ABSTRACTS

AMERICAN ACADEMY OF PEDIATRICS

PEDS 21
PEDIATRICS FOR THE 21st CENTURY

The Trauma-Informed Pediatrician:
Identifying Toxic Stress and Promoting Resilience

Friday, October 23, 2015 | 11:30 AM-5:30 PM

ABSTRACTS
While we hope to protect children and adolescents from any type of traumatic event and toxic stress, many will still have some type of adverse experience. The Adverse Childhood Experiences (ACEs) Study demonstrates that the more adverse experiences a child has such as child maltreatment, exposure to interpersonal violence or parental drug use, the greater the likelihood the child will have physical and mental health issues that can last into adulthood, possibly resulting in premature death. However, if identified and addressed early, the biological impact of toxic stress can be minimized. In this session, pediatricians will learn how to identify and address toxic stress in the lives of their patients and families and access resources in order to promote resilience, giving children and adolescents an opportunity to live a healthy life.

**Learning Objectives**

At the end of this conference, the learner will be able to:

1. Describe various types of toxic stress suffered by children and adolescents, including child maltreatment, exposure to multiple forms of violence, neglect, etc.

2. Define strategies for identifying children and adolescents who have been exposed to toxic stress, including symptom manifestation.

3. Identify tools, approaches and resources to manage patients exposed to toxic stress.

4. Discuss strategies for promoting resilience in children, adolescents and families.

*Sponsored by Section on Child Abuse and Neglect; Council on Foster Care, Adoption, and Kinship Care; Council on Injury, Violence and Poison Prevention; Section on Adolescent Health; and Section on Developmental and Behavioral Pediatrics*
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Recommendations for Program Standards for Psychosocial Support of NICU Parents

Sue L. Hall, MSW, MD,¹ Michael Hynan, PhD,² Cris Glick, MD,³ Tawna Burton,⁴ Janet Press, BSN,⁵ Erika Goyer, BA,⁶ Raylene M. Phillips, MD, IBCLC,⁷ and Keira Sorrells, BA,⁸ ¹St John’s Regional Medical Center, Oxnard, CA; ²University of Wisconsin, Milwaukee, WI; ³Mississippi Lactation Services, Jackson, MS; ⁴Intermountain Medical Center, Salt Lake City, UT; ⁵Crouse Hospital, Syracuse, NY; ⁶Hand to Hold, Austin, TX; ⁷Division of Neonatology, Loma Linda University Children’s Hospital, Loma Linda, CA; ⁸Preemie Parent Alliance, Jackson, MS

Purpose
Parents of NICU infants face multiple stresses, and they have higher one-year prevalence rates of postpartum depression and posttraumatic stress disorder (PTSD) than parents of healthy term infants. Stressed parents are less able to form secure attachments with their infants. Premature infants whose parents are depressed have worse developmental outcomes than do other infants. Therefore, psychosocial support of NICU parents is essential to optimize outcomes for babies.

Methods
The National Perinatal Association convened a multidisciplinary workgroup to determine program standards for psychosocial support of NICU parents. The group of 50 participants from over 20 organizations met at a one-day summit in 2014. The group included psychologists, social workers, neonatologists, a perinatologist, nurses, nurse midwives, occupational therapists, public health workers, and former NICU parents. The workgroup was divided into 6 teams to focus on: 1-role of mental health professionals; 2-role of peer support; 3-family-centered developmental care; 4-palliative care and bereavement; 5-post-discharge support; and 6-staff education and support. Teams performed literature searches to determine evidence-based needs of NICU parents as well as best practices. All recommendations were subsequently sent to participating organizations for their review and endorsement.

Results
Recommendations included: 1- NICUs with 20 or more beds should have at least one full-time masters’ level social worker and one full or part-time doctoral level psychologist embedded in the NICU staff. Their roles can overlap and may include screening of parents for emotional distress, providing clinical services, and performing research. 2- Layered levels of emotional support should include family-centered developmental care and peer-to-peer support in every NICU, mental health professional support for parents displaying acute distress, and referrals to psychologists or psychiatrists for parents who have more concerning risk factors or escalating distress. 3- Peer-to-peer support provided by trained volunteers should be offered to all parents, with in-person support as a best practice. When possible, support should begin in the antepartum period and be carried through post-discharge. 4- Family-centered developmental care should include parents as partners in the care team, involving them in all rounds. Parents’ active provision of care is endorsed. 5- All health professionals that work with pregnant women and their families should be trained in palliative and bereavement care. 6- Home healthcare workers should be trained to provide psychosocial support to families as part of their services. 7- All NICU staff should receive training on normal/expected responses of parents to a NICU stay, methods of communication and of providing support to parents, and elements of self-care to minimize burnout.

Conclusion
NICU parents typically experience psychological distress, and staff efforts to provide psychosocial support in a variety of ways can mitigate parents’ increased risk for postpartum depression and PTSD, as well as improve the parent-infant bond. The infant’s development should be optimized as a result.
Effects of Toxic Social Environments on Mood and Disordered Eating

Dominique R Williams, MD, MPH, FAAP,1 Barbara R Benson, BSN, RN,1 Patricia Belford-Cohen, LCSW,1 and Jill H. Layne, LCSW.1 1Children’s Hospital of the King’s Daughters, Norfolk, VA

Purpose
The purpose of this study was to assess the relationships between social environments and depression or disordered eating among children undergoing treatment in a pediatric weight management program.

Methods
This study reviewed records of 100 patients enrolled in a year-long pediatric weight management program that included clinical supervision by a pediatrician, nurse, dietitian, exercise specialist, and licensed clinical social workers. The dataset included information regarding psychosocial stressors, family history, mood, behavioral, and developmental disorders. Depression and depressive symptoms were grouped as “mood disorder;” the term “disordered eating” included emotional or compulsive eating, binging, and restricting. The prevalence of problems with peers, uninvolved parents or unsupportive family, and abuse were compared to the presence of depression or disordered eating. P-values associated with the tests were considered significant when less than 0.05, and are provided in the summary of results.

Results
Table 2 includes a summary of the sample. Patients who disclosed problems with peers or family exhibited significantly higher rates of disordered eating and depression. Higher rates of depression were also seen in patients with an uninvolved parent (Table 1). Disordered eating behaviors occurred more frequently in single parent homes or when there is an uninvolved parent. The mechanism for these relationships is unclear. In the absence of depressive symptoms, significantly fewer patients disclosed disordered eating, \(X^2(1, N=100) = 7.67, p<0.01\).

Table 1: Psychosocial Stressors by Depression and Disordered Eating

<table>
<thead>
<tr>
<th>Sample N=100</th>
<th>Depression</th>
<th>p-value‡</th>
<th>Disordered Eating</th>
<th>p-value‡</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Yes (%)</td>
<td>No (%)</td>
<td>Yes (%)</td>
<td>No (%)</td>
</tr>
<tr>
<td>N=55</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>N=45</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Peer interactive difficulties (n=54)</td>
<td>68.5</td>
<td>31.5</td>
<td>&lt;0.01*</td>
<td>48.1</td>
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<tr>
<td>Patient-family interaction difficulties (n=15)</td>
<td>80.0</td>
<td>20.0</td>
<td>0.03†*</td>
<td>60.0</td>
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<tr>
<td>Parent-Sibling discord (n=40)</td>
<td>60.0</td>
<td>40.0</td>
<td>0.41</td>
<td>37.5</td>
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<tr>
<td>Single parent household (n=23)</td>
<td>56.5</td>
<td>43.5</td>
<td>0.87</td>
<td>56.6</td>
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<tr>
<td>Uninvolved Parent (n=17)</td>
<td>76.5</td>
<td>23.5</td>
<td>0.04†*</td>
<td>64.7</td>
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<tr>
<td>History of Abuse (n=12)</td>
<td>75.0</td>
<td>25.0</td>
<td>0.12†</td>
<td>33.3</td>
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</table>

‡Chi-square p-values except where indicated †Fisher’s Exact Test *Significant difference at p<0.05

Continued on page 4
Effects of Toxic Social Environments on Mood and Disordered Eating
(continued from page 3)

**Table 2: Summary (N=100)**

<table>
<thead>
<tr>
<th>Psychosocial Stressors (%)</th>
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<tr>
<td>Peer interactive difficulties</td>
<td>54</td>
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<tr>
<td>Major family health problems</td>
<td>12</td>
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<td>Recent major changes in family</td>
<td>25</td>
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<td>Patient-family interaction difficulties</td>
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<td>Limited family resources</td>
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<tr>
<td>Parent/Sibling discord</td>
<td>40</td>
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<tr>
<td>Single parent household</td>
<td>23</td>
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<tr>
<td>Uninvolved parent</td>
<td>17</td>
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<tr>
<td>Abuse</td>
<td>12</td>
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<table>
<thead>
<tr>
<th>Family History (%)</th>
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<tr>
<td>Parental obesity</td>
<td>63</td>
</tr>
<tr>
<td>Addictions</td>
<td>26</td>
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<tr>
<td>Parent/Relative underwent gastric bypass surgery</td>
<td>15</td>
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<table>
<thead>
<tr>
<th>Mood, Behavior &amp; Developmental Diagnoses (%)</th>
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<tr>
<td>Anxiety Disorder</td>
<td>6</td>
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<tr>
<td>Mood Disorder</td>
<td>55</td>
</tr>
<tr>
<td>Adjustment Disorder</td>
<td>8</td>
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<tr>
<td>Bereavement/Grief</td>
<td>2</td>
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<tr>
<td>ODD/ADHD/Disruptive and Other Behavioral Disorders</td>
<td>13</td>
</tr>
<tr>
<td>Eating Disorder</td>
<td>37</td>
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</table>

**Conclusion**

Further research is needed to fully understand the factors that mediate the effects of social environments on aspects of obesity. The results of the study support the idea that troubled social environments produce responses that may eventually manifest as disordered eating, depressed mood, and abnormal weight gain.
Environmental Determinants of Illness and the Distribution of Burden: Analyzing the Scorecard to Promote Child Health Advocacy

Margaret McCormick, MS, RN,1 and Mary Cataletto, MD.2 ¹Towson University, Towson, MD; ²Winthrop University Hospital, Mineola, NY

Background
The distribution of burden caused by environmental toxins and pollutants is often the greatest for vulnerable populations, including children, especially those from low income and minority families. Learning how to analyze environmental determinants of illness and understand the implications of these determinants on the distribution of disease across cultures and population groups is essential to assist healthcare students to become more involved in healthcare promotion and advocacy for a healthy environment for all our children.

Purpose
The aim of this project was twofold: first to have healthcare students gather health data from national and regional resources and compare it against corresponding environmental conditions, including air and water quality. The second objective is to learn how to analyze this information effectively to advocate for a healthy environment.

Method
A web-based, 5-step approach was used to teach healthcare students about environmental risk factors using an online pollution locator, at http://www.scorecard.com. First, students chose four zip codes from different areas within their states and created a demographic profile of the area. Second, the students compare and contrast the risks in these areas. Third, students identify major and minor health disparities within their state. Fourth, in order to complete this assignment, each student must rank order their environmental priorities. Fifth, the student creates a “suggested plan of action” which promotes environmental health. Examples of action plans might include writing to a legislator or supporting a bill in the General Assembly that targets clean air or water.

Discussion
Using a web based approach, students can gain a snapshot of the health in their communities. They can compare community risks and better understand issues related to environmental justice. Analyzing the scorecard can provide statistical data to evaluate environmental health and provide students with a vehicle to become proactive in their communities.
The Iscreen Study: A Randomized Trial on Screening for Social Determinants of Health

Dayna A Long, MD. UCSF Benioff Children’s Hospital Oakland, Oakland, CA

**Purpose**
There is growing interest in clinical screening for pediatric social determinants of health, but little evidence on formats that maximize disclosure rates on a wide range of potentially sensitive topics. We designed a study to examine disclosure rates and hypothesized that there would be no difference in disclosure rates on face-to-face versus electronic screening formats for items other than highly sensitive items.

**Methods**
We conducted a randomized trial of electronic versus face-to-face social screening formats in a pediatric emergency department. Consenting English-speaking and Spanish-speaking adult caregivers familiar with the presenting child’s household were randomized to social screening via tablet computer (with option for audio assist) versus a face-to-face interview conducted by a fully bilingual/bicultural researcher.

**Results**
Almost all caregivers (96.8%) reported at least 1 social need, but rates of reporting on the more sensitive issues (household violence and substance abuse) were significantly higher in electronic format, and disclosure was marginally higher in electronic format for financial insecurity and neighborhood and school safety. There was a significant difference in the proportion of social needs items with higher endorsement in the computer-based group (70%) than the face-to-face group (30%).

**Conclusion**
Pediatric clinical sites interested in incorporating caregiver reported socioeconomic, environmental, and behavioral needs screening should consider electronic screening when feasible, particularly when assessing sensitive topics such as child safety and household member substance use.
Community Collaboration - Toxic Stress and Resilience

Jeannette Lia Gaggino, MD,¹ Megan Sikkema, DO,² Jamie Johnson, DO,² and Kristine Gibson.² ¹Bronson Hospital Kalamazoo, Kalamazoo, MI; ²Western Michigan University School of Medicine, Kalamazoo, MI

Case Report
Collaborative Effort with Community Mental Health to Promote Horizontal Integration Regarding Adverse Childhood Experiences

Kalamazoo Wraps 3rd Annual System of Care Conference
Agenda in Brief
Saturday March 7, 2015

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<tr>
<td>8:00-8:15</td>
<td>Registration and Continental Breakfast</td>
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<td>8:15-9:15</td>
<td>Dr. Meagan Sikkema and Dr. Lia Gaggino</td>
<td>“Talk To Me” Youth and parents speak to audience about experiences with PCP/Mental Health</td>
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<td>9:15-10:15</td>
<td>Dr. Meagan Sikkema</td>
<td>“The Current Situation: Childhood Adversity in our Community and State”</td>
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<td>10:15-11:15</td>
<td>Dr. Andrew Garner</td>
<td>“Childhood Toxic Stress: A Public Health Crisis Requiring a Public Health Approach”</td>
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11:15-11:30       BREAK – Get lunch – buffet style

11:30-1:30 Working Lunch
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<th>CME</th>
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<td>Working Lunch</td>
<td>Dr. Andrew Garner, Dr. Gibson, Dr. Lia Gaggino and Danielle Sackrider</td>
<td>“Mapping the Gaps and Turning Pillars to Pilings” in a “resource rich, linkage poor” community. How can we build bridges and create platforms for collaborative solutions?</td>
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<td>1:30-1:45</td>
<td>BREAK</td>
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<tr>
<td>1:45-2:45</td>
<td>Dr. Mark Sloane and Jim Henry, Ph.D., CTAC</td>
<td>“Resilience In the Face of Adversity: Promoting Hope”</td>
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<td>2:45-3:00</td>
<td>Dr. Garner</td>
<td>“Words to Inspire”</td>
<td>.25</td>
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**Turn In Evaluations**

Discussion
A conference has been designed around the CATCH Leonard P. Rome AAP grant to bring Dr. Andrew Garner to Kalamazoo residency program. 2 residents Drs. Sikkema and Johnson were awarded the grant. We were able to attach a community program to our local Kalamazoo Community Mental Health and Substance Abuse Services System of Care Conference. Our goal is to promote horizontal integration vs. “silos” both in our community and across the state. Attendees include local stakeholders as well as state Dept of Human Services and Dept of Community Health representatives. This is also in conjunction with our state chapter (MIAAP) goal to address Toxic Stress.
The Ethics, Limits, and Potential Harm of Naming Names

Ashley K Fernandes, MD, PhD. The Ohio State University College of Medicine/Nationwide Children’s Hospital, Columbus, OH

Case Report
A NICU team is taking care of a 34 week old male admitted with hypoxia and hypothermia, complications of prematurity. On day of life 2, however, the mother and father decide to name their child “Krystal Meth,” because that was what they “were high on” when the child was conceived. Consultation with social work does not convince the family to change their minds, and the team is reluctant to consult the ethics committee.

Discussion
The naming of children has been an ethically neutral one, a process left up to family discretion. The notion behind this laissez-faire policy is that names are highly personal, and that freedom of expression has strong roots in our constitution and national culture. However, names are also public, and help to refine a child’s identity. There is a growing body of evidence from the social sciences that demeaning given-names may result in harm to a child’s future psychological, economic, and social prospects. The science of toxic stress and the ACEs Study suggest that even a risk of psycho-social trauma is something which we should seek to limit rather than ignore.

The author argues that healthcare providers have a moral obligation to try to prevent harmful names, because the physician-patient relationship in pediatrics exists as a covenant of trust. WHO’s definition of health includes “mental and social well-being and not merely the absence of disease,” and supports this premise. The author distinguishes between names that are unwise, but not harmful, and “unhealthy” names, which are further divided into the “degrading” and the grammatically “nonsensical.” Degrading names should not be allowed because of the probability of social harm; nonsensical names should be proscribed because if language has a social function, then a purely subjective grammatical rule (and therefore the name itself) is incoherent.

The author argues for a spectrum of “hard” and “soft” interpretations of the ethical duty to protect a child’s name. A hard policy might involve statutory laws; the soft policy could include ethics committee oversight of names and/or faculty and staff education to increase ethical sensitivity. Finally, the case report rebuts common counterarguments including: constitutionality; threats to diversity; the lack of imminent physical harm; and the argument that a name is only temporary.

Promoting resilience and reducing stress in childhood begins before birth, but can be promoted by improving health care providers’ ethical sensitivity toward parental naming choices. A degrading name should not be given a “free pass” in the name of “freedom of expression.” Our ethical duty demands a heartfelt concern for the well-being of the whole patient—a child with immutable dignity.
Improving Outcomes for Young Children
By Mitigating the Impact of Toxic Stress and Trauma

Blythe Berger, ScD¹, Ronald Seifer, PhD,² and Ailis Clyne, MD, MPH.¹ Rhode Island Department of Health, Providence, RI; ²Bradley Research Center, Providence, RI

Case Report
In 2014, The Rhode Island Department of Health received funding from the Maternal and Child Health Bureau: Early Childhood Comprehensive Systems initiative to develop a system that would identify and reduce negative influences on early development. The purpose of the project is to implement systems building activities and develop strategies to enhance services to mitigate the impact of toxic stress and trauma in infancy and early childhood. Specific project goals include:

1. Enhancing systems of recognition, response, and intervention to improve outcomes for children who have experienced toxic stress and/or trauma
2. Enhancing community based intervention systems to better respond to the needs of children birth to three who are at risk for experiencing or have experienced toxic stress and/or trauma
3. Creating/Supporting a state-community infrastructure to provide governance, structure and evaluation to support RI to recognize and respond to families who experience toxic stress and/or trauma

To achieve project goals, a state team of experts in early childhood systems, primary care, mental and behavioral health, home visiting, early childhood education, healthy environments, public health, research, and evaluation has been assembled. The work of the expert team has been driven by answering the following questions: How do we define toxic stress? Is there perinatal data already being collected that could serve to predict future toxic stress risk? Are there existing tools for assessing toxic stress risk and assisting in toxic stress “diagnosis”? Who should be screened for toxic stress, at what age and in which settings? What type of training do professionals need to effectively screen for and address toxic stress? What are the most effective interventions for addressing the factors that lead to toxic stress? Are effective interventions for toxic stress available and accessible to the population to be screened? What are the outcomes to be evaluated?

Discussion
Work will take place over three years. Work completed in the first year of the project includes:

• Development of a definition of toxic stress and description of the state’s capacity to respond to toxic stress. The definition will be adapted for messaging campaigns to a variety of audiences: professional providers, non-professional providers, families, and policy makers.
• Development of a toxic stress screening tool currently being piloted in the home visiting setting
• The development of a toxic stress training program for primary care providers of young children and home visitors which includes on-line self-learning modules and in person workshops for skill building and training on the use of the screening tool
• Integration of behavioral health with evidence-based home visiting programs which are anticipated to be a primary component of the interventions to address toxic stress
• Establishment of a centralized referral system for providers to use in linking families to resources
Promoting Resiliency of Trauma-Exposed Communities Together (PROTECT): an Interprofessional Approach

Juanona A Brewster, MDiv, MTS, MJ. Illinois Chapter, AAP, Chicago, IL

Case Report
Throughout Illinois, there are strong commitments to providing trauma-informed support and quality services for children and families at risk in many service sectors, including health care, mental and behavioral health, family support, home visiting, and education. While providing trauma-informed support throughout the lifespan is important, program and agency leaders in early childhood systems in particular have embraced the challenge of integrating trauma-informed practice into systems because of the significant potential to reduce negative outcomes, which can include difficulties in the classroom setting and with learning, behavior problems, poor social and emotional competence, and impaired relationships.

However, the likelihood is very remote that from one community to another or from one profession or system to another, every service provider a) has access to training and other resources on trauma and toxic stress; b) is supported to implement best practices; and c) coordinates services with other systems interacting with the child and caregivers. In addition, existing training and other resources for trauma and toxic stress are often not consistent in messaging, important concepts related to adverse childhood experiences, or trauma informed principles.

In Illinois, the emerging efforts to become trauma-informed have been created in specialized silos and intended to meet the needs and abilities of particular professions or have been designed reactively to meet only very specific population needs, often in those communities most impacted by trauma. To be effective, it is imperative to ensure comprehensive and coordinated training, consulting, and coaching of early childhood professionals, as well as routine and effective information sharing between systems and consistent messaging to parents and caregivers. Additional work is needed to expand access to resources systemically and statewide, to ensure it is of high quality, and to coordinate efforts between systems.

The Illinois Promoting Resiliency of Trauma Exposed Communities Together (PROTECT) Initiative has convened leaders from key early childhood systems, state agencies and initiatives to address these challenges. ICAAP, as the project lead, has brought a pediatric perspective and built on important work of the national American Academy of Pediatrics, the Substance Abuse and Mental Health Services Administration (SAMHSA), and the Centers for Disease Control (CDC) in attending to adverse childhood experiences, toxic stress, and trauma.

SAMHSA's document “Concept of trauma and guidance for a trauma-informed approach” offers some established strategies and tactics for becoming trauma-informed in approach and practice by providing direction in the application of six key principles and ten implementation domains.

PROTECT has progressed beyond the review of existing professional development materials, to an interprofessional dialogue about resiliency building within organizations and communities and the application of trauma-informed principles and domains.

Discussion
Session participants in will learn more about PROTECT and have the opportunity to strategize application of learning within their own organizations.
Talking Is Teaching: Talk, Read and Sing

Dayna A Long, MD. UCSF Benioff Children’s Hospital Oakland, Oakland, CA and Dana Hughes, DrPH, MSUP, UCSF Philip R Lee Institute for Health Policy Studies, San Francisco, CA

Purpose
Research demonstrates that infancy and early childhood are critical times of brain development. Early quality engagement between primary caregivers and infants and young children promote important lasting bonds, strengthen resilience and enhance brain development and vocabulary acquisition. UCSF Benioff Children’s Hospital Oakland and the UCSF Phillip R Lee Institute for Public Policy along with the Clinton Family Foundation and Next Generation are implementing a two-pronged intervention – a community wide campaign and a provider intervention occurring during well child checks within community healthcare centers -- to test the effectiveness of efforts to encourage parents to talk, read and sing to their infants and toddlers. Both efforts use multiple high quality, attractive creative material, including children’s clothing, books, tool kits and media messaging.

Methods
This mixed method evaluation utilizes key informant interviews, focus groups, surveys/interviews of parents and collection of analytics regarding numbers of billboard and commercial views, website hits, etc., to assess the impact of the community campaign and provider intervention. In addition to measuring the impact on parent’s knowledge and behavior, the evaluation seeks to understand which messages and creative products are most effective. Specifically, the evaluation seeks the impact of each major campaign components: trusted messengers, environmental prompts and tools to facilitate change.

Results
The evaluation will not be completed until late summer 2015. Results will include qualitative findings from the key informant interviews and focus groups and quantitative analysis of the parent interviews/surveys and the analytics. Early findings suggest strong favorable reactions to the creative items. Due to the high quality and usefulness of the materials, parents feel valued and have motivated parents to talk, read and sing to their children. Providers are also enthusiastic about the creative and the books as they provide effective tools for communicating that talking is teaching. Final results, which will presented quantitatively and qualitatively, will demonstrate overall impact of the efforts as well as the relative impact of specific components.

Conclusion
The evaluation findings will provide important insight into the effectiveness of the overall Talking is Teaching: Talk, Read and Sing campaign and the individual components, including messages, messengers and creative materials. This information will inform children’s hospital and communities nationwide who are interested in programs intended to support infant and child development and influence long term health and well-being.
Collaborating for Care Around Childhood Adversities and Toxic Stress

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**Purpose**
To improve awareness of and response to Adverse Childhood Events (ACE).

**Methods**
In collaboration with the Utah Division of Child and Family Services and the Fostering Healthy Children (foster care) program, nine practices (14 physicians and 1 Nurse Practitioner) enrolled in a 9-month Quality Improvement Learning Collaborative (LC) from May 2014 to January 2015. Each practice determined target age groups for screening for exposure to adverse events, symptoms of toxic stress, and referral to local resources for those with symptoms. Each practice randomly selected records of 30 well-child visits for the initial assessment/baseline measurement.

Practice teams attended a quality improvement learning session where they learned the evidence behind screening for ACEs and were taught quality improvement methods, including how to conduct rapid cycles of change through the Model for Improvement. Each practice team developed customized plans to implement routine screening for and response to symptoms. Monthly measurements of 10 randomly selected charts were conducted, and practices received regular feedback via conference calls to support continued cycles of change, discuss barriers and solutions, and monitor progress. At the conclusion of the learning collaborative, each practice again evaluated 30 randomly selected visit records and results were compared to baseline data. Results of the project’s aggregate data were shared with all practices.

**Results**
At baseline, with the exception of one practice, all practices had a score of zero for all measures because none had been screening. There was a substantial increase (from 0-1% at baseline to greater than 70%) for all measures from an aggregate standpoint. Overall participating practices achieved 70% or higher completion rate for screening exposures of adverse events. When screening yielded positive results, practices achieved 70% or higher in evaluating for symptoms, and 75% or higher in treatment planning including referral to social and mental health services when symptoms were identified.

**Conclusion**
Through a 9-month Quality Improvement Learning Collaborative, clinicians and staff from various practice settings improved identification of children with a history of traumatic experiences and symptoms of toxic stress, and increased referral to local social and mental health resources.
From Bench to Bedside: Addressing Toxic Stress in Pediatric Medical Center

Suzanne Roberts, MD and Karen C. Rogers, PhD. USC Keck School of Medicine/Children's Hospital Los Angeles, Los Angeles, CA

Given the association between adverse childhood events (ACES) and a variety of long-term health outcomes, addressing toxic stress is both imperative and uniquely challenging for pediatric practice. A large urban pediatric medical center is utilizing multiple strategies across disciplines to increase identification and response to toxic stress in both inpatients and outpatients at risk. The goals of this effort are to increase awareness of pervasive impact of toxic stress in pediatric encounters, including the scientific basis for effects of toxic stress on brain architecture and child development and the power of relationships in prevention and treatment of toxic stress, as well as to equip providers with tools to help families affected by toxic stress.

Education and training on toxic stress in this setting needed to:
• Reflect the hospital's clinical and academic mission through application of science to practice in all areas of patient care.
• Reach both clinicians-in-training and established practitioners
• Make information relevant to practice
• Utilize both didactic and clinical case-based teaching
• Appeal to a variety of professional disciplines

Strategies are being implemented at varied levels to maximize effectiveness: hospital-wide, general pediatrics or specialty-care focused, and interdisciplinary team-based. Leadership, practicing clinicians, and clinicians-in-training have been targeted to effect “top down and bottom up” culture of awareness regarding the lifelong health impact of adverse childhood experiences resulting in toxic stress. Resources are disseminated to pediatricians and other providers to improve sense of competence in addressing toxic stress in practice and reduce perceived professional helplessness. Clinicians and clinicians-in-training at the hospital's community mental health center have been included to promote continuity of care and a common understanding of the relationship of toxic stress to the hospital's mission to build healthier futures.

Specific education and training strategies relevant to the primary care pediatrician have included:
• Hospital-wide didactic: Neuroscience-focused interdisciplinary grand rounds, introducing the basic science underlying toxic stress induced changes in brain architecture, protective factors, and treatment strategies. Presentation by general pediatrician, trauma-trained psychologist, and basic scientist.
• Pediatric medical practice: introduced socioemotional screening and maternal depression screening into protocols utilized by both residents and attendings in general pediatrics clinic for well-child visits. Developmental screening and Reach Out and Read program already in place. Practitioners provided with linkages to clinic family support program or community services for positive screens. Education provided on observing caregiver-child attachment and encouraging positive parenting and social capital to promote resiliency at all well child visits.
• Pediatric resident training: conferences during community and advocacy rotations on toxic stress, maternal depression, positive parenting; participation in clinics for children exposed to abuse, neglect, or placed in foster care.

Lessons learned and future directions for this program will be addressed.
Trauma - Informed Care: A Training Model for Pediatricians

Ramkumar Jayagopalan. Carolina Pediatrics, SC

Purpose
South Carolina Chapter of the American Academy of Pediatrics obtained the “Health care for children and youth in foster care” grant from the Academy’s Council on Foster care, Adoption and Kinship care in May 2013. The purpose of the grant was to provide Trauma informed training to pediatricians who serve foster kids and kids in kinship care. Trauma in early childhood has been proved to have significant risk for somatic and emotional health problems in the adulthood\(^1\). Greater than 30% of kids have had a significant trauma in their early childhood. The financial implication of this is enormous. Pediatricians play a very important role in identifying these kids and provide proper treatment and link them to the right evidence based mental health treatment options available in their communities. Unfortunately pediatricians do not get adequately trained in dealing with trauma.

Methods
In order to get a baseline data on trauma awareness among pediatricians in South Carolina, a survey was done among pediatricians during the 2014 CATCH meeting in Charleston, SC. After lot of discussion about the best way to do trauma training we decided to hold a learning collaborative. We partnered with project BEST to provide the training. Project BEST is a community collaborative that provides trauma informed training in South Carolina to mental health providers. The learning collaborative was attended by close to 30 people including pediatricians and other practice staff. The content of the learning collaborative included presentations on what trauma informed training means for pediatricians, practical tips on taking care of foster kids, common medications that could be used by pediatricians, 2 hour training provided by project BEST on using standardized screening for trauma and referral resources to provide evidence based treatments for trauma. We also gave suggestions on quality improvement steps that could be implemented. We partnered with QTIP (a South Carolina CHIPRA grant) in arranging the conference. The Department of Social Services (DSS) was also represented at the meeting.

Results
The survey results were as follows:

<table>
<thead>
<tr>
<th>Total providers answering survey</th>
<th>24</th>
</tr>
</thead>
<tbody>
<tr>
<td>Providers screening for trauma (non standardized tool)</td>
<td>52%</td>
</tr>
<tr>
<td>Providers using standard tools</td>
<td>9%</td>
</tr>
<tr>
<td>Providers inquiring about reactions to trauma</td>
<td>39%</td>
</tr>
<tr>
<td>Providers providing information to families about trauma and its effect</td>
<td>17%</td>
</tr>
<tr>
<td>Providers providing anticipatory guidance</td>
<td>21%</td>
</tr>
<tr>
<td>Providers who were aware of age appropriate treatments for trauma</td>
<td>17%</td>
</tr>
</tbody>
</table>

Conclusion
Trauma in early childhood is a significant burden on the society and pediatricians play an important role in tackling this issue. There is an urgent need for trauma informed training for pediatricians and residents and ours is a model that could be replicated in other states.

The Capacity to Care: Initiating a Trauma-Informed Transformation By Assessing the Culture in a General Pediatrics Clinic

Ashley G Bennett, MD, University of Southern California Keck School of Medicine/CHLA, Los Angeles, CA

**Purpose**

Pediatricians play a critical role in advocating for trauma-informed systems of care, but many struggle to provide such care in their clinics. The pervasive effects of trauma can create barriers at every level of care and affect a clinic’s capacity for providing trauma-informed care. Secondary traumatic stress and burnout adversely affects direct patient care and may impair staff’s ability to implement necessary changes. The culture and policies of the organization can exacerbate the impact of trauma on patients and providers. Addressing these barriers is the first step in creating a trauma-informed medical home. This project assessed the capacity of one clinic for providing trauma-informed care using two brief surveys.

**Methods**

IRB exemption was granted. All clinical and office staff at an inner-city pediatric clinic were asked to complete two anonymous surveys. The clinic supervisor emailed the request, along with the links to the surveys, and information about employee assistance programs to all staff members. To maintain anonymity in the small sample, no demographic data was collected.

The first survey contained The Professional Quality of Life Scale (PROQOL) (Version 5), which assessed compassion satisfaction, burnout, and secondary traumatic stress.

Trauma-informed principles informed the creation of a second survey, which assessed current practices, policies, and culture of the organization.

**Results**

Overall, the clinic staff reported high compassion satisfaction, high secondary traumatic stress, and low-moderate burnout. This pattern of scores is typically unique to high-risk situations, such as working in areas of war and civil violence.

The organizational assessment identified several problems. In general, staff reported feeling physically safe at work, but not emotionally safe. Organizational policies were described as rigid. Most felt the organization did not value the opinions of patients or staff. 40% felt confident that they were already making trauma-informed modifications, although most reported a lack of trauma screening and available resources. There was a lack of initial and ongoing training opportunities, but most were interested in learning about and implementing trauma-informed care. Results of both surveys were shared with clinic administration. A strategy was developed based on the findings to prioritize future activities.

**Conclusion**

When developing a program to implement trauma-informed care, brief staff surveys, such as the PROQOL and organization assessment can provide useful information about the clinical capacity for providing trauma-informed care and can help identify priority areas for future activities.
Early Life Housing Stress and Urban Childhood Asthma

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Purpose
Disproportionate exposure to environmental triggers and variations in genetic susceptibility do not fully explain the asthma disparities in urban children, suggesting that other influences should be considered. The role of early life stress in the pathogenesis of asthma is emerging, however, little is known about the specific role of housing-related stress. This information would contribute to a more robust understanding of both the physical and psychological aspects of housing that may directly and indirectly influence childhood asthma. In this study, we hypothesize that high levels of early life housing stress will be associated with childhood asthma, and chronic housing stress will have a greater impact.

Methods
This study utilizes data from an established urban pregnancy cohort. Early life housing stress was measured using the Crisis in Family Systems (CRISYS) scale during pregnancy and when children were approximately 18 months old. A weighted sum of housing stress was calculated from the relevant housing-related CRISYS items, and was dichotomized at the median value into high and low stress for each visit. The outcome was maternal-reported, physician-diagnosed asthma by age 6 years. Multivariable regression models estimated the association between housing stress and asthma, adjusted for child sex, season of birth, race, education, maternal atopy, household cockroach allergen level, and presence of other environmental housing issues (rodents, moisture/mold).

Results
Analyses included 573 mother-child pairs with complete data on housing stress and asthma. Of a possible housing stress score of 52 for each visit, the median for prenatal was 2 (IQR=5, Range 0-32), and for postnatal was 2 (IQR=4, Range 0-28). Approximately one-third (35%) of mothers had high housing stress in both periods. Women with high housing stress in both periods were more likely to be atopic, obese, report water and rodent problems, and have an asthmatic child compared to those with low stress in both periods (p values <0.05). Children of mothers with high stress in both periods were more likely to have asthma (OR 2.9, 95%CI 1.3-6.5) compared to children of mothers with low stress in both periods, in an adjusted logistic regression model. Further inclusion of maternal smoking, maternal age, or birthweight did not substantively alter these findings.

Conclusion
Chronic housing stress in early life may influence asthma expression in urban children even when adjusting for in-home physical environmental factors. These results may inform clinical screenings to identify high risk families and contribute to public health interventions that better address both psychosocial and environmental housing issues in urban populations.
Fostering Health NC: An Initiative to Connect Children and Youth in Foster Care to a Medical Home

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Case Report / Discussion

The American Academy of Pediatrics considers children in foster care to be Children and Youth with Special Health Care Needs. Nationally, their health care costs are triple that of their age-matched Medicaid peers. Their health is deeply compromised by the trauma they have experienced through the abuse or neglect that prompted their removal, the many transitions they experience – through multiple placements and sometimes intermittent returns home to their biological parent(s), as well as the lack of a continuous medical home. Their healthcare is often episodic and fragmented.

Our initiative, in partnership with our state chapter of the AAP seeks to improve the health outcomes and reduce costs of the state’s foster care population. The initiative engages the local primary care clinician, the local department of social services, and the state’s medical home care management network for the Medicaid population to enhance communication by clarifying and removing barriers to sharing of information, leveraging technology, and operationalizing best practices, including those that establish strong care coordination. The project emphasizes adopting the AAP’s recommended enhanced periodicity schedule for children in foster care, drafting letters of agreement among agencies that guide local collaboration, and granting access for the local department of social services to Medicaid claims information in support of the initial (health screening) visit and case management decisions. The project is guided by the expertise and commitment of a state advisory team that includes public and private partners who have developed a set of tools and resources to support statewide implementation of the medical home model for children in foster care. These tools and resources are publicly available on our state chapter of the AAP, NC Pediatric Society website. Additionally, a Maintenance of Certification Part IV activity is available at no cost to participants and is being rolled out this winter and will be posted on line for additional providers to access in the future.

Tools to support quality care in a medical home for infants, children, and adolescents in foster care will be presented with an emphasis on the potential for replication in other states. Presenters will share lessons learned in the course of delivering technical assistance to primary care clinicians across the state in a variety of practice settings and locations, local departments of social services who retain custody of children in foster care, and local networks that are part of the state’s nationally recognized medical home care management network for the Medicaid and SCHIP population. Presenters will share their experiences on project development, including the importance of gaining the support of funders and policymakers. Finally, future project developments will be highlighted which include a Learning Collaborative for Care Managers and an Online Learning Module for Social Workers.
Children's Lives on the Texas/Mexico Border: A Pediatrician-Led Community Response to Toxic Stress

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Prolonged fear can have deleterious effects on the trajectory of a child's health and can be considered “toxic stress” (Shonkoff, et al., 2012). Hundreds of thousands of Hispanic children living along the Texas/Mexico border, are exposed to fear and discrimination on a daily basis in an environment that has become highly militarized. Children suffering toxic stress include: 1) children traveling alone trying to escape terror in their home countries, who are arrested and detained; 2) children exposed to violence in the Mexican drug wars who now live in border communities; 3) youth brought to the U.S. as infants, “Dreamers” who fear deportation, or that their only pathway to legal residency will be the military; 4) citizen-children living in mixed-immigration status families who fear permanent separation from their parent(s) through deportation; and 5) citizen-children who have friends and schoolmates in the preceding categories.

On February 14, 2014, the Children’s Lives on the Border Community Gathering was convened by pediatricians and other community leaders, inspired, in part, by Shonkoff’s (2012) assertion that the professions of medicine, law, and education need to collaborate to address toxic stress. Fifty community activists, representing 15 legal, educational, medical, faith- and community-based organizations, crafted a community response to the extraordinary trauma that border children suffer. Over 500 short, mid- and long-term actions were identified for eight themes: advocacy/policy; basic needs; detention centers; media/changing the narrative; school; spiritual; public spaces; and community collaboration.

Outcomes from the gathering include: (1) public spaces transformed with welcoming murals at a community health center serving undocumented families and in federal detention facilities for children, co-designed and painted by child detainees, medical students, and community design professionals; (2) publications by pediatricians in local, state, and national media outlets, e.g. Treat these children with care and dignity, San Antonio Express News, August 1, 2014; Children’s lives on the border. Pediatrics, 133(5), e1118-e1120; and Doctors with borders, Texas Observer, September 29, 2014; (3) community-based organizations provided workshops on effects of fear on families and children in communities with mixed-immigrant status families; (4) increased awareness of stress and children’s needs among school personnel; and (5) helped facilitate a rapid community response to the influx of 54,000 child refugees from Central America in the few months following February 2014. Children and families released from U.S. Border Patrol holding cells were welcomed at local churches, staffed by volunteers—physicians, nurses, social aid workers, etc. Children and families received medical care, respite, food, showers, clothing, and care packages to take on their journeys northward to family.

Participants in the Valentine’s Day gathering continue to collaborate in ongoing efforts to alleviate toxic stress in their communities and to embrace and care for children and families fleeing for their lives.
Health Insurance Status and Unmet Medical Needs Among Injured Children: A Population-Based Study

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Purpose
Annually, around 9 million injured children are treated in U.S. emergency departments. For injuries that require medical care beyond acute care facilities, effective follow-up care may reduce the prevalence of disabilities and lead to improved outcomes. Although uninsured children have been found to receive less preventive and routine services, little is known about insurance-related disparities in obtaining recommended medical treatments following injuries especially using nationally representative samples. This study aims to examine the role of insurance status in receiving follow-up medical care after trauma injuries in children.

Methods
This is a retrospective study of the 1997-2006 Medical Expenditure Panel Survey (MEPS). Households, including children, from each panel are followed for approximately two years during which they are surveyed five times (every 4-5 months). In these surveys, parents report their children’s emerging health conditions and healthcare utilization. Children 0-17 years were included if they sustained an injury that was associated with at least one hospitalization, an emergency department visit, or an office-based visit. Once an injury is reported, parents are asked whether further treatment was recommended. If affirmed, a further question asks whether the child received all recommended care, received some of the recommended care, received no recommended care, or is still being treated for the condition. This response was used as the dependent variable with all recommended care as the reference category and insurance status (private as the reference, any public, or uninsured) as the independent variable. Multinomial regression model was used to model unmet healthcare needs in relation to insurance status adjusting for potential confounders.

Results
Among injured children, 51 were uninsured, 359 were publicly insured and 577 had private insurance. Compared to privately insured and uninsured children, publicly insured children were significantly less likely to report excellent health at baseline. However, uninsured children were more likely to report higher perceived injury severity (p<0.01). Compared to privately insured children, uninsured children were more likely to receive no medical care following injuries (odds ratio 4.6; 95% CI 1.0 – 20.6) adjusting for age, sex, race, baseline health and severity. There were no differences in receiving follow-up care between publicly insured and privately insured children.

Conclusion
Despite adjustment for demographics, baseline health and injury severity, uninsured children are more likely to receive no follow-up care after injuries. Failure to obtain timely care may put those injured at a different trajectory for recovery and delay return to pre-injury health.

Implications for Policy
These results suggest health reform may be needed to increase access to health treatments among children with traumatic injuries.
Head START and a Children’s Hospital: Expanding a Collaboration to Benefit Children

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Background
The Partnership for Resilient Families is a collaboration between a large children’s hospital (CMH) and Missouri’s largest early Head Start program, Operation Breakthrough (OB). A pediatric primary care clinic has been co-located with OB for over 15 years and provides both well child and acute care. Research in the past decade has made it clear that early childhood adversity and the toxic stress it causes play an important role in poor educational and health outcomes across the lifespan. Despite the common etiology of poor outcomes, early childhood educational and pediatric health care systems do not typically collaborate to devise strategies and plan programming.

Purpose
Using a framework of toxic stress, parent engagement and life course theory we sought to maximize the positive impact on families by developing a functional, collaborative model involving key stakeholders at OB and CMH in addition to parents. The initial phase of this work consisted of a needs and strengths assessment as well initiation of vitally needed behavioral health interventions at OB.

Methods
Leadership and staff of both organizations routinely meet for understanding and strategic planning. A small leadership team on site daily works closely to assess family needs, plan interventions, and troubleshoot. Annual intake by OB now includes screens for parental PTSD (PC-PTSD), depression (PHQ-9) and parental adverse childhood experiences (ACEs). A psychologist, hired by CMH, has been assigned to develop behavioral and mental health care services at OB as well as initiate program in community engaged research.

Results
A needs assessment among 142 parents revealed several indications of toxic stress among the parent group, including 22% screening positive for PTSD, 19% screening positive for major depressive disorder and 35% with an ACE score of 4 or greater. A community action board (CAB) composed of parents at the center is engaged as partners in planning the adult wellness program and research agenda. All materials related to addressing toxic stress are vetted with the CAB. Parent Child Interaction Therapy (PCIT), early childhood mental health collaboration, caregiver wellness workshops and parent cafés have been initiated and are well attended.

Conclusion
Addressing the impact of parent’s ACEs and toxic stress will be vital to impacting child health and educational outcomes. This two generation model shifts the traditional paradigms of both the pediatric health care system as well as the early childhood system. Enhancing systems collaboration by expanding the CMH role beyond general pediatrics has led to implementation of active interventions to address toxic stress in both children and their parents.
Developing a Toxic Stress Screening Protocol and Referral System in a Large Inner-City Pediatric Practice: An Update from Longitudinal Data Collection

Maude Aldridge, MD,1 Zachary Goode, DO,1 Lucy Garbus, NP,1 Laura DeSousa, LICSW,1 Tinararie Fioroni, LMHC,2 Yashira Oropeza-Diaz, PsyD,3 Kouren Delgado,3 Jennifer Friderici, MSPH,4 and Stephanie Carlin, DO.1 1General Pediatrics, Baystate Medical Center, Springfield, MA; 2Behavioral Health Network, Springfield, MA; 3Family Advocacy Center, Springfield, MA, (4)Baystate Medical Center, Springfield, MA

Purpose
Toxic stress (TS) is the prolonged activation of the stress response system from sustained adverse childhood experiences without the support of a caring adult. This disruption of normal neurophysiology early in life increases risk of poor medical and psychosocial outcomes throughout life. Pediatricians are in a unique position to identify children at risk for TS. Our objective was to develop a screening protocol for TS in a high-risk population and implement an effective referral system based on delayed development, behavioral difficulties or psychosocial stressors.

Methods
A team of pediatricians, child advocacy specialists, social workers, and behavioral health (BH) providers implemented staff training to create a trauma-informed office. All children under 66 months presenting for well child visits were screened with the validated Survey of Wellbeing of Young Children (SWYC). A supplemental questionnaire was added to better identify additional family stressors. Positive screens were referred to social work or BH. Metrics included overall referral rate and interval between screening date and first BH visit.

Results
1199 SWYC screens were completed between 6/9/14 and 3/26/15. Mean/SD age was 2.2y/1.8y; 51% were female, and 71% self-identified as Hispanic. Nearly all patients had public insurance. Almost half (n=558, 47%, 95% CI 44%-50%) of all SWYCs were positive in at least one of the domains measured. Specifically, nearly 30% of all SWYCs were positive for behavior, and 17% positive for psychosocial stressors. Of all positive screens, 227 (40%) were eligible for referral and, of these, 128 (56%) received an initial appointment. The interval between screen date and first appointment decreased from 14 days in the first 2 months, to 1 day by month 9 of study, a 92% decrease (figure 1.).

Figure 1. Interval in Days Between TS screen and First Appointment

Conclusion
At this inner-city practice serving low-income families, TS was identified in a large number of children and families, and 40% of them required referral for support services. Continued efforts to improve coordination of services decreased wait times for services by 92% in just 10 months. Our future objectives will include improving the integration of BH within the pediatric practice, examining the effect of BH on TS within subjects over time, and exploring options for primary prevention within our community.
Can We Promote Early Literacy in the Well Child Nursery?  
the Early ABCs: A Randomized Controlled Trial

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Purpose
Identify interventions for disadvantaged Spanish and English speaking new mothers which foster early literacy promoting beliefs and behaviors since reading with young children strengthens parent-child relationships and builds language, literacy and social-emotional skills that last a lifetime.

Methods
300 mothers insured by Medicaid with healthy singletons in the nursery were enrolled in a study of educational materials and completed a baseline interview. Mothers were randomized to 1 of 2 interventions, each with a bilingual DVD and booklet. Half received the Ready to Learn (RTL) intervention addressing the benefits of reading, talking and playing with young children and a bilingual board book; half received the All Babies Cry (ABC) intervention focusing on crying as a normal infant behavior, signs of parental distress and strategies to soothe parents and infants. 80 RTL and 77 ABC mothers spoke Spanish at home; the remainder spoke English, but not Spanish. 245(82%) were contacted by phone for re-interview when infants were 60-180 do. However, only 115(38%) reviewed the materials and completed the interview (53 RTL/62 ABC). Follow-up mothers were more likely to have been immigrant (54% v. 34%, p=0.001) and interviewed in Spanish (31% vs. 13%, p<0.001) than those not reinterviewed.

Results
Enrollment-mothers in the 2 groups were well matched: 27.4(5.5) yo, parity 2.2(1.2), 70% married /LTG, 40% employed, 15% students, 25% < HS, 34% HS/GED, 41% >= 1 year college/vocational, 49% Hispanic, 12% NHBlack, 27% NHWhite, 12% Other. 20% interviewed in Spanish, 41.7% immigrant. At follow-up infants in both groups were similar in age 94.5(28.4) do, reading with adults 84%, #children’s books/household (17.2(15.2) v. 18.4(18.4)), #days/week reading ((3.6 (2.9) v. 3.4 (2.9))). More RTL Mothers reported that a favorite activity with baby was reading together (34% v. 14.5%, p<0.05) and reading together was a favorite activity for baby (17% v. 4.8%, p<0.05). RTL fathers read more to their babies than ABC fathers (41.5% v. 22.6%, p<0.05).

Conclusion
This simple, inexpensive intervention was well accepted but underutilized by new low income mothers since few mothers viewed the materials provided in the hospital without significant encouragement from investigators and hence, this intervention might be more effective if delivered by a trusted pediatric provider in a less intensive setting. At follow-up most mothers in both groups were reading with their babies. The intervention did not significantly affect how often mothers read with infants but it did show an increase in their reported enjoyment of this activity and fathers’ reading with infants. The AAP has recommended parents read, talk, and sing with infants beginning at birth. This work demonstrates that very young mother-child dyads can and do enjoy shared reading. Fathers may find it difficult to connect with newborns; shared reading may offer an opportunity for them to bond with babies from the start.
Addressing Behavioral/Emotional Health in Pediatric Primary Care - Moving from a Great Idea to a Sustainable Practice

Sara M. Naureckas, MD, Hannah Chi, MPH, Jacqueline Vaca, LCPC and Kanako Kawai, MD, Erie Family Health Center, Chicago, IL

The American Academy of Pediatrics recommends routine screening of children and adolescent’s behavioral/emotional health with appropriate follow-up of positive results. How to do this in an effective, efficient, fiscally sustainable manner is not clear – especially in under-resourced, high-need communities. Beginning in 2013, our two organizations – a Federally Qualified Health Center (FQHC) and a Community Mental Health Center (CMHC), have been working to develop, implement and evaluate a model of integrated primary and behavioral healthcare within a medical home.

Site/patient description
The organizations are located in neighborhoods with high rates of poverty, violence, unemployment and health disparities. There are 7500 patients under age 18 in the FQHC practice. Half of FQHC families prefer Spanish-language services.

Goal
Find effective, sustainable ways to identify behavioral/emotional concerns early through universal screening, address concerns in primary care when possible, and facilitate linkages when more extensive care is required.

Strategies
• Integrate annual screening into well child visits (WCV) with age/language appropriate instruments (Ages/Stages SE, Pediatric Symptom Checklist parent/youth, Traumatic Events Screening Inventory). Behavioral health clinician (BHC – Licensed Clinical Professional Counselor or Licensed Clinical Social Worker) scores screener, gives results, and arranges follow-up at time of WCV. Goal is that WCV is completed in under an hour.
• Implement ‘touchpoint’ BHC visits at WCV for toddlers and three school-entry ages to introduce services.
• ‘Warm hand-offs’ available immediately for pediatrician/parent/patient concern.
• Families can call BHC phone-line if needs arise outside of a visit.
• Up to 6-8 ‘short’ BHC follow-up visits (cognitive behavioral therapy) possible within the medical home – referral facilitated to CMHC if further therapy needed.
• Program coordinator provides community linkages and communication with school system.
• Legal services available through a local law school relationship.
• Increase pediatrician competency via psychiatrist-led trainings and phone consultation, develop guidelines for team co-management of ADHD, depression and anxiety.
• Strengthen EMR content to facilitate communication, tracking, care plans, etc.
• Develop organized approach to “crisis” issues such as current suicidal ideation.

Findings:
• 19% of site’s pediatric patients have participated in a program activity since 2013 (screening, touchpoint, warm handoff, other). The crisis workflow has been used 9 times.
• Rates of positive screeners are below expected (6.5% - expected 20-30% from literature).
• Rates of parent/pediatrician/patient concern are high – 10 times as many referrals to BHC are for concern than from positive screener.
• Approach has led to significant increase in ‘show rate’ for BHC visits as compared to routine therapy visits at the FQHC.
• With consent, participants and a control cohort will be followed over 12 months to evaluate changes in behavioral/emotional health and other factors.
• States vary widely in reimbursement of screening and BHC-type activities including short counseling encounters. An analysis of reimbursement needed for sustainability is underway.
A Promising Strategy for Addressing Trauma Among Institutionalized Children in Vietnam: A Pilot Project

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Purpose
There are thousands of children in Vietnam living in orphanages. Many have experienced significant trauma. Past research has revealed a clear link between institutional care and associated developmental delays and behavioral problems in children. However, adjustment and resilience of young institutionalized children in Vietnam are less clear. The present study on young institutionalized children examines the following: 1) gaps between developmental and biological age; (2) prevalence of clinical scores on DSM-IV- oriented scales; and (2) caregiver’s and child’s interaction style and links to behavioral adjustment.

Methods
This study used data from a Toy Library (TL) operating in a government-run orphanage in Vietnam. The TL is a novel strategy for dealing with childhood adversity/stress toxicity. The TL provides a safe space for caregivers to learn appropriate caregiving practices from trained specialists using developmental-based toys in play sessions with the aim of helping children through experienced trauma. A sample of 24 children (< 5yrs) and their caregivers were recruited for the program. Caregivers were individuals from the community who volunteered a few hours a day working with the children. The volunteers were trained in early childhood development and play as well as their interactions with children observed. Baseline data was captured using the Child Behavior Checklist (1.5 – 5 years), the Indicators of Parent/Child Interaction (IPCI), and Ages and Stages Questionnaire (ASQ-3) developmental screening tool.

Results
Data revealed significant improvements in the percentage of children scoring in the normal range for problem solving and personal/social skills on the ASQ-3 from Time 1 to Time 2. Also, Children improved in the quantity of positive feedback cues to, sustained engagement and follow-through with caregivers during play, and lower levels of frozen and watchful behaviors [t(24)=-4.36, p<.01; t(24)=-2.65, p < .05; t(24)=-2.16, p<.05; t(24)=5.97, p<.01 respectively]. Clinical and borderline scores on the oppositional/defiant (OD) scale were significantly linked to low levels of children's positive feedback at Time 1 (r=-.40, p<.05) and irritability and fussiness at Time 2 (r=.44, p<.05). Finally, OD behavior at Time 1 predicted irritability and fussiness at Time 2 after controlling for gender and OD at Time 1 (β = .47, p<.05).

Conclusion
The quality of children's interactions with caregivers improved over time. Even though a significant percentage of children had initial developmental delays, training caregivers on child development and play contributed to narrowing of the gap between biological and developmental age. Persistent fussy and irritable behaviors are linked to DSM-IV conditions in children (e.g., OD) and thus should be screened for in Vietnamese institutions. Although this is not a randomized trial, it does represent a promising strategy in dealing with childhood adversity and that could potentially be incorporated into other outpatient/community initiatives. Thus, the TL should be tested in a larger trial with an appropriate comparison group.
Holistic Homes to Break the Cycle

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Parental incarceration has a profound impact on a child and increases their risk for experiencing toxic stress from their high-risk environments. The goal of this project was to create the infrastructure for holistic, trauma-informed Medical Home that could meet the needs of children affected by parental incarceration. This project used CATCH Grant funding to implement activities in the home, in the clinic, and in the community.

Mindfulness-based activities, although generally unavailable, provide children and families with vital skills to alleviate the physiologic trauma of toxic stress and support to nurture relationships. Families affected by parental incarceration were invited to a 2 hour event hosted by their after-school program. During the event, children participated in a yoga class and other activities known to improve emotional regulation. The lead pediatrician met with the caregivers to introduce the concept of toxic stress and to discuss strategies to promote resiliency. At the end of meeting, interested caregivers signed up for the other components of the pilot program: a parent partner and an 8 week mindfulness-based curriculum that would be sent to their home in weekly installments. All families were given resiliency tool-kits that contained child-friendly activities and toys that could be used to teach coping skills (such as bubbles for breathing).

Many families affected by parental incarceration are isolated due to shame and struggle to provide an environment that promotes emotional healing. Two parent partners were hired to increase the families’ social capital and to build trust within the community. The lead pediatrician trained the parent partners, met with them weekly to discuss issues, and facilitated communication between parent partners and families’ social workers.

The project involved several activities to educate the community and decrease stigma. A large crowdfunding event provided a platform to educate the community, to develop new community partnerships, and to raise funds for future activities. The project leaders also appeared on local radio stations and met with the superintendent of schools and representatives from the police department to discuss strategies to minimize the impact of parental incarceration on children.

To help guide the development of more trauma-informed medical services, staff members and a small subset of patients at a local pediatric clinic were asked to complete surveys during this project. The staff surveys provided information about the clinic’s capacity for providing trauma-informed care. A trauma-informed psychosocial screen provided additional information about the needs and clinical experiences of patients and helped demonstrate the importance of trauma screening to clinicians.

Successful completion of project activities required collaborative community efforts and family and child engagement, and CATCH grant funding. Information from these activities will be used to design a Medical Home to meet the needs of children affected by parental incarceration.
Mental Health Integration – It Works!

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Purpose
This collaboration between a local health department and two state agencies linked two SAMHSA funded grants to develop and test a model of integration of early childhood mental health and family support into the pediatric medical home. The project, with service delivery in 7 community based primary care settings, provide a continuum of care which includes early identification, care coordination and support around family stressors, and parenting and mental health interventions. Service delivery sites included.

Methods
The model embeds a Family Partner with lived experience and an Early Childhood Mental Health (ECMH) clinician into pediatric primary care. This “power team” works together to assess, support, and follow families with children who are identified by primary care providers with signs of social and emotional difficulties, are experiencing risk factors known to lead to poor outcomes, or are at imminent risk of or are diagnosed with a mental health condition. The team enhances the capacity of the family-centered medical home to respond holistically to the health concerns of families, providing a menu of mental health related services. Support includes a family centered, culturally competent, Wrap-Around informed care planning approach to support families and improve child outcomes.

Results
While one evaluation is ongoing (it is a longer duration grant), children enrolled in the other grant achieved improved mental health outcomes (Figure 1). Children receiving care at a comparison site showed no such reduction in risk; in fact, behavioral symptoms increased over time among nonparticipants. The caregivers of enrolled children showed lower levels of stress and depression (Figure 2).

Conclusion
The powerful combination of professional skill and personal connection offered to families achieved positive outcomes in both programs. The Family Partner brings first-hand experience navigating systems and caring for a child with social, emotional or behavioral needs. The ECMH Clinician has professional training and an in-depth understanding of early childhood mental health. Through family strengthening, parent support and mental health interventions, parents gained knowledge of child development, parenting skills, and better utilization of community resources, which led to improved child and caregiver outcomes.

Recognizing the salience of the pediatric medical home for young children and the central importance of caregiver engagement and support in addressing the needs of very young children, this model engages families early and takes pressure off an overburdened primary care and mental health system. Acknowledging that practices may not have the capacity to employ a “power team,” we created a comprehensive collection of tools and guidance for integrating early childhood social and emotional development into pediatric care that is available online. The toolkit includes sections on providing family centered care for children’s social emotional development, integrating early childhood mental health staff, building medical home systems, and financing the model.

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Mental Health Integration – It Works!
(continued from page 26)

Figure 1. LAUNCH Child Growth in Social-Emotional Health n = 183
(Lower Score is Better)

Chi Sq = 62.45,
df 3, 
p < .001

Baseline Age

Figure 2. LAUNCH Parents with/without Clinically Significant Symptoms of Depression and Stress

n=181
Chi Sq = 15.08
df 1,
p < .001

n=167
Chi Sq = 49.29,
df 1,
p < .001
Piloting a Screening Tool for Social Determinants of Health, Adverse Childhood Experiences (ACEs), and Resiliency Among Children Seen in 4 Urban Resident Clinics

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Background
Socioeconomic factors have long been known to affect health. The medical community and other sectors who work with children and their families are beginning to understand that adverse childhood experiences can impact long term health in similar ways, and genetic, hormonal, and brain research now supports this. Despite these advances, this knowledge has yet to be routinely translated into practices that improve identification of affected children, thereby allowing family referral to needed services. Existing screening tools usually focus on one of three broad categories: socioeconomic factors, adverse childhood experiences, or resiliency. Each of these separate tools is lengthy, and may not be administered with tools for the other categories. In addition, existing tools do not allow the family to set priorities.

Objective
We would like to create a single, short screening tool that addresses all three categories in a way that allows the family to set priorities and guide needed interventions.

Methods
Faculty from 4 institutions in Chicago reviewed existing validated screening tools and incorporated key elements of each into a new tool. The screening tool is being piloted in a semi structured interview format on 10 families from each institution to guide modification of the tool.

Results
We are modifying the tool based on the results of the pilot and creating a 12 item screen which will be tested in 4 institutions’ resident clinics looking at acceptance, feasibility and validity.
Youth Haven: A Community-Based Approach to Youth Violence Prevention

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Purpose
Urban youth are disproportionately impacted by violence. They suffer the loss of support systems and endure chronic stress from unsafe environments, making them a priority population to engage in violence prevention activities. Many communities have created interventions to mitigate youth violence, but few have included the perspectives and input of community youth. A community-academic partnership created YouthHaven, a research and advocacy training curriculum to build youth ambassadors’ capacity to reduce community violence, and empower youth ambassadors to impact violence prevention policy in New Haven, CT.

Methods
YouthHaven consists of 12 youth ambassadors (YAs), aged 16-18, recruited from city public schools for their interest in violence prevention, who, during two consecutive summers of full time work and two school years of meetings 2-3 times per week for 2-3 hours, participated in training and project implementation. YAs were compensated for their time. In their first project, YAs convened a citywide “Youth Congress” to gather other youths’ perspectives on violence. Data collection included both quantitative audience response surveys and qualitative, facilitated small group sessions around targeted theme areas such as “your ideal neighborhood.” Ambassadors used these data to develop their next projects; each project was led by YAs with facilitation by adult, academic and community partners.

Results
Data from the Youth Congress showed 81% (N=54) of attendees reported a family member being hurt by an act of violence and 61% (N=49) reported having a family member killed in an act of violence. Small group session data analyzed through qualitative methods revealed that youth priorities in violence prevention were focused on improving employment opportunities, activities for youth, and improving the city environment. The YA presented these themes to city leaders, police, and community stakeholders; reviewed and contributed to a citywide violence prevention planning document; developed and implemented an IRB-approved survey for youth on violence prevention strategies, and completed a course in violence mediation training.

Conclusion
The incorporation of youth perspectives, experiences, and priorities is feasible and critical to the creation of violence prevention strategies that can be endorsed by the youth for whom violence prevention policies are intended.
A Primary Care and Behavioral Health Collaboration Developed to Screen for and Address Toxic Stress in Young Children in a Large Inner City Pediatric Clinic

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In recent years, much light has been shed on the science of toxic stress in childhood. Toxic stress (TS) is defined as the prolonged activation of a child's stress response system resulting from the experience of adversity in the absence of supportive, responsive caregiving. It affects the brain chemistry and architecture, expression of DNA and leads to poor behavioral and health outcomes throughout the child's life and into adulthood. Screening for and identifying ways to help children who are experiencing toxic stress is a major goal of the new AAP Center on Healthy Resilient Children. Identifying ways to integrate pediatric primary care and mental health care is also a goal of the AAP. In response, we have developed a collaboration between a large pediatric primary care center and a local behavioral health (BH) agency with the goal of screening for TS and providing assistance to families whose children are at risk for TS. An interdisciplinary team of a pediatrician, social worker, child abuse parent advocate, child trauma psychologist, a pediatric nurse practitioner, the BH agency coordinator, and two pediatric residents developed a protocol to screen for TS using the Survey for Well-being of Young Children (SWYC) and to refer those with positive screens for additional services. At each well child visit from two months to five years, the SWYC screens for adverse childhood experiences, including domestic violence and maternal depression, as well as the child's development and the caregiver's perception of the child's behavior. In order to learn more about the child's home environment, we added five questions. We also added a preamble to explain why we were screening and created a referral sheet for the provider to use to streamline the system. In January of 2014, we began using the SWYC for universal screening during well-child visits between 2-60 months by every pediatric provider: 36 pediatric residents, 8 attending pediatricians and 2 pediatric nurse practitioners. At the same time the BH agency increased their presence so that there was almost always a BH clinician in the clinic to meet with the families identified through the screen.

The purpose of this presentation is to describe:
1. The community engaged steps we used to develop our collaborative.
2. Our protocol for screening for toxic stress and referring families to improve resilience.
3. Challenges and limitations we faced.
4. Our plans for next steps including research to measure child and family outcomes.

While more work needs to be done to examine the effectiveness of our project, the use of universal screening for toxic stress and successful integration of a BH agency into a large pediatric health center offers a strong example of how this model could be adopted by other pediatric practices.
Women Connect: Providing Resources to at-Risk Women & Children in New Jersey

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Background
The Center for Great Expectations (CGE) in Central Jersey is a support center for homeless, pregnant or parenting women and their children. CGE is the only non-profit in NJ that provides individualized treatment and support within a home environment to help families overcome trauma, abuse, addiction, and homelessness. This female population averages an Adverse Childhood Experience Study (ACES) score of 5.

Purpose
Approximately 1.6 million children in the United States will experience homelessness over the course of a year. Children who experience homelessness or are born into homelessness are at higher risk for mental health issues, exposure to violence, developmental delay and frequent illnesses. Single females head 84% of homeless families. Women Connect’s goal is to minimize the toxic stress by teaching mothers how to be their children’s primary advocate by teaching how to obtain available resources offered through private, public and federal organizations for basic necessities and health care.

Method
Women Connect is a program comprised of eight teaching sessions designed and run by Rutgers-Robert Wood Johnson first and second year medical students, with support from Rutgers-RWJ pediatric residents during their advocacy rotation. The curriculum teaches homeless mothers how to find community resources such as local food pantry hours, subsidized after-school programs, GRE information and available affordable housing, in order to maximize the health and wellness of their children. These one-hour sessions are held on a monthly basis and were written based on results of needs assessments. Sessions include: “Identifying Resources in the Community”, “Resources in NJ”, “How to Evaluate Resources”, “Using the Internet for Resources”, “Creating Your Child’s Health Medical Journal”, “Creating a Resume,” “How to Find Trusted Medical Information,” and ACLS Training.

Results
Identical pre- and post-test comprised of problem solving based questions are used to assess the success of each session. Pre and post-test results demonstrate a 100% success rate for improving knowledge on specific resources and/or how to obtain resources effectively. Pooling various session’s pre and post test results, the average pre-test score is 1, with an average post-test score of 3.5. 80% rate the usefulness of the sessions as 5/5. These results demonstrate that the sessions increase the client’s ability to access resources, judge the validity of the source, use various media venues to organize their child's health information and improve health literacy.

Discussion
In order to improve the wellness of homeless children in the U.S, parents must be empowered by knowledge and a research skillset to have the ability to advocate for their child’s needs in order to create resilience to toxic stress within the family. Women Connect’s success demonstrates that individual sessions focused on connecting adults to available resources increase their capability to provide a better, safer, healthier childhood for at-risk children.
Early Childhood: Integrated Behavioral Health in Pediatric Practice

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Purpose
National estimates of emotional or behavioral disturbances in early childhood (birth to age 5) range from 9.5 to 14%, yet far less than half of these children receive any mental health services. Even when services are accessed, they are often inadequate in quality and/or quantity. Not surprisingly young children (especially from culturally and racially diverse populations) are expelled from preschool at rates exceeding 11.5/1000 and preschool children are expelled at 13 times the rate for children in kindergarten through 8th grade. While developmental and behavioral screenings in early childhood are now more widespread, there are multiple barriers to accessing mental health care: lack of providers trained to treat young children, stigma, long wait times and insufficient insurance payment. Integration of behavioral health in a pediatric office removes multiple barriers and enables prevention and earlier intervention by decreasing stigma and wait time, integrating physical and mental health care, and reducing referral barriers by building on the established trusted relationship with the pediatrician. Working with young children requires family focused partnerships and community connections.

Methods
This grant funded quality improvement project co-locates a social worker in a pediatric office to offer behavioral health consultation, assessment, triage, short term treatment (e.g Triple P) and care coordination with preschool, early intervention programs, teachers and specialists. Over 400 families (25% of the practice) have taken advantage of these services over the past 2 years. Data was collected both pre and post intervention on Triple Aim measures: patient experience, population outcomes of specific conditions (tracked in an emr registry), and cost (total medical expenditures, ie, per member per month).

Results
After 18 months of intervention, the data show improvements in patient experience, quality outcomes and cost. The greatest cost savings occurred in the group with co-morbid behavioral health and complex physical conditions from $2556 pmpm in 2013 to $1211.55 pmpm in 2014. Case examples of preventing preschool expulsion will be provided.

Conclusion: In spite of data suggesting improvements in the Triple Aim and the capacity to address a major public health problem of preventive mental health in early childhood and preschool expulsion, this service model is not financially sustainable in the current fee for service environment. The potential for improved outcomes as well as cost savings requires an alternative more sustainable payment model.
General Pediatric Office and Community Family Support Collaboration to Improve Early Childhood Developmental and Mental Health Outcomes

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Optimal infant developmental and behavioral health outcomes occur within nurturing relationships where caregivers receive adequate support for basic needs. Particularly in high risk groups, concerns over basic needs such as housing and food may impair caregiver engagement. Families need to be supported early to help break the cycle of these influences and mitigate their impact on the child’s development.

In 2013, The Children’s Board of Hillsborough County supported a new program to place a developmental specialist in two general academic pediatric practices to monitor newborns’ and young children’s development. The families were offered developmental screenings beyond those recommended by Bright Futures. In addition, they received developmentally appropriate toys and were given community resources to assist with development and help engaging with the Early Steps (Early Intervention) Program. After two years, the grant was reconfigured to continue developmental support, but strengthened the community support component focused on families with children ages 0-3 years old. For families that needed increased assistance (e.g. housing, food, parental mental health, etc.), a case worker was assigned.

Outcomes during fiscal year 2013: 92% of 65 children who were referred for services showed improvement on reassessment (585 children screened). 50% of 8 families demonstrated improved well-being after case management. In fiscal year 2014: 94% of 47 children identified with developmental concerns near or below the cutoff showed improvement at 2 month re-screening using Ages and Stages (431 children screened). 100% of 27 children identified with developmental concerns were linked with a formal evaluation before 34 months of age. Of 23 families who participated in case management for at least 30 days, 87% demonstrated improved well-being and 100% had increased social supports.

In the first 4 months of the reconfigured program, 164 families have participated. 104 families have received information, referral and linkage with the clinic coordinators, 75 have had successful linkages to other programs with 29 families still actively being connected. 31 families have engaged in intensive family support services with 12 having completed services successfully and 19 families continuing in services. 29 children have been referred to Early Steps for further developmental evaluations—13 evaluations have been successfully confirmed and 16 are still in process. An unexpected benefit has been increased awareness of community resources by pediatric staff, attendings, and residents as Family Support personnel share their knowledge.

This collaboration has provided intense developmental screening and case management support of young children. Both of these are difficult to obtain in a general pediatric setting with a low income, at risk population. The families are introduced to these services in a familiar and trusted setting. The community’s support of this program through grant funding shows their commitment to healthier outcomes for our most vulnerable families and children.
Prevention and Early Identification of Traumatic Stress at a Women and Children’s Health Centre

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Background
A tertiary women and children’s hospital in a mid-sized Canadian city is implementing Trauma Informed Care, which was initiated originally within mental health services for children and youth. This presentation describes the work of the “Early Screening” sub-committee, tasked to address how to identify, and where possible prevent, trauma related symptoms in women or children who are not involved in mental health services.

Project
To date the group has identified three main areas of need: 1) improved screening of women during pregnancy; 2) programs to screen and treat currently underserviced but at risk infants and toddlers, for example, where there are concerns such as excessive crying or disruptive behavior; and 3) improved screening for children and youth attending the health centre for medical reasons, to identify those who have had trauma exposure that may influence or even explain their symptoms, or that may affect how they respond to assessment and treatment of their medical problems.

Three processes are underway to work towards these goals: 1) engaging health centre clinicians outside of mental health, who currently may not identify Trauma Informed Care as a priority (or may not know what it is); 2) engaging services outside of the health centre such as child protective or early intervention services, and 3) identifying appropriate screening tools for the different target groups.

All three processes will be described in the final presentation, but the issue of screening tools is the focus of this abstract. We have searched the literature for evidence to identify existing tools that are appropriately sensitive and specific, acceptable to the persons being screened and the clinicians using them, and with a low risk of exacerbating pre-existing trauma symptoms.

There is very limited evidence on brief screening tools for circumstances when trauma is not strongly suspected.

As another example of the challenges of identifying appropriate screening tools, we have considered children referred for suspected ADHD. PTSD is a common comorbidity with ADHD, and the two conditions have some overlapping neuropsychological impairments. Yet the ADHD toolkit typically used by Canadian pediatricians does not incorporate this evidence into practice. The Canadian ADD Resource Alliance (CADDRA) suggests a minimum of four office visits, combined with gathering of collateral information, prior to diagnosis. Their tools to support this process screen for 30 conditions (psychiatric, developmental, or medical) that are considered as potential mimics or co-morbidities of ADHD. However, trauma related stress is not among these 30.

Conclusion
We hope that a description of the challenges we face and how we are dealing with them will be helpful to others who are in the early stages of implementing Trauma Informed Care.
Everychild Bright Beginnings Initiative: Transforming Care to Prevent and Address Toxic Stress and Trauma in Young Children and Families

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The deleterious effects of adverse childhood experiences (ACES) and toxic stress are now well established. Responding to a call to action for pediatricians to address these issues, a community health center system serving over 5000 children under 4 in an low income ethnically diverse community, developed and implemented a new program focused on the youngest children served and their families and pregnant women through creating a shared vision and joining forces with our families, community mental health partners, our Medical Legal Partnership, our police chief, home visiting programs, educational and health institutions and others.

Since implementation in 2014 we have educated and trained over 350 staff in trauma informed care (TIC). We changed the manner in which we interact with families and staff to instead of asking “why” a family did not do something or is acting in a certain way, we now ask “Is something happening in your life”. We are redesigning care processes, policies and procedures to incorporate TIC approaches. Our integrated behavioral health team developed screening tools addressing stressors, protective factors, ACES, and literacy promotion. Families are stratified by risk and we intervene in a tiered approach. To date one of every three families screened are moderate to high risk. Interventions range from evidence based behavioral health treatments to parent child bonding and educational interventions. We have developed and implemented new training in and responses to intimate partner violence. All staff have been trained in how to respond appropriately to trauma disclosures.

In addition to our clinic system program, we are leading the effort and partnering with the broader community to advocate for and educate in TIC at all sites that interface with children and families such as the school district, police department, and hospitals. Training has spread beyond our walls to already touch many of those groups and to change the TIC discourse in the larger community.

Our model with the development of momentum and shared vision, not only in our health center but in the community as a whole, in an upstream approach, is geared towards moving young children and young families to the best trajectory for lifetime success. Our project model and approach is one that can be adapted for many pediatric practices, communities and settings.
Evidence-Based Parenting Training of Foster Parents Improves Empathy and Skills

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Purpose

Children in foster care have a high prevalence of early trauma and social-emotional problems. Foster parents (FP) need support and training on behavior management in foster care.

To determine whether an evidence-based parenting program (Incredible Years, IY) adapted for foster care impacts child behavior or FP stress, parenting attitudes, or perceived competence.

Methods

We conducted a pilot randomized controlled trial of IY, offered to FPs of children aged 2-7 yrs, randomly assigned to the IY intervention (14 week professionally led group parenting program) or control (TAU: treatment as usual, no parenting program) groups. FPs in both arms completed identical pre/post quantitative measures. Our primary outcome, child behavior, was measured with the Child Behavior Check-List (CBCL). Secondary outcome of parenting were measured with the Parenting Stress Inventory (4 subscales), and the Adult-Adolescent Parenting Inventory (5 subscales, including empathy and view of family roles). A subset of intervention FPs also completed post-intervention focus groups and in-depth interviews.

Results

Between the IY (n=19) and TAU (n=19) groups, there were no significant demographic differences based upon FP or index child characteristics, pre/post CBCL scores, or parent stress scores. FPs trained in IY had improvements in empathy from pre to post screening (p = 0.009), significant changes in their views of family roles when compared to TAU (p = 0.03), and a significant decrease in the perception that their child needed formal behavioral health treatment (85% pre vs. 53 % post, p = 0.03), unlike TAU. Main themes from qualitative data (4 focus groups; 5 in-depth interviews; total n=13) highlighted that FPs trained in IY had new perspectives on the value of play, benefited from peer support, and reported enhanced parenting skills. These FPs reported this program improved child confidence and reduced negative behaviors, and these changes were sustained over time.

Conclusions

This pilot RCT did not support our primary outcome; however, we found some positive and potentially important effects on secondary measures including significant changes in empathy, enhanced ability to adopt the child’s perspective, and reduced need for formal mental health treatment for children with behavioral problems. Qualitative reports of benefits derived suggest FP enhanced empathy may impact tolerance or sensitivity to child behavior. Our study, while small, supports the benefits of evidence-based parenting education for FPs caring for traumatized children who are likely to pose behavior management issues.
Early Treatment for Neonatal Abstinence Syndrome: Analysis of Safety, Outcomes, and Costs Associated with a Palliative Approach to Newborn Opioid Withdrawal

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Purpose
To examine the safety, outcome, and cost profiles associated with a palliative treatment model for newborns at high risk for opioid withdrawal in the setting of level I newborn care.

Methods
Retrospective chart review was performed for 137 qualified infants born in a clinical university setting between 2006 and 2014 with an ICD-9 diagnosis code of 760.72 (Narcotics affecting fetus or newborn via placenta or breast milk) or 779.5 (Drug withdrawal syndrome in newborn) and admitted for Level 1 care. All were treated with a palliative model that combined early (within 24 hours of birth) methadone treatment and inpatient stabilization with regimented outpatient weaning. Eleven patients (8.0%) experienced medical complications (fever, hypoglycemia, tachypnea, supraventricular tachycardia) requiring transfer to a higher level of care prior to completion of the care model. For the remaining 126 newborns, primary outcome measures for analysis included hospital length of stay, need for co-medication, adverse medication and safety events (unsafe sleep, drops), peak modified Finnegan abstinence scores and weight loss levels, readmission rates, and total hospital charges and cost per case.

Results
Newborns at high risk for opioid withdrawal who were completely treated with our palliative model had an average gestational age of 38.5 weeks (range: 35-41). Median length of stay was 8 days (range: 4-19). Co-medication was needed in 2.4% of cases, and there were no adverse medication-related events documented. Safety events were observed in 7.1%, all related to unsafe sleeping environment in the hospital. There were no infant falls or deaths. Newborn oversedation was noted in 5.6% of cases, all during inpatient stabilization. Mean peak abstinence score was 11.1 +/- 3.7, with only 7% of newborns experiencing significant gastrointestinal symptoms. Mean weight loss from birth was 7.0 +/- 2.5%. Emergency care within 30 days of discharge was sought by 11.9% of newborns, with 2/3 subsequently hospitalized. Reasons for readmission included pertussis, RSV, fever, hypothermia, apparent life-threatening event due to reflux, bacteremia, diarrhea, and failure to thrive. For our treatment model, mean total hospital charges and cost per patient were $10,380 +/- 3007 and $5585 +/- 1702, respectively. In our cohort, 96% of newborn hospital stays were funded by Medicaid.

Conclusion
Based on our data, a model of palliative methadone therapy for newborns exposed to chronic long-acting opioids during late gestation that combined early treatment, inpatient stabilization and outpatient weaning was effective and cost-saving when compared to reported national averages (JAMA 2012, 307:1934-40). Our newborns experienced early and effective symptom control and low rates of transfer, safety events, and readmission. This innovative model of care may be feasible for level I nurseries, have widespread applicability and may further confer social, medical and economic benefits associated with family-centered care, parental engagement, and shorter hospital stays.
Trauma Informed Care for Youth in Foster Care

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Purpose
The American Academy of Pediatrics (AAP) recommends trauma informed systems of care for youth in foster care. The purpose of this study was to conduct a pilot project to incorporate trauma-informed care within an outpatient setting when caring for children in foster care. The specific objectives were to (a) provide trauma-informed training for pediatric residents; (b) pilot standardized screening; and (c) describe screening results using post implementation chart review.

Methods
The pilot project was implemented over an 18 month period of time, September 2013 – October 2014. Community partners provided training for staff, providers, and pediatric residents. We utilized “Plan Do Study Act” (PDSA) quality improvement cycles to monitor progress.

For the pilot, we selected a newly developed trauma screening tool, the Traumatic Experiences Questionnaire (TEQ). The tool met our screening criteria including: mental health professional recommended, brief, and available in Spanish. Although the TEQ has been used in over 400 children 2-8 years of age, it is not yet validated. The TEQ was adapted for use in children age 11-17 years, and is referred to as TEQ-A.

Standardized screening using the age appropriate caregiver or child completed TEQ/TEQ-A was offered at time of entry into foster care and during well child visits for youth in foster care age 2-17 years. A post implementation chart review was conducted in 2014.

Results
Thirty-eight residents received training on trauma informed care using materials and handouts from the AAP toxic stress toolkit.

119 charts were reviewed. There were fewer young children (2-10 years of age, n=45) compared to older children (11-17 years of age, n=74). 58% of all children were male, 31% Hispanic, 50% White non-Hispanic, and 19% unknown race/ethnicity. There was no association between total number of trauma experiences, number of trauma symptoms, and physical or mental health diagnoses (p > 0.05). Psychotropic medication use was reported in 66% (n= 49) of older children. Screening occurred in 69% of younger children (n=31) and 47% of older children (n= 35). The mean number of traumatic experiences was similar in both age groups: 4.5 in younger children vs. 5 in older children. Rates of trauma symptoms detected through the TEQ/TEQ-A ranged from 3.0% - 57.6%.

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Conclusions
Collaboration with community partners to provide trauma informed training was well received, and the feasibility of using the brief TEQ/TEQ-A to screen for trauma experiences and symptoms was demonstrated. Rates of standardized screening were low among adolescents and further evaluation of the utility of the TEQ-A in the medical setting is needed. This pilot demonstrated that standardized screening for toxic stress can provide valuable information and create an opportunity for caregiver/patient education.

Acknowledgements
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Interprofessional Training in Trauma Informed Care: A Behavioral Health Integration Approach

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Purpose
1 in 5 children in the United States experience mental health problems and 3 out of 4 children with mental health disorders present to primary care. Given this need, there has been a national call from bodies including the American Academy of Pediatrics and the National Institutes of Health to improve the integration of primary care and mental health services. Our hospital is an urban teaching institution with an underserved population with high rates of trauma related to immigration, intimate partner violence, and child abuse. We aimed to create a program that would (1) address the need for mental health consultation in the pediatric primary care clinics, and (2) provide interprofessional training for pediatric residents and psychology trainees.

Methods
Over a two year period, the leadership from the primary care pediatric clinic and the infant, child and adolescent psychology team built a program that integrates pre-and post-doctoral psychology trainees into resident continuity clinics. All psychology trainees were oriented to primary care and received intensive training in trauma-specific interventions. Trainees and supervisors conducted joint huddles during each clinic session to discuss cases for potential collaboration. Depending on the need, psychology trainees performed screening, assisted with referrals to other mental health providers, and provided brief consultations. Psychology trainees also participated in resident didactics on subjects that joined the two fields. Both disciplines provided the trainees with instruction in team based models of care. Psychology trainees recorded data including demographics, reason for consultation, and services provided.

Results
Over an 18-month period, 200 unique patients were referred for a total of 294 consultations. The most common assessments were behaviors related to trauma (51%), anxiety (25%), and depression (21%). Recent immigrants constituted 11% of referrals. The majority of patients (60%) received brief counseling, while a smaller number (27%) were referred for subspecialty care. On average, psychology trainees spent 45 minutes on each case. A total of 25 pediatric residents and ten psychology trainees participated in the program.

Conclusions
Integrating mental health and pediatric primary care in a setting with high rates of trauma allowed us to meet the high demand for mental health services as well as the training needs of learners from both disciplines. Structured collaboration opportunities and dedicated supervision from both programs is key. Referrals to specialty mental health are challenging because of stigma, logistical barriers in attending appointments, or long wait times for services. With brief consultations from the psychology trainees nearly 2/3 of cases were able to be turned back over to pediatric primary care. Embedding psychology trainees in resident continuity clinics is a meaningful way to address mental health concerns in a population with high rates of trauma while providing interprofessional training about working in multidisciplinary teams.
Parenting Matters: The BABY Buffer Social MEDIA Program

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There is evidence that social media programs such as text4baby can deliver messages that are associated with changes in specific beliefs targeted by the messages. In 2013 the Kansas Chapter of the AAP received an AAP Healthy People 2020 Grant for Health Communication and Social Media. Our Baby Buffer Program (www.babybuffer.org) aimed to use social media to help pediatricians translate the science of toxic stress into guidance that helps parents of young children buffer their children against adversity. We educated 4 pediatric practices with high Medicaid rates about toxic stress and developed materials to help practices recruit parents into the Baby Buffer Program. We developed age appropriate email messages to push out to these parents weekly, and developed content (blogs, resources) for parents with specific tools for positive parenting. Emails began in 2014 with open rates that averaged 32.5%. Surveys reported high satisfaction with all components (“brain science”, milestones, website, email, blogs, and Facebook). The majority of families heard about the Baby Buffer program from their pediatrician. Pediatricians felt the program was useful, although it wasn’t clear that the emails generated discussions about positive parenting. Users recommended that we expand the age range, have an available on-line expert, and increase the numbers of participating doctors. We hope to expand the program to practices across Kansas and hope to increase the percentage high risk parents using the program. The Baby Buffer Social Media Project is envisioned to be a long term Project of the Kansas Chapter of the AAP.
Assessing Foster Parents’ Perception of Their Preparedness to Care for the Child Exposed to Early Toxic Stress

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Purpose
Children in foster care have a high prevalence of early toxic stress and significant physical and mental health care needs. Foster parents (FPs) are the primary resource to physicians and DCF in identifying health concerns in this vulnerable population. However, to this point, little attention in the literature has been paid to FPs’ self-perceived preparedness in understanding and supporting the unique behavioral and emotional needs of the children in their care.

The objective of this study is to characterize FP perception of their own abilities, and their perceived level of training and support, in understanding and managing the behavioral and emotional needs of the children in their care, with the aim of identifying circumstances where FPs would most benefit from physician support.

Methods
This study is part of a single-center qualitative study of a cohort of FPs presenting for their foster child’s initial evaluation in a clinic specializing in the care of children in foster care. Over the course of one year, 34 FPs filled out a survey that included 11 self-rated items rated on a 10-point visual-analog scale with open spaces provided for comments.

Results
Experience of the 34 FPs surveyed ranged from one week to 22 years. Median responses to questions assessing FP comfort in communicating to their foster child about their prior experiences ranged from 8.45 (95% CI: 5.74-8.14) to 9.60 (CI: 8.12-9.60). When asked if they had been given support in both understanding and managing their children’s behaviors and emotions, median responses were 8.8 (CI: 5.39-8.04) and 7.95 (CI: 5.11-7.70), respectively. Notably, comments provided by FPs indicate that most have had to seek training and support from agencies outside of DCF. Regression lines between years of FP experience and reported level of training and support showed an inverse growth relationship, indicating that parents with less than 4 years experience were more conflicted about the level of training and support they had received; after that point, responses stabilized at a high level of satisfaction.

Conclusion
Many FPs report a lack of specific training regarding the emotional and behavioral health of the children in their care. Thus, it is important that pediatricians provide anticipatory guidance, particularly to newer foster parents, with regard to understanding and managing the emotional and behavioral consequences of toxic stress.
Human Trafficking Educational Initiative in a Pediatric Emergency Department: A Multidisciplinary Approach

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Purpose
The human trafficking of children is capturing intense interest amongst healthcare providers. Studies show 87% of victims have undergone examination while in captivity, yet remained unidentified. While most encounters are in the emergency department (ED), a study of ED providers revealed a gap in knowledge about HT. Data suggest educational presentations are effective interventions for increasing perceived HT knowledge in ED providers.

Our project aims to increase ED provider awareness of HT, knowledge about HT health effects, and understanding of available resources. Previous studies have not examined this type of intervention within the context of a residency program. Despite 173,225 visits annually, there have been no identified cases of HT in our ED.

Methods
Following a plan-do-study-act model, we designed an hour-long multimedia, interactive presentation addressing HT epidemiology, symptoms, strategies for history taking, trauma-informed care, mandatory reporting, and available resources if disclosure is made. This presentation was piloted with small groups of nurses, residents, attending physicians, and medical students. All attendees were provided an ID badge card with key resources. Pre- and post-intervention surveys were employed to assess perceived knowledge.

Results
Our preliminary data show an overall improvement in provider awareness and understanding of HT victim identification and appropriate response in the event of a disclosure.

Table 1. Mean scores pre- and post-intervention

<table>
<thead>
<tr>
<th>Perception</th>
<th>Pre</th>
<th>Post</th>
</tr>
</thead>
<tbody>
<tr>
<td>I feel knowledgeable about the effects of HT on physical and mental health.</td>
<td>3.2</td>
<td>4.2</td>
</tr>
<tr>
<td>I am familiar with the signs and symptoms that might identify a victim of HT.</td>
<td>2.5</td>
<td>4.3</td>
</tr>
<tr>
<td>Victims of HT are likely to present to a healthcare setting in Texas.</td>
<td>3.6</td>
<td>4.6</td>
</tr>
<tr>
<td>If I suspect a patient in the ED may be a victim of HT, I feel knowledgeable about the next steps to take.</td>
<td>2.2</td>
<td>4.2</td>
</tr>
<tr>
<td>I have suspected that a patient of mine was a victim of HT.</td>
<td>2.4</td>
<td>3.0</td>
</tr>
<tr>
<td>It is important to know about HT for my profession.</td>
<td>4.6</td>
<td>4.8</td>
</tr>
<tr>
<td>I understand how to employ trauma-informed care when encountering a patient who is a potential victim of HT.</td>
<td>2.2</td>
<td>4.1</td>
</tr>
</tbody>
</table>

Key: 1 = Strongly disagree, 2 = Disagree, 3 = Neither agree nor disagree, 4 = Agree, 5 = Strongly agree

Conclusion
An hour-long interactive session and provision of badge-cards are effective ways to train ED providers on identification, patient interaction, and resource availability for HT victims. Future work will include feedback-based refinement of the presentation, and expansion of the training sessions to all ED nurses, social workers, registrars, security staff, and pediatric residents. The sessions will be integrated into the annual ED staff continuing education curriculum, resident noon conference, and the community advocacy rotation. Further pre- and post-intervention data will be collected to evaluate the efficacy of this initiative.