Research Brief 1

Evaluating Community Approaches to Preventing or Mitigating Toxic Stress

Release Date: October 2019

This brief, first in a series, provides an overview of the three-year study, including the research questions and study design, methods and data sources, and planned deliverables

Overview

Experiencing and learning how to manage stress is a normal part of child development. But when children experience stress for prolonged periods, without the supportive response of an adult to mitigate the experience, that stress can be toxic.[1] A growing body of research documents the negative effects of toxic stress on children's long-term well-being, highlighting significant costs to the health and well-being of communities.[2] However, there has been limited attention given to how healthcare and community service systems can apply an integrated approach to reduce service barriers, engage families, and improve outcomes for children at risk for or exposed to toxic stress.[3]

Context

Pediatric primary care clinics are often the front line to identifying children who may be experiencing toxic stress. These clinics serve as a universal and non-stigmatized entry point to family services. Across the country, pediatric clinics are partnering with the Center for the Study of Social Policy (CSSP), the American Academy of Pediatrics (AAP), and the Help Me Grow National Center (HMG) to implement innovations that promote family-centered care and service coordination to prevent and mitigate toxic stress.

What is Toxic Stress?

Not all stress is toxic. Experiencing and learning how to manage stress is a normal part of child development. But when children experience stress for prolonged periods, without the supportive response of an adult to mitigate the experience, that stress can be toxic.[2]

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

Tolerable
Serious, temporary stress responses, buffered by supportive relationships.

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

Adapted from: https://developingchild.harvard.edu/science/key-concepts/toxic-stress/

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Starting in 2017, Chapin Hall at the University of Chicago began a 3-year study at 9 pediatric clinics to investigate the role of these innovations in preventing and mitigating toxic stress.[4] We are partnering with pediatric primary care clinics, early childhood service providers, and more than 900 families with young children to capture how family experiences and outcomes are altered by these innovations:

- Developmental Understanding and Legal Collaboration for Everyone (DULCE)[5]
- Improving Screening, Connections with families, and Referral Networks (I-SCRN)[6]

The study, funded by The JPB Foundation, is based in counties participating in Early Childhood Learning and Innovation Network for Communities (EC-LINC)[7]. The study will:

- Examine changes in process and outcomes associated with healthcare innovations intended to prevent and mitigate toxic stress;
- Describe family experiences interacting with healthcare and early childhood systems to promote their children's healthy development and mitigate the impacts of stressors; and
- Inform funders, stakeholders, and communities about the benefits and challenges to implementing toxic stress innovations in pediatric primary care.

Research Questions and Study Design

The study enrolled families, pediatric primary care clinical providers, and early childhood system leaders as key informants to reflect on the healthcare innovations. These include the benefits and challenges of addressing family needs, building strengths in a pediatric primary care setting, and the implications for early childhood and healthcare systems to develop and sustain family-driven models of care.

Clinics were identified for participation based on their implementation of the core programmatic components of the AAP and CSSP innovations. Of the nine clinics recruited, seven are implementing DULCE, while two are participating in the I-SCRN learning collaborative. Clinics are spread across five distinct geographic locations: Alameda County, CA; Lamoille County, VT; Los Angeles County, CA; Palm Beach County, FL; Orange County, CA.

Across the clinics, caregivers of children ages birth through 6 months were recruited to participate in survey interviews at three time points: baseline (0-6 months), midpoint (7-11 months), and final (12-15 months).

Family Participation in Community-Based Referral Pathways

To deepen understanding of family participation in community-based referral pathways, Chapin Hall co-designed a component of the study in partnership with Help Me Grow National Center, Help Me Grow California, and local affiliates in three California counties: Alameda, Orange County, and Santa Clara. We are investigating facilitators and barriers to strengthening community-based referral pathways and families' participation in referrals.

Qualitative data collected as part of this component of the study will include:

- Interviews with local affiliate staff
- Interviews with pediatric providers
- Focus groups with community-based providers
- Focus groups with families with young children who have participated in Help Me Grow services

With these findings, Help Me Grow affiliates, early childhood systems, and other stakeholders will gain actionable insights to shape future outreach and engagement strategies and enhance the value that centralized referral offers to families, providers, and healthcare and early childhood systems.

Table 1. Study Areas of Focus and Goals

	Families: Systematically describe how family-centered care and pediatric primary care innovations influence parental capacity to address social determinants of health and protective factors.
	Clinics: Investigate the process, facilitators, and barriers to implementing pediatric primary care innovations focused on increasing clinic capacity to address social determinants of health and prevent and mitigate toxic stress.
	Community systems: Describe community approaches to the alignment and layering of programs, policies, services, and opportunities across healthcare and early childhood settings to address contributors to toxic stress among vulnerable families and promote healthy caregiver-child relationships.

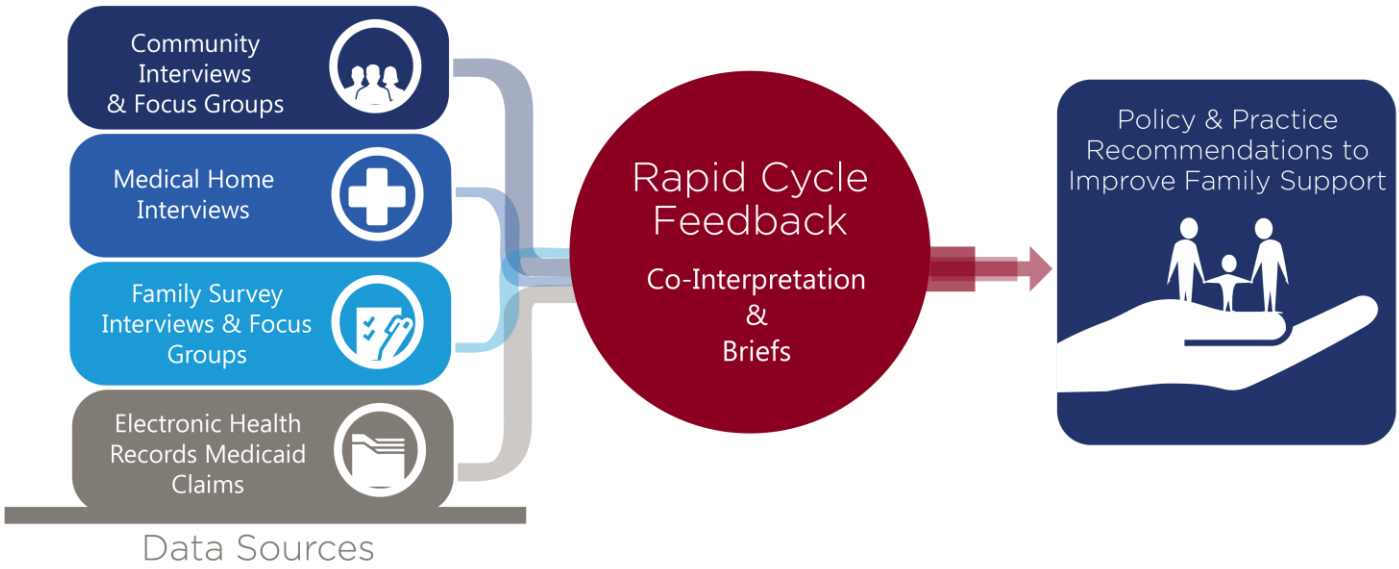
Methods and Data Sources

The study is a mixed-method, hybrid design integrating outcomes and implementation research with a developmental evaluation approach. The study will compare and contrast community and innovation experiences over time. We involve stakeholders at four different levels: national partners (e.g. leadership and staff at CSSP, AAP, and HMG), communities (e.g., EC-LINC provider partners and families), clinics (e.g., medical and administrative staff), and families receiving pediatric care at participating clinics. We will leverage the unique perspectives of these four stakeholder groups to inform our research findings.

To address our study questions, the study team is leveraging multiple data sources (Figure 1). Data for this study will be collected **qualitatively** (e.g., interviews and focus groups with families, healthcare providers, community stakeholders, and early childhood system leaders), **quantitatively** (e.g., survey interviews with caregivers using standardized measures), **observationally** (e.g., parent-child interactions), and **administratively** (e.g., electronic health records, Medicaid Claims, and service registries).

Together, these data will form a comprehensive snapshot of families with young children and the health and community-based services they encounter. By integrating these data, the study will highlight the structural, systemic, individual, and contextual challenges and mediators that catalyze change to mitigate the impact of social determinants of health among pediatric populations.

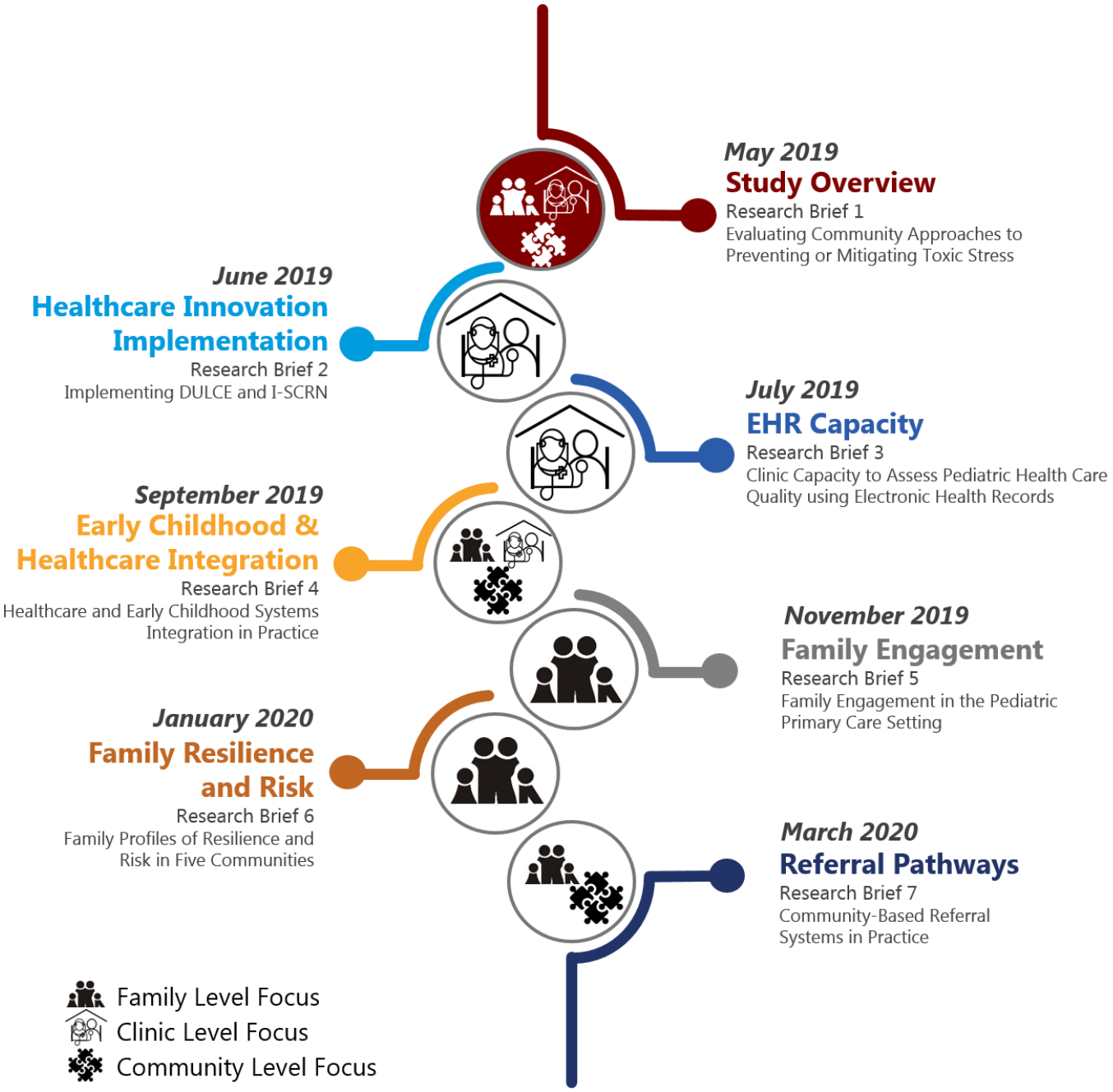
Figure 1. Leveraging Multiple Perspectives and Data Sources



Deliverables

Chapin Hall at the University of Chicago is committed to delivering actionable recommendations and products from our research to inform our partners, policymakers, and the early childhood field in general. Figure 2, below, outlines the timeline for a series of research briefs for clinics, families, and national partners that highlight key study findings in 2019 and 2020.

Figure 2. Evaluating Community Approaches to Preventing or Mitigating Toxic Stress: Research Brief Series



Glossary

Screening: The practice of asking families a set of standardized questions to identify unmet needs (e.g., housing assistance, nutrition supplements, mental health services). In the context of this study, screening includes concrete support, postpartum depression, child development, and lead exposure.

Referral: The practice of providing direction to families about securing services to address unmet needs identified during screening.

Linkage: The strategies used by health or community-based service providers to support families to uptake referred services (e.g., a referral phone call from clinic staff to a community-based provider that provides the agency the family's contact information).

Medical home: A model for primary care practice that is patient-centered, focused on treating patients with respect and compassion, and leverages an integrated, collaborative team of care providers and connections to community-based providers to offer patients comprehensive care.

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The opinions, findings, and conclusions or recommendations expressed in this publication are solely those of the authors and do not necessarily reflect those of The JPB Foundation, The Center for the Study of Social Policy, the American Academy of Pediatrics, or our clinic partners.

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[1] Shonkoff, J. P., & Garner, A. S. (2012). The lifelong effects of early childhood adversity and toxic stress. *Pediatrics, 129*, 232–246.

[2] See, for example, Franke, H. A. (2014). Toxic stress: Effects, prevention and treatment. *Children*, *1*(3), 390–402; FRIENDS National Resource Center (n.d.). *Protective Factors Survey.* Chapel Hill, NC: Author. Retrieved from http://friendsnrc.org/jdownloads/attachments/pfs_faq_2014.pdf; Steptoe, A., & Feldman, P. J. (2001). Neighborhood problems as sources of chronic stress: development of a measure of neighborhood problems, and associations with socioeconomic status and health. *Annals of Behavioral Medicine*, *23*(3), 177–185.

[3] Shonkoff, J. P., & Garner, A. S. (2012). The lifelong effects of early childhood adversity and toxic stress. *Pediatrics, 129*, 232–246.

[4] Additional information, including other research briefs, about the Empowering Families, Aligning Systems, and Enhancing Practice: Evaluating Community Approaches to Preventing or Mitigating Toxic Stress Study is available here: https://www.chapinhall.org/project/mitigating-toxic-stress/

[5] Additional information about DULCE can be found here: https://hria.org/projects/developmental-understanding-legal-collaboration-everyone-dulce/

[6] Additional information about I-SCRN can be found here: http://www.laaap.org/project-i-scrn-improving-screening-connections-with-families-and-referral-networks%E2%80%8B/

[7] Additional information about EC-LINC communities can be found here: https://cssp.org/our-work/project/early-childhood-learning-and-innovation-network-for-communities/

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