

The Relationship Between Physical and Behavioral Health

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Outline

- Discuss rationale for integration of physical and behavioral health care
- Explore evidence supporting the causal relationships between physical and mental health
- Discuss the ACE study and its implications for long-term health
- Review models of behavioral health integration and consider their strengths and weaknesses

Case study 1

Andrew is a 55 yo man living at home with his aging mother and stepfather. Insulin dependent diabetes since age 10, now with ESRD, diabetic retinopathy, CHF, recent CVA, s/p hip fracture, morbid obesity. Background history reveals untreated adolescent depression associated with onset of alcohol abuse, academic failure resulting in school drop out at age 16. From teens through early adulthood, he had poor glucose control with multiple hospitalizations for DKA, inability to maintain steady employment, inability to maintain intimate relationships. Depression and alcohol abuse persisted and physical health progressively deteriorated throughout middle adulthood. Placed in a long term care unit as parents no longer able to take care of him.

Case study 2

18 yo female admitted to medical service with bacteremia, endocarditis, and cellulitis. She had a history of IV heroin abuse, childhood sexual exploitation. Prior to her removal from her home at the age of 13, she had been used as a prostitute to support her mother's heroin addiction beginning at the age of 9. Medical team consulted psychiatry to address belligerent and agitated behavior on the unit and demands to leave the hospital against medical advice. Consult team noted that agitation was triggered by blood draws by male phlebotomist. Also noted that her postoperative pain was being undertreated.

Rationale for Integrated BH

- Mind and body are not separate
- Mental illness makes people physically ill
- Physical illness makes people mentally ill
- Physical health needs present in the mental health setting
- Mental health needs present in the medical setting

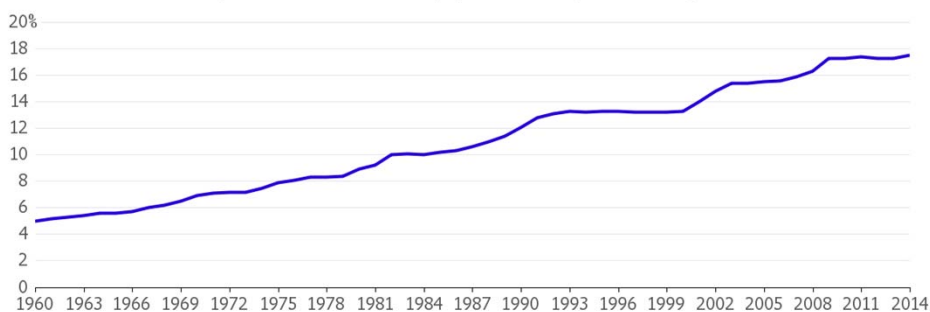
Why have we not ensured that mental health services be coordinated with physical health services?

A confluence of factors...

- Health care reform gains political traction in context of rising health care costs
- Reduced stigma
- Mental Health Parity and Addiction Act of 2008 (Wellstone, Pete Dominici)
- Increased cultural awareness of mental health in society
- Advances in science of mental health
- Changing beliefs about mind/body dualism

Health Care Grows as a Share of GDP

For decades, health care has been taking up an increasing piece of the U.S. economy, and totaled a record 17.5 percent of GDP in 2014, up from 17.3 percent the year before.



Source: Office of the Actuary, Centers for Medicare and Medicaid Services

Bloomberg

The Triple Aim: Care, Health, And Cost

The remaining barriers to integrated care are not technical; they are political.

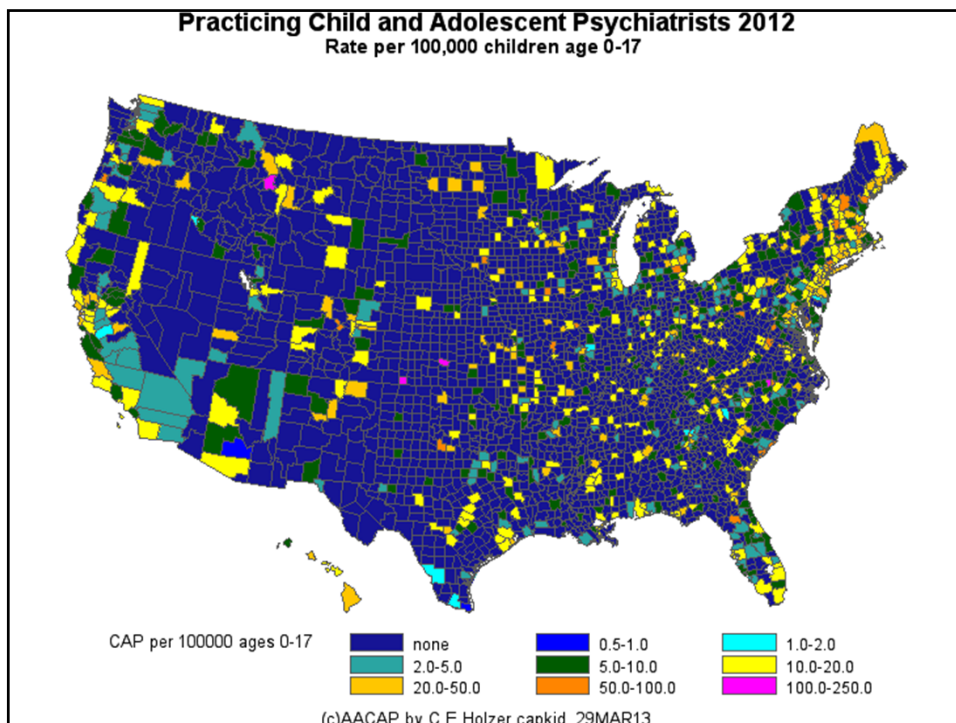
by Donald M. Berwick, Thomas W. Nolan, and John Whittington

ABSTRACT: Improving the U.S. health care system requires simultaneous pursuit of three aims: improving the experience of care, improving the health of populations, and reducing per capita costs of health care. Preconditions for this include the enrollment of an identified population, a commitment to universality for its members, and the existence of an organization (an “integrator”) that accepts responsibility for all three aims for that population. The integrator’s role includes at least five components: partnership with individuals and families, redesign of primary care, population health management, financial management, and macro system integration. [*Health Affairs* 27, no. 3 (2008): 759–769; 10.1377/hlthaff.27.3.759]

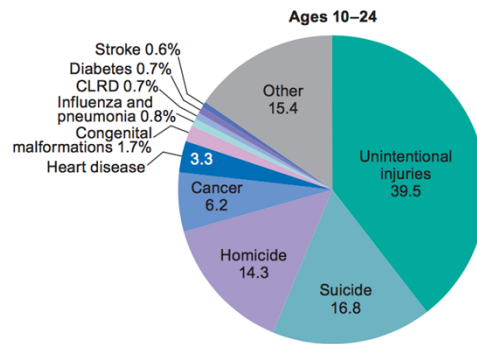
Referring out...

- 50% of patients referred to MH providers don't get service
- For those who do, the avg number of sessions is 2

Grembowski, Martin et al., 2002
Simon, Ding et al., 2012



Leading Causes of Death by Age



CDC: National Vital Statistics Reports, Vol. 65, No. 2, February 16, 2016

Integrating BH within Overall Health Care

- Reduction of Stigma
- Improving Access to Care for Mental Health Conditions
- Improving Outcomes

What is Integrated Care?

- Mental health needs addressed in medical care settings (especially primary care)
- Physical health needs addressed in mental health settings: “Reverse Integration”
- Mental health care and physical health care operating in the same system
 - Coordinated
 - Cross-functioning/Cross-training

Problem List in Primary Care

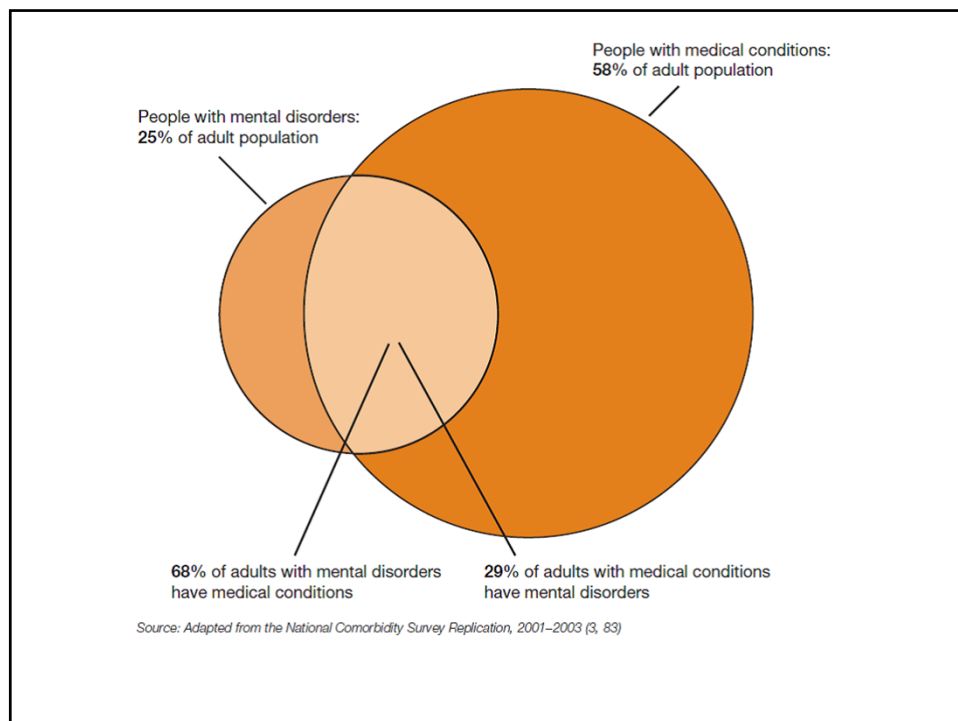
John Smith, 42 year old married Caucasian male, allergic to penicillin

1. Hypertension
2. Gastro-esophageal Reflux Disease
3. Overweight
4. Alcohol abuse
5. Depression
6. History of early childhood trauma

Problem List in Mental Health Care

John Smith, 42 year old married Caucasian male, allergic to penicillin

1. Depression
2. History of early childhood trauma
3. Alcohol abuse
4. Hypertension
5. Overweight
6. Gastro-esophageal Reflux Disease



Patients with mental illness frequently have poor physical health

- 68% of adults with mental illness have at least one significant physical illness
- At least three times as likely to die prematurely from these diseases
- Patients with significant mental illness (SMI) in public health sector die on average 25 years earlier than general population in large population-based study across 16 states (Druss, 2011)
- Chronic Diseases: DM, CVD, COPD, HIV, Hep C, TB

Health Risk Behaviors

- Tobacco
- Substance Abuse
- Poor diet
- Lack of physical activity
- High risk sexual activity

Smoking and Mental Illness

- 31-44% of all cigarettes are smoked by individuals with mental illness
- 44-64% of patients with SMI smoke
- 50% of patients with schizophrenia are heavy smokers, take more puffs per cigarette
- Higher rates of COPID and lung cancer
- Cigarette taxes disproportionately affect mentally ill
- Study: Patients with SMI spend 27% of monthly income on cigarettes, less money to spend on healthy food, medicine, etc
- Smoking induces drug-metabolism enzymes

Substance Abuse

- Schizophrenia, Bipolar, Depression, PTSD associated with dramatic elevation in Alcohol and Other Drug Dependence (12X-40X risk ratio)
- Substance abuse: poor self-care, poor diet, poor adherence to medication, high risk sexual behavior, suicide, accidents, all in addition to direct pathogenic effects of substances
- Patient with “dual diagnosis” have highest rates of Diabetes, CVD, Asthma

Poor Diet

- Patients with SMI: Higher fat, carbohydrates, lower fiber, less fresh fruits and vegetables, higher calories
- Twice as likely to be obese
- Diseases associated with obesity: Diabetes, CVD, sleep apnea, gall bladder disease, arthritis, cancers
- Dietary risk factors are mediated by medication side effects, poverty, environmental constraints

Social Determinants of Health

- Poverty, unemployment
- Early childhood trauma
- Chronic psychological stress: persistent elevation of stress hormones, elevated blood glucose, weight gain, including risk of HTN, MI, Stroke
- Including exposure to environmental toxins, allergens, infectious agents from poor infrastructure affecting ventilation, sanitation, overcrowding

Lack of physical activity

- Lower levels of physical activity confirmed in multiple studies among SMI
- Mediated by lower education level, poverty, symptoms of disorders influencing motivation and energy, social withdrawal, side effects of medication
- Lack of physical activity combined with poor diet 2nd leading cause of death in US (Mokdad, 2000)

High Risk Sexual Activity

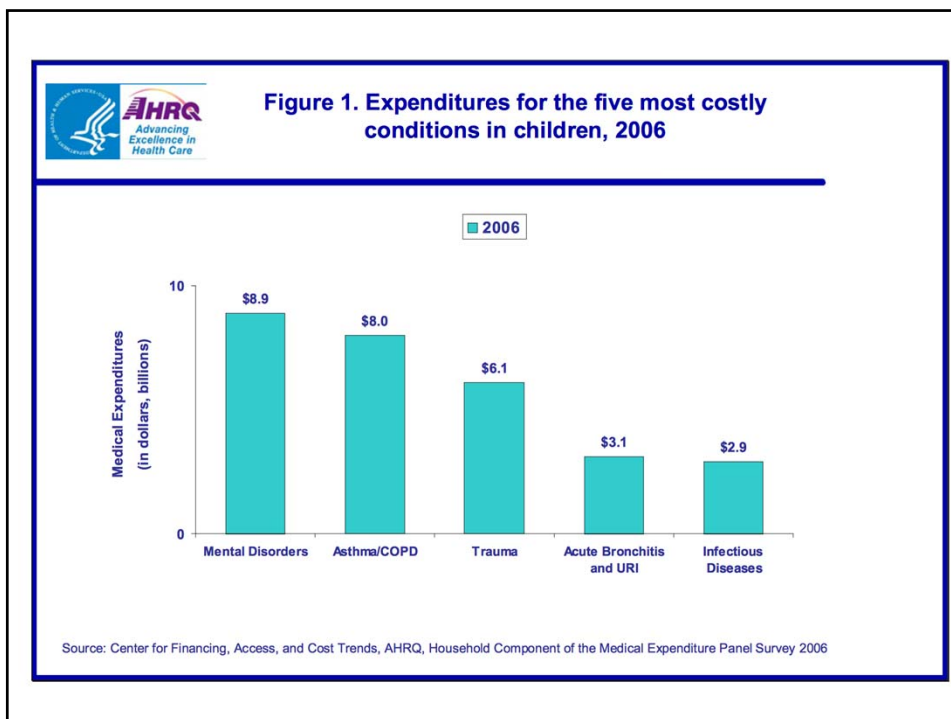
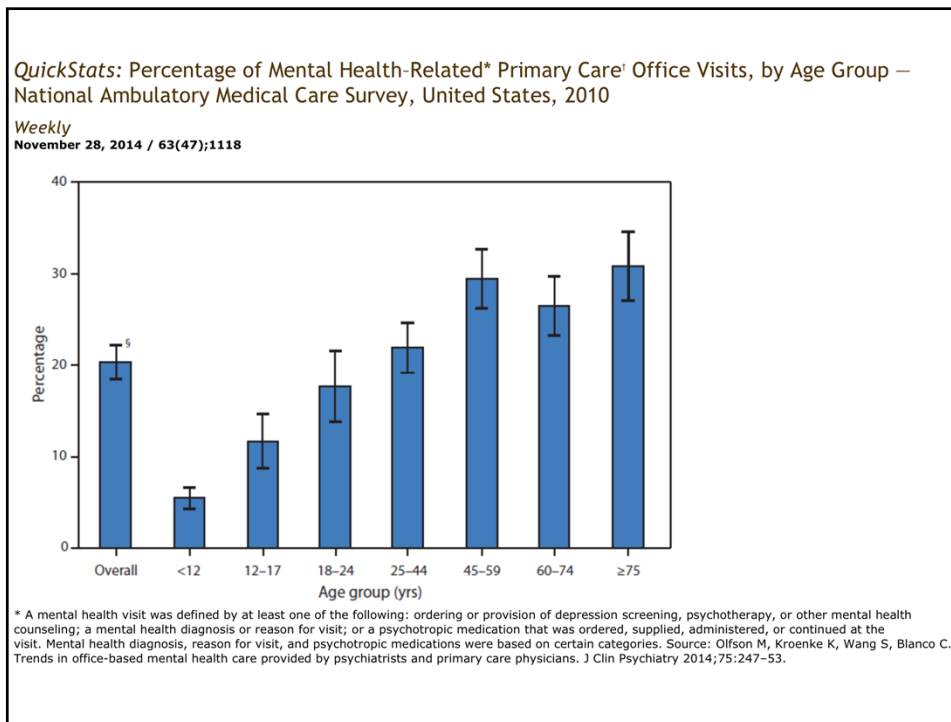
- Of sexually active patients with SMI: 58% did not use condoms, 48% had multiple sexual partners, 30% had traded sex for money or goods
- Elevated rates of HIV, HBV, HCV
- Mediated by poverty, substance abuse, symptoms of psychiatric illness including impulsivity, trauma-reenactment.

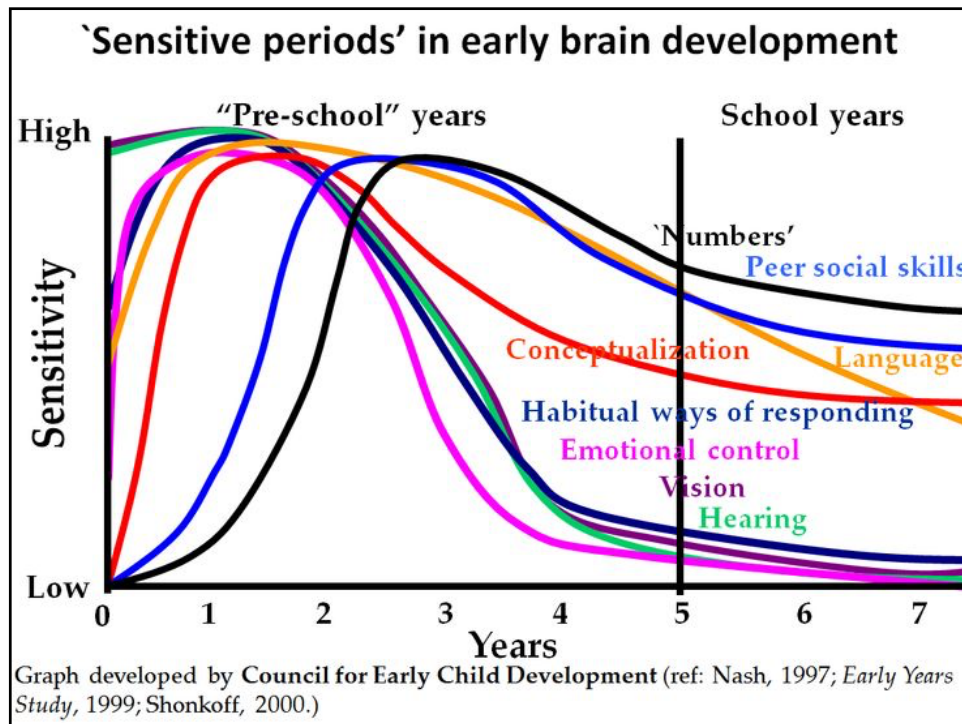
Mental health symptoms influencing utilization of health care services

- Stigma among providers affecting access and thoroughness of care
- MH symptoms: idiosyncratic beliefs about health, paranoia, low energy, motivation
- Difficulty with transportation, keeping appointments
- Difficulty with compliance, difficulty keeping appointments, following regimens

Addressing physical health needs in mental health practice

- Barriers
 - Lack of training
 - Concerns about therapeutic alliance/patient preference
- Advantages
 - Core skills: behavioral modification, motivational interviewing
 - Therapeutic alliance
 - Care coordination expertise

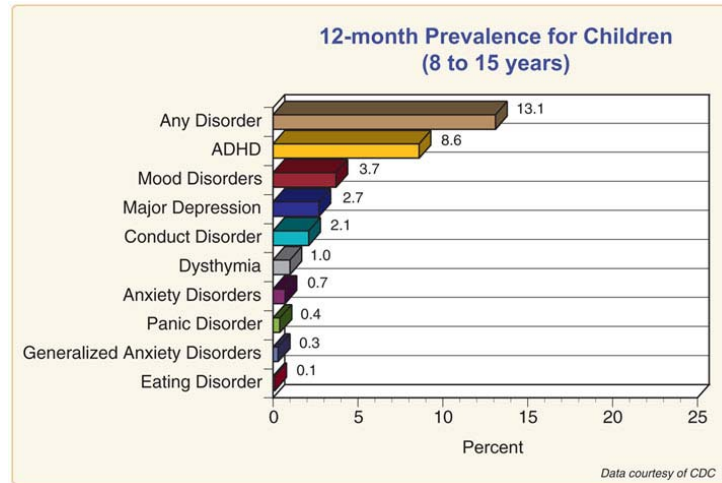




Critical Importance of Stable and Responsive Relationships in Early Childhood

- Secure attachments
- Self-regulation and sleep cycles
- Healthy stress response systems
- Health-promoting behaviors

Psychiatric Disorders in Children and Adolescents



Ages at onset for five categories of mental health disorder

	projected lifetime risk, ^a % (s.e)	Age at which % of projected lifetime risk attained, years ^b		
		25%	50% (median)	75%
Anxiety disorders	31.5 (1.1)	6	11	21
Mood disorders	28.0 (0.8)	18	30	43
Impulse control disorders	25.4 (1.1)	7	11	15
Substance use disorders	16.3 (0.6)	18	20	27
Any disorder	50.8 (1.2)	7	14	24

^a Proportion of whole population that will have experienced disorder by age 75 years.

^b Data for standardised age-at-onset distributions of DSM-IV diagnoses derived from the World Health Organization Composite International Diagnostic Interview with projected lifetime risk at age 75 years; adapted from Kessler *et al* where data on specific diagnoses and details of the sample are available.³¹

Jones PB, BJP 2002

Table 1. Diabetes Self-Care and Major Depression

Self-Care Activities (past 7 days)	No Major Depression ^a	Major Depression ^a	Odds Ratio ^b	95% CI	Significance
Diet					
Healthy eating ≤1 time/wk	8.8%	17.2%	2.1	1.59-2.72	<i>P</i> <.0001
5 servings of fruits/vegetables ≤1 time/wk	21.1%	32.4%	1.8	1.43-2.17	<i>P</i> <.0001
High-fat foods ≥6 times/wk	11.9%	15.5%	1.3	1.01-1.73	<i>P</i> <.04
Exercise					
Physical activity (≥30 minutes) ≤1 time/wk	27.3%	44.1%	1.9	1.53-2.27	<i>P</i> <.0001
Specific exercise session ≤1 time/wk	45.8%	62.1%	1.7	1.43-2.12	<i>P</i> <.0001
Smoking					
Yes	7.7%	16.1%	1.9	1.42-2.51	<i>P</i> <.0001

^a Percentages are unadjusted.
^b Adjusted for these covariates: age, sex, marital status, education, race/ethnicity, medication risk, complications, treatment intensity, clinic, and physician generalized estimating equation.
 Source: Reference 25.

Lin et al. Group Health Cooperative, 2004

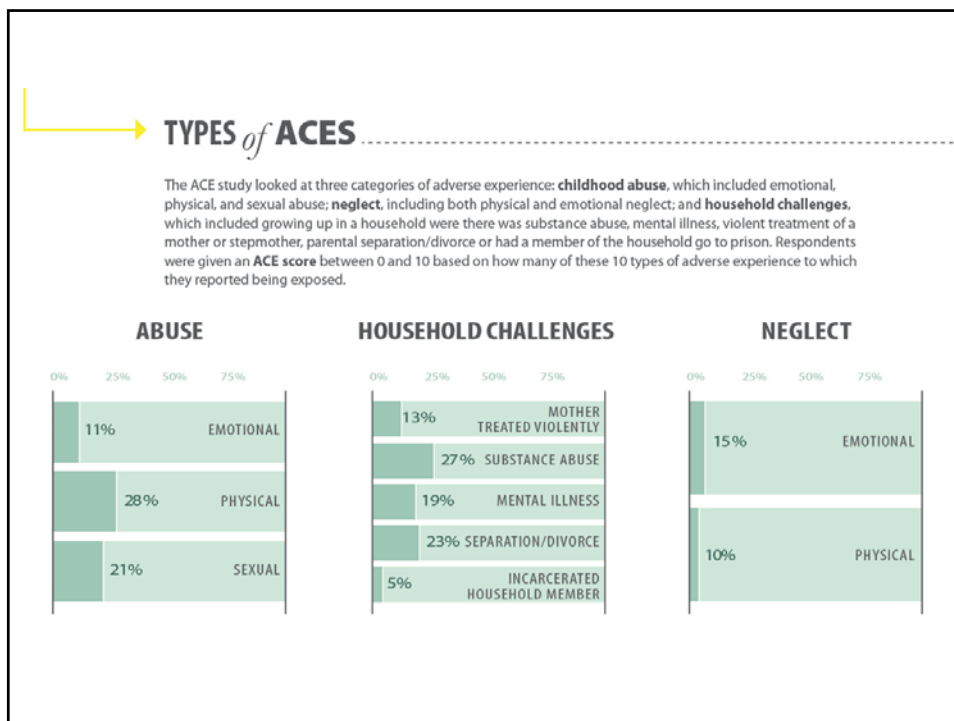
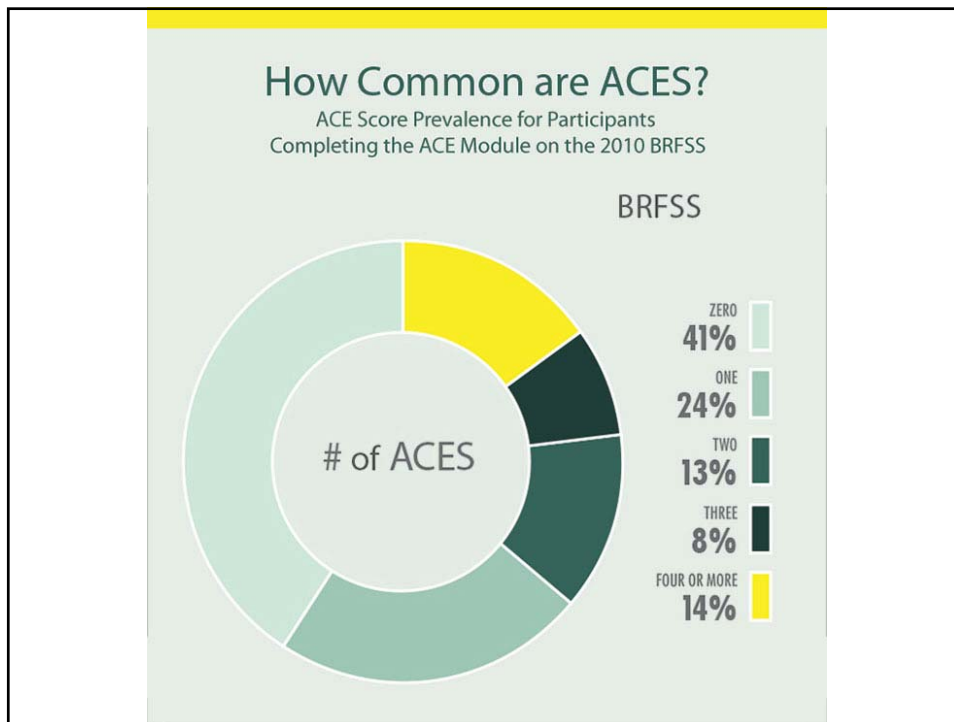
Research Article

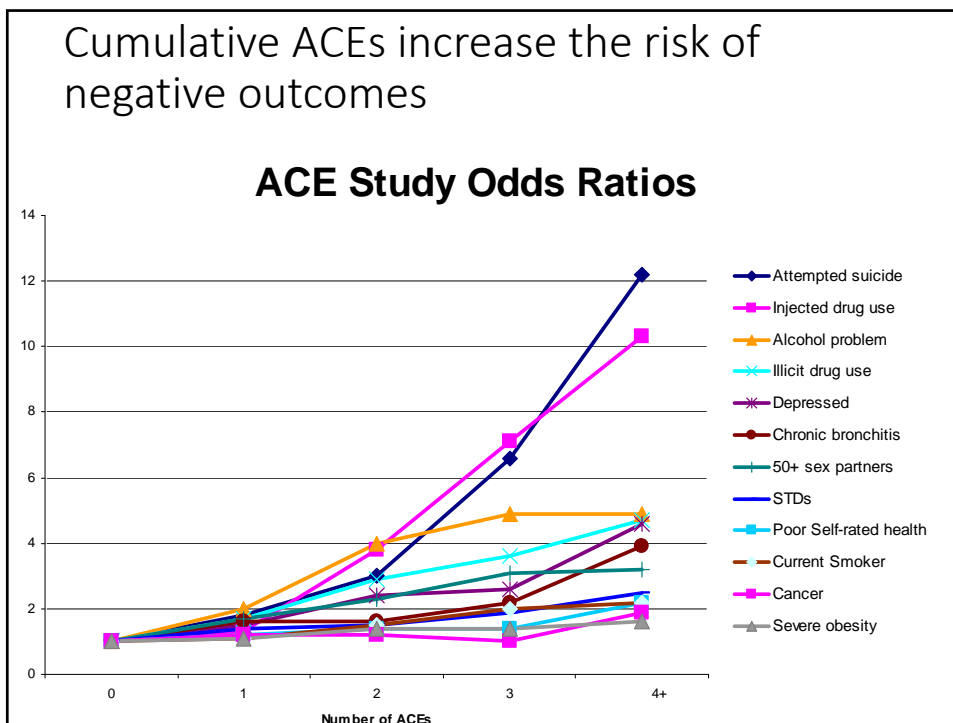
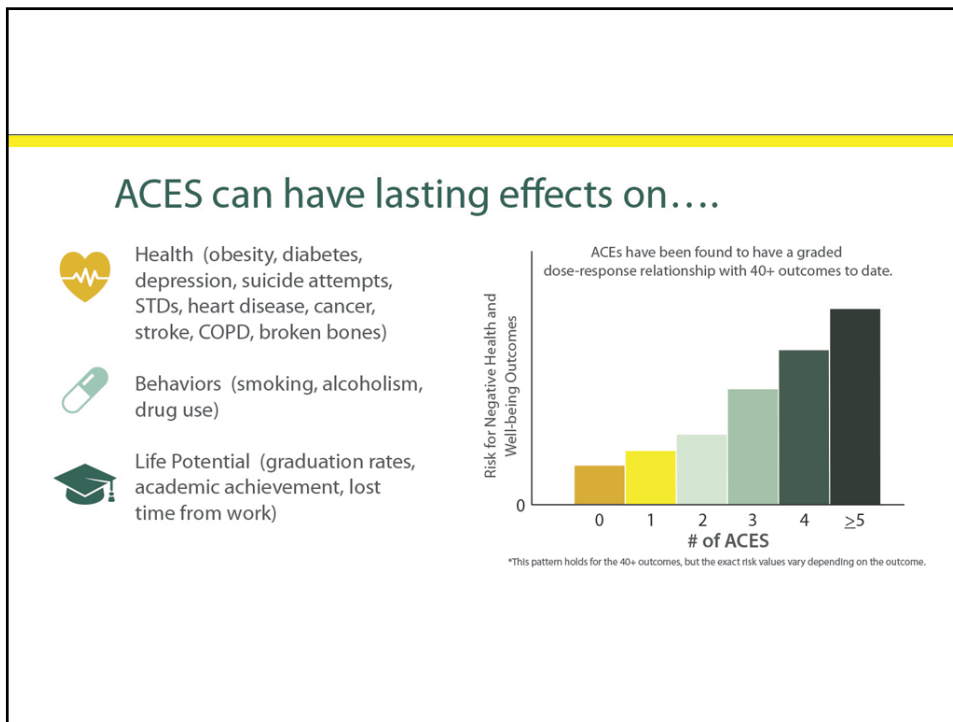
Relationship of Childhood Abuse and Household Dysfunction to Many of the Leading Causes of Death in Adults

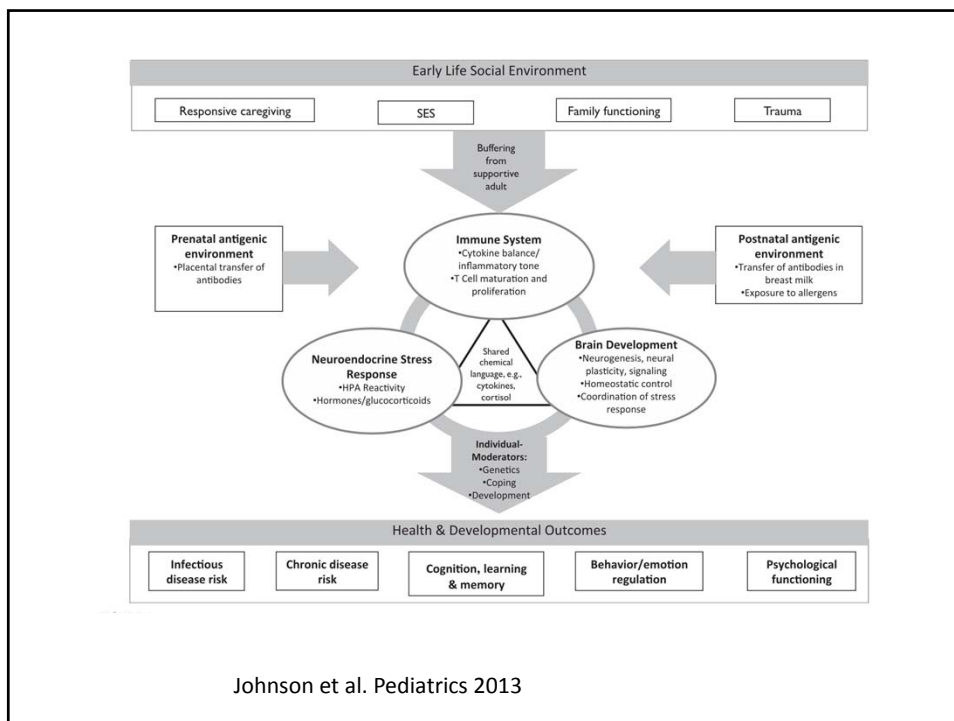
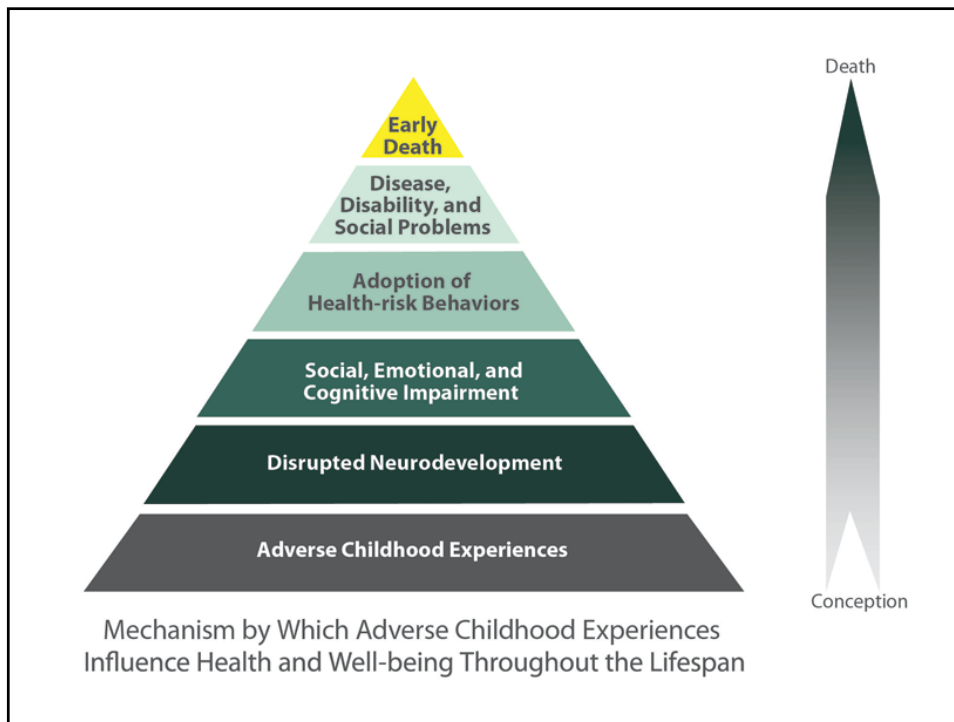
The Adverse Childhood Experiences (ACE) Study

Vincent J. Felitti, MD, FACP, Robert F. Anda, MD, MS, Dale Nordenberg, MD, David F. Williamson, MS, PhD, Alison M. Spitz, MS, MPH, Valerie Edwards, BA, Mary P. Koss, PhD, James S. Marks, MD, MPH

Methods: A questionnaire about adverse childhood experiences was mailed to 13,494 adults who had completed a standardized medical evaluation at a large HMO; 9,508 (70.5%) responded. Seven categories of adverse childhood experiences were studied: psychological, physical, or sexual abuse; violence against mother; or living with household members who were substance abusers, mentally ill or suicidal, or ever imprisoned. The number of categories of these adverse childhood experiences was then compared to measures of adult risk behavior, health status, and disease. Logistic regression was used to adjust for effects of demographic factors on the association between the cumulative number of categories of childhood exposures (range: 0–7) and risk factors for the leading causes of death in adult life.







What *can* Be Done About ACEs?

These wide-ranging health and social consequences underscore the importance of preventing ACEs before they happen. **Safe, stable, and nurturing relationships and environments (SSNREs)** can have a positive impact on a broad range of health problems and on the development of skills that will help children reach their full potential. Strategies that address the needs of children and their families include:

Voluntary home visiting programs can help families by strengthening maternal parenting practices, the quality of the child's home environment, and children's development.
Example: Nurse-Family Partnership



Home visiting to pregnant women and families with newborns



Parenting training programs



Intimate partner violence prevention



Social support for parents



Parent support programs for teens and teen pregnancy prevention programs



Mental illness and substance abuse treatment

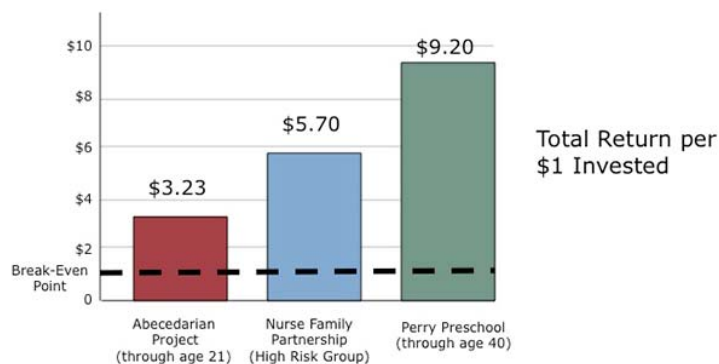


High quality child care



Sufficient income support for lower income families

Cost/Benefit Analyses Show Positive Returns Early Childhood Programs Demonstrating Range of Benefits to Society



Source: Karoly et al (2005); Heckman et al (2009). Credit: Center on the Developing Child.

Massachusetts Child Psychiatry Access Project

MCPAP
For Moms

Contact number for providers:
855-Mom-MCPAP (855-666-6272)

Google™ Custom Search

Promoting Maternal Mental Health
During and After Pregnancy

About MCPAP for Moms | How We Help Providers | Provider Toolkit | Our Team | For Mothers and Families



Click Below For Video



MCPAP for Moms promotes maternal and child health by building the capacity of providers serving pregnant and postpartum women and their children up to one year after delivery to effectively prevent, identify, and manage depression.

“The Primary Care Advantage”: Suitability of Primary Care Providers for Mental Health

- Patients and families often feel more comfortable and trusting of primary care providers
- Primary care providers have the opportunity for prevention and screening
- Experience coordinating care for children with multiple specialists and ancillary providers (medical home model)
- Primary care providers know the developmental context of symptoms
- Addressing psychiatric issues in primary care setting can reduce stigma

AAP Mental Health Task Force, Pediatrics 2009

Models of Mental Health Integration

	Behavioral Health Clinician Model	Child Psychiatry Access Programs	Collaborative Care Model
Behavioral Health Team	On Site: Behavioral health clinician: Social Worker, Psychologist, Nurse Practitioner (rarely psychiatrist)	Off-site Psychiatrist, therapist or care coordinator	On Site: Behavioral Health Care Manager Off/On Site: Psychiatric Consultant
Behavioral and Primary Care Physicians work:	In the same space, within the same facility, sharing health records	In separate facilities, health records are not typically shared	In the same space, within the same facility, sharing health records
Advantages in practice	Allows for collaboration of care, broad reach of the clinic population	Availability of immediacy of consultation, outreach of services (ability to reach more patients)	Measurable and definable, clinicians and teams can be held accountable to outcomes
Challenges in Practice	Cultural changes in clinical practice, defaulting to co- location, limited ability for more structured and intensive behavioral health interventions or care coordination	System issues may limit collaboration, financing of services	Sustainability issues, Limited Studies in pediatric population, financing of services

“Common Factors Theory”

Duncan, Miller, Wamboldt, Hubble 2009

- Variance in outcome associated with mental health treatment attributed to the following factors
 - 40% client and extra-therapeutic factors
 - 30% therapeutic relationship (empathy, warmth, encouragement of risk-taking)
 - 15% expectancy/placebo effect
 - 15% specific therapeutic approach (i.e. clinical methodology)

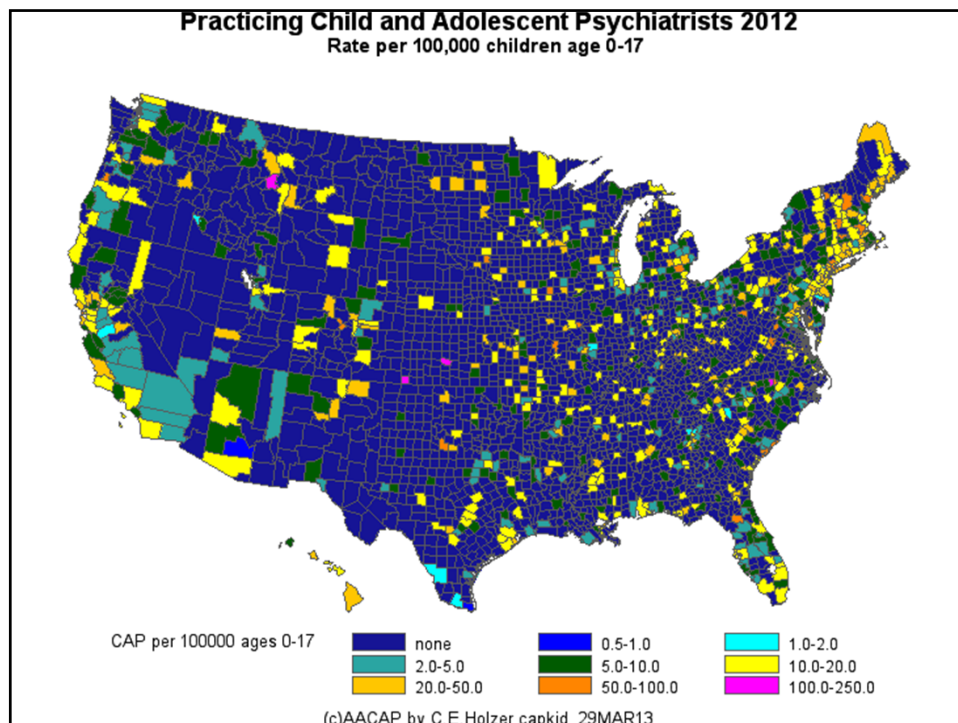
Mental Health Screening in Primary Care

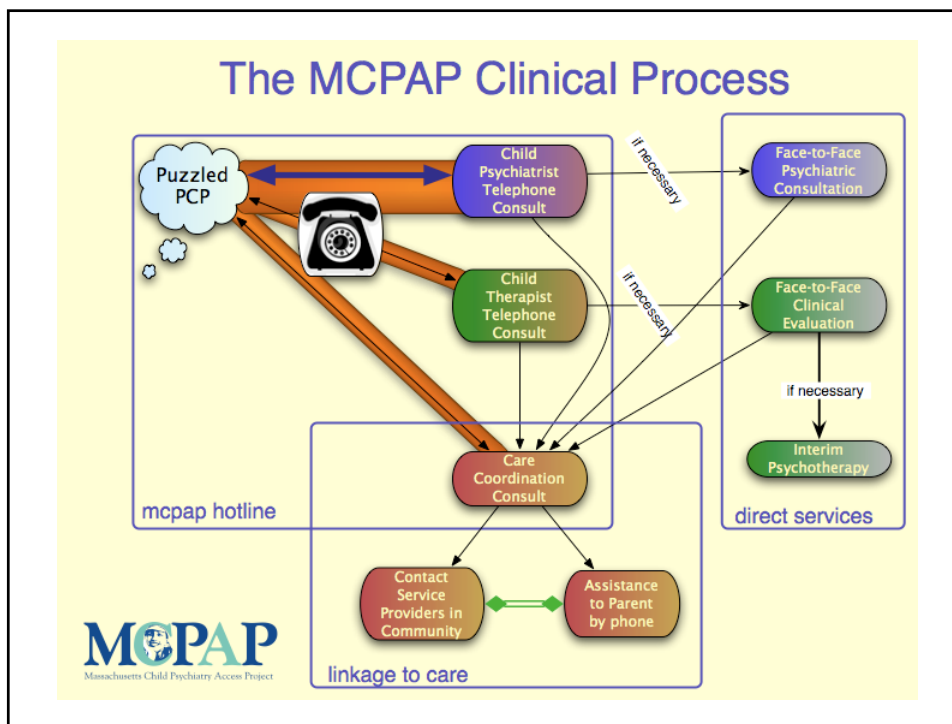
- Better to use broad instruments, rather than diagnosis-specific scales
 - Pediatric Symptom Checklist
 - SWYC
- Except: Specific screens for adolescent depression, substance abuse are important for adolescents
 - Do not rely on parent report measures for these
- Develop a process for screens to be administered and results to be entered into record prior to provider entering room
- Consider the screen as an opening to a conversation—not a diagnostic test!
- Don't screen unless you have a reliable process for ensuring that positive findings are addressed with patient. (Failure to address a positive finding on a screen is negligent and can be quite harmful...)

CPAPs are regional children's mental health consultation teams designed to help primary care providers meet the needs of children with psychiatric problems.

CPAP services

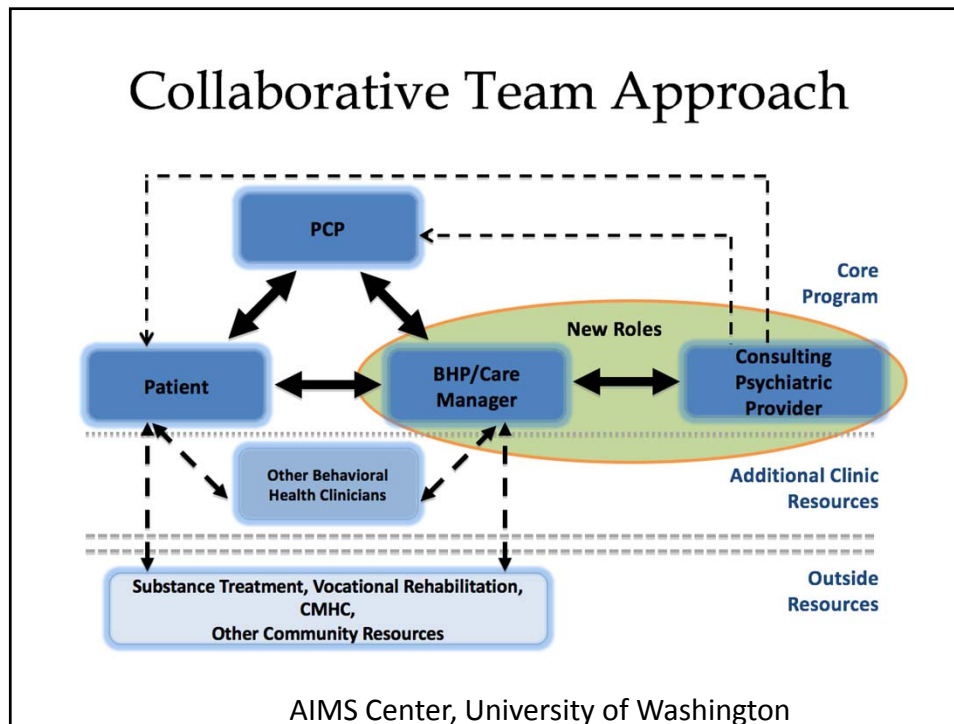
- Telephone consultation
- Expedited direct patient evaluation
- Care coordination
- CME (online, print, in-person)
- Other: drug utilization review, interim psychotherapy, telepsychiatry





Limitations of CPAP Model

- Push vs. Pull: CPAPs are pull. Is pull good enough?
- CPAPs depend upon adequately functioning specialty MH system surrounding primary care. Without this, PCPs flounder with their most challenging cases and become disillusioned
- CPAPs rely upon strong PCP engagement with patients (particularly re MH needs) and program. Underfunded programs, perverse incentives.



Collaborative Care Model Evidence Base

- Now over 80 Randomized Controlled Trials (RCTs)
 - Meta analysis of Collaborative Care (CC) for depression in primary care (US and Europe)
 - **Consistently more effective than usual care**
- Since 2006, several additional RCTs in new populations and for other common mental disorders
 - Including anxiety disorders, PTSD
 - Emerging evidence for ADHD, alcohol and substance use disorders

Archer, J. et al., 2012

Collaborative Care Model Evidence Base

Evidence Base Established	Emerging Evidence
<ul style="list-style-type: none">• Depression<ul style="list-style-type: none">- Adolescent Depression- Depression, Diabetes, and Heart Disease- Depression and Cancer- Depression in Women's Health Care• Anxiety• Post Traumatic Stress Disorder• Chronic Pain• Dementia	<ul style="list-style-type: none">• Substance Use Disorders• ADHD• Bipolar Disorder

Nature of Primary Care Setting

- Implications of high volume practice
 - Stimulus/Response
- Other team members: MA, RN, Care Managers?, Referral specialist?
- Temperamental and personality differences
- Noisy, bright

Workforce development needs for integrated behavioral health

- Knowledge of medical treatment
- Develop comfort level with high volume practice environment: noise, privacy
- Develop Consultation models of clinical practice
- Identity as a “cultural ambassador”
- Develop communication skills for working with primary care teams
- Measurement based care

Administrative challenges

- Financing challenges:
 - FFS reimbursement inadequate for integrated practice
 - New codes on horizon for collaborative care model
- Need for shared platform for medical information, revision of traditional confidentiality principles

