

Toxic Stress / Adverse Childhood Experiences

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**AMERICAN ACADEMY OF PEDIATRICS,
MAINE CHAPTER SPRING CONFERENCE**

On the Path of Well-Being: Adversity, Poverty
and Resilience

May 1-3, 2015

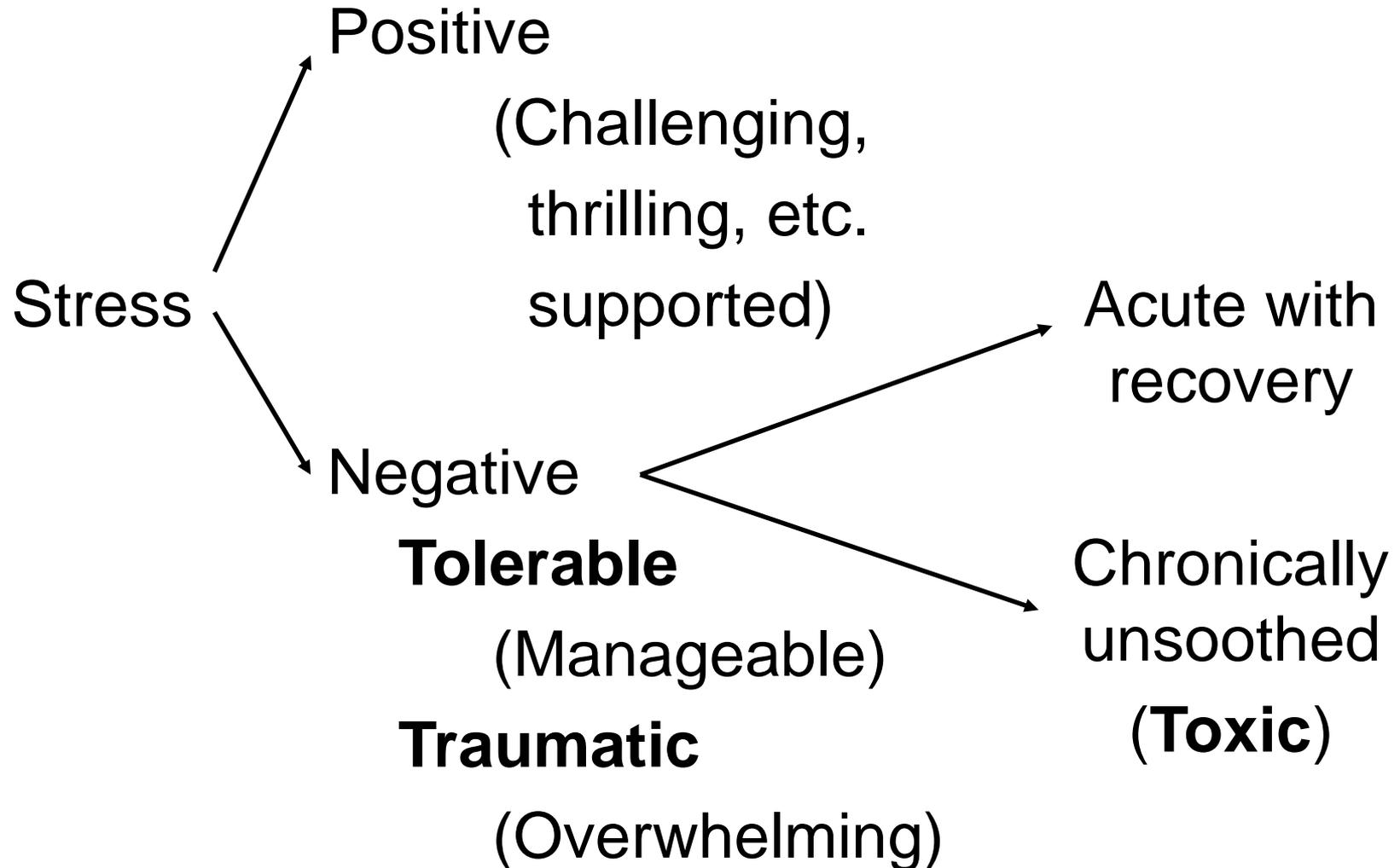
Take-home points:

- Chronic stress response (remaining unsafe, unsoothed or bothered—even subclinical) can affect health and development, in both episodic and chronic conditions
- Cumulative stresses can increase impact
- Protective/promotive experiences can buffer stress and build resilience
- Current evidence-base and screening tools are not very precise, but do support a conversational, collaborative approach, probably the best way to proceed anyway
- Consider a continuum of data-gathering, decision-making and interventions within integrated care
- A variety of resources are available to support Better Health, Better Healthcare, and Better Healthcare Cost

Stress

Type of Stress

Duration



“Toxic Stress”

“In contrast to positive or tolerable stress, **toxic stress** is defined as *the excessive or prolonged activation of the physiologic stress response systems **in the absence of the buffering protection afforded by stable, responsive relationships**...that help children develop a sense of safety, thereby facilitating the restoration of their stress response systems to baseline.*”

www.pediatrics.org/cgi/doi/10.1542/peds.2011-2662

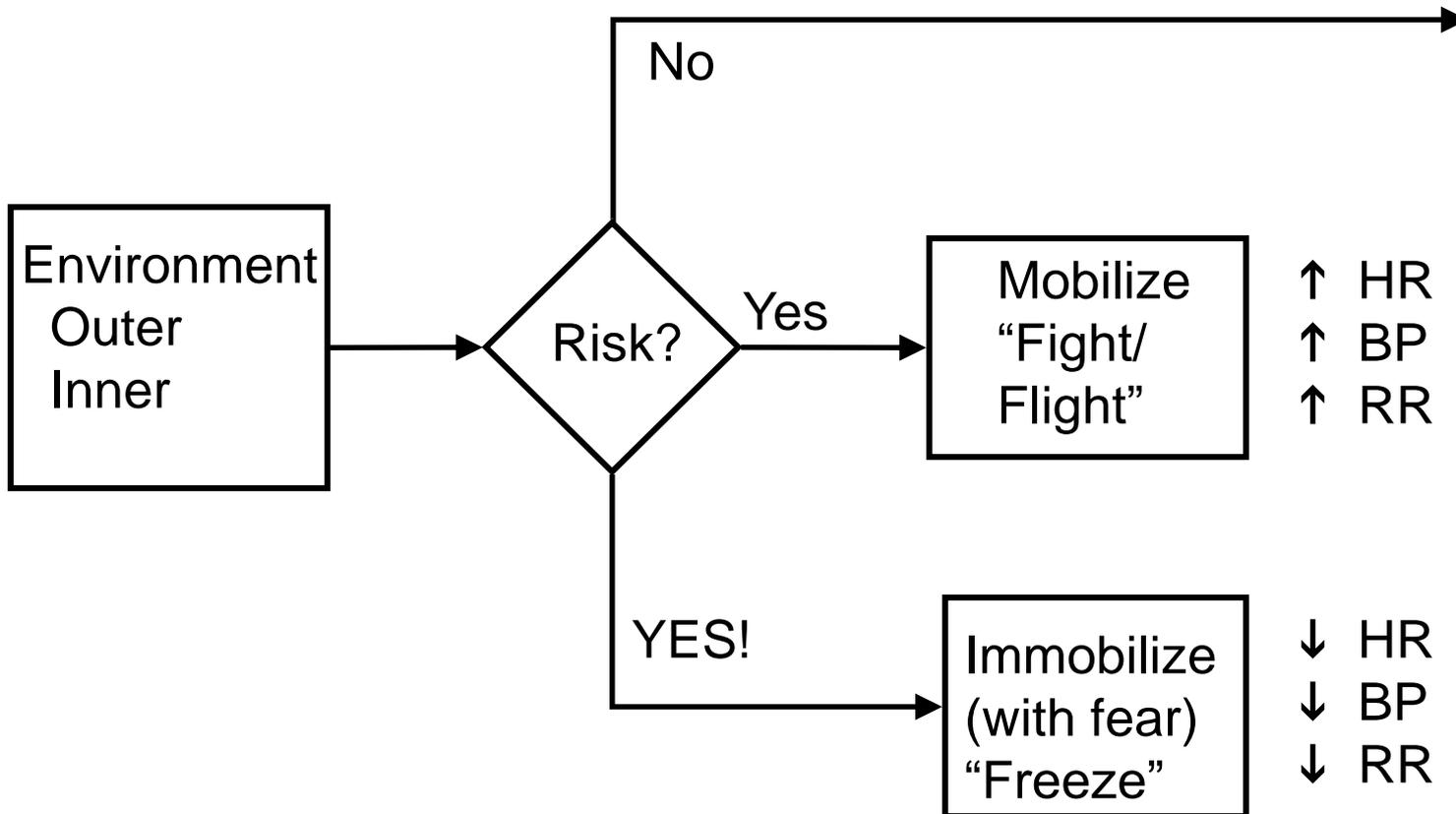
That is:

A chronic stress response state (which for children:
has not been soothed within a caregiver-child relationship)

NOT a type of stress

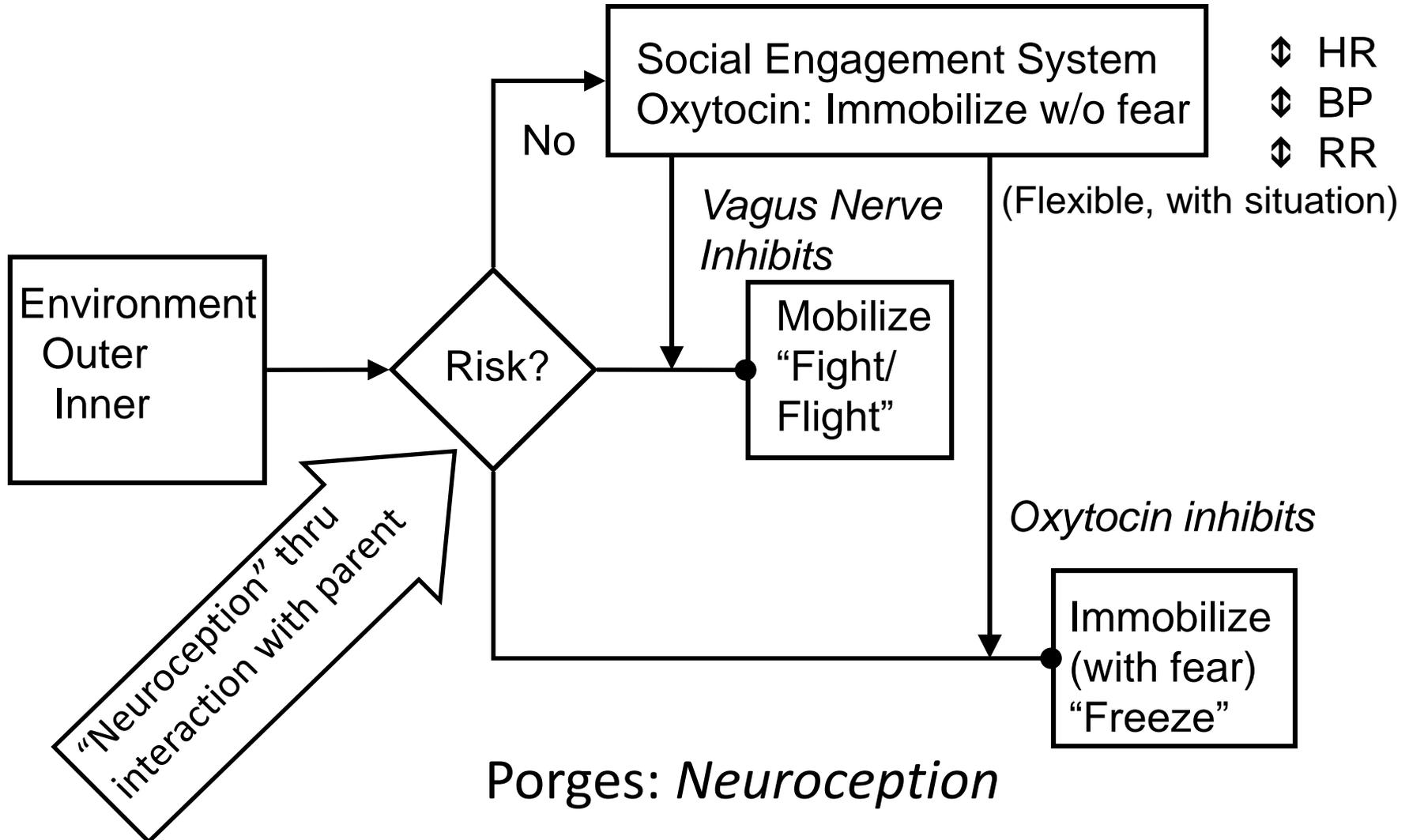
NOT on a dimension of ‘tolerable to traumatic’

Sympathetic Arousal Stress Response System



Building Resilience?

Add: Parasympathetic Arousal (SES) to the Stress Response Systems



Social Engagement System

- Involving 10th cranial nerve “Neuroception” (eye contact, facial mirroring, vocalization, middle ear tuning into voice frequencies, touch, etc.) and dorsal vagus (supporting heart rate variability and inhibiting HTPA activation)
- Parasympathetic tone linked to diaphragmatic breathing
- Available from birth, although may not be fully developed in preterm infants
- Soothing defined as activating this system to support a return to safety from distress
- Gradually builds resilience expectations of being safe, lovable, capable, meaningful
- Useful in mitigating stress of ACEs, such as separation/divorce

Pause

- Consider stresses, adversities to trigger one of the stress response systems, acutely or chronically

Adverse Childhood Experiences

Child Victimization

- Physical Abuse
- Sexual Abuse
- Emotional Abuse
- Emotional Neglect
- Physical Neglect

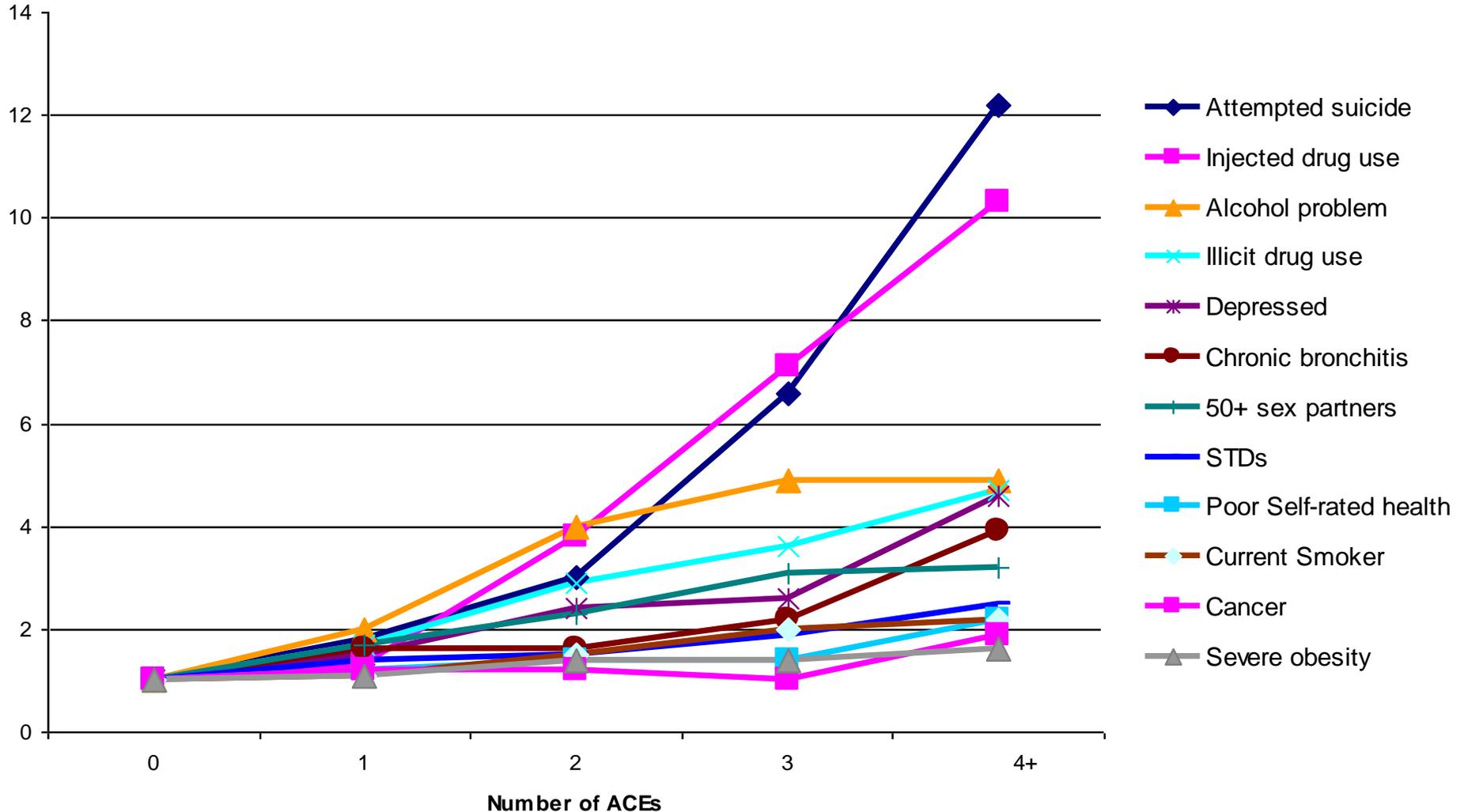
Parental/Household

- Domestic Violence
- Substance Abuse
- Incarceration
- Mental Illness
- Separation/Divorce/
Bereavement

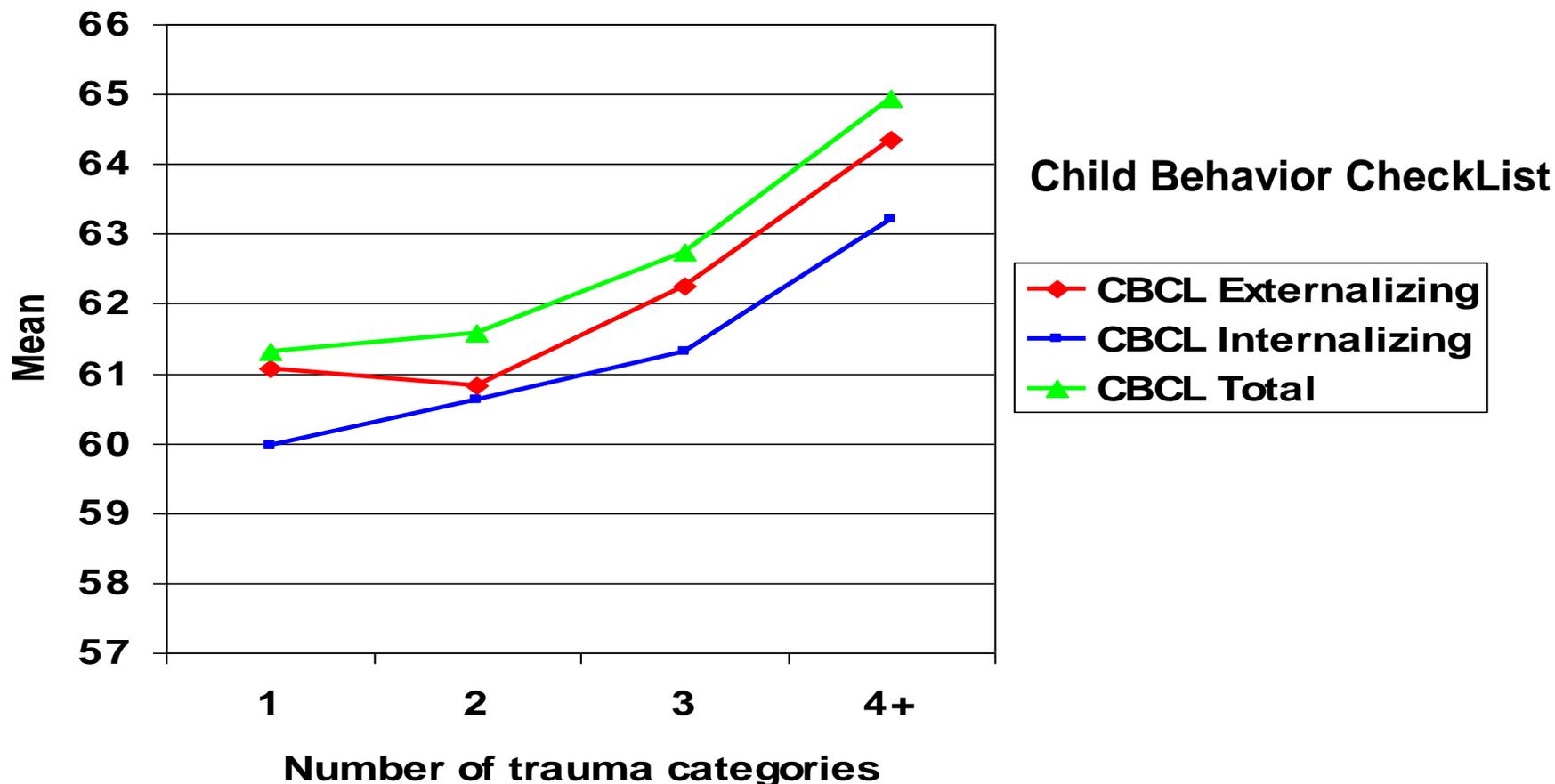
www.cdc.gov/NCCDPHP/ACE/

Cumulative ACEs increase the risk of negative outcomes

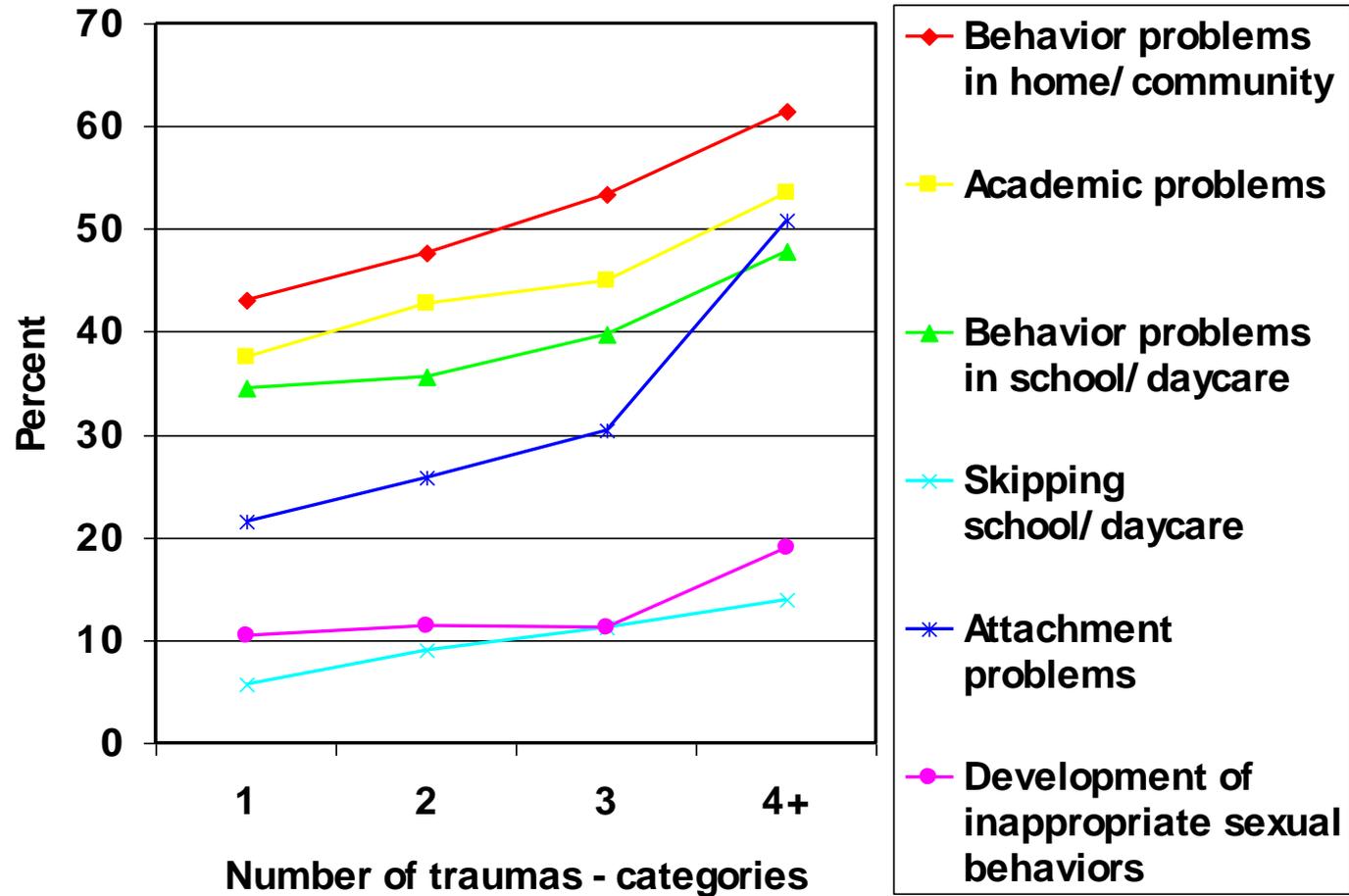
ACE Study Odds Ratios



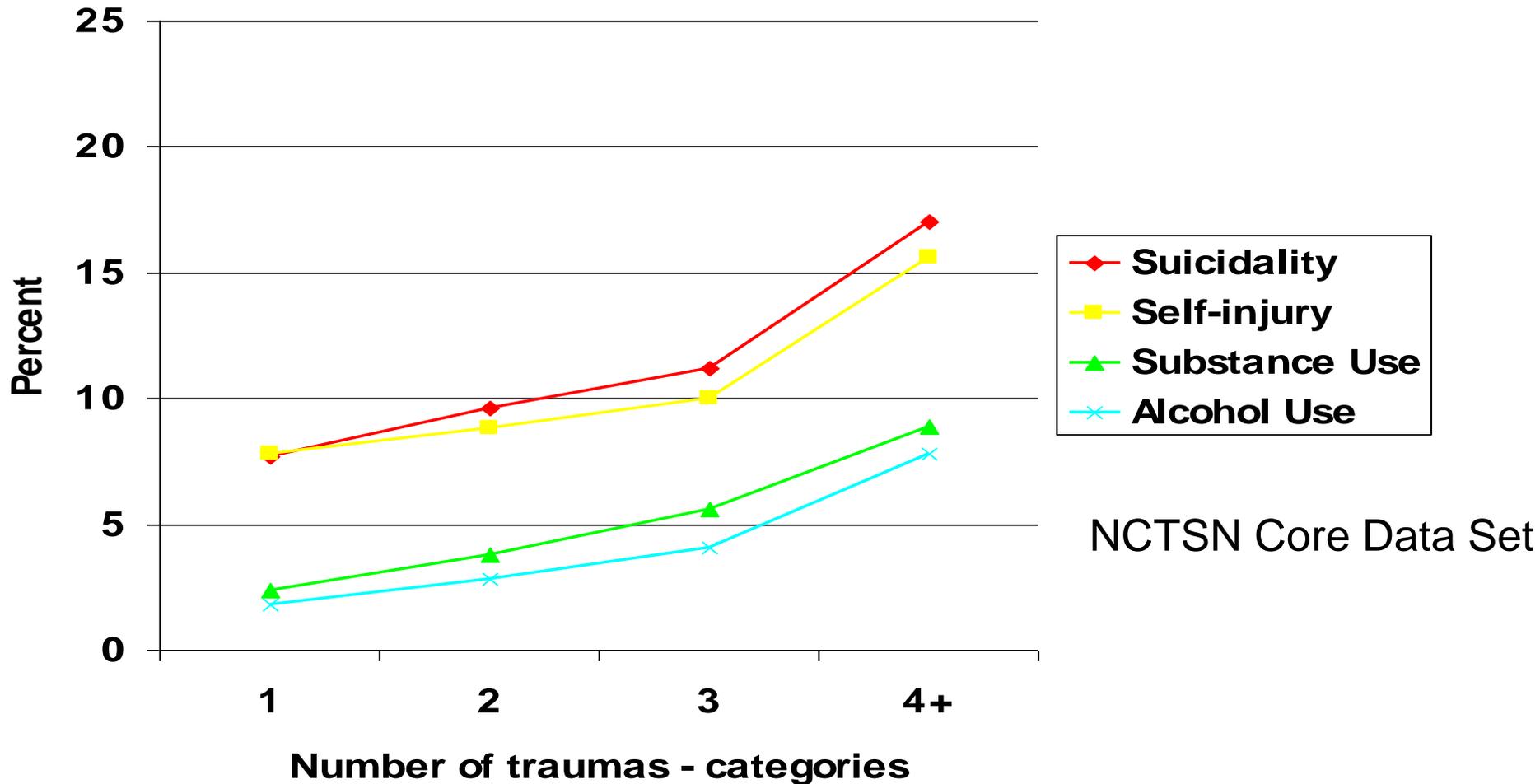
Multiple Trauma & Impairment in NCTSN Core Data Set



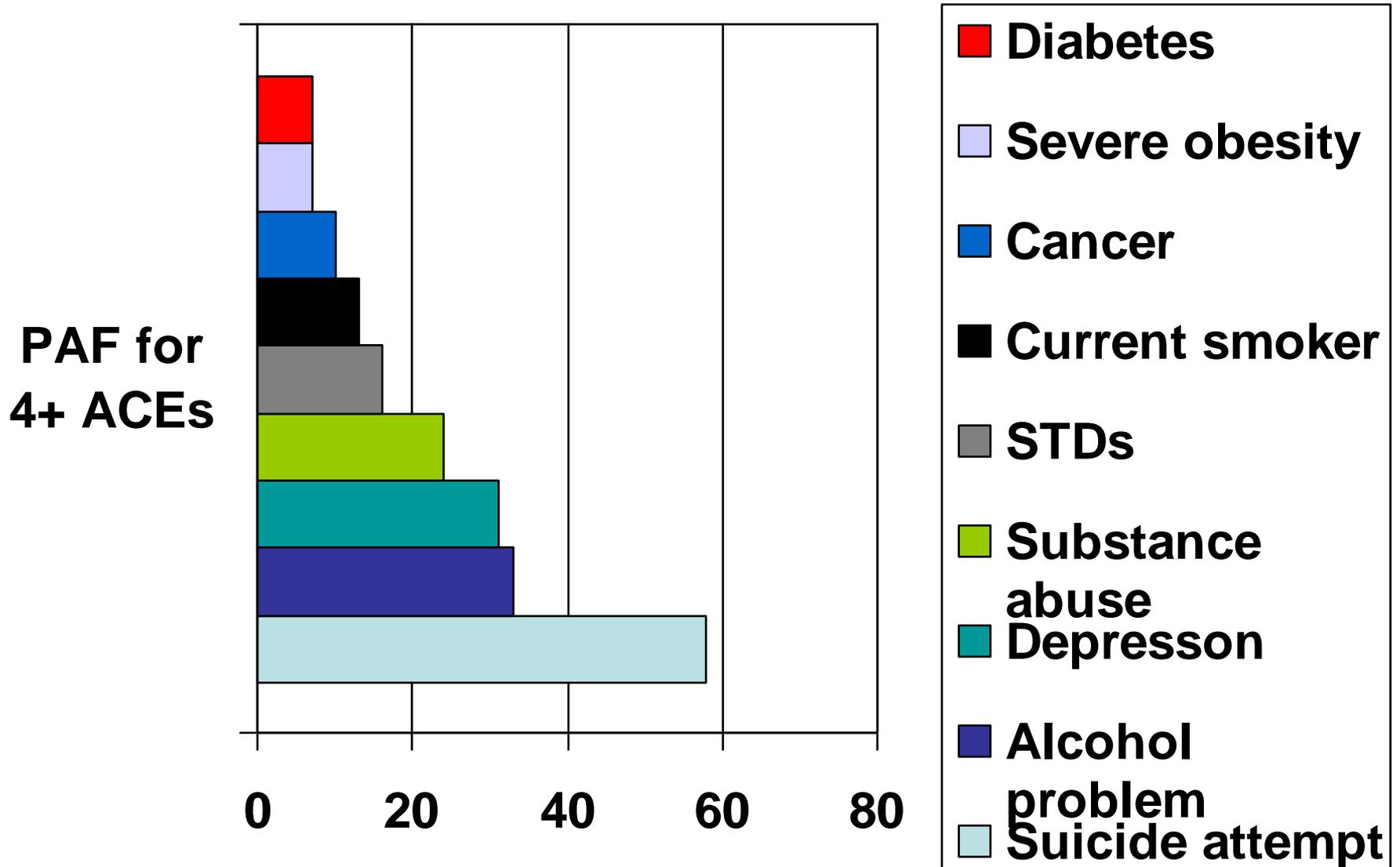
MT: Behavior Problems, Development of Relationships & Competence



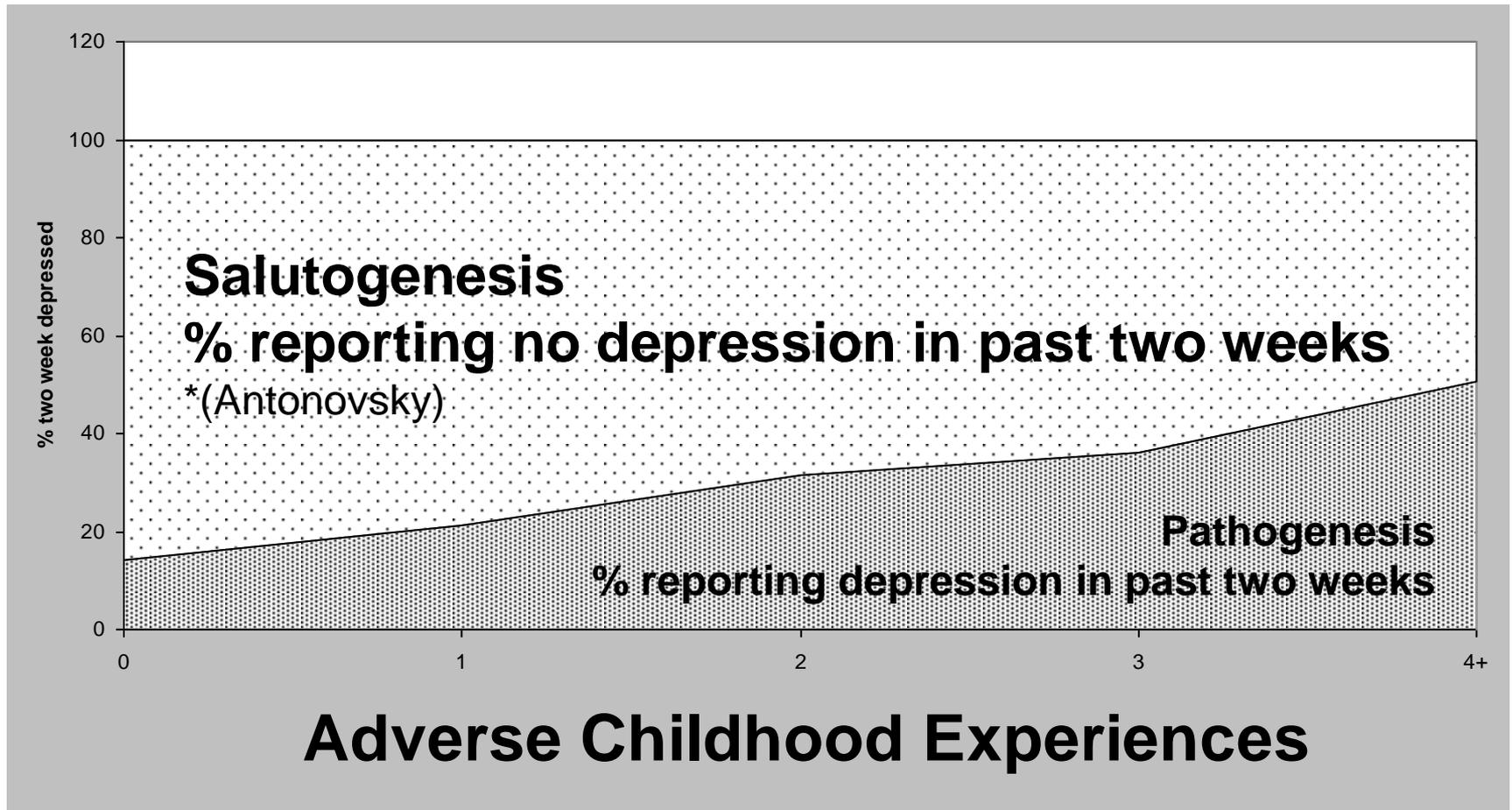
Multiple Traumas & Child Health Risk Behaviors



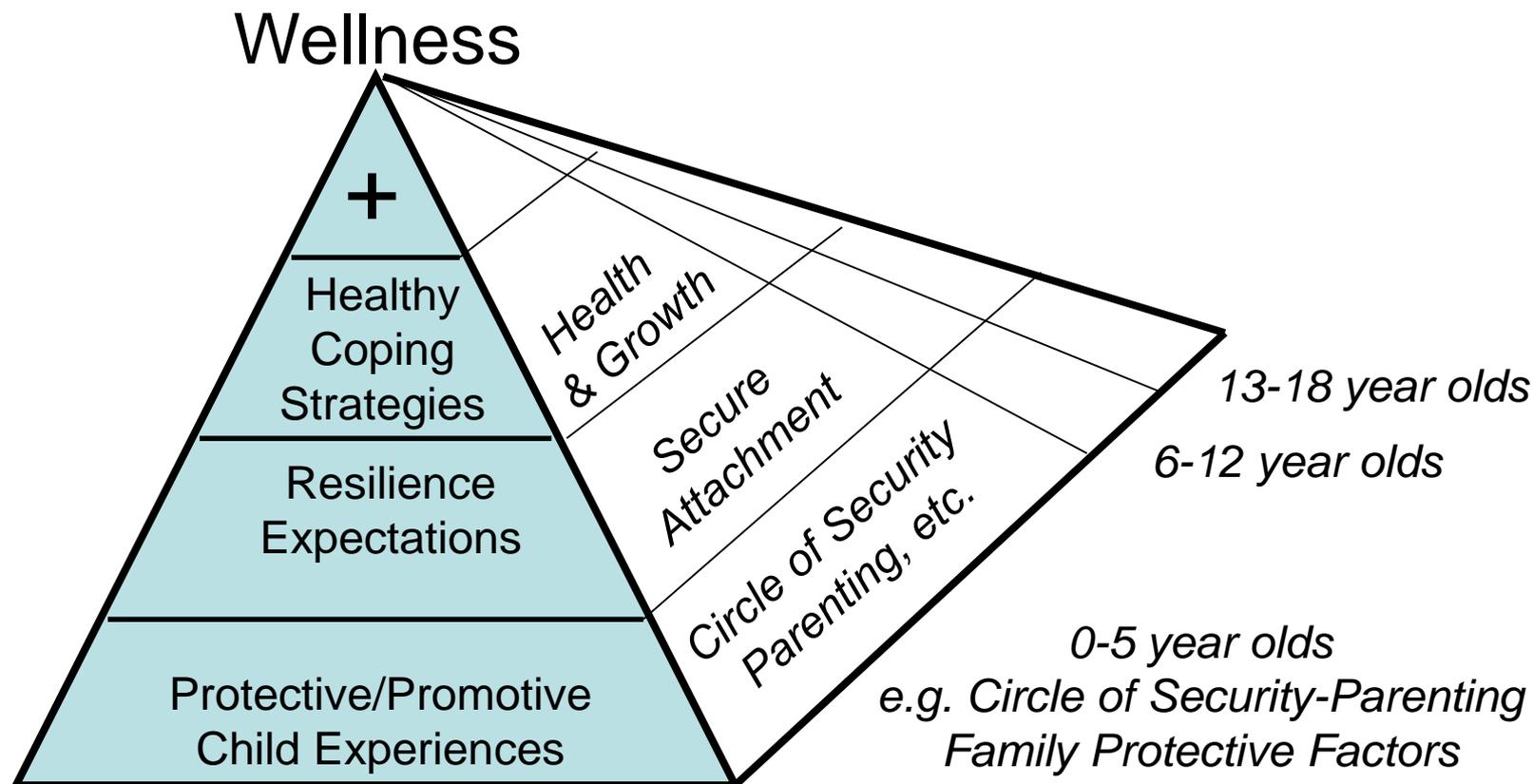
Population Attributable Fraction



How do people stay healthy?

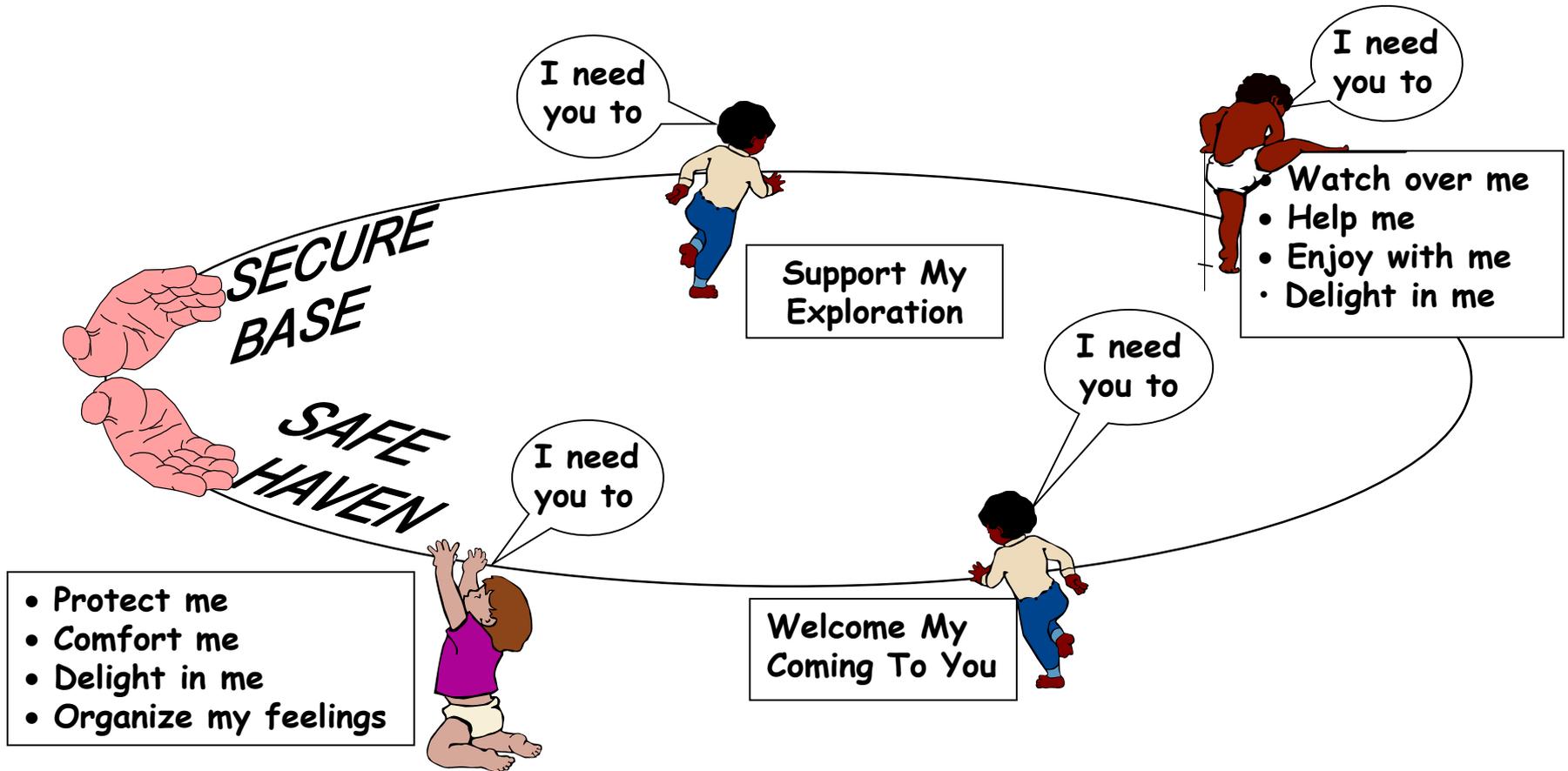


What positive life experiences/mediators might parallel or complement the ACE Study pyramid?

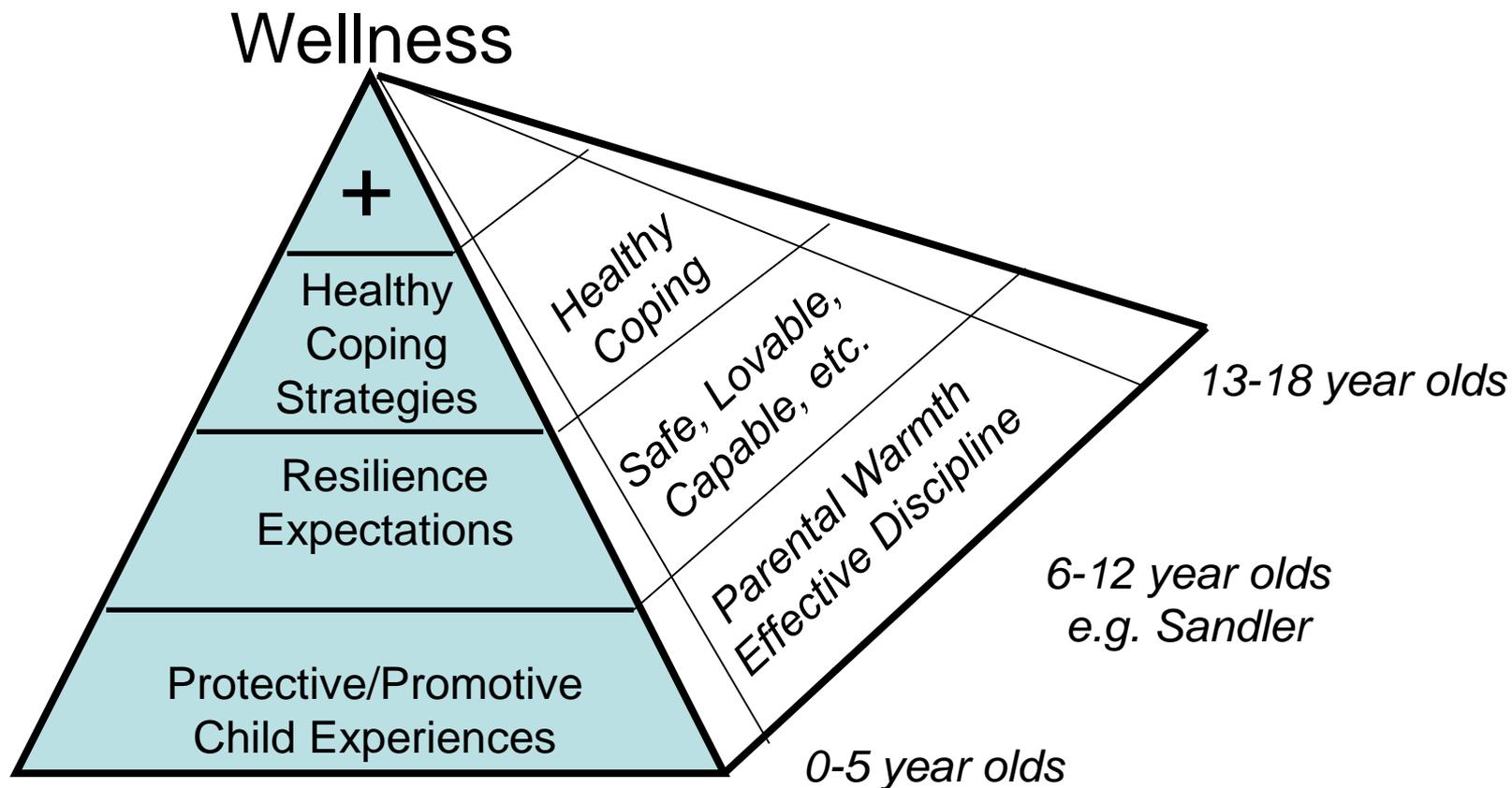


Circle of Security

Parent Attending to the Child's Needs



What positive life experiences/ mediators might parallel or complement the ACE Study pyramid?



Pause

- What to do?

Solvable Problems re: ACE Study

How representative was the population?

Screen for ACEs or symptoms

How specific/sensitive—why bother?

Other adversity besides 10 ACEs?

What intervention

What's in it for me?

What about stigma? Mandated reporting?

Am I supposed to do everything?

How predictive are ACEs?

Beyond the odds ratios reported in articles, data on sensitivity and specificity is less available.

Generally it appears that the ACE ?s may be high in specificity and low in sensitivity

If no ACEs, then likely to be healthy (hi specific)

If 4+ ACEs, then might have negative outcome, but more likely than not, won't (lo sensitive)

...but it may still be good to have a conversation

Four Quadrant Screen to Plan

ACEs	High	Monitor	Refer to Case Mgt
	Low	Yeah! Relief!	Refer to Case Mgt
		Low	High

Symptoms

Surveillance, Screening, Service Plans

Surveying (“Surveillance”)

“elicit parental observations, experiences, and concerns by posing simple questions related to children’s development, learning, & behavior (Hagan, et al, 2008)...parents’ concerns regarding family psychosocial issues.”(Garg & Dworkin, 2011)

Screening

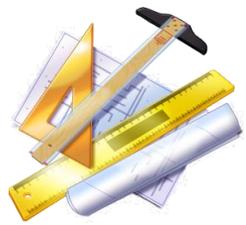
“screening involves the use of standardized tools, such as parent-completed questionnaires and professionally administered tests, at select ages.” (Garg & Dworkin, 2011)

Service Planning may involve:

Providing or referring for service directly from screening

Further assessment in order to clarify need for specific service and level of intervention, to establish diagnosis and eligibility, to identify factors affecting service delivery, etc.





Standardized Tools

In addition to providing a generally **reliable** protocol for administering screening (everyone does it the same, rather than idiosyncratically), standardization enables calculation of a tool's sensitivity and specificity in guiding decisions about diagnosis and service planning.

Consider that a screening tool predicts whether a characteristic is true for a person (e.g. will receive PTSD diagnosis) or guides a decision about service planning (e.g. a good candidate for therapy referral).

Sensitivity refers to how well scoring 'positive' on the screening tool identifies true positives (e.g. the PTSD dx, a good therapy referral).

Specificity refers to how well scoring 'negative' on the tool identifies true negatives (e.g. not a PTSD dx, not a good therapy referral).

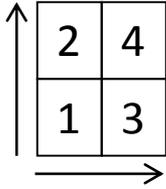
Integrated care teams can choose what levels of sensitivity/specificity are desired for their populations. service

Continuum of Services (multi-level)

Screening/
Assessment
Results:

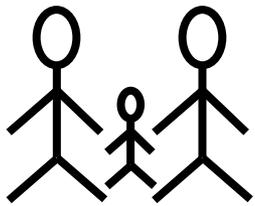
Intense Problem	→	Specialty referral (e.g. PC to MH trauma intervention)
Problem	→	Specialty service (within discipline) Highly integrated care team
Risk of Problem	→	General service and referral Coordination of services (e.g. case manager) Developmental Guidance and MH competencies
No Problem	→	Support for Self-Management, Common Factors, etc. Community Services (e.g. Home Visiting, Head Start) Parent Education and Skill-building groups
		Universal education and support services Protective factor support

Comprehensive Screening (multi-dimensional)



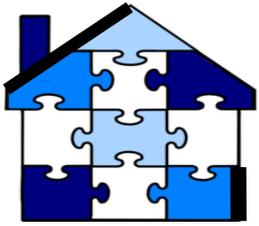
Integrating multiple dimensions (not just a single screen) can:

- Guide intervention planning within ‘four-quadrant’ models
- Implement AAP: Ecological-Biological-Developmental model
- Improve sensitivity/specificity (i.e. ‘relative risk’)
- Support comprehensive planning in Patient-Centered Health Homes (e.g. physical and behavioral health, family protective factors, child-parent relationship issues, etc.) and a holistic view of child/family.
- Reduce risk of overlooking factors that could make a significant difference in health and healthcare outcomes.
- Address interaction effects among factors (e.g. reactivity + trauma)
- ... especially if screening data is integrated, rather than fragmented across a variety of screens.



Family Context

- Primary roles in integrated care:
 - Parents conduct ongoing ‘surveillance’
 - Parents are a source of information for screening
 - Parents as partners in service planning / delivery
- Screening opens/extends conversations
- Relationship as focus of service in early childhood
- Language (‘surveillance’, ‘toxic stress’, ‘targeted intervention’?)
- Trauma/Resilience-Informed importance of:
 - safety, trust, goals, choices, teamwork



Health Reform Context

Sustainability

- Screening in Patient-Centered Health Home as an ACA service model and source of coordination funding and sustainability for integration
 - Comprehensive planning
 - Continuum of services
 - Coordination of services
 - Electronic record-keeping
 - Change Improvement (PDSA cycles)
 - Individual + Population focus
- Better health, healthcare, healthcare cost

How bothered or not? (Resilience, Strengths and Priorities)

- How is it that the other categories don't still bother you?
- How does what still bothers you affect you?
- Would you like to explore how to change what still bothers you?

Continuum of Interventions to shift 'Bothered' to 'Not-Bothered'

- Individual Evidence-Based PTSD Treatment
- Mindfulness training, etc.
- Forgiveness, Pastoral Counseling, 'ACE Overcomers'
- Trauma-Informed Parenting Skill-Building
 - Circle of Security, Parenting From the Inside Out,
 - DBT for Parenting, Nurturing Program, PMTO,
- Home-visiting support
- Developmental guidance from Primary Care or referral
- Parent self-help → to community network ← “
- Reflecting on past → present in a safe situation

Cumulative Risk Screening

Please mark one circle for each category of stressful events that you (your child) experienced, without identifying each specific event.

OOOOOOOOOOO __ **Total # experienced**

Please mark a circle for each of the stressful events that still bothers you (your child).

OOOOOOOOOOO __ **Total # still bother**

Flow of cumulative risk screening for individual intervention

1. Introduce traumatic stress & health
2. Ask # of categories experienced
3. Ask # of categories no longer bothering
4. Affirm coping strategies
5. Followup how bothered (e.g. PTSD:RI, TSCC)
6. Prioritize areas for change, perhaps therapy
7. Proceed with 'trauma-informed' sensitivity to cumulative trauma experience
8. Consider screening protective experience, resilience expectations, and coping skills
9. More detailed trauma assessment and therapy?

But there aren't enough services!

Not if everyone needed intense services, but...

...think in terms of a continuum of steps

[3] Intense Need		Specialist therapy
[2] Need		Integrated Care Generalist therapy
[1] Risk of Need		Developmental Guidance Risk Reduction Activities
[0] No Need Yet		Health Promotion Activities

How do I know what level?

Not if everyone needed intense services, but...
 ...think in terms of a continuum of steps

[3] Intense Need?		Specialist Therapy
[2] Need?		Assessment re: plan.....maybe ↕
[1] Risk of Need?		Screening, if + then talk ↑
[0] No Need Yet?		“Surveillance”, if + then talk ↑

What's in it for me?

Better Health for my patients... (& my patience)

...if contributions of stress are addressed...

in episodic problems

in chronic conditions

Better Healthcare...if

...

Better Healthcare Cost...

if...

Resources

- www.NCTSN.org
- www.ARCHPEDIATRICS.com (UCLA PTSD RI)
- www.circleofsecurity.net
- www.drdansiegel.com (PFIO, 12 strategies, hand model)
- www.stephenporges.com (Neuroception, Seseystem)
- www.maineecgc.org/cmt_health.html (HAT ACEs report)
- www.childwelfare.gov/preventing/programs/whatworks/report/index.cfm
- www.aap.org

Parenting From the Inside Out...

helps parents help their child to:



- Experience safety
- Develop memories of positive social interactions
- Label or symbolize feelings and events
- Link thoughts, events, feelings, behaviors
- Communicate/Empathize
- Develop social-emotional health

http://www.morethansound.net/store/daniel-j-siegel-publications/parenting-from-the-inside-out-dvd-/prod_104.html

Sandler: New Beginnings Program for children/families of divorce

Parental Warmth

- Promotes sense of security, support for coping, self-esteem and reduces fear of abandonment

Effective Discipline

- Increases predictability of environment (*security*)
- Increases sense of control (*efficacy, capability*)
- Reduces coercive interactions between parent and child (*self-esteem, lovability*)
- Maintains involvement in pro-social behaviors (“
- Prevents involvement with deviant peers (*safety*)

For Divorce ACE: Resilience-Building Outcomes 6 years Later*

Decreased:

- Symptoms of mental health problems
- Academic underachievement
- Prevalence of diagnosed mental disorder
- Marijuana, alcohol, drug use
- Number of sexual partners

*Sandler: New Beginnings Program

Sroufe & Egeland, et al (2005)

The Minnesota Study of Risk & Adaptation from Birth to Adulthood

“Children with histories of early positive care and early histories of competence are significantly less likely to evince problem behavior in the face of stress than those with unsupportive histories” (p. 226).

“Also important are changes in stress and support that occur at later times...It is the balance of supports and challenges that must be considered, not just the challenges.” (p. 227).