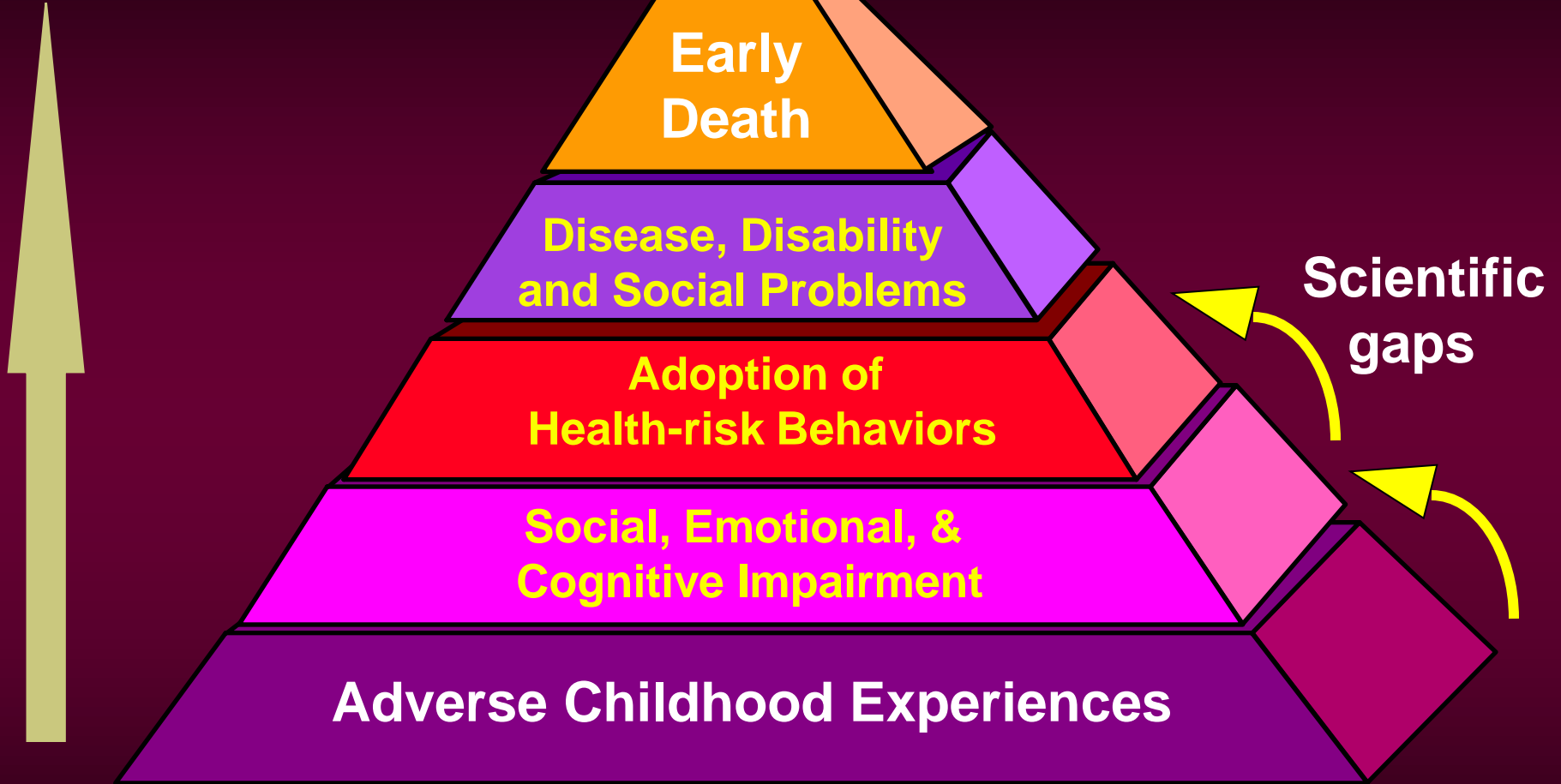


Overview of the Adverse Childhood Experiences (ACE) Study

Robert F. Anda, MD, MS
Co-Principal Investigator

www.RobertAndaMD.com

Death



Scientific gaps

Adverse Childhood Experiences

Social, Emotional, & Cognitive Impairment

Adoption of Health-risk Behaviors

Disease, Disability and Social Problems

Early Death

Conception

The Adverse Childhood Experiences (ACE) Study

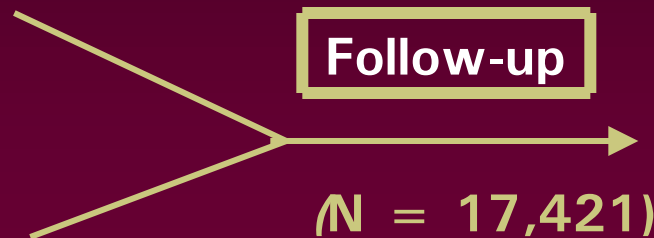
Examines the health and social effects of ACEs throughout the lifespan among 17,421 members of the Kaiser Health Plan in San Diego County

What do we mean by Adverse Childhood Experiences?

- childhood abuse and neglect**
- growing up with domestic violence, substance abuse or mental illness in the home, parental discord, crime**

ACE Study Design

**Survey Wave I
(N = 9,508)
Index**



**Mortality
National Death**

**Morbidity
Hospital Discharge
Outpatient Visits**

**Survey Wave II
(N = 8,667)**

**Emergency room
visits**

Pharmacy

Utilization

*All medical evaluations
abstracted from both waves*

Adverse Childhood Experiences Are Common

Household dysfunction:

Substance abuse	27%
Parental sep/divorce	23%
Mental illness	17%
Battered mother	13%
Criminal behavior	6%

Abuse:

Psychological	11%
Physical	28%
Sexual	21%

Neglect:

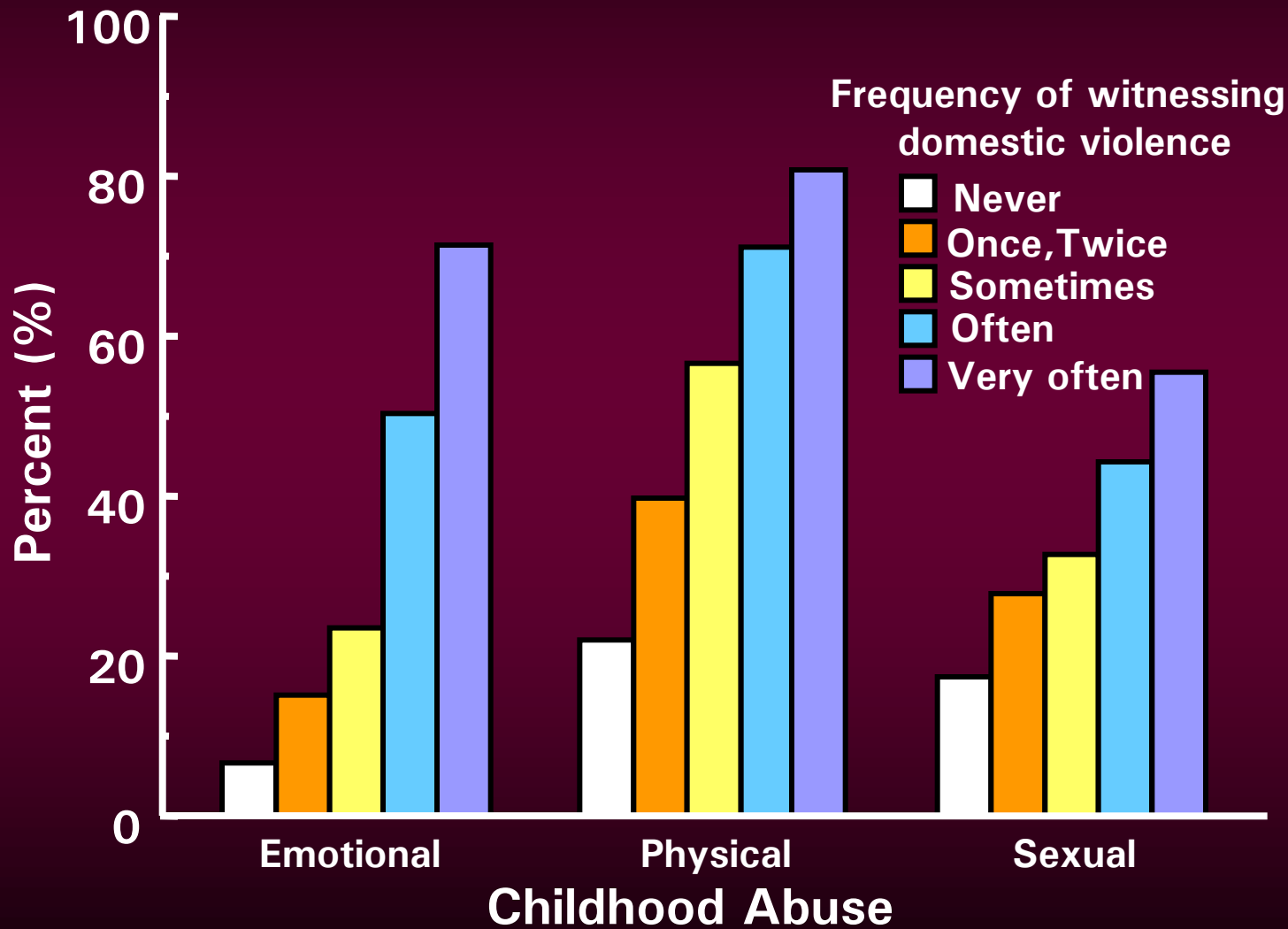
Emotional	15%
Physical	10%

**Adverse Childhood Experiences Rarely
Occur in Isolation...**

They come in **groups.**

Domestic Violence and the Risk of Other ACEs...

Prevalence of Childhood Abuse by Frequency of Witnessing Domestic Violence



ACEs tend to come in groups...

Additional ACEs (%)

1 2 3 4 ≥5

If you had:

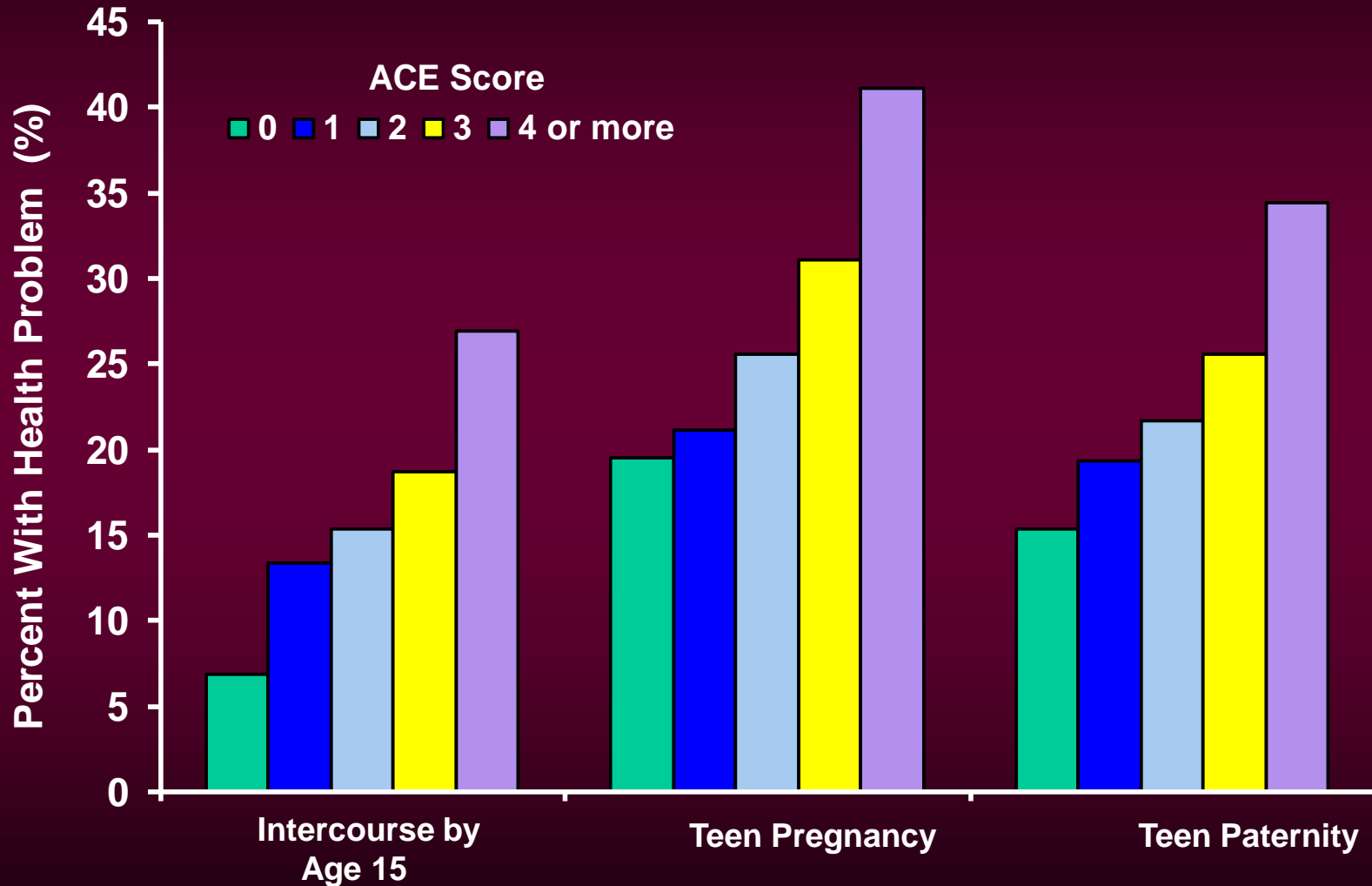
A battered mother 95 82 64 48 52

Adverse Childhood Experiences Score Complex Trauma--Trauma “Dose”

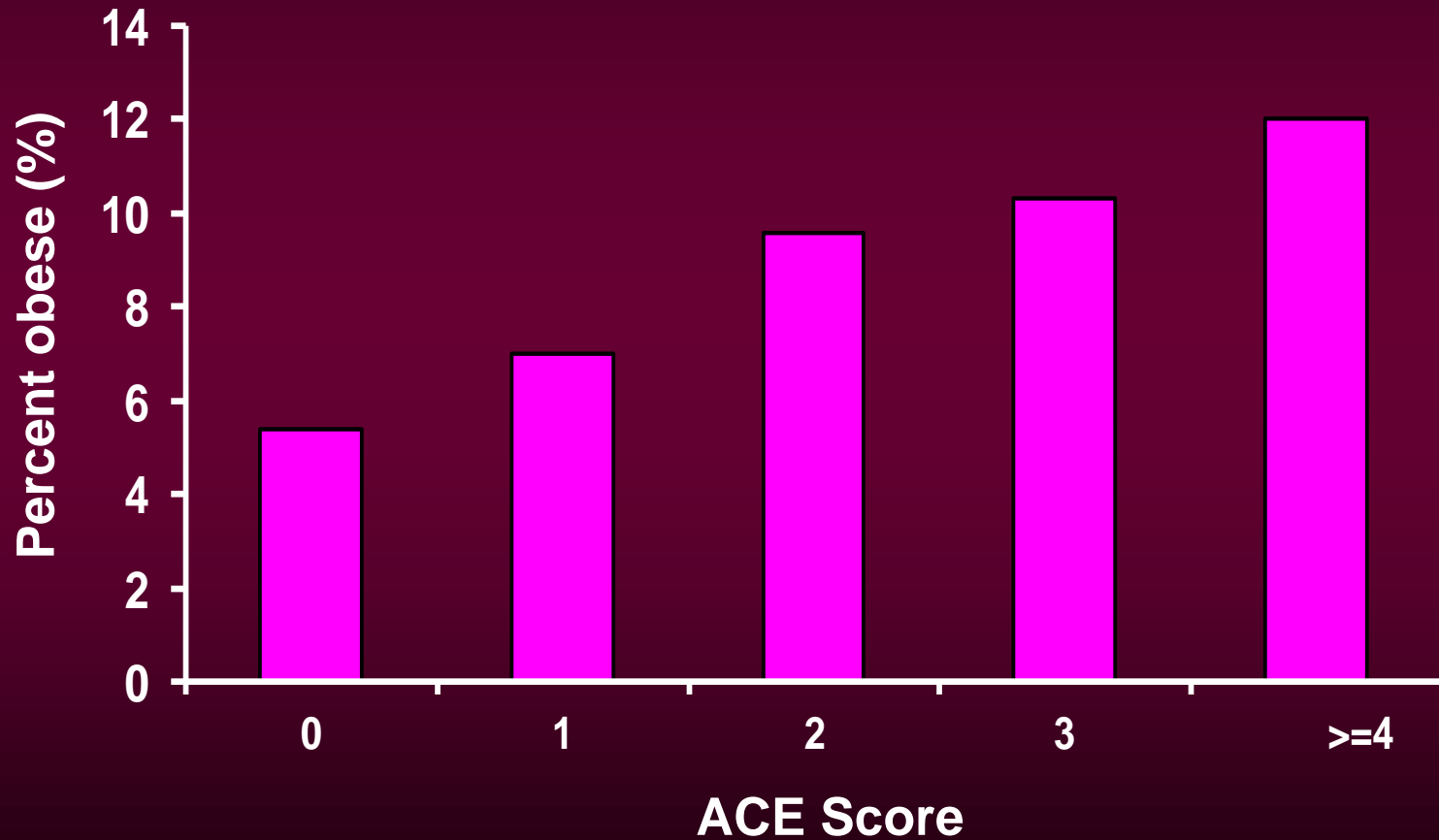
Number of individual types of adverse childhood experiences were summed...

<u>ACE score</u>	<u>Prevalence</u>
0	33%
1	26%
2	16%
3	10%
4 or more	16%

ACE Score and Teen Sexual Behaviors

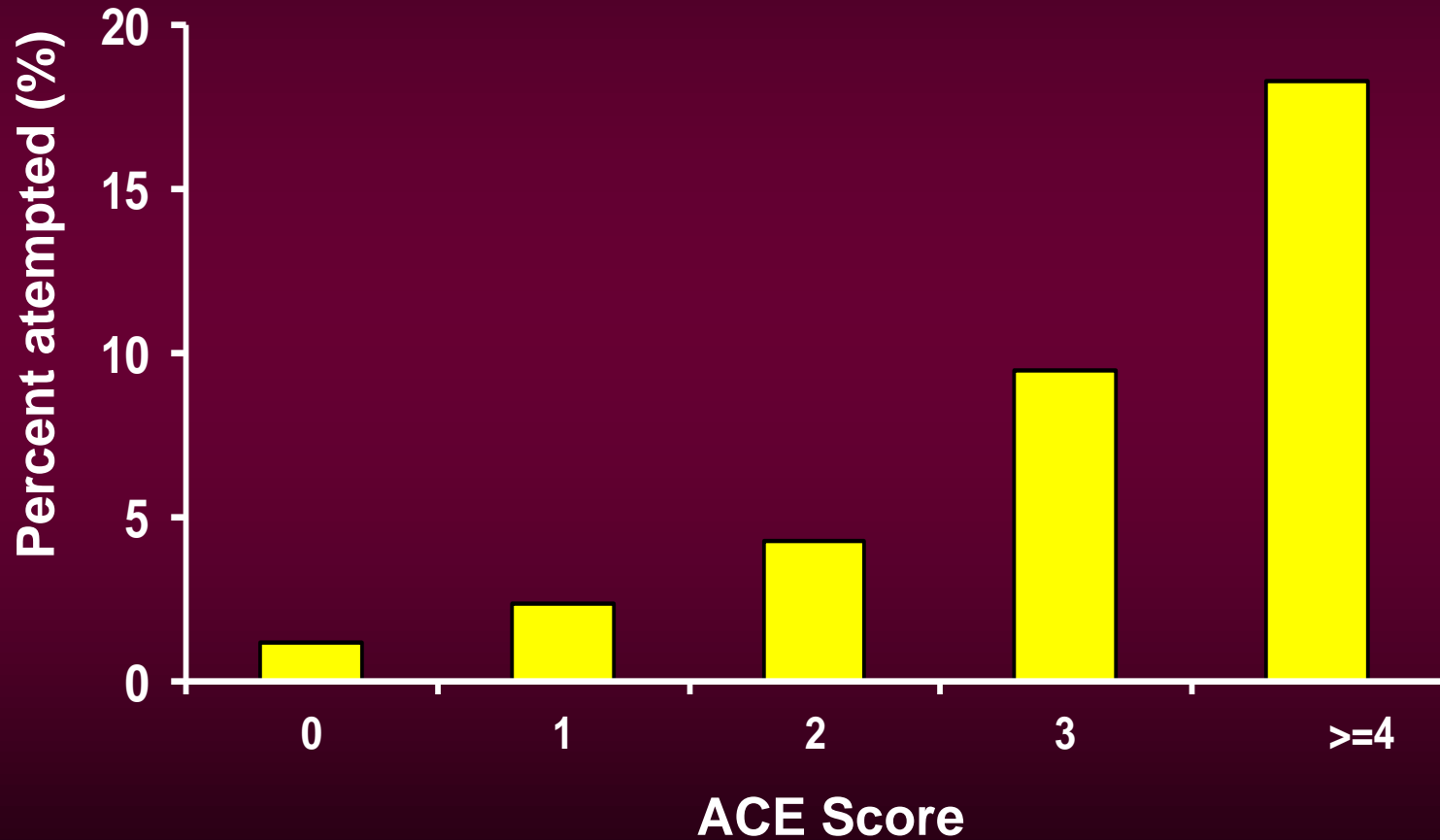


The ACE Score and the Prevalence of Severe Obesity (BMI ≥ 35)

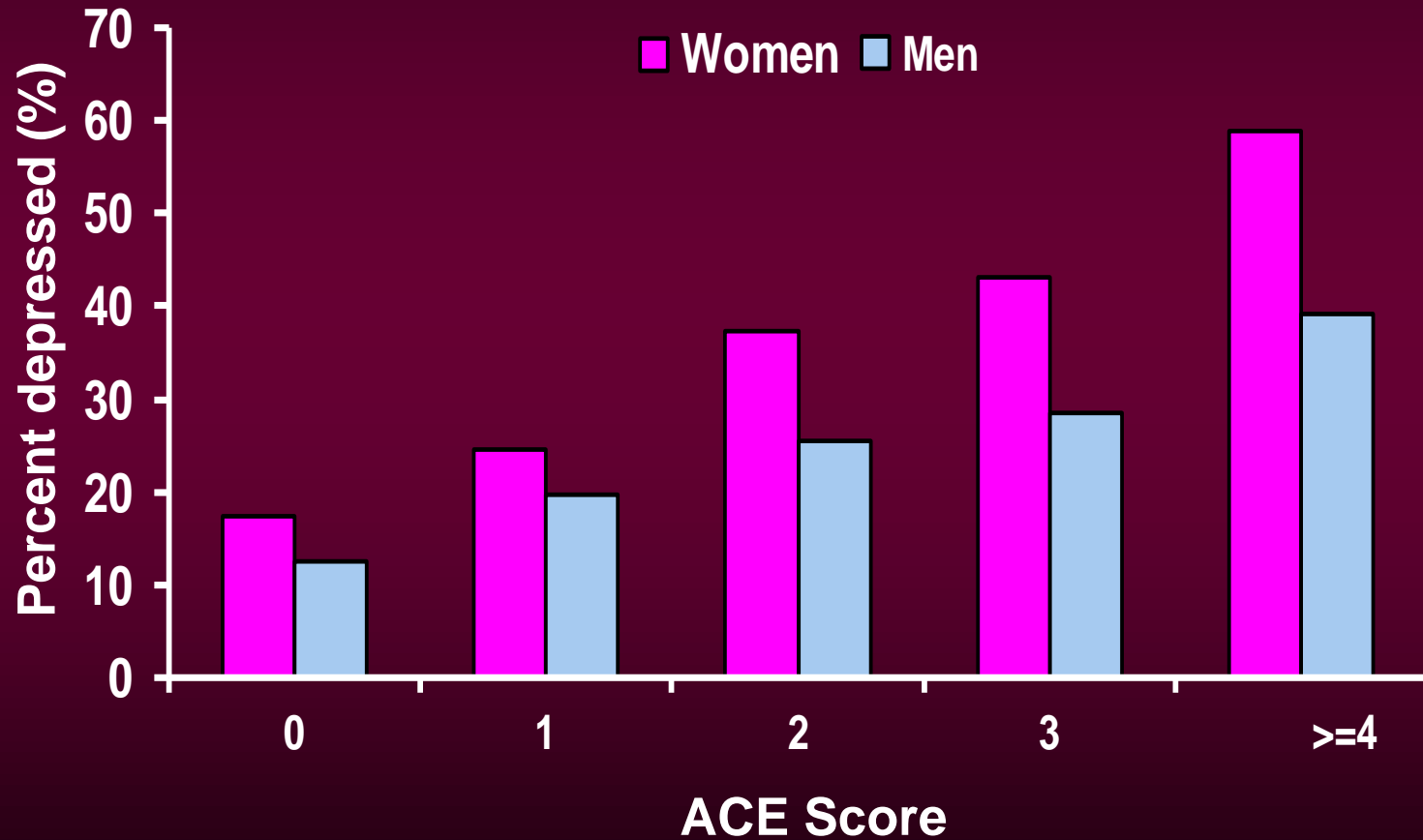


ACEs and Mental Health...

The ACE Score and the Prevalence of Attempted Suicide

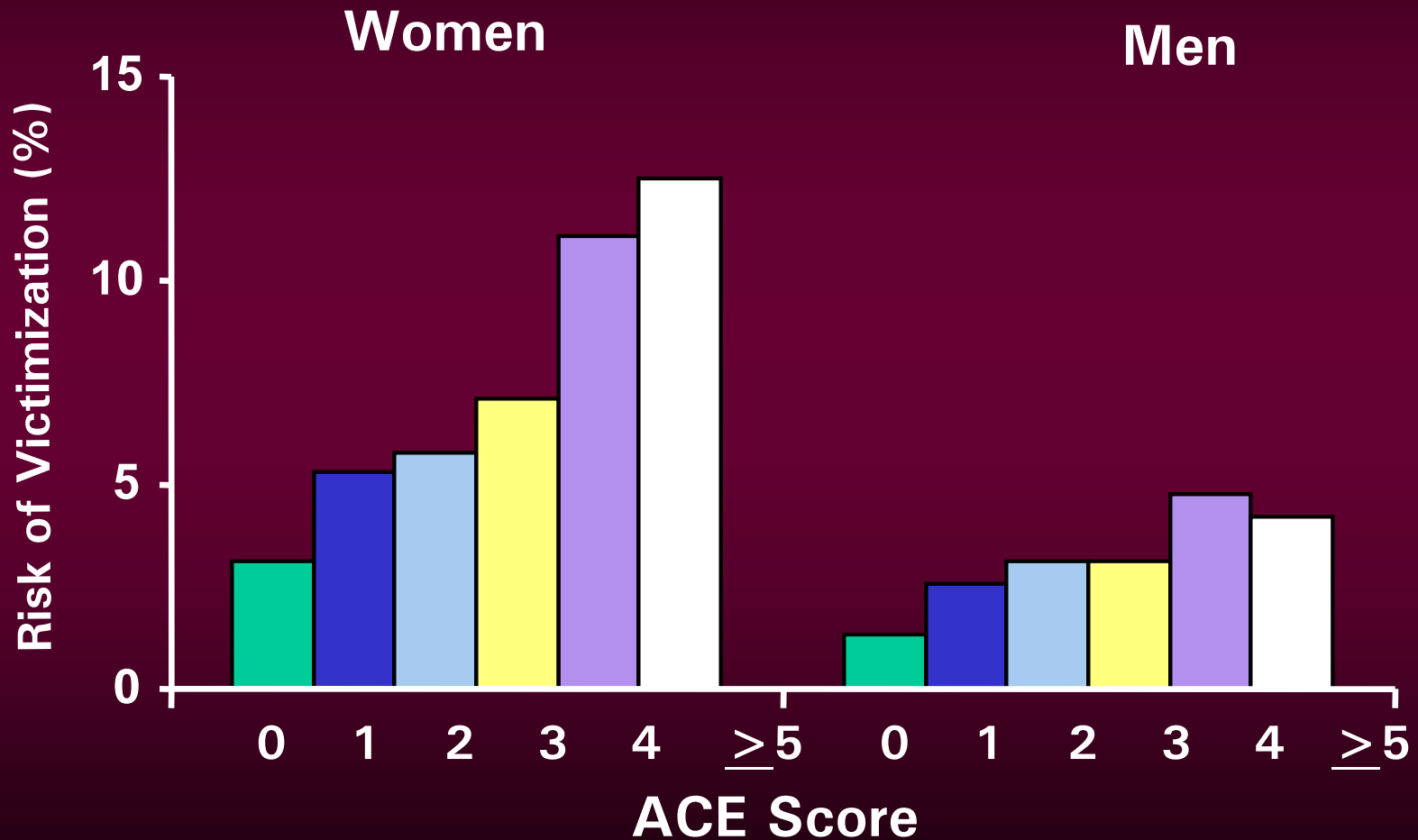


The ACE Score and a Lifetime History of Depression

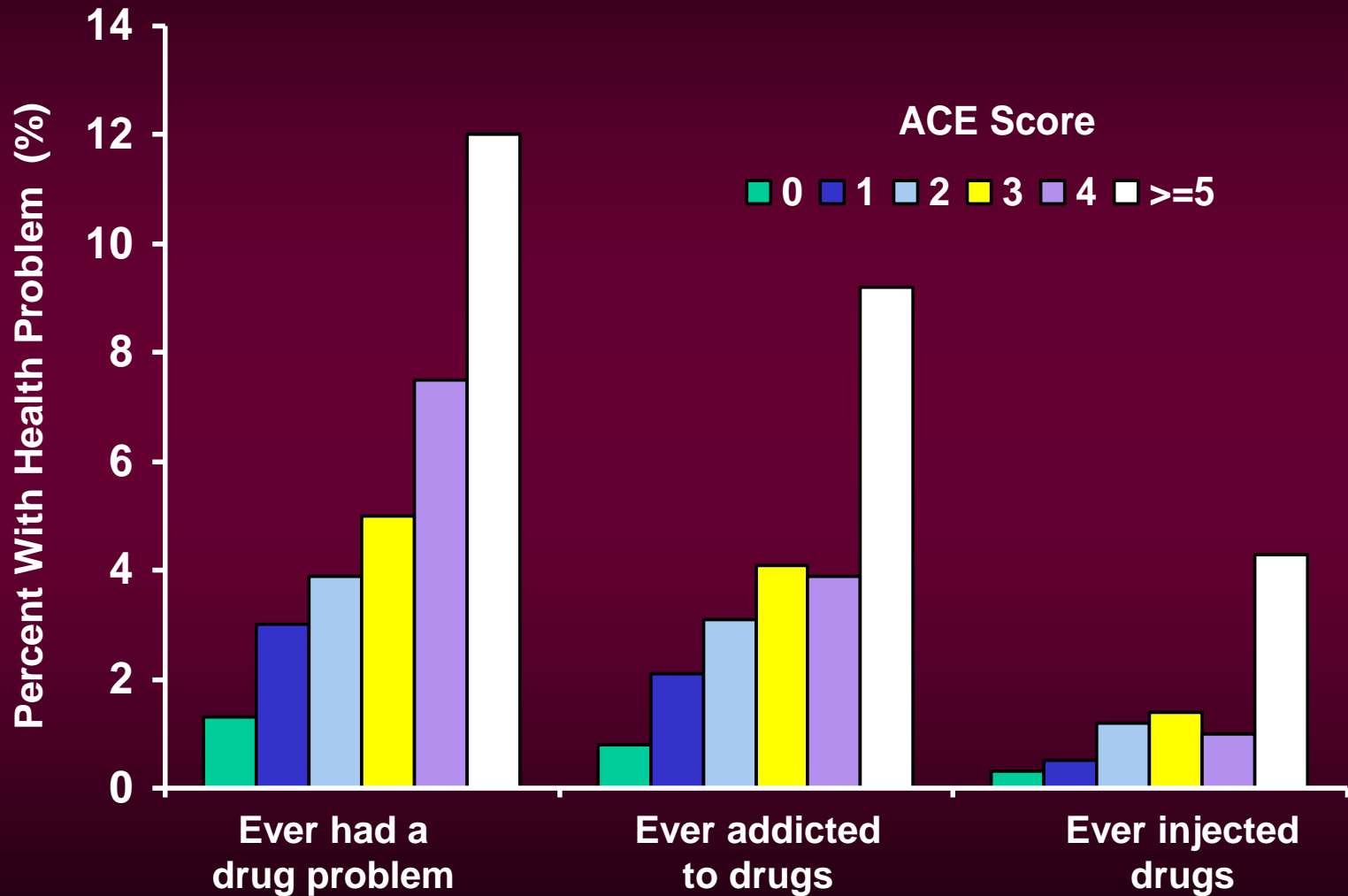


ACEs and Violent Victimization as an Adult...

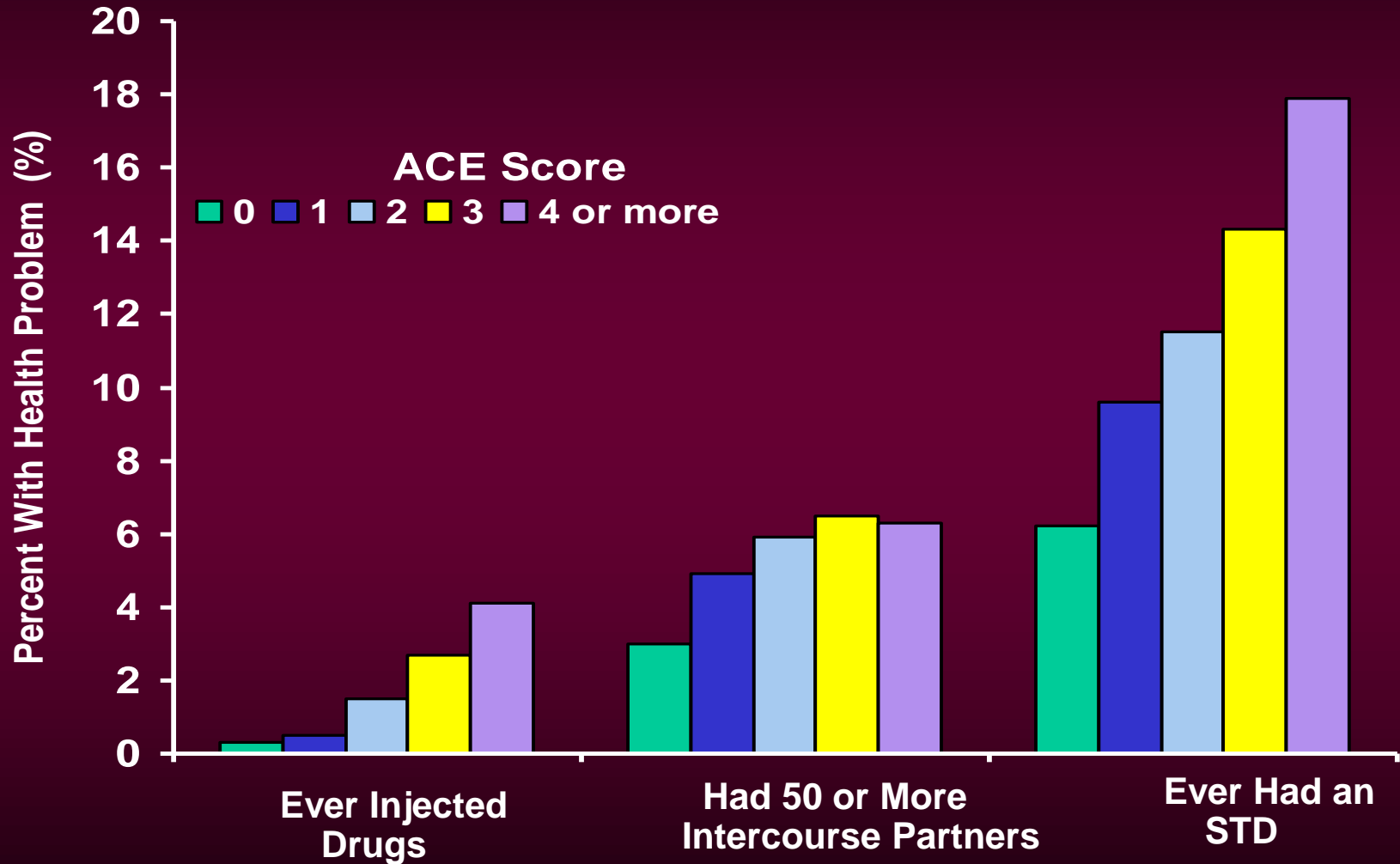
ACE Score and the Risk of Being a Victim of Domestic Violence



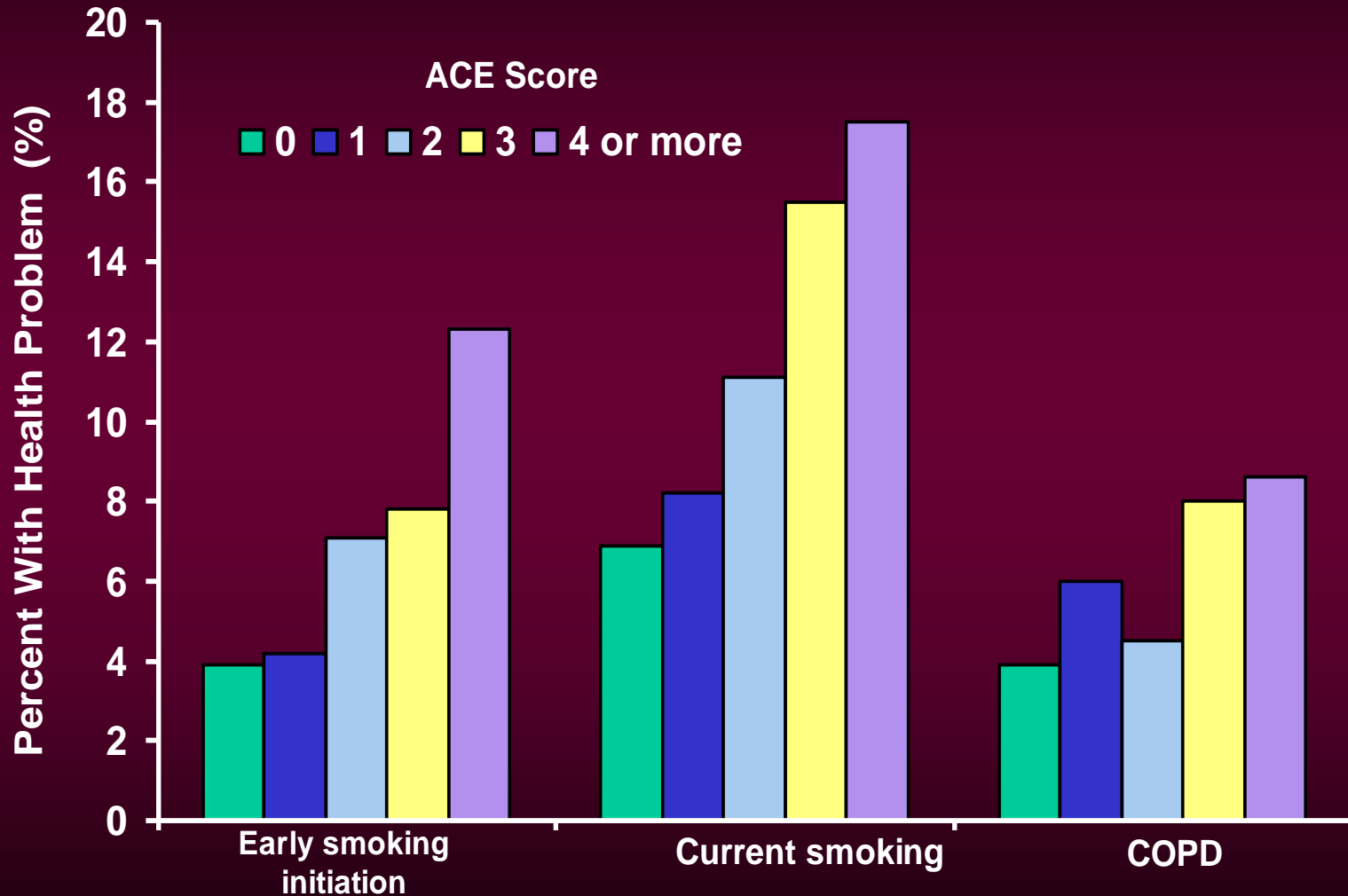
ACE Score and Drug Abuse



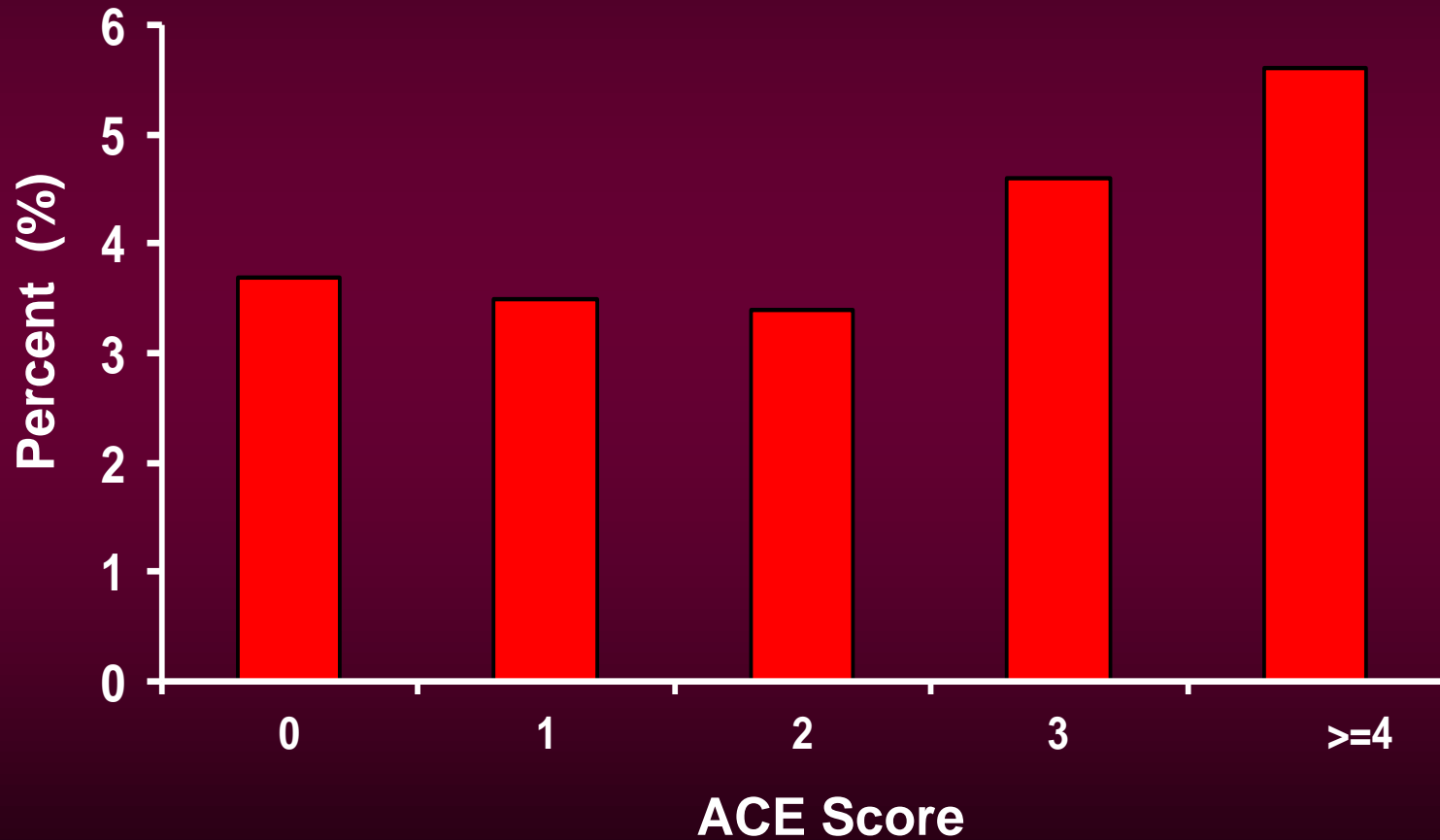
ACE Score and HIV Risks



ACEs, Smoking, and Lung Disease



The ACE Score and the Prevalence Ischemic Heart Disease



One Perspective on the Direct Health Care Costs of ACEs:

The Burden of Prescription Drug Use

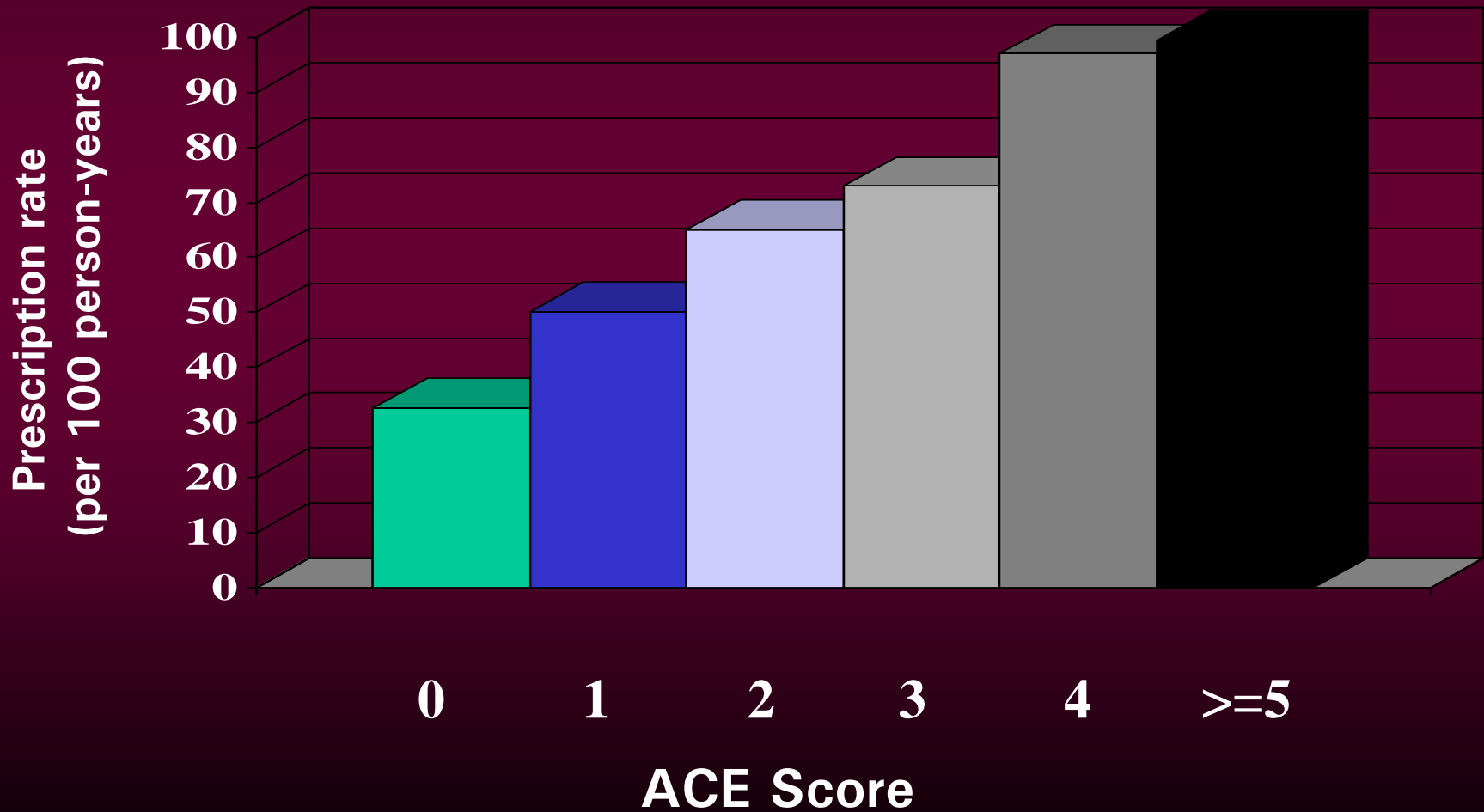
Prescription Drugs in the United States (2003)

-nearly \$180 billion spent

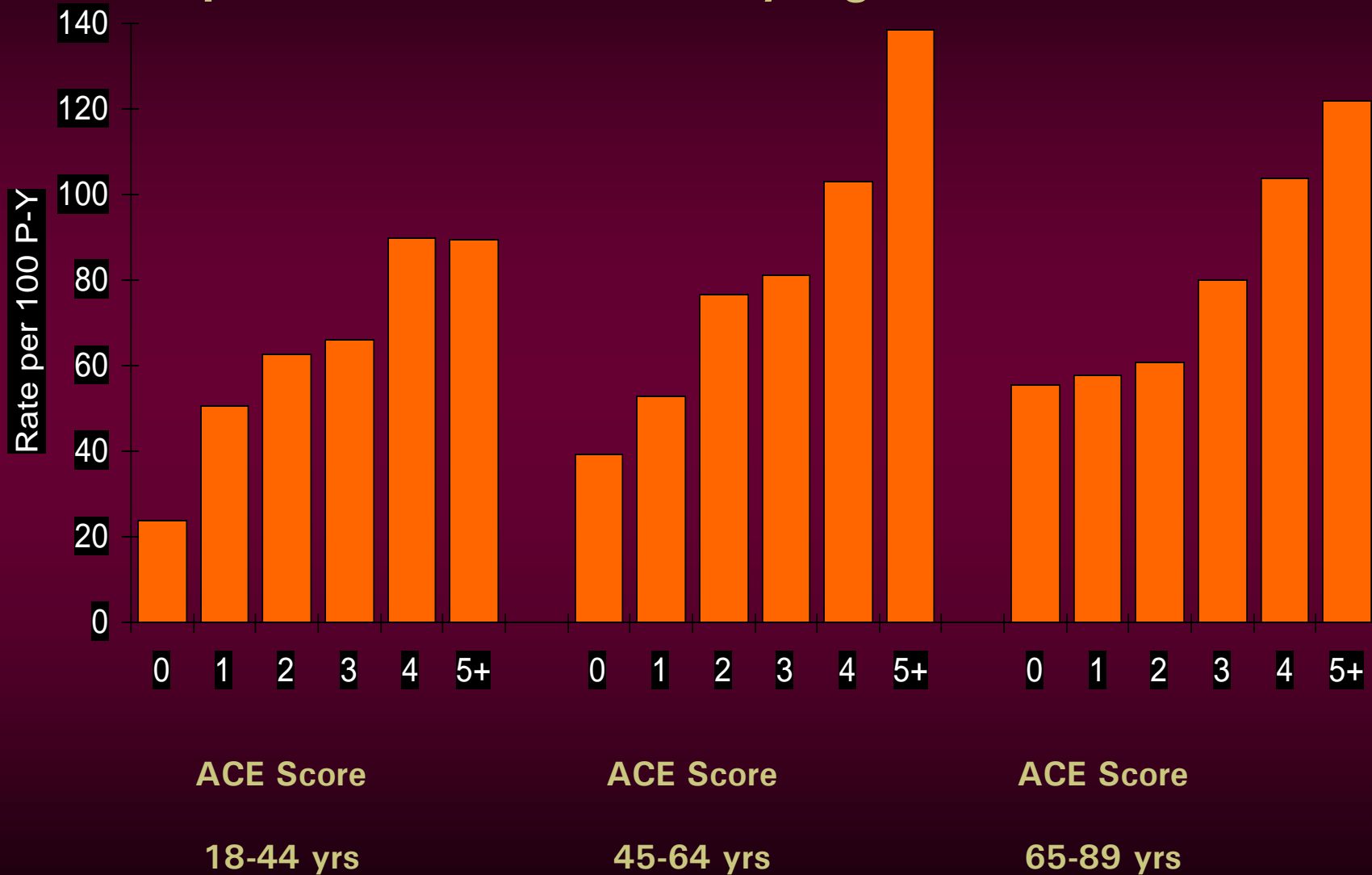
-11% of total national health expenditures

-more than four times the amount spent in 1990

ACE Score and Rates of Antidepressant Prescriptions



ACE Score and Rates of Prescribed Antidepressant Medications by Age, 1997-2004



Adverse Childhood Experiences as a Clinical and Public Health Issue

ACEs:

- are endemic**
- highly interrelated**
- have a cumulative stressor effect**
- effects are biologically plausible**

Adverse Childhood Experiences As a National Health Issue

ACEs have a strong influence on:

- adolescent health**
- reproductive health**
- smoking**
- alcohol abuse**
- illicit drug abuse**
- sexual behavior**
- mental health**
- risk of revictimization**
- stability of relationships, homelessness**
- performance in the workforce**

Adverse Childhood Experiences As a National Health Issue

ACEs increase the risk of:

- Heart disease**
- Chronic Lung disease**
- Liver disease**
 - Suicide**
 - Injuries**
- HIV and STDs**
- and other risks for the leading causes of death**

The Adverse Childhood Experiences (ACE) Study

Summary of Findings:

- Adverse Childhood Experiences (ACEs)
are very common
- ACEs are strong predictors of health risks and
disease from adolescence to adulthood
- This combination of findings makes ACEs one
of the leading, if not the leading determinant
of the health and social well-being of our nation

Bridging The Chasm



Child health as it stands today

Breakthroughs in molecular genetics and biology:

**Mental illness
Substance abuse
Violence**

Improved recognition and treatment of:

**Mental illness
Substance abuse
Domestic violence
Child abuse**

Mass education about child development & parenting:

**Media
Schools**

Documenting the societal burden of child health as it stands today



New directions in prevention and treatment

Child health as it could be

Bridging The Chasm



**Child
health
as it
stands
today**

Involving those who don't yet realize that they are working on issues that represent the "downstream" wreckage of child abuse and neglect--and other adverse childhood experiences--in the effort to bridge the chasm.

**Child
health
as it
could
be**

Routine screening for trauma is needed