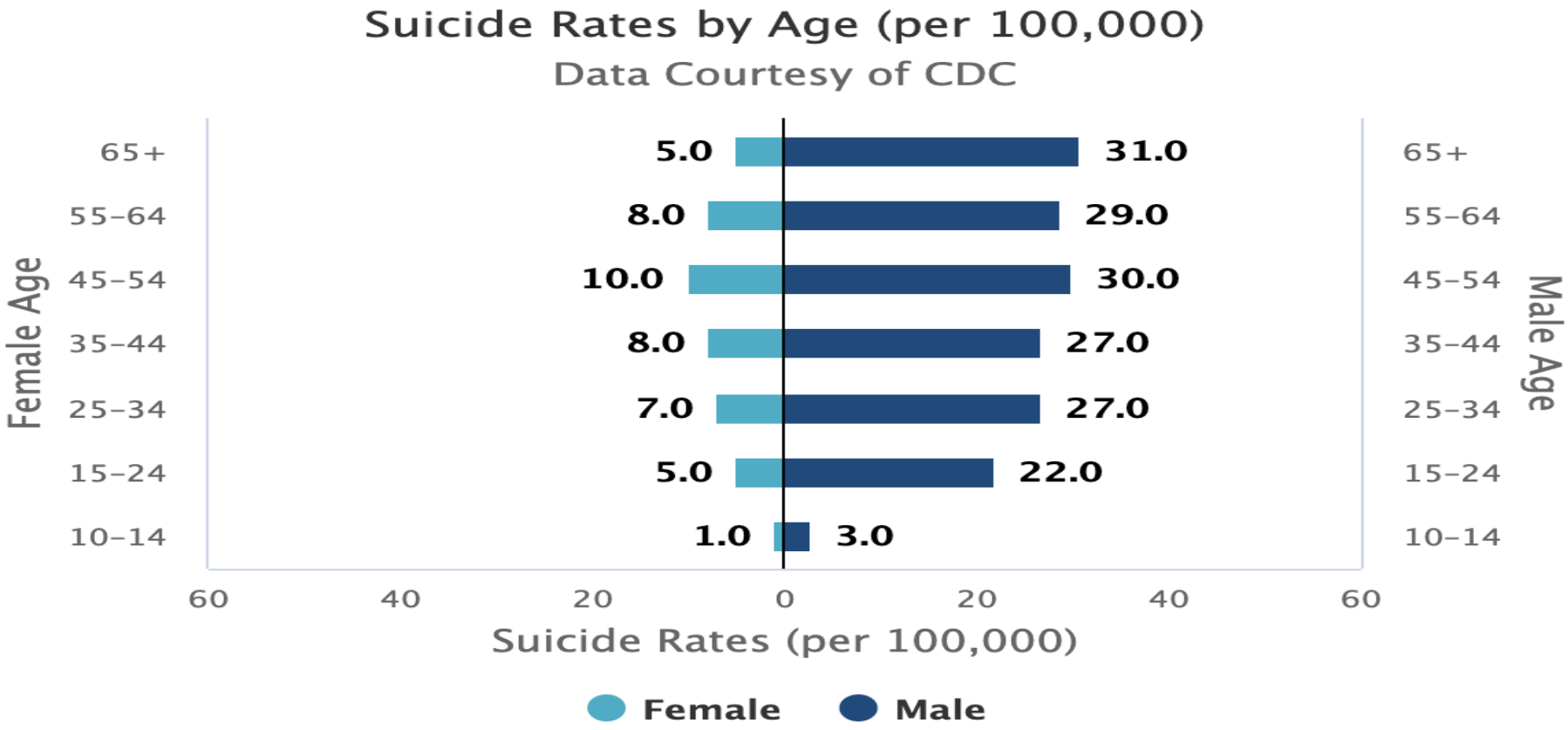
Data Courtesy of CDC



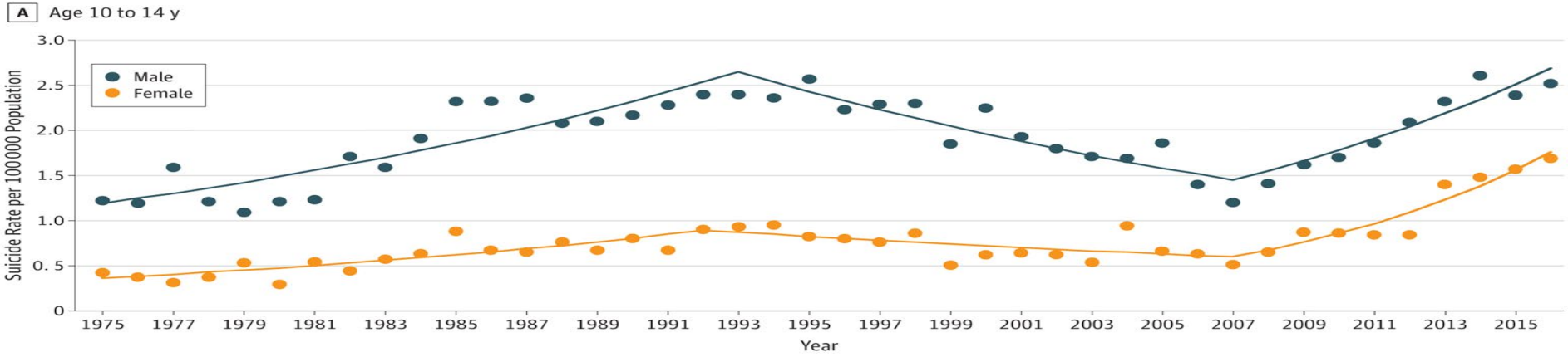
Michigan Rate Between 11.41 - 12.57 / 100,000 people

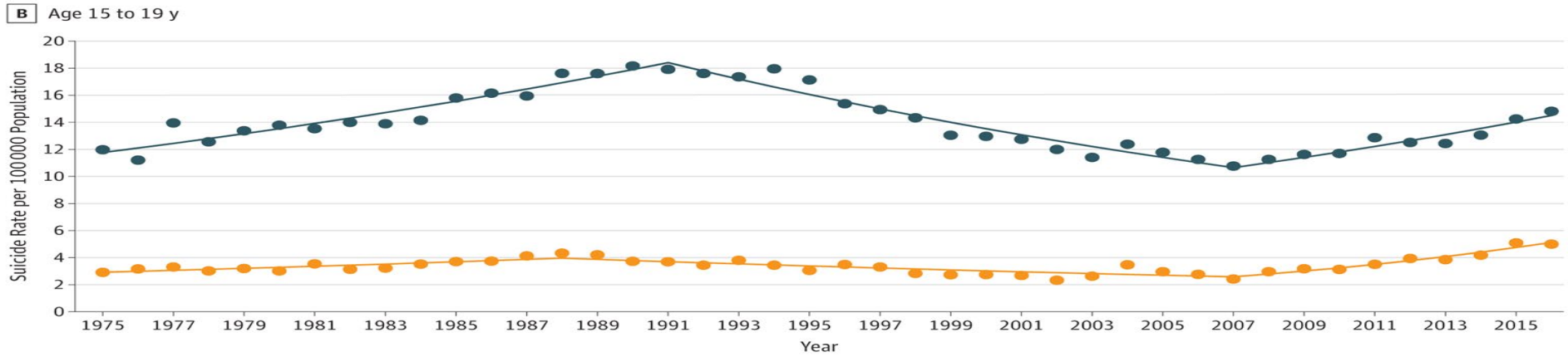


Wide Variation in Rate by Race



Suicide Most Common in Older Males





Rate Increasing this Century, Especially among 10 - 14 year olds

Definition and Differential

Major Depressive Disorder DSM -5 Criteria

5 of the following 9 symptoms causing functional impairment during a same 2 -week period, with at least one symptom being either depressed or irritable mood or anhedonia:

- Depressed or irritable mood
- Decreased interest or lack of enjoyment
- Decreased concentration or indecision
- Insomnia or hypersomnia
- Change of appetite or change of weight
- Excessive fatigue
- Feelings of worthlessness or excessive guilt
- Recurrent thoughts of death or suicidal ideation
- Psychomotor agitation or retardation.

Depression Vignette:

Bold words are possible chief complaints

A 15-year-old girl in the 10th grade presents **feeling tired, difficulty falling asleep** , **stomach aches** , and **poor concentration** . She lives with her mother and a 13-year-old sister. Her mother describes her as an outgoing and straight-A student until about 6 months ago. Her grades have slipped from As to Cs, and she has been feeling sad and **irritable** . She has started avoiding her friends, and has been worrying about her appearance and her grades. She states that she feels dumb, and that her classmates don't like her. Recently, she started to think that life was not worth living, and wished she would fall asleep and never wake up.

Differential Diagnosis

- Other mental health disorder
  - Persistent depressive disorder (dysthymia)
  - Social Anxiety, PTSD
  - Substance Use
  - Adjustment Disorder
  - Eating Disorder
- Hypothyroidism
- Anemia
- Vitamin D or folate deficiency
- Undiagnosed chronic illness
- Normal Development

Normal Adolescent Development that Mimics Depression

- Individuation is an age appropriate task for for adolescents
- More irritable with parents
- Less talkative to parents
- More invested in peers
- Developing sense of self
    - Lots of comparing
    - Trying new behaviors
- Less concrete thinking; more existential or nihilistic thoughts.

Screening

Depression Screening Tools

- PHQ-9
  - Range 0 - 27
  - >10 or positive screen need to be followed up by a clinical interview
  - https://www.aacap.org/App_Themes/AACAP/docs/member_resources/toolbox_for_clinical_practice_and_outcomes/symptoms/GLAD-PC_PHQ-9.pdf
- CES-DC
  - Range 0 - 60
  - > 15 is a positive screen for depressive symptoms.
  - There are no questions about suicidal ideation or self-harm; better screen when clinical follow up not readily available.
  - https://www.brightfutures.org/mentalhealth/pdf/professionals/bridges/ces_dc.pdf

Depression - Triage

The Secret Sauce

- Time, a scarce resource in primary care, is your best tool to successfully help a child with a depressed mood. A 20 to 30 min conversation is invaluable.
- Talk to the child alone.
- Define the limits of confidentiality right at the beginning.
- Listen much more than you talk.
- Don’t challenge cognitive distortions, you are just gathering information.
- Don’t give advice.
- Try not to judge.
- Try not to be anxious.

Triage - Individual Modifying Factors

- Comorbid psychiatric or substance use disorders
- History of trauma, abuse, neglect, or early loss
- Aggressive behavior
- Grief associated with the loss of a peer, mentor, caretaker or family member
- Suicidal ideation, hopelessness or psychotic features
- Poor function at school
- Poor Social function (loss of friends, bullying, passive social media)
- Stress related to gender / sexuality
- Other psychosocial stress
- Recurrence of depression

Triage - Home Environment

- Family history, parental psychopathology
- Poorly functioning caretakers
- Low SES
- Experiencing fear in the home
- Inconsistent provision of basic needs
- High level of conflict in the home

Moderate Depression

Moderate Depression - Definition

- Approximately 10 - 15 on the PHQ-9 A
- Only 1 or 2 modifying risk factors
- No suicidal ideation

Moderate Depression “Plus”

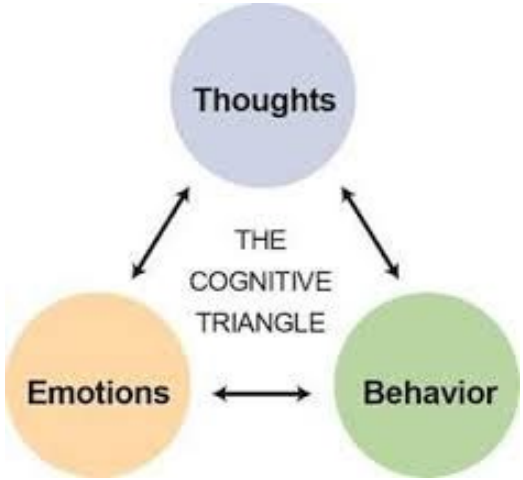
- Moderate Depression Plus:
- Suicidal ideation only expressed in hot anger / frustration (hard to discern)
- Fleeting suicidal ideation with no plan. (hard to discern)
- Ideally consult with mental health professional
- Any suicidal ideation should be shared with parents
- Specialty care prefered but can be treated successfully in primary care.

Moderate Depression Treatment

- Case Management: communication between child, parents, school
  - Isolation is very dangerous
- Psychoeducation
  - Normalize depression
  - Introduce the idea that not every thought we have is accurate
- Sleep Hygiene
  - Can use OTC sleep aid (Melatonin)
  - Create a healthy and consistent schedule
- Nutritional Counseling
- Behavioral activation
  - Social activities
  - Build competency
  - Exercise
  - Build Insight - Mindfulness, Yoga

CBT Basics

- Co-located MSW / collaborative care models are great.
- RN's can also learn basics of CBT
- Basic principles:
  - Not all of our thoughts are acurate
  - If we are calm and curious we can notice that.
  - Once we notice that we can try to change our thoughts to be healthier and more accurate.



Severe Depression

Severe Depression

- PHQ-9 A greater than 15
- Several Modifying Factors
- Persistent suicidal ideation
- Suicidal ideation with a plan
- Suicidal ideation with a plan and intent need to be sent to ER for evaluation and probably admission
    - Many fewer “child bed” than there need to be in the state of Michigan
    - Wait time in ER are sometimes measured in days.

Severe Depression - Treatment

- All included in treatment for moderate MDD
- Psychotherapy alone
- Medication alone
- Combination of psychotherapy and medication

Treatment for Adolescents with Depression Study (JAMA Aug. 2004)

- 439 adolescents, ages 12-17 years from 13 US academic and community clinics 2000 - 2003 (mostly academic patients)
- Exclusions: actively suicidal, abusing alcohol or drugs, psychotic, severe conduct problems, or need hospitalization
- Four treatment groups for 12 weeks (CBT groups not masked):
    - Fluoxetine (10-40 mg)
    - CBT + fluoxetine (COMB)
    - CBT only
    - placebo

TADS continued

- Rates of response
  - 71% COMB*
  - 61% fluoxetine*
  - 43% CBT
  - 35% placebo
  - * fluoxetine -containing conditions were statistically superior to CBT and to placebo
- COMB resulted in greater rates of remission 37% and normalization of functioning (35%) than placebo (17% and 19% respectively)
- Suicidality decreased significantly in all treatment groups
  - Fluoxetine with CBT showed the greatest reduction (P= .02)
- **Conclusion: Combination treatment for depression is the optimal treatment choice**

Professional Psychotherapy

- Sometimes loving the person listening to you is a barrier
- Creates a safe space separate from “real life”
- Takes advantage of years of professional training and experience
- Most important predictor of a therapeutic response is…. Liking your therapist!

Medication Alone

- Previous poor response to psychotherapy
- Therapy not available or practical
- Children that are agitated, inattentive, not interested

Medication

The SSRIs

Table 1 SELECTIVE SEROTONIN REUPTAKE INHIBITORS

Medication	FDA Approval Status	Starting Daily Dose	Usual Effective Daily Dose	Maximum Daily Recommended Dose
citalopram	not approved for children or adolescents	5-10 mg	20-40 mg/d	60 mg/d
escitalopram	major depression-12 years & up	2.5-5 mg/d	5-20 mg/d	30 mg/d
fluoxetine	depression-8 years & up, OCD-7 years & up	5-10 mg/d	10-40 mg/d	60 mg/d
fluvoxamine	OCD-8 years & up	25-50 mg/d	50-200 mg/d	300 mg/d
paroxetine	not approved for children or adolescents	5-10 mg/d	10-40 mg/d	60 mg/d
sertraline	OCD-6 years & up	12.5-25 mg/d	25-100 mg/d	200 mg/d

SSRI- What Should We Expect?

- Placebo response rate is 30 - 60%
- SSRI response rate is 40 - 70%
- (1st + 2nd med trial response rate is about 75%)
- Number Needed to Treat is 10
- Remission rate 30 - 40%

SSRI's Side Effects

- Central nervous system: Insomnia (10% to 33%), **headache** (21%), drowsiness (5% to 17%), anxiety (6% to 15%), yawning (≤1%)
- Decreased libido (11% to 25%) - no tolerance to this SE
- Gastrointestinal: **Nausea** (12% to 29%), **diarrhea** (8% to 18%), anorexia (4% to 17%), dry mouth (4% to 12%)
- Neuromuscular & skeletal: Weakness (9% to 21%), tremor (3% to 13%)
- Respiratory: Pharyngitis (10% to 11%)

SSRI's Black Box Warning

- Antidepressants increase the risk of suicidal thinking and behaviour in children, adolescents, and young adults (18 - 24 years of age) with major depressive disorder and other psychiatric disorders.
- The FDA evaluated the effects on suicidality of nine antidepressants used in 24 acute RCTs (16 MDD, 4 OCD, 2 generalized anxiety disorder, 1 SAD, and 1 ADHD; Hammad et al., 2006; Posner et al., 2007). Total number of children = 4,500.
- One primary outcome was spontaneously reported occurrences of suicidal ideation and behavior, "suicidal adverse events". There were no completed suicides in any of the studies

SSRI's Black Box Warning

- For patients on SSRI's there was an overall risk ratio (RR) for suicidality of 1.95
- This means study participants on medication were almost 2 x more likely to have suicidal ideation or behavior.
- This difference was only seen in clinic visits, there was no difference noted on the questionnaires filled out by the two groups

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SSRI's Black Box Warning

- The numbers were small in both groups however, about 2% suicidal adverse events in the non-medicated group vs. 4% in the medicated group
- Put another way, the overall number needed to harm (NNH to observe one adverse event that can be attributed to the active treatment) for MDD was 112
- As stated before, the overall NNT for the antidepressants in pediatric depression is 10. Thus 11 times more depressed patients may respond favorably to antidepressants than may spontaneously report suicidality.

Correlation BB Warning and Suicide Rate

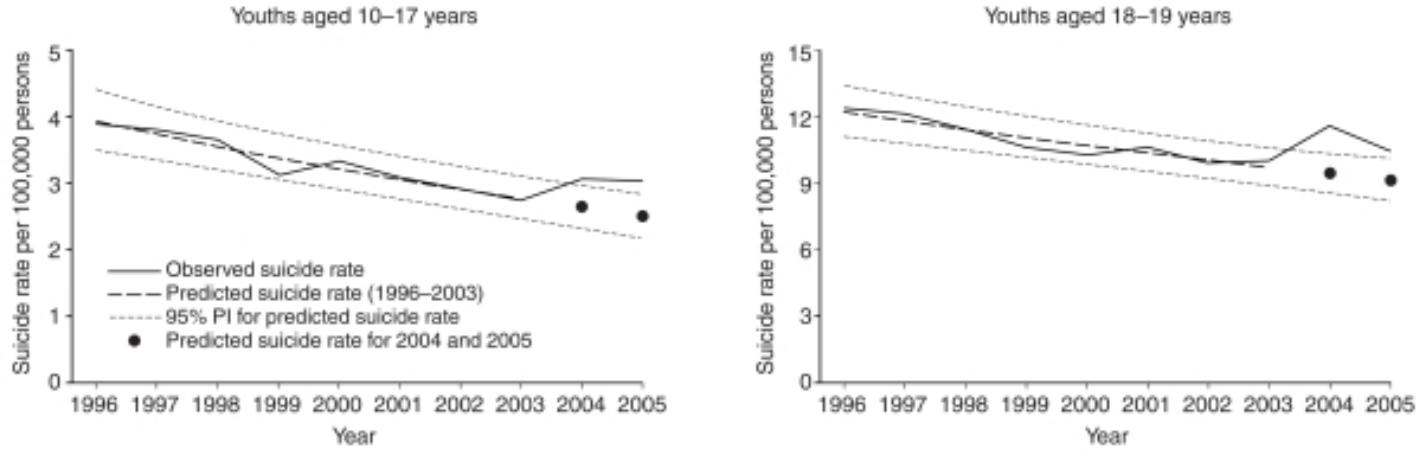

Figure 1 Annual suicide rates for U.S. youths 10 to 17 and 18 to 19 years of age from 1996 to 2005. (From Bridge JA, Greenhouse JB, Weldon Ah, et al. *JAMA* 2008;300:1025–1026. Copyright © 2008, American Medical Association.[4])


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