

NRC/IOM Study on Prevention of Mental Disorders and Substance Abuse Among Children, Youth and Young Adults

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NIMH perspective on study

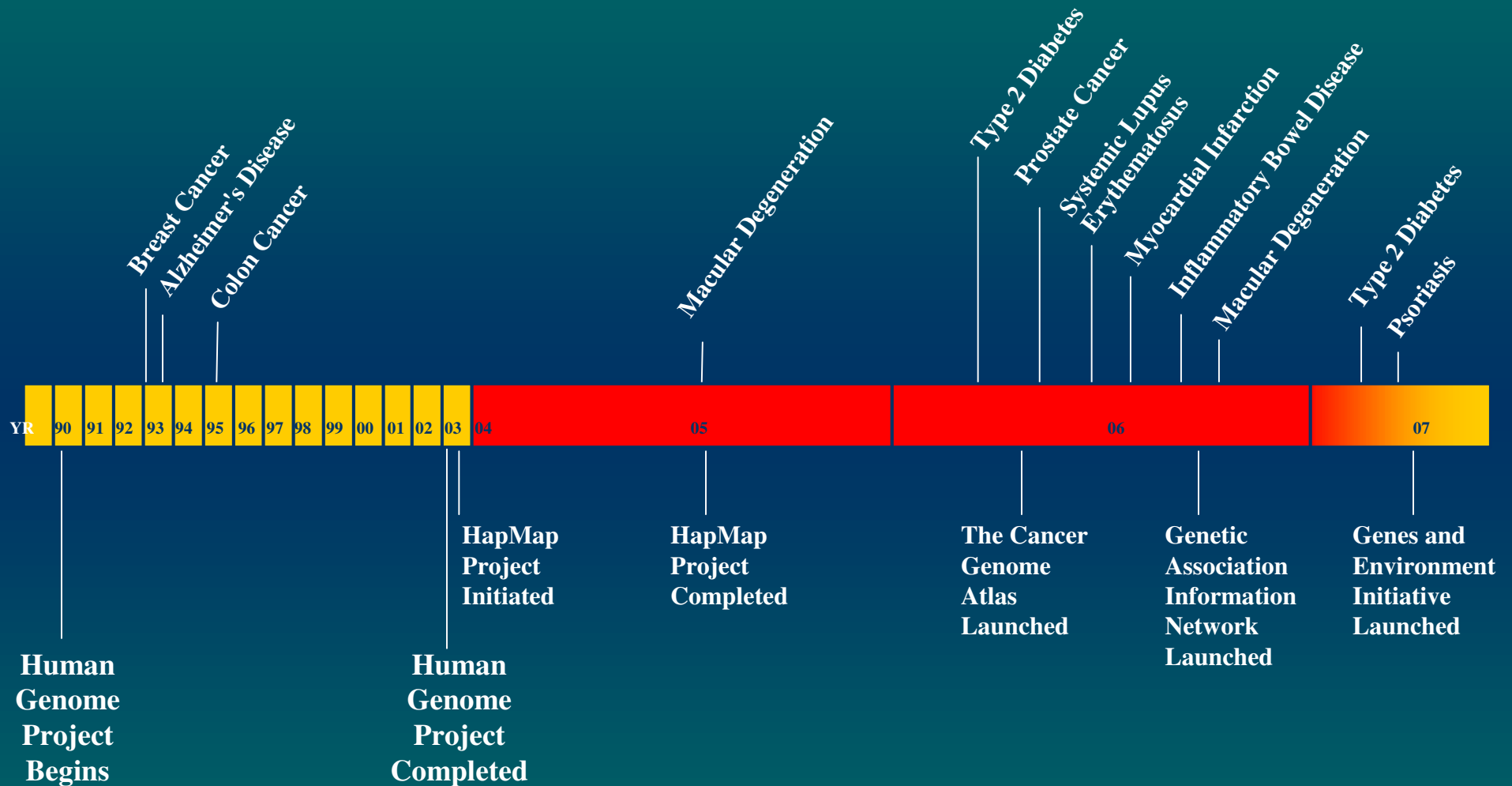
- n Background
- n Desired objectives
- n Overview of portfolio



Background for request

- n 1994 IOM Report "*Reducing Risks...*"
- n 1998 NAMHC Report "*Priorities for Prevention Research at NIMH*"
- n 2003 Human Genome Project completed
 - n Accelerated pace of gene discovery
 - n Susceptibility genes molecular pathophysiology
- n 2002-2005 Epidemiology studies of MI
 - n Prevalence of childhood onset disorders;
Gene X Environment interactions

Gene Discoveries for Common Complex Diseases



NIH Research Initiatives



PERSPECTIVE


Cure therapeutics and strategic prevention: raising the bar for mental health research

TR Insel¹ and EM Scolnick²

¹*NIMH, Bethesda, MD, USA and* ²*Broad Institute of MIT and Harvard, Cambridge, MA, USA*



New pathways for discovery

- n Specify pathophysiological mechanisms
 - n Causal risk factors, biomarkers, diagnostic tests
 - n Premorbid, prodromal, onset, progressive stages
- n Identify targets for intervention
 - n Core features of disease
 - n Malleable leverage points
- n New interventions via rational therapeutics
 - n Pharmacologic, psychosocial, environmental
 - n Preemptive intervention in prodrome or 1st episode 



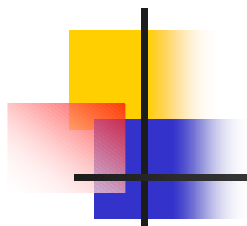
Adult mental illness begins early

Kim-Cohen et al., 2003, *Arch Gen Psychiatry*

- n 50% of all lifetime cases begin by age 14;
74% of all lifetime cases begin by age 18

Kessler et al., 2005, *Arch Gen Psychiatry*

- n 50% of all lifetime cases begin by age 14;
75% of all lifetime cases begin by age 24



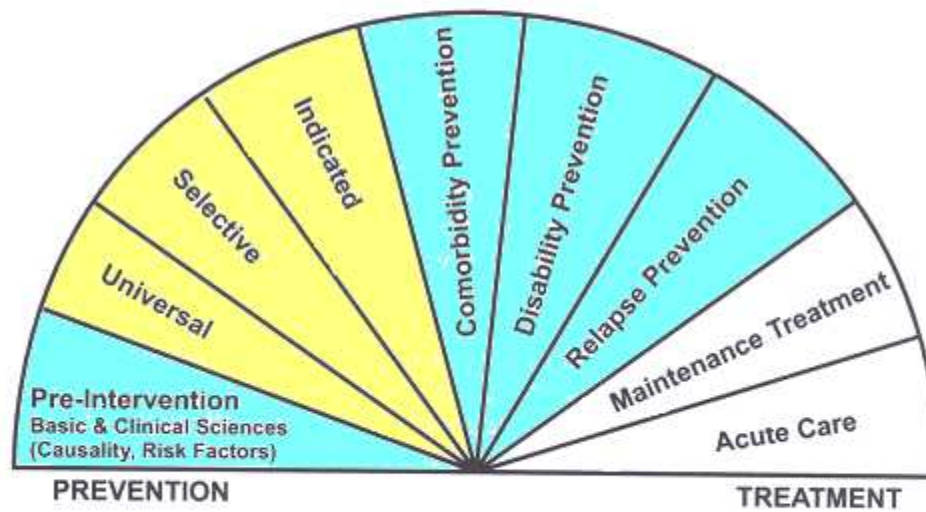
Early and sustained intervention may be our best strategy for averting chronic impairment.



Desired objectives

- n Review progress since 1994, identifying gaps in knowledge & emerging scientific opportunities
- n Focus on pre- and post-onset prevention (i.e., universal, selective, indicated AND prevention of relapse, comorbidity, and disability)
- n Explore existing and potential collaborations among geneticists, neurobiologists, behavioral researchers, and prevention scientists

Mental Health Intervention Spectrum



NIMH Prevention Research Portfolio, FY 2006

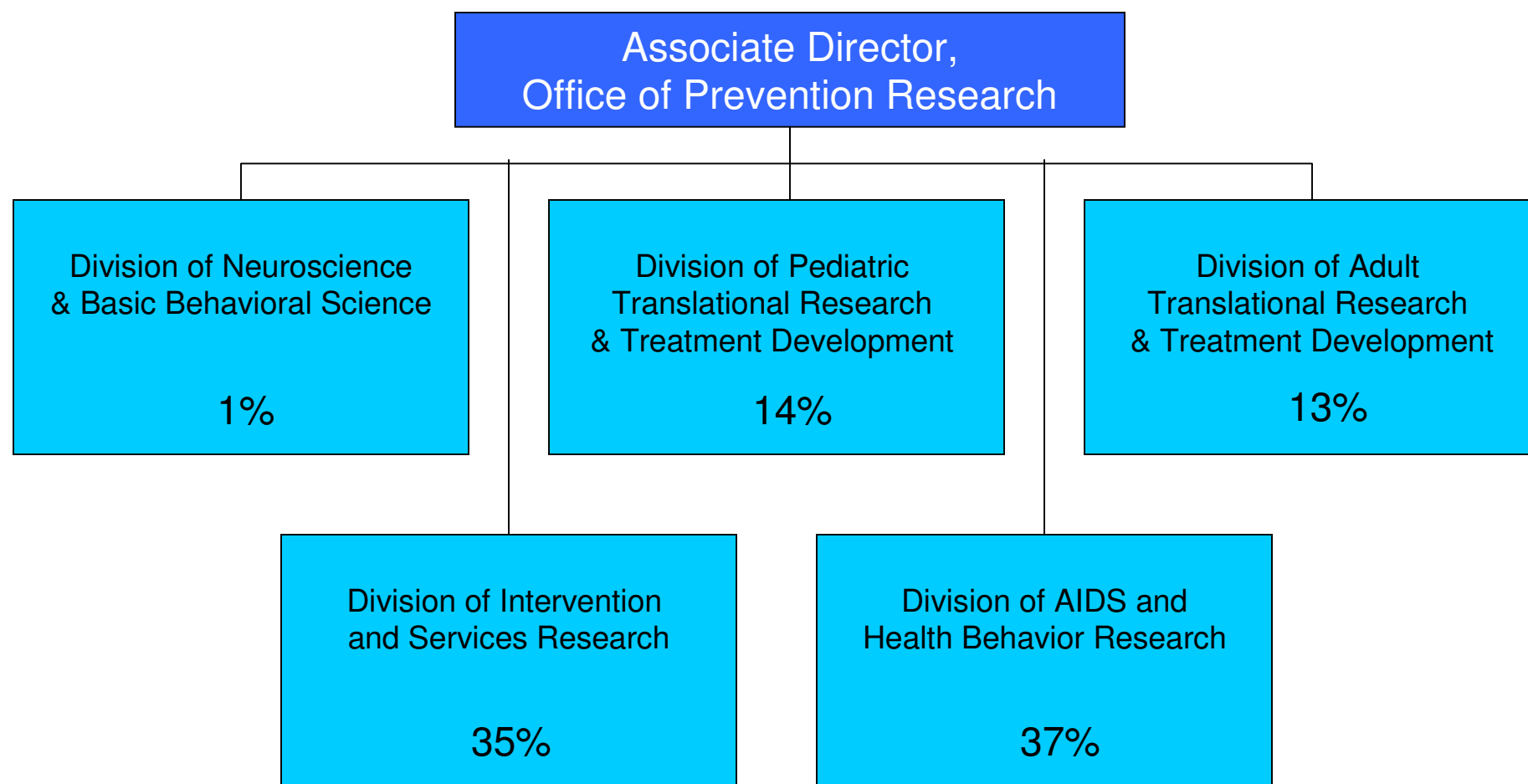


NIMH prevention research portfolio

- n In FY 2006, ~500 research, training, and career development grants
 - n Externalizing Disorders
 - n HIV risk behaviors, conduct disorder, aggression, antisocial personality disorder
 - n Internalizing Disorders
 - n Anxiety disorders, depression, suicide, PTSD
 - n Low Base Rate Disorders
 - n Eating disorders, bipolar disorder, schizophrenia



Prevention Research Consortium





Recent NIMH prevention meetings

n 2004

- n Prevention of Depression in Children & Adolescents
- n Preventing Child and Adolescent Mental Disorders: Research Roundtable on Economic Burden and Cost Effectiveness

n 2005

- n Early Recognition of Eating Disorders in Children and Adolescents
- n Research in Prevention and Early Intervention in Psychosis



Recent NIMH prevention meetings

n 2006

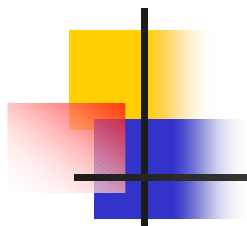
- n Gene x Environment Interactions and Developmental Psychopathology
- n Prevention of Traumatic Stress Disorders in High-Risk Occupations

n 2007

- n Research on Antisocial Behaviors in Children
- n Role of Families in Preventing & Adapting to HIV/AIDS



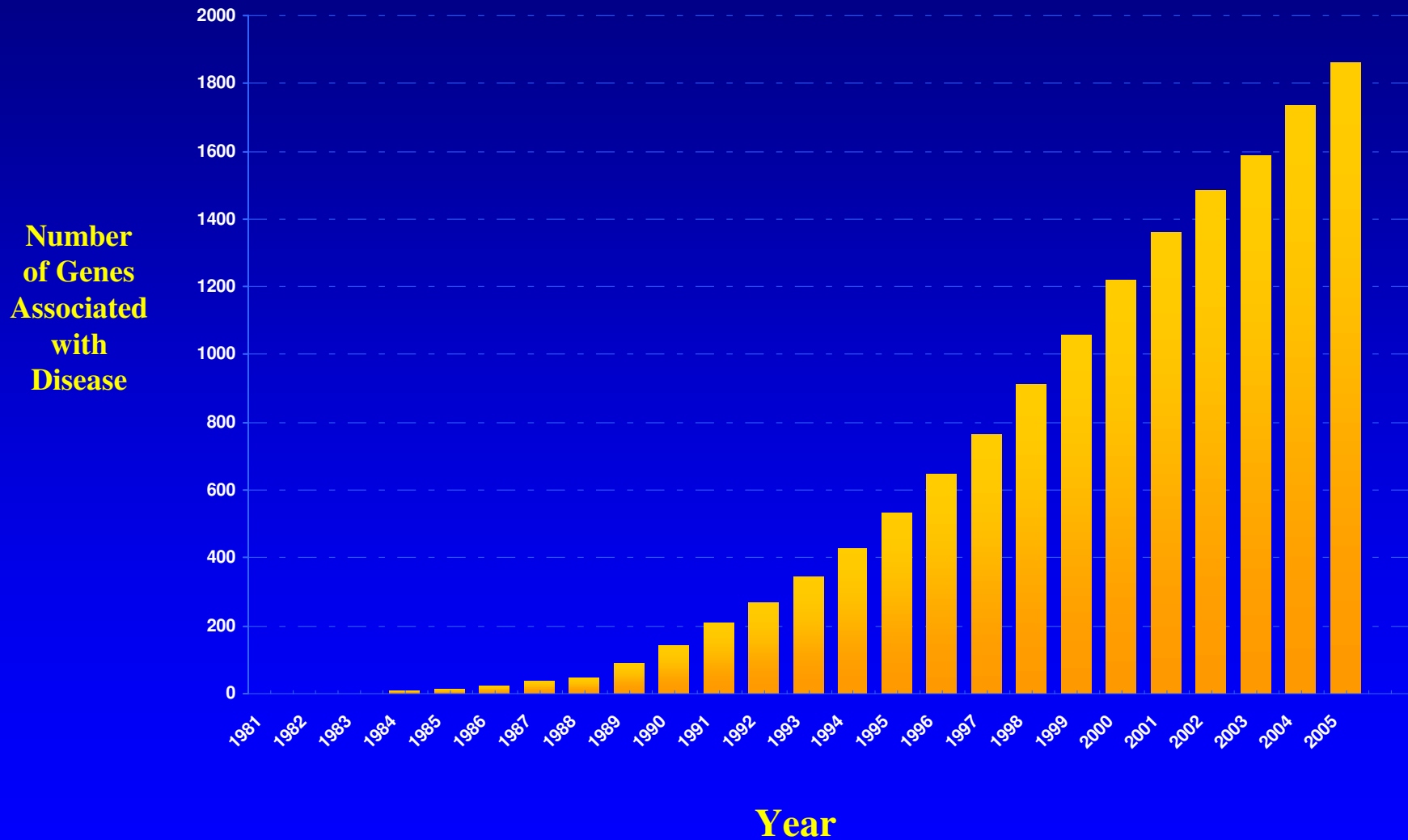
"I'll have an ounce of prevention."



NIMH staff look forward to
working with the Committee.

Thank You!

Cumulative Pace of Disease Gene Discovery 1981-2005



Source: Online Mendelian Inheritance in Man



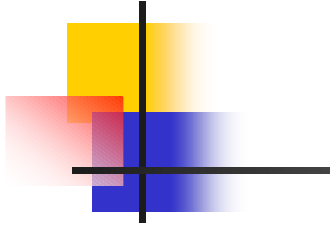
Gene X environment interactions

Caspi et al., 2002, *Science*

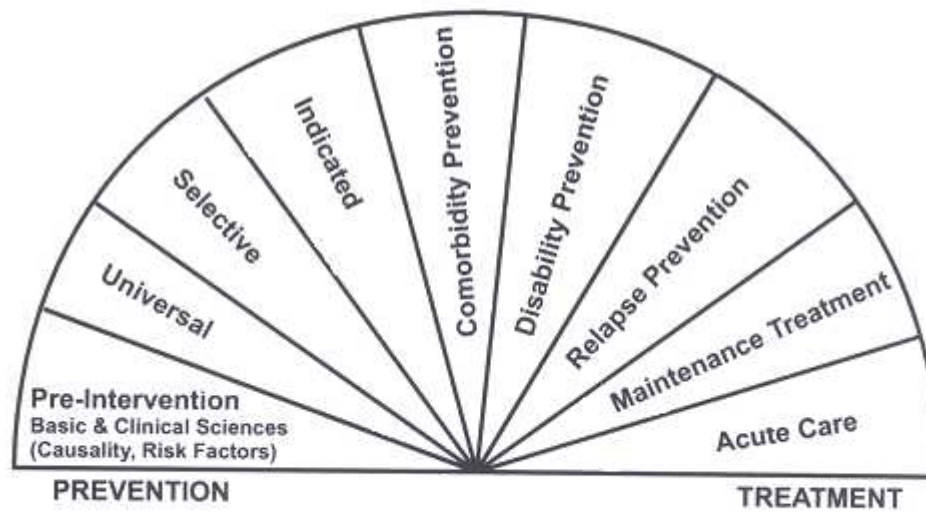
- n Low MAOA activity X early maltreatment =
↑ antisocial behavior in adolescent/YA males

Caspi et al., 2003, *Science*

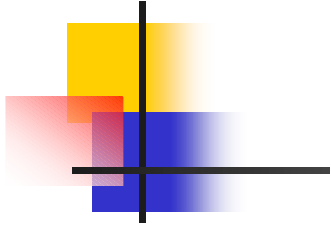
- n Short allele of 5-HTT gene X early life stress =
↑ depression/suicidality in YA men and women



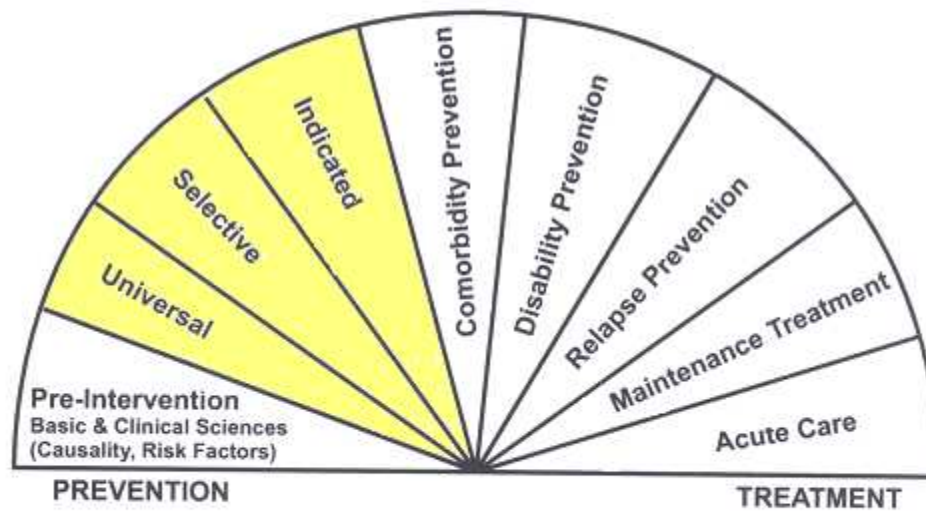
Mental Health Intervention Spectrum



From "Priorities for Prevention Research at NIMH" (1998)



Mental Health Intervention Spectrum



NIMH Prevention Research Portfolio, FY 2006