

MEN'S HEALTH NETWORK in collaboration with the Congressional Men's Health Caucus

Congressmen Markwayne Mullin (OK) and Donald Payne, Jr. (NJ) (Co-Chairs)

Briefing:

Men's and Boys' Mental Health Issues: Gateways to Opioid and Drug Abuse?

Agenda

I. Opening Remarks

- Ana Fadich, MPH, CHES – Introduction
Vice President, Men's Health Network, Chair, APHA Men's Health Caucus
- Congressman Donald Payne, Jr. (Confirmed), *Tenth District, New Jersey*
- Congressman Markwayne Mullin (Invited), *Second District, Oklahoma*

II. Speakers

- **Eric Murphy, PhD**
Program Chief
Depression and Suicide Related Behaviors Program, National Institute of Mental Health (NIMH)
- Wizdom Powell, PhD, MPH, MS
Director
Health Disparities Institute, University of Connecticut
- Gregory Tau, MD, PhD
Faculty, Child and Adolescent Psychiatry
Columbia University Medical Center
- Nathaniel Counts, JD
Senior Policy Director
Mental Health America



Translational Research in Developmental Depression and Suicide Risk

Eric Murphy, Ph.D.

Chief: Depression and Suicide Related
Behaviors Program

Division of Translational Research, NIMH

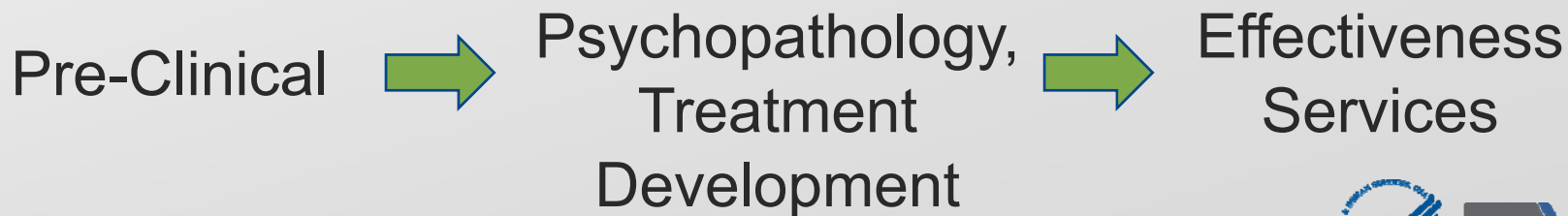
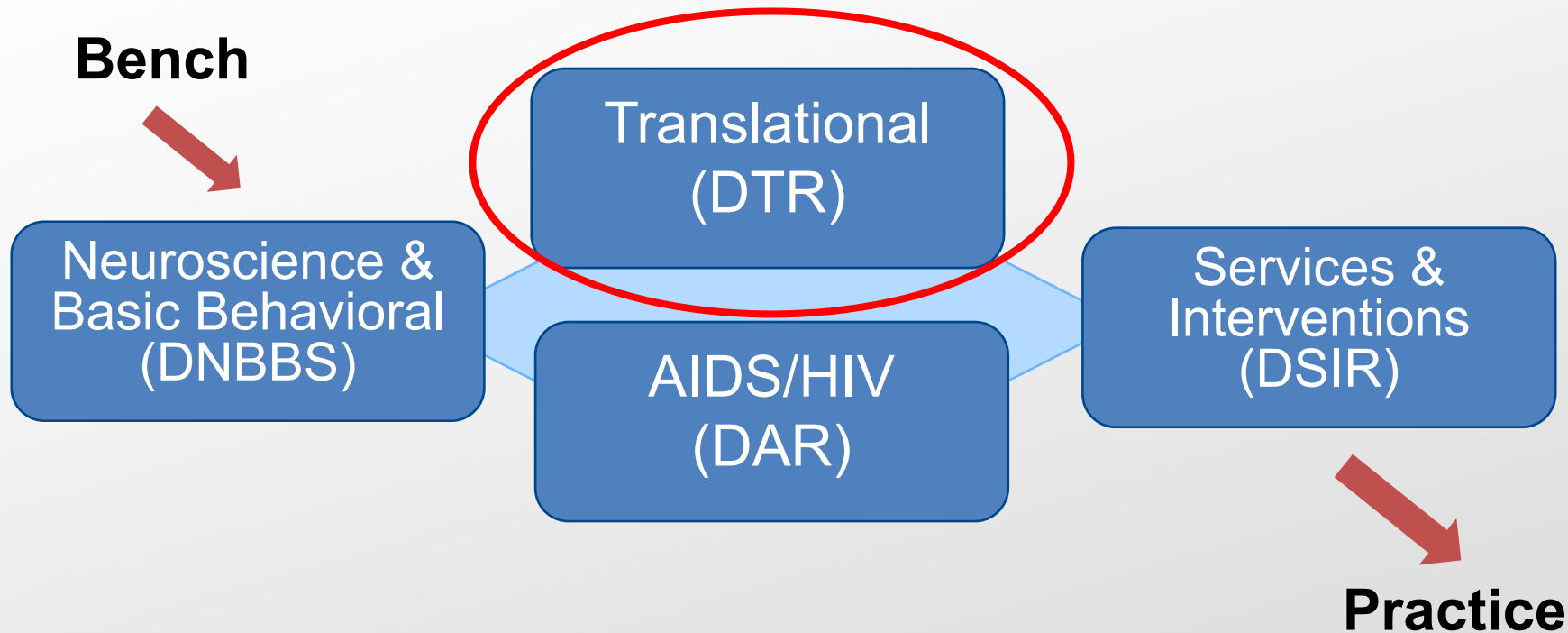
January 30, 2018



Talk Overview

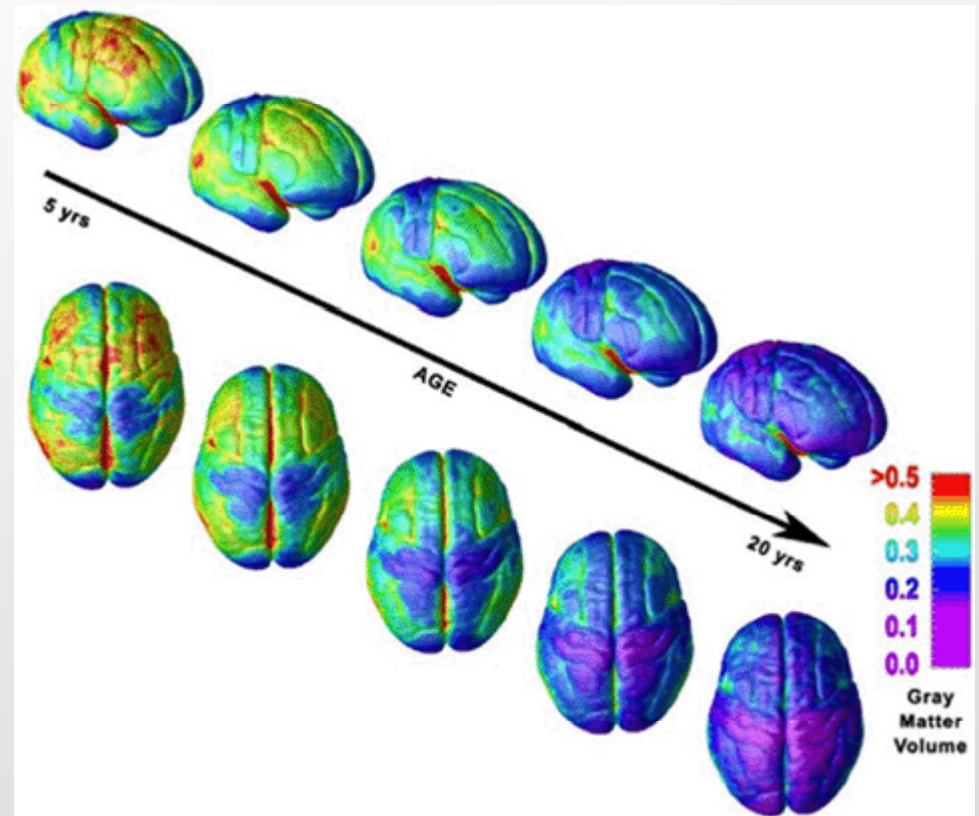
- Defining translational research
- Brain development
 - Healthy
 - Disordered
- Depression and suicide statistics in youth
- Snapshots of ongoing research
- Future areas of interest

Translational Research, Explained via the NIMH Extramural Division Structure



Brain Development is Protracted

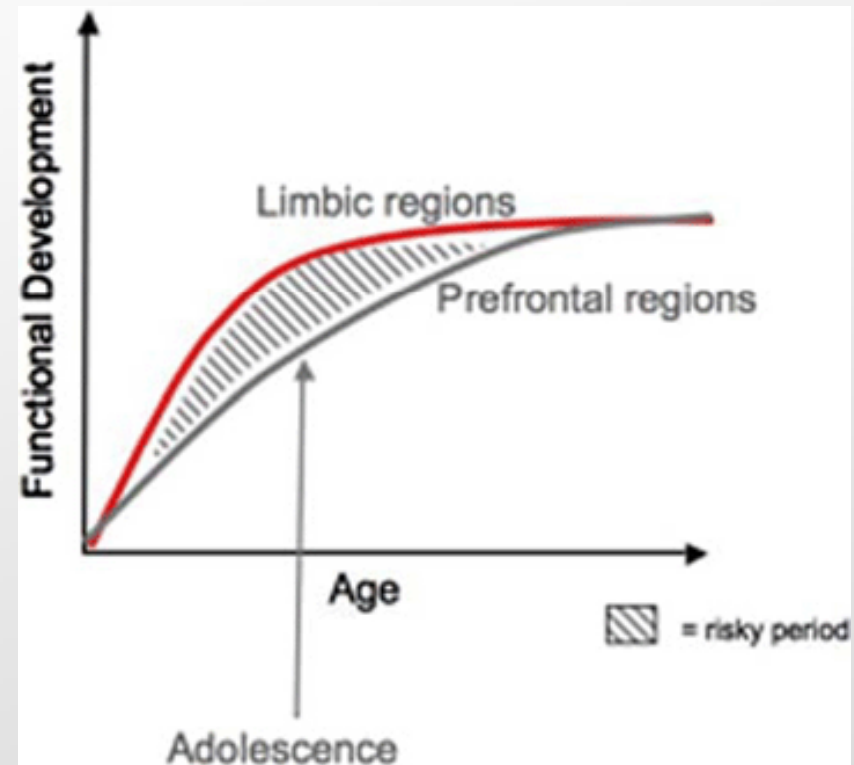
- Brain maturation continues through late adolescence.
- Brain regions develop at different rates, as do associated cognitive abilities.
- Disordered development can interfere with cognitive abilities associated with adaptive functioning, and contribute to mental health issues.



Lenroot & Giedd 2006

Cognitive Development in Adolescence

- Faster development of limbic regions (reward, fear, anger) than prefrontal regions (self-control) during adolescence contributes to risky behavior.
- Atypical development can create imbalance in relationship between limbic and prefrontal regions:
 - Impulsivity
 - Negative Affect
 - Decreased reward response
 - Lack of motivation



Casey, Jones & Hare, 2008

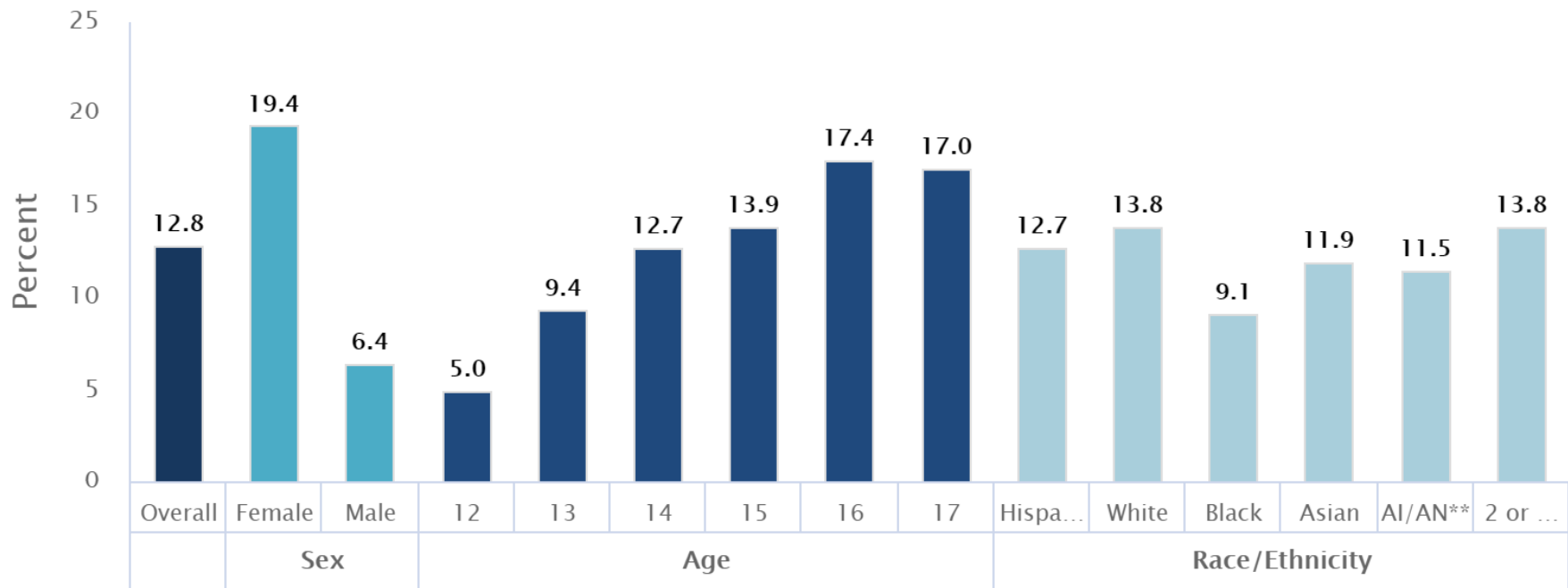
What Could Contribute to Disordered Development?

- Environmental Stressors
 - Trauma
 - Malnutrition
 - Neglect
 - Abuse
 - Poverty
 - In-utero exposures
- Genetic Predisposition
- Many other factors (social environment, gender, age, puberty, etc.)
- Interactions of multiple factors

Depression Rates across Adolescence

Past Year Prevalence of Major Depressive Episode Among U.S. Adolescents (2016)

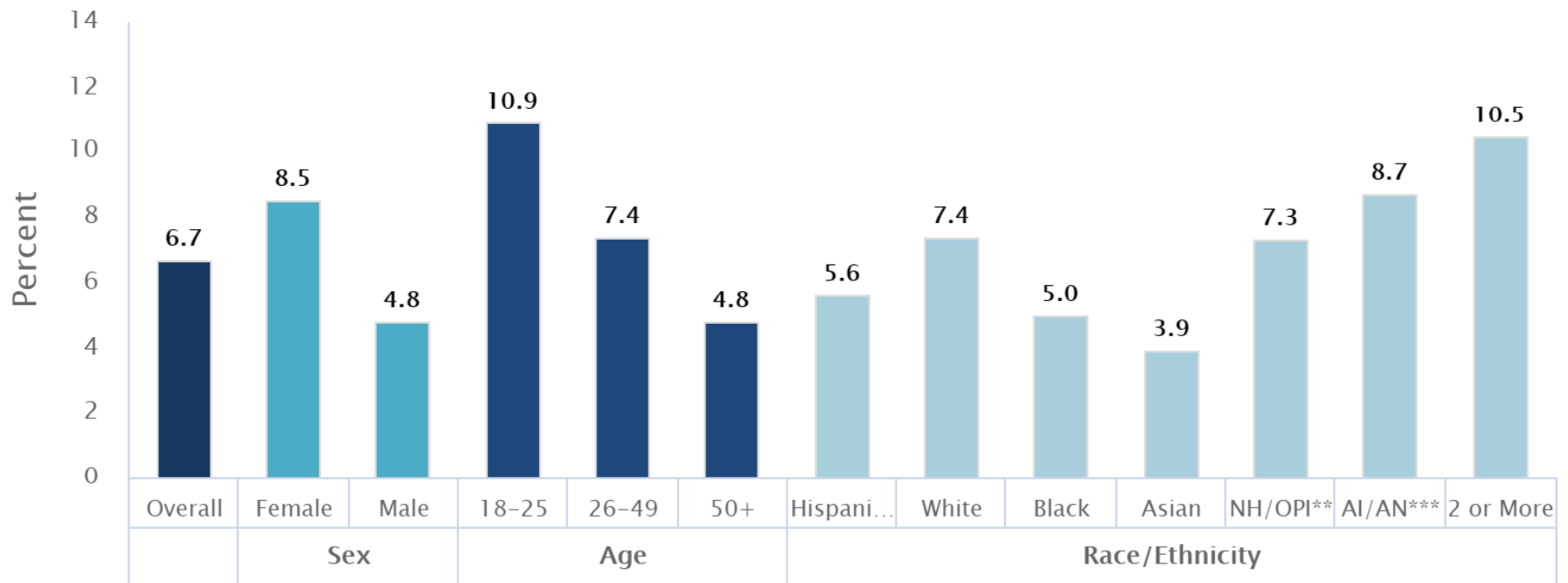
Data Courtesy of SAMHSA



Depression Rates in Adulthood

Past Year Prevalence of Major Depressive Episode Among U.S. Adults (2016)

Data Courtesy of SAMHSA



Leading Causes of Death Across Lifespan

Table 1. Leading Causes of Death in the United States (2015)

Rank	Select Age Groups						
	10-14	15-24	25-34	35-44	45-54	55-64	All Ages
1	Unintentional Injury 763	Unintentional Injury 12,514	Unintentional Injury 19,795	Unintentional Injury 17,818	Malignant Neoplasms 43,054	Malignant Neoplasms 116,122	Heart Disease 633,842
2	Malignant Neoplasms 428	Suicide 5,491	Suicide 6,947	Malignant Neoplasms 10,909	Heart Disease 34,248	Heart Disease 76,872	Malignant Neoplasms 595,930
3	Suicide 409	Homicide 4,733	Homicide 4,863	Heart Disease 10,387	Unintentional Injury 21,499	Unintentional Injury 19,488	CLRD 155,041
4	Homicide 158	Malignant Neoplasms 1,469	Malignant Neoplasms 3,704	Suicide 6,936	Liver Disease 8,874	CLRD 17,457	Unintentional Injury 146,571
5	Congenital Anom alies 156	Heart Disease 997	Heart Disease 3,522	Homicide 2,895	Suicide 8,751	Diabetes Mellitus 14,166	Cerebro-vascular 140,323
6	Heart Disease	Congenital Anom alies	Liver Disease	Liver Disease	Diabetes Mellitus	Liver Disease	Alzheimer's Disease

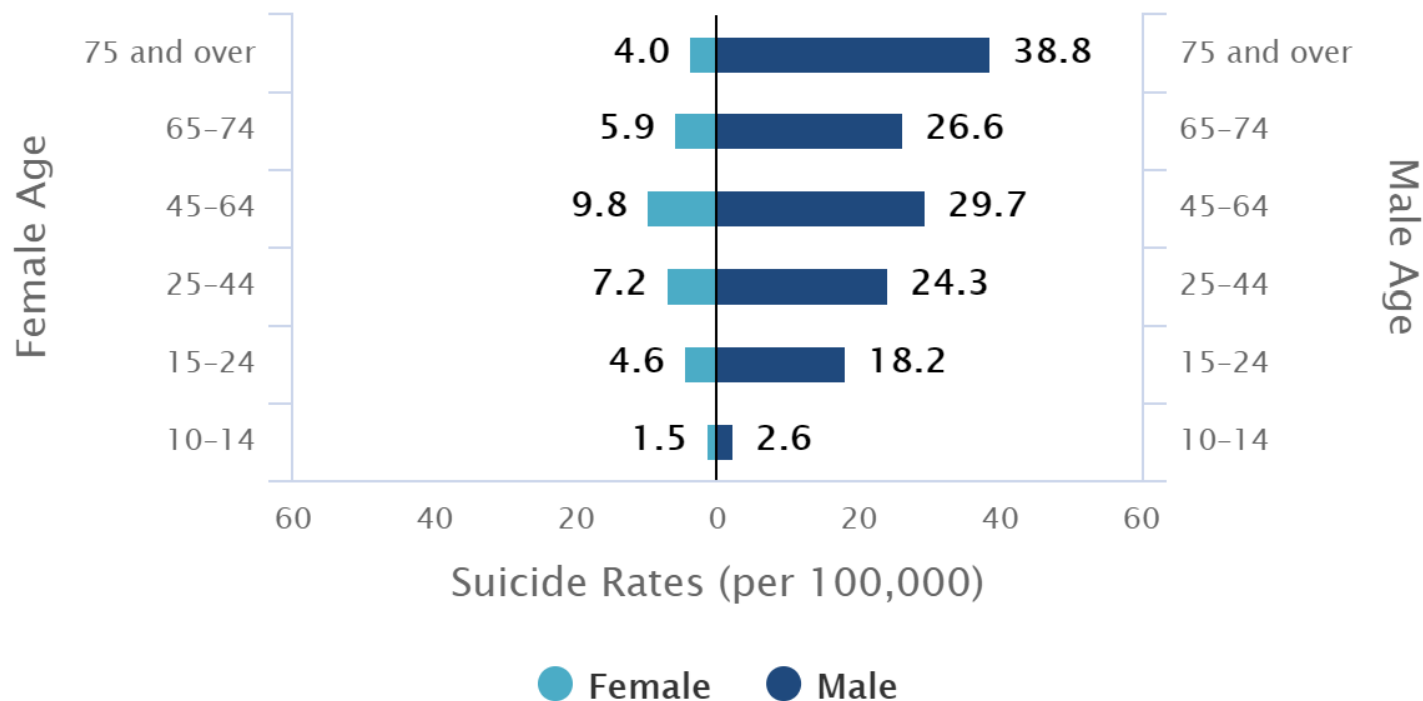
Data courtesy of CDC



Suicide Rates For Males and Females by Age

Suicide Rates for Males and Females by Age in the United States (2014)

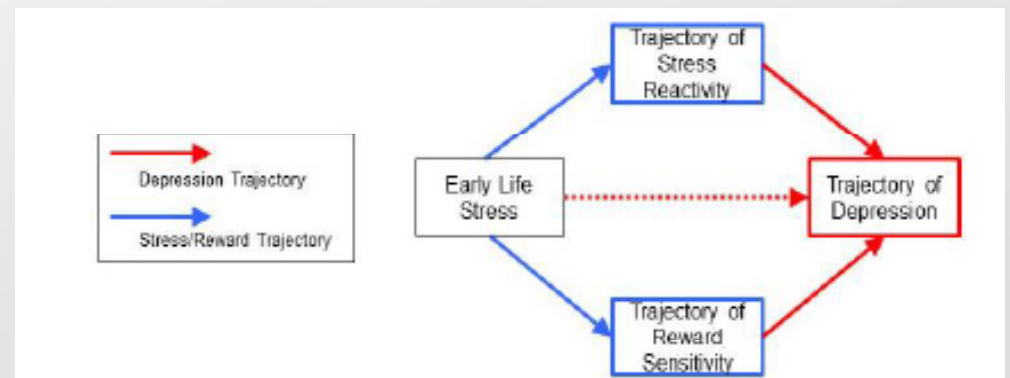
Data Courtesy of CDC



Recent and Current NIMH Work

Psychobiological Mechanisms Underlying the Association Between Early Life Stress and Depression Across Adolescence.

- Early Life Stress (ELS) increases risk for later psychopathology, but we still know very little about how or when these stressors influence neural development.
- This study collected ELS info from healthy children, then measured behavior and brain imaging over time in the same individuals.
- Separately evaluates ELS effects on two cognitive domains associated with depression: Stress Reactivity and Reward Sensitivity.



Ian Gotlib MH101495

Recent and Current NIMH Work, Cont.

Biomarkers, social, and affective predictors of suicidal thoughts and behaviors in adolescents.

- Adolescents who have been hospitalized for suicidal thoughts and behaviors are highly likely to make a suicide attempt within 6 months of discharge.
- The social context of the family environment that the adolescent returns to can play a large role in alleviating or exacerbating these thoughts.
- In this study, an Electronically Activated Recorder (EAR) carried by the adolescent periodically records the environment. Social context and reactive affect will be used to predict suicidal thoughts and behaviors.
- Will look at whether childhood maltreatment and associated biological signatures enhances relationship between social context and affect.

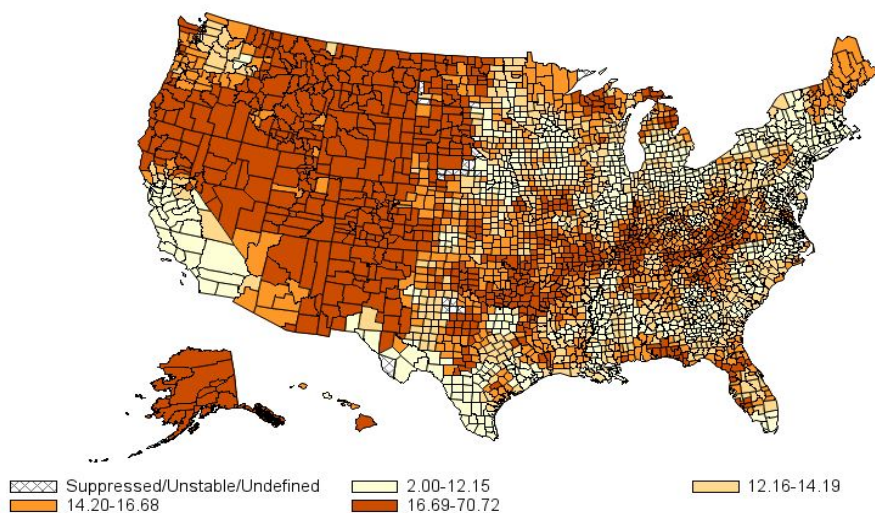
Nicole Nugent MH105379

Future Areas of Interest

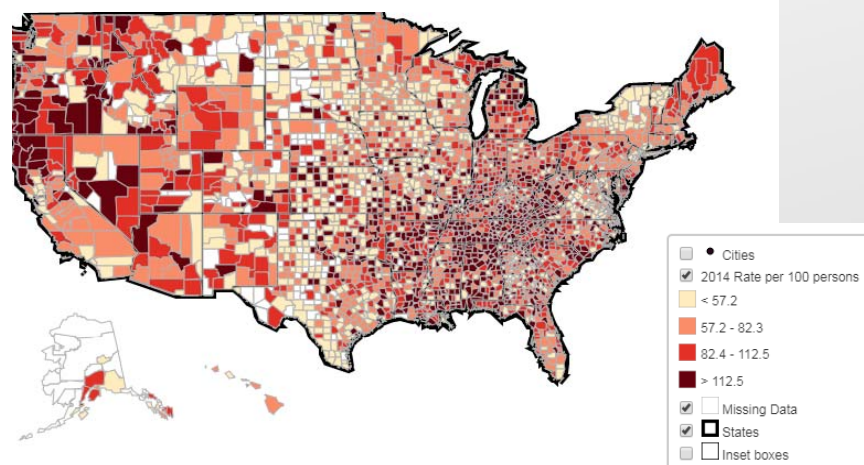
- Proximal risk for suicide: can we tell when someone might transition from thinking about suicide to acting on these thoughts?
- Influence of sleep on mental health.
- Suicidal thoughts and behaviors in younger children.

Suicide and Opiate Use

2008-2014, United States
Smoothed Age-adjusted Death Rates per 100,000 Population
All Injury, Suicide, All Races, All Ethnicities, Both Sexes, All Ages
Annualized Age-adjusted Rate for United States: 12.26



U.S. County Opioid Prescribing Rates, 2014



Courtesy of CDC

References

- NIMH mental health statistics website:
<https://www.nimh.nih.gov/health/statistics/index.shtml>
 - Graphs and charts for many mental health disorders
 - Links to source data
- CDC Web-based Injury Statistics Query and Reporting System:
<https://www.cdc.gov/injury/wisqars/index.html>
 - Mapping of data nationally or by census region.

Thank you