

Addressing Toxic Stress and Adverse Childhood Experiences in Partnership with Mothers: the MOMS Partnership

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Disclosures

There are no conflicts of interest

All photographs are used with
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Two Generation Approach

Changing Outcomes For Children Facing Adversity
Requires Transforming the Lives of Adults
Who Care for Them

Violence

Mental
Illness

Substance Abuse

Stress

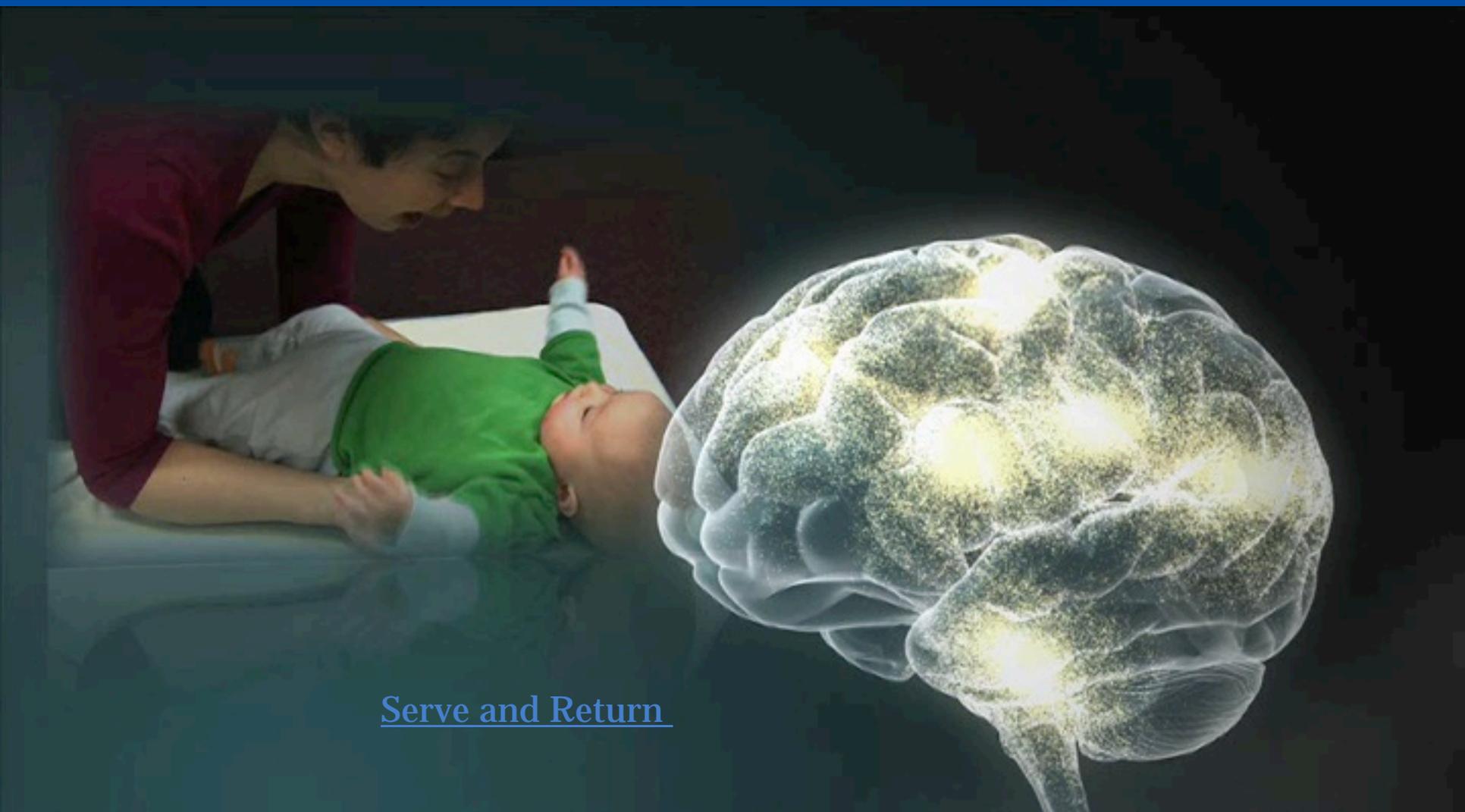
Poverty

Adverse childhood
Experiences



Strengthening
foundational
skills for
wellbeing,
parenting,
employability,
and
responsible
citizenship

Serve & Return Builds Brains and Skills



Serve and Return

Courtesy: Harvard Center on the Developing Child

The Absence of Serve & Return Activates the Stress Response



Disruption of serve and return

Source: Tronick, E. (2007)



The Biology of Adversity: Three Levels of Stress

Positive

Brief increases in heart rate,
mild elevations in stress hormone levels.

Tolerable

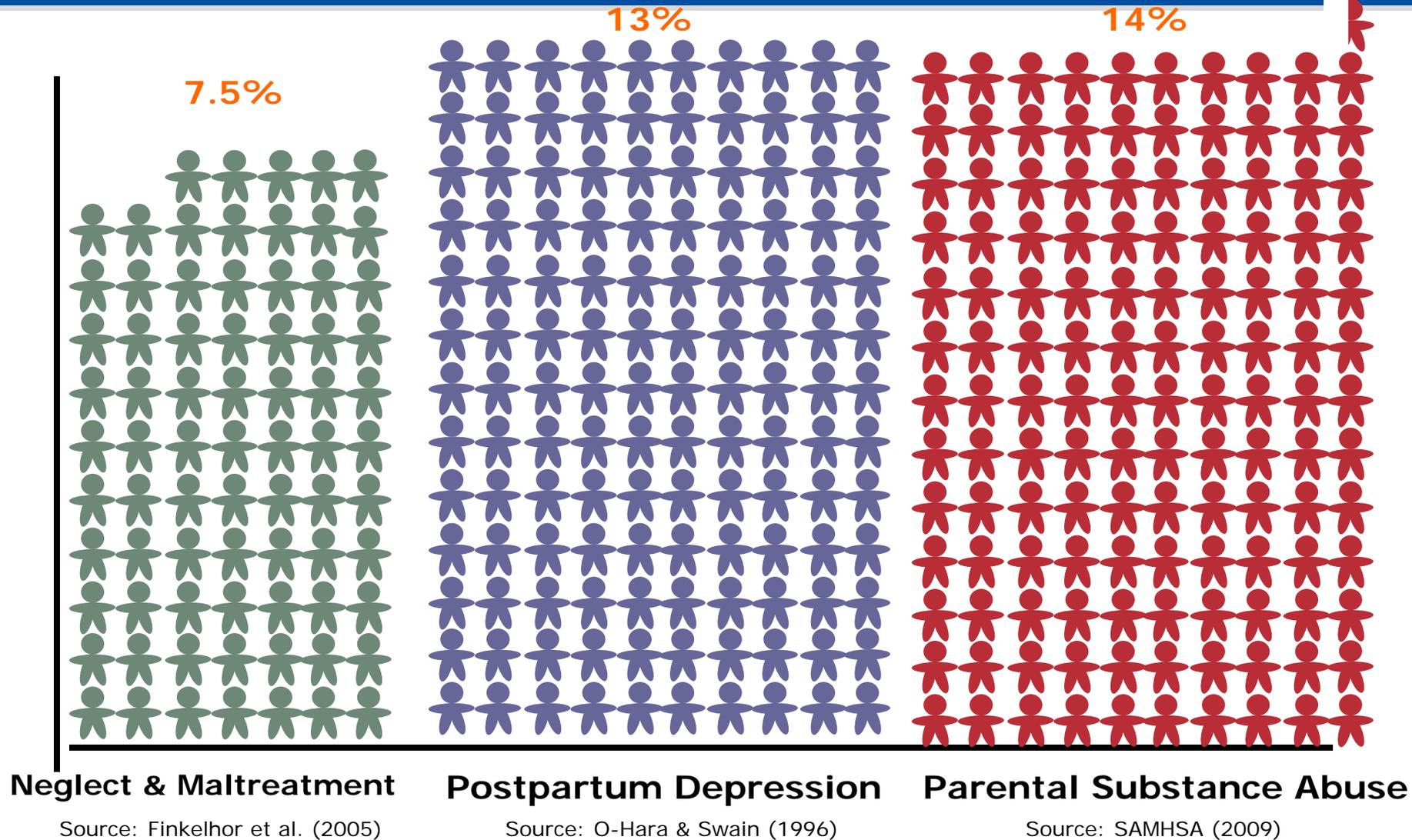
Serious, temporary stress responses,
buffered by supportive relationships.

Toxic

Prolonged activation of stress response systems
in the absence of protective relationships.

Adapted from the National Scientific Council of the Developing Child

Sources of Toxic Stress in Young Children



Maternal Mental Health: Overview of the Epidemiology

- **20.6** million children live with an adult with a mental illness.^{1,2}
- Children of depressed as compared to non-depressed parents are more likely to develop psychiatric illnesses, and are at greater risk for social, cognitive, and medical difficulties.²
- **69.7 percent of depressed low-income mothers** with young children have a condition classified as severe or very severe—to a degree that disrupts home, social, or work life.³



¹ Prince M. *Lancet* 370: 859-877, 2007. Kessler RC. 2005 JAMA

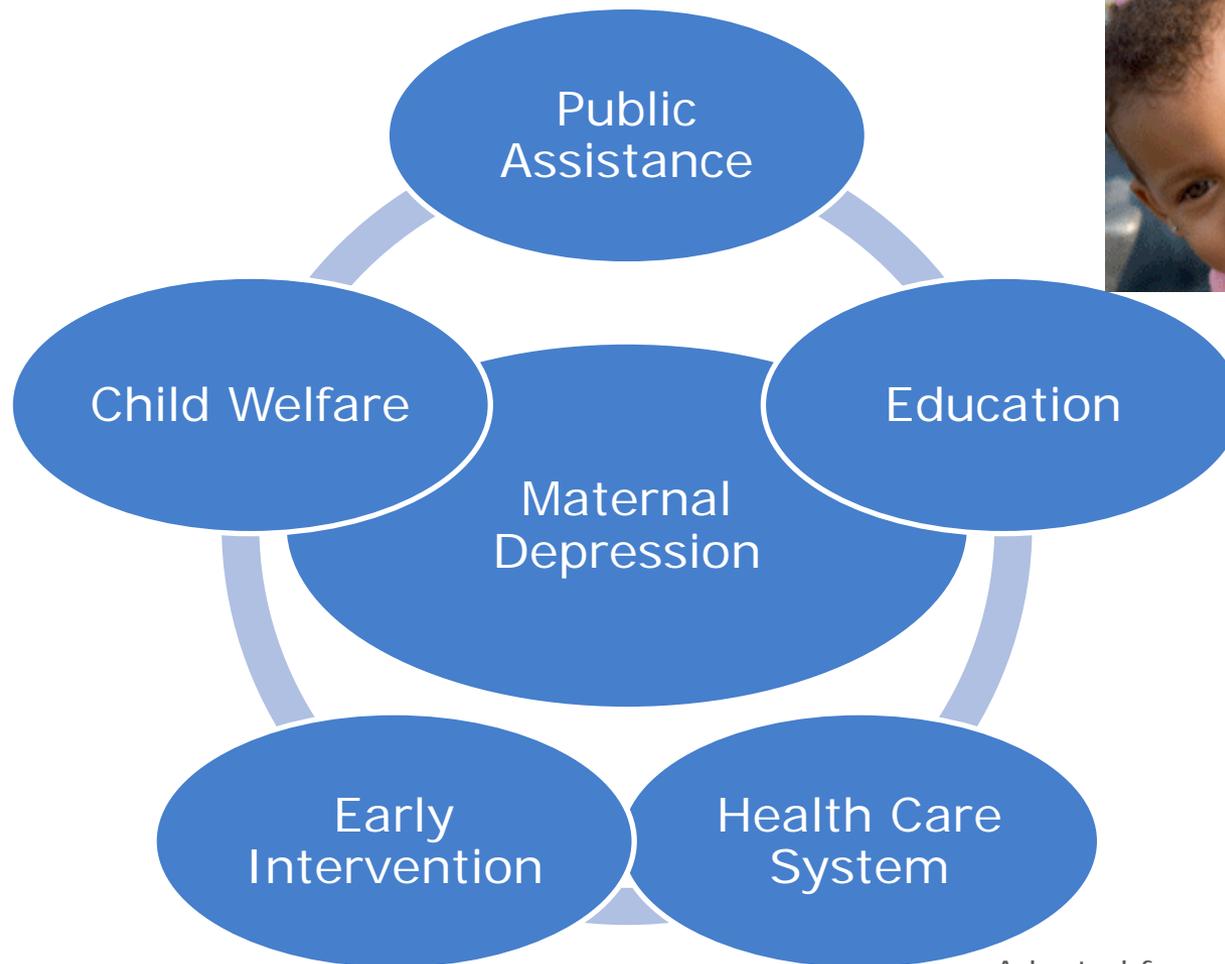
² *National Academies of Science*, 2010

³ National Survey of Drug Use and Health (NSDUH), 2008–2010,

Maternal Depression: Central Role in Development

Outcome	Impact of Depression on Children
Adverse Birth Outcomes	Premature delivery: 3.4x more likely Low birth weight baby: 4x more likely
Developmental Milestones	Height-for-age at age 5: 40% increased odds of being $\leq 10^{\text{th}}$ percentile
Emergency Dept. Visits - Child	Asthma: 2-3x more likely to have visit in the past year
School Readiness & Performance	30% less likely to be Kindergarten ready IQs: 4.5 points lower
Poor Adult Health	Smoking: 1.8 – 2.8x more likely Poor general or mental health: 1.3 – 2.3x more likely Limited activity: 1.8-3x more likely

Public Sector Systems Affected by Maternal Depression



Adapted from Sontag-Padilla, RAND 2013

Depressed Mothers are the “Hardest to Reach” but Most Necessary to Engage in Two-Gen Approach

- Between **28 and 61** percent of mothers in home visiting programs screened positive for depression.¹
 - Program effects suggest largest effect for mother’s with moderate to high depressive symptoms.^{2,3}
 - But these mothers usually **drop out early** or **never enter programs**.⁴
- 10,367 participants 66 implementation sites: mothers who had the highest dropout rate were:
 - younger
 - unmarried
 - African American
 - depressed

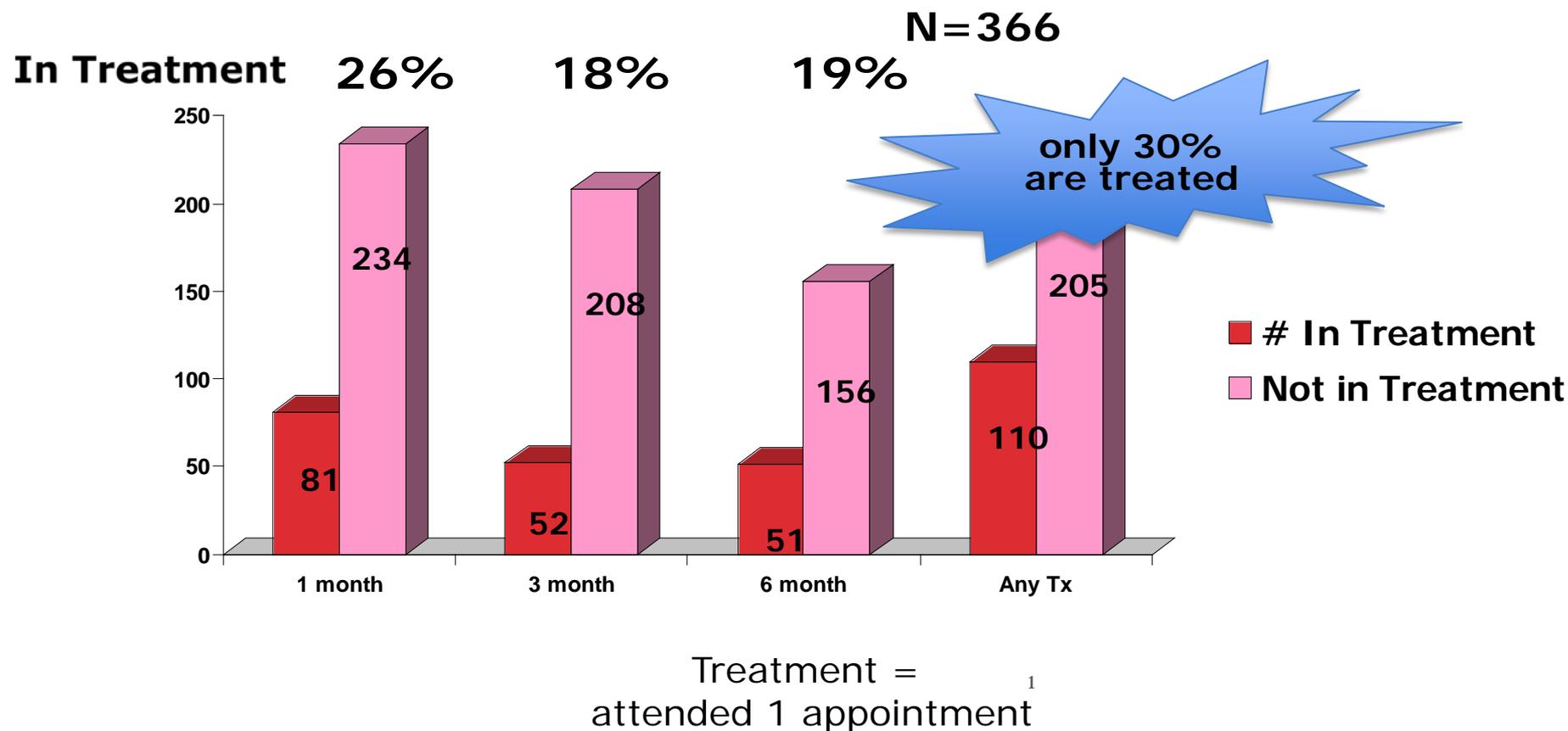
¹Ammerman, RT. *Aggression and Violent Behavior* 15. 2010.

²Rahman, A. *PLOS Medicine* 10 (5) e1001442, 2013.

³Duggan, AK. *J Consult Clin Psychol.* 77(4):788–799, 2009.

⁴O’Brien, RA *Prev Sci.* Jun;13(3):219-28. 2012

Current Intervention Approaches Can Be Strengthened



Smith MV et al. "Success of mental health referral among pregnant and postpartum women with psychiatric distress." *General Hospital Psychiatry*, 31(2): 155-162, 2009.

Nationally, Low-income Mothers do not Receive Depression Treatment

- National estimates from the Medical Expenditure Panel Survey showed nearly 40 percent of mothers with depression had not received treatment, and only 35 percent of those treated had received adequate treatment¹
- Low-income women, the uninsured, African American women, and Hispanic women are at even greater risk of receiving no or inadequate treatment^{2,3,4}

1 Witt, et al. 2009. "Journal of Behavioral Health Services & Research 38(2): 191-204.

2 Kristofco, Robert E., 2007. Journal of Continuing Education in the Health Professions 27(S1): S18-25.

3 Miranda, Jeanne., 2008. "Mental Health in the Context of Health Disparities." American Journal of Psychiatry 165(9): 1102-08.

4 Santiago, Catherine DeCarlo, Journal of Clinical Psychology 69(2): 115-26.

Yvonne and Carmen



Tips for You (parent with mental illness) to reduce your child's risk of depression and anxiety

- Establish and maintain a good relationship with your child.
- Support increasing autonomy of your toddler.
- Minimize conflict in the home.
- Help your child to deal with anxiety.



A profile of Yvonne and Carmen

- Average income = \$12,500/ year
- High school graduates, fifth grade reading level
- Interpersonal violence
- Transient---average of five moves in the last year
- Food insecurity
- Diabetes



Meta-Analysis:

Treatment of Mother = Improvement in Child

- Of the six studies that examined children's psychosocial outcomes, five found that mothers' treatment was associated with child improvements.
- Treatment of maternal depression was predictive of improvement in child academic functioning and mother-child relationships and interactions.

Gunlichs & Weissman, 2008 JAACP, 47 (4)



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MOMS PARTNERSHIP

Ensuring the Emotional Health of Our City's Families

Yale SCHOOL OF MEDICINE



The New Haven MOMS Partnership's Mission



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The mission of the New Haven MOMS Partnership is to transform service delivery systems for mothers and children through community and neighborhood-based resources dedicated to wellness; thereby strengthening **generations** of families to flourish and succeed.

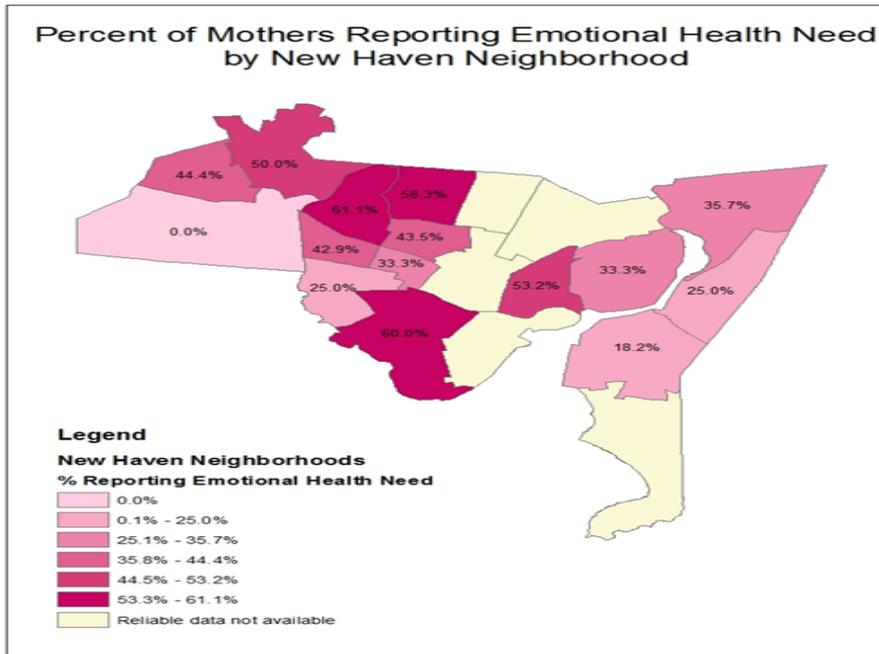


Our Target Population



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Low-income female caregivers with children under the age of 18.



Step 1: Formalize Partnerships



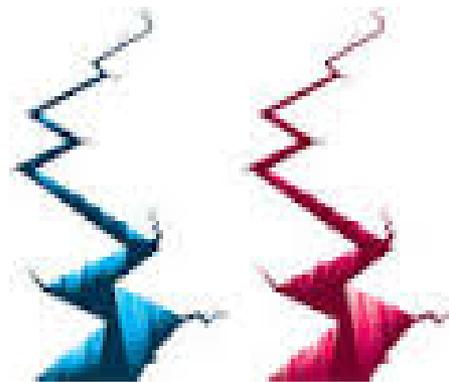
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- Clifford Beers Guidance Clinic
- Housing Authority of New Haven
- New Haven Health Department
- New Haven Healthy Start
- New Haven Public Schools
- State of CT Department of Children & Families
- State of CT Department of Social Services
- The Diaper Bank
- Yale School of Medicine



One Critical Reason to Formalize Participation of Caregivers

- The “gulf” or “chasm” created between research and practice ¹
 - On average 17 years elapse between publication and implementation ^{2,3}



1 Chambers, DA. *Adm Policy & Health* (2012)

2 Balas, EA. *Yearbook of Medical Informatics* (2000)

3 Van de Ven A. *Academy of Management Review* (2006)

Step 2: Community Mental Health Ambassadors



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- Outreach, engagement, brief intervention
- “Task shifting” and “task sharing”



- 10 CMHAs: significant changes in attitudes, behaviors, sense of competency over 6 months of employment
- 43 CMHAs trained across the City of New Haven



Step 3: Assess “Goals”



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- Conduct “**Environmental Scan**”

“When was the last time you did something for yourself?”

“What is your goal for this week?” For yourself?
For your child(ren)?

“Any one thing, service or person you depend on for support?”

Claydon, E, Kruse A, Smith, MV. *J Community Mental Health*



Goals of Mothers



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1.) Securing stable **employment**

2.) "Making my child proud"

Support: Food stamps, housing

Barriers to Goal Attainment



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1.) Stress

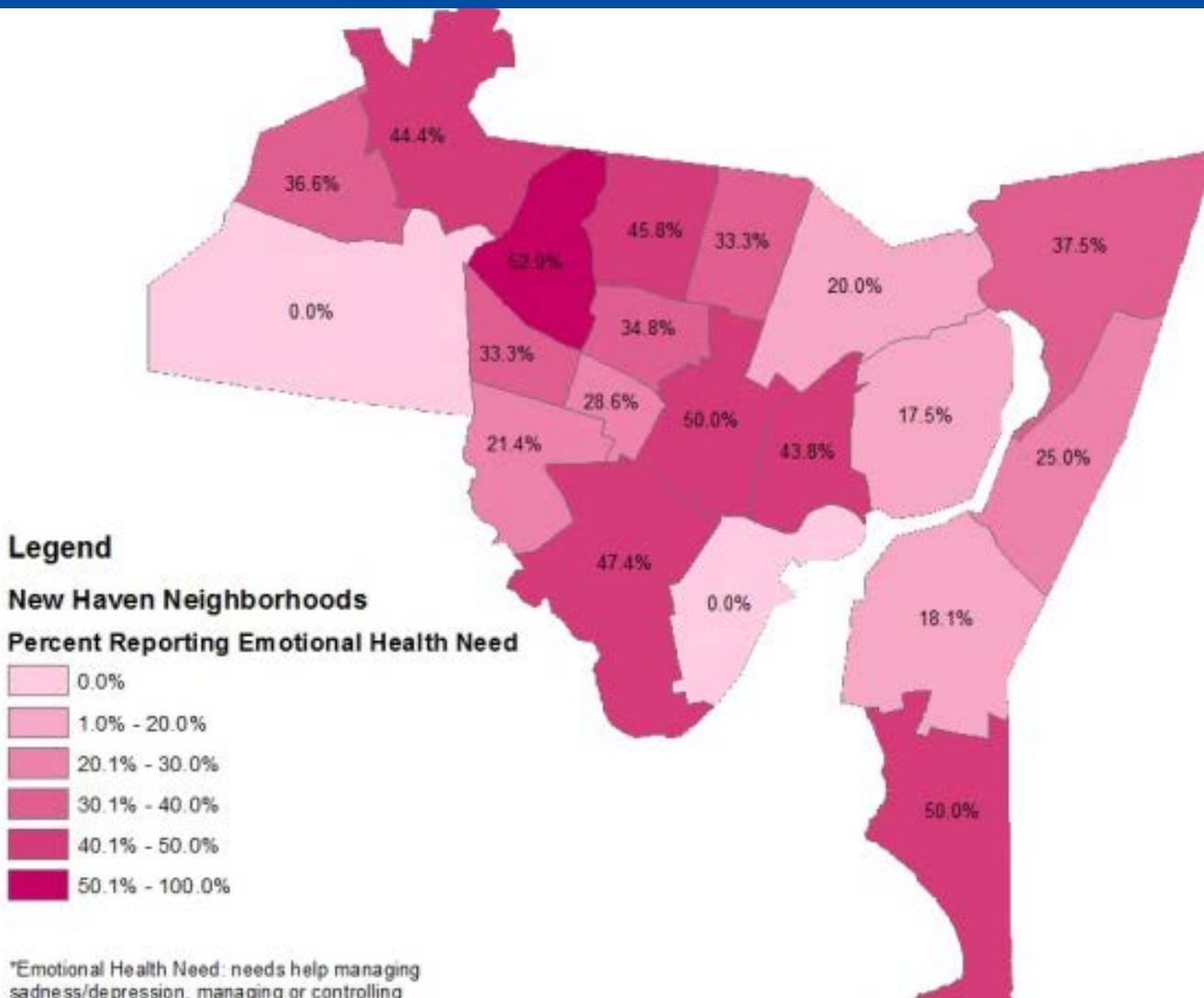
2.) Social Isolation



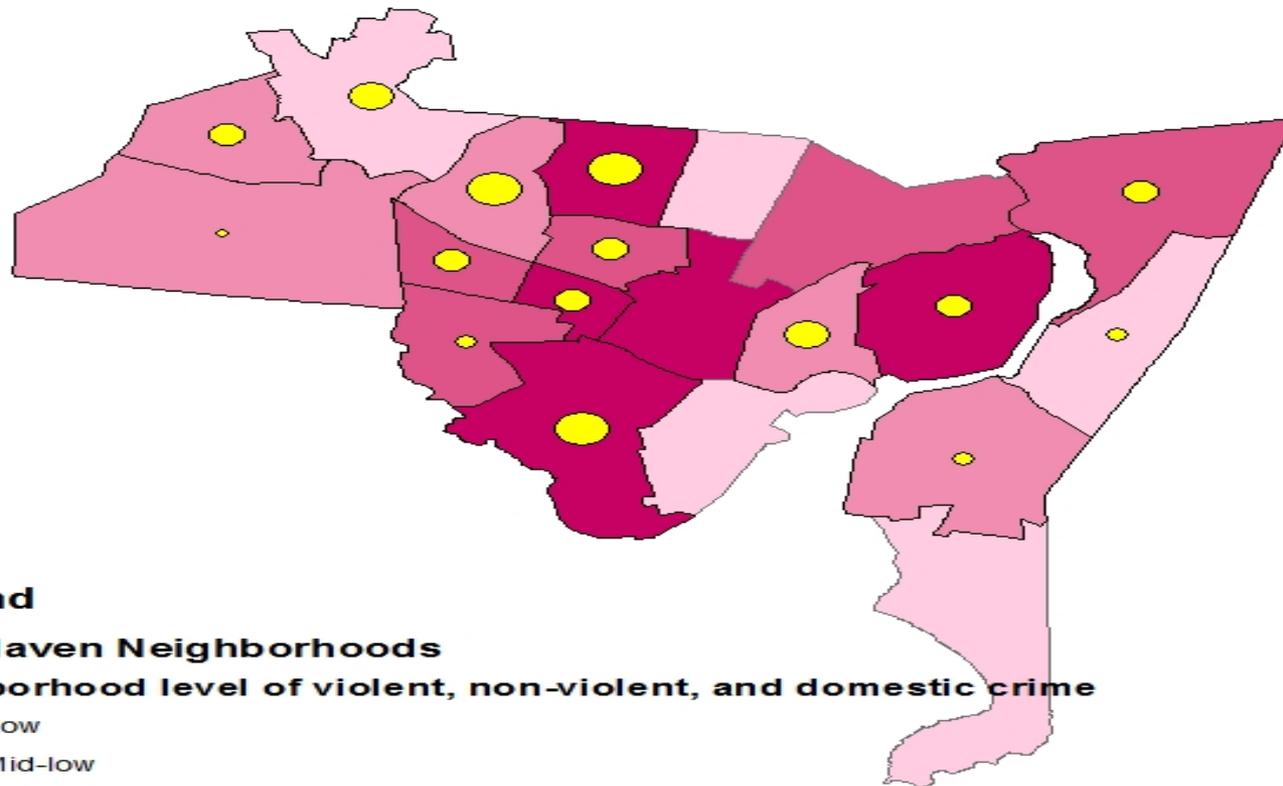
How Moms Talk About “Stress”

- “Not having a full-time job and living paycheck to paycheck.”
- “Working and getting paid small amounts of money”
- “Being a single mom with three sons and not being able to give them everything they want”
- “Not being able to provide for my family in a way that satisfies me”
- “Feel unable to provide children with friends, experiences”
- “Feeling so worried about where we will sleep that I cannot help but get angry at my children.”

Emotional Health Need (N=2,213)



Level of Violent, Non-Violent, and Domestic Crime and Percent of Mothers Reporting Poor Mental Health by New Haven Neighborhood (2008-2012)



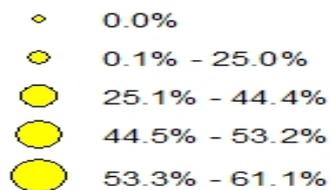
Legend

New Haven Neighborhoods

Neighborhood level of violent, non-violent, and domestic crime



Percent of mothers reporting poor mental health



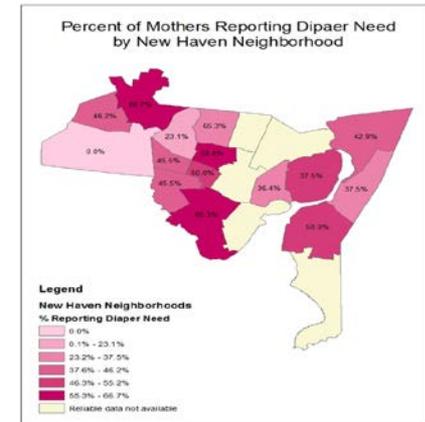
Preventing ACES: Operationalizing Poverty for Parents



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Why Diapers Matter

Without Diapers — Babies Cannot Participate in Early Childhood Education
Without Childcare — Parents Cannot Go to Work



Why Does Early Childhood Education Matter?

Students that participate in early childhood education are 2.5 times more likely to go on to higher education.



Source: *Economic Impacts of Early Care and Education in California*. UC Berkley Center for Labor Research and Education



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Diaper Need and Its Impact on Child Health
Megan V. Smith, Anna Kruse, Alison Weir and Joanne Goldblum
Pediatrics: originally published online July 29, 2013;
DOI: 10.1542/peds.2013-0597

The online version of this article, along with updated information and services, is located on the World Wide Web at:
<http://pediatrics.aappublications.org/content/early/2013/07/23/peds.2013-0597>

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Step 4: Universal Strategies for Two Generations Matched to Goals



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- Promote Family Economic Success = Workforce

Effect size for increasing family household income \$4K annually (0.41)

- Promote Maternal Mental Health = CBT

Effect size for cognitive gains in children as a result of treating maternal depression (0.42)



Smith MV. Under Review *Psych Services*

Step 5: Universal Implementation of Interventions to Build Capacity



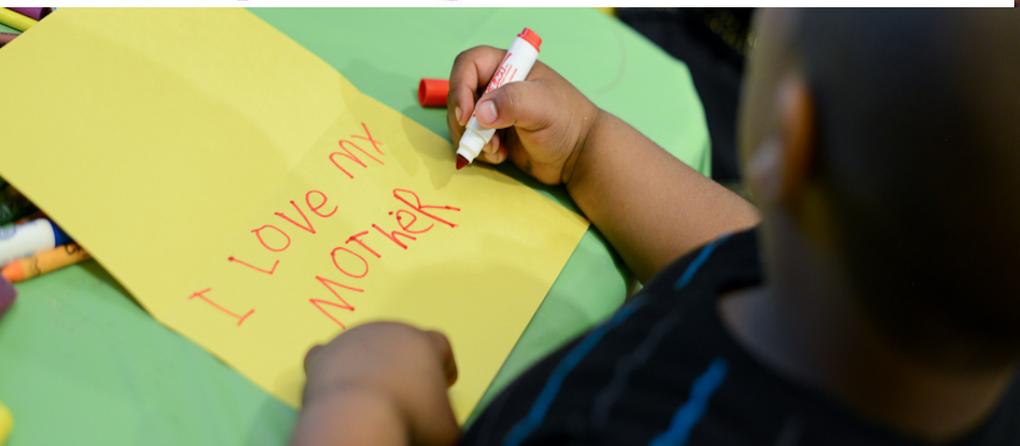
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- “MOMS Stress Management and Job Readiness Courses”
- 8 and 12-week, skill-building cognitive behavioral therapy (CBT)
- Co-delivered by clinicians and CMHAs



Step 5 (cont): Innovation in Location

- Integration of health in non health settings is essential to addressing chronic health needs ¹
- Supermarket, Public Housing Complexes, Churches, Laundromats-- “HUBS”



¹ IOM. Living Well with Chronic Illness: A Call for Public Action. 2012









Using Technology to Enhance Social Capital



NIMH #100456-01



MoMba's Goals

- Connect new mothers to:
 - Other mothers
 - Infants (attachment)
 - Local resources/health services

- Incentivize positive social networks and enhance social capital and skill building



CHALLENGES

53 

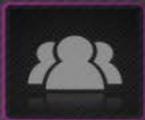
open

pending

done



Baby's health



Community



Fun



Surveys



BANK

53 

tokens

gift cards

donate

Total donations 2025 

Donate your hard earned tokens to a Momba mom or the community.



Donate to:
A Momba Mom



Donate to:
National Diaper Bank Network





chat

SOCIAL

53

people

chat

(reply to **Mahogany P**) Aww she turn the Big 1 how time fly

Jul 24 **Mahogany P** → reply
(reply to **Tina A**) Yes only a few more weeks

Aug 4 **Mahogany P** → reply
My baby will b 1 in 4 days n she still isn't walking independently ugh

Aug 4 **Meghan C** → reply
(reply to **Mahogany P**) Kylia isn't either, don't worry, she will when she ready!!

Aug 7 **Mahogany P** → reply
(reply to **Meghan C**) Thanx



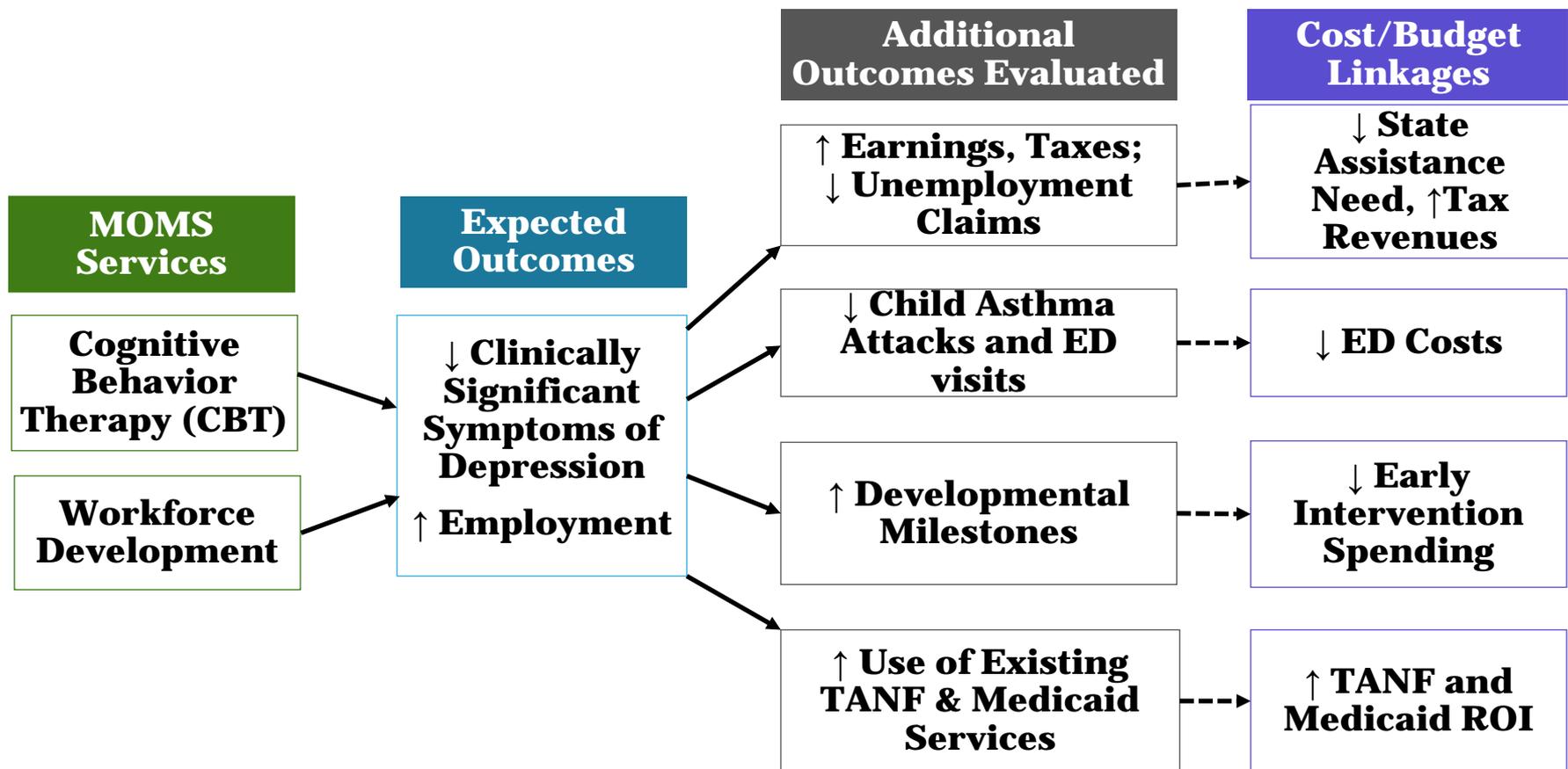


MoMba Impacts

- On average, 21.8 chat messages were sent per participant over the full study period.
- When adjusting for baseline technical literacy, the maternal sensitivity score is, on average, 0.52 units higher in the intervention group vs. control group ($p=0.041$).
- The MoMba group had a significantly greater social capital score at 12 months compared to the control group ($p=0.018$).
- The MoMba group had a significantly greater social network score ($p=0.042$). On average, for every one month from intake, there is a 0.40 unit increase in the social network score among those in the MoMba group.

Future Directions

Linking MOMS Services to Intended Outcomes & the State Budget



Courtesy of Third Sector Capital Partners & Yale MOMS

Acknowledgements



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