A Public Health Approach to Trauma

George was born a healthy 7.5-pound, 21-inch baby boy. After his birth, his mother, Shondra, a 19-year-old African American woman, experienced severe postpartum depression. His father, 19-year-old Eduardo, a Latino who had not been supportive of the pregnancy, could not understand why Shondra was depressed and was physically and emotionally abusive to her. Shondra and Eduardo had been living together for a year after her family told her to leave when she turned 18. Shondra has not had contact with any family members since then. Gradually, Shondra overcame her postpartum depression, but her relationship with Eduardo did not improve. During this time, George was exposed to recurrent episodes of domestic violence between his parents and experienced chronic toxic stress.

When he began a preschool program at age 3, George exhibited behavior issues. He could not complete tasks or follow directions. If his teacher raised her voice, George became increasingly difficult to control. He hit other children and ran out of the classroom several times a day, especially when his teacher led an activity and George was expected to stay with his group. He reacted violently to loud or unexpected noise in the classroom. Because his teacher felt she could not ensure his safety or that of the other children, the school requested that George not return to the program. Shondra had to quit her job to stay home with him, and this made Eduardo angrier, leading to additional violence.

George started attending a public school, where he continued to experience difficulty following classroom rules. He found it especially hard to remain seated during the day. He was prone to walking out of the classroom and had violent outbursts when forced to remain. Eventually, he was referred to the school psychologist and was diagnosed with oppositional defiant disorder. The traditional school could not meet his needs, so he was sent to an alternative school at a significant expense to the public school system. He remained in the alternative school for 3 years before being sent back to his home school. He continued to experience difficulty managing his behaviors and fell behind his peers academically.

Years pass and George eventually dropped out of school and became affiliated with a gang. He was arrested several times, the last time for murder, and was sentenced to life in prison at age 18. George's early childhood experiences drastically affected his life and that of his mother. Their experiences have also cost society hundreds of thousands of dollars.

Prevalence estimates vary, but as many as 68 percent of children and youth in the United States may be exposed to a traumatic event by age 16.[1] Traumatic events come in many forms, from unpreventable natural disasters, motor vehicle crashes, and loss of loved ones, to more preventable child maltreatment and neglect or community violence that affect not only the individual, but also the family, community, and general society: *We are all affected by trauma***.** George's story is a worst case scenario, but not an unknown consequence for children, youth, and families exposed to trauma. The experiences of George's family illustrate the downstream consequences of unaddressed trauma. The traumatic experience may be isolated and short term or it may be ongoing and long term, but intervening is essential.

Given the pervasiveness and broad societal impact of trauma, efforts must begin to recognize and address it as a public health problem. A public health approach to trauma focuses on preventing trauma from occurring and intervening early to mitigate its impact when it does occur. For George's family, prevention and early intervention activities could have included providing Shondra with prenatal education, therapy to help with her postpartum depression and her abusive relationship, and trauma-informed parenting support. Eduardo could have participated in a father-to-father program to bolster his parenting skills and a batterer intervention to address his aggressive and violent behavior toward his partner. If George's parents had received these interventions, his chances of growing up in a safe environment would have greatly increased. His teachers could have received trauma-informed supports that would have helped them identify interventions to help him recognize that he was not a "bad" child but rather one who had suffered trauma over a long period and interventions to help him learn to regulate his emotions and to heal.

The Public Health Approach

The public health approach is a population-based method for addressing health concerns. There are numerous public health models for addressing trauma, but their core tenet is tiered layers of intervention that begin with universal *prevention* and shift the focus and intensity to targeted and intensive levels of *intervention*. The **Pyramid Model** illustrates the different levels of interventions and is used in a variety of systems.[2] Traditionally, public health has been viewed in terms of physical illness and injury prevention, but the behavioral health field is developing a universal and preventive approach to behavioral health issues, including trauma. Tables 1a and 1b compare common physical and behavioral public health interventions.

Table 1a: Physical Health and Safety Interventions

Health Problem	**Intervention**
Measles, polio, and chicken pox	Immunization
Car accident fatalities	Seat belt laws
Lung cancer	Anti-smoking campaigns

Table 1b: Mental and Behavioral Health Interventions

Health Problem	Intervention
Child abuse and maltreatment	Paid maternity and paternity leave
Teenage suicide	Anti-bullying campaigns and youth mental health first aid
School dropout	Positive behavior interventions and supports

A public health approach to behavioral health issues is fundamentally the same as a public health approach to physical health issues, but the former can present additional challenges, such as defining, implementing, and measuring efforts. Establishing an immunization program to prevent a disease is a relatively straightforward process. However, successful anti-bullying campaigns in schools and the community not only require coordination, time, and money, but also depend on participants engaging in the program and continuously practicing their skills. Campaign information must be transferred to the home and community, which adds challenges.

The Public Health Approach to Trauma

In recent years, many human service fields have begun to embrace a public health approach to addressing violence prevention, child maltreatment, and children's mental health, building on the effectiveness of large-scale prevention efforts used in physical health approaches. For example, schools have successfully implemented multi-tiered intervention approaches, such as Positive Behavioral Interventions and Supports (PBIS), and universal programs targeted at improving the school climate, sometimes known as Social Emotional Learning (SEL).[3] These schools have reported improvements in academics, emotional regulation, and attendance,[4] highlighting the success of universal approaches to behavioral health. However, these efforts are largely siloed, and interventions for child maltreatment and suicide prevention are not coordinated. Interestingly, a public health approach to trauma in and of itself does not yet exist in the behavioral and mental health literature, though prevention programs have been developed to address issues such as child maltreatment, substance use, and violence, which are closely linked to increases in the likelihood of experiencing trauma.

Lessons learned from programs addressing specific behavioral health issues provide evidence of the effectiveness and wisdom of embracing a public health model and methodology to deal with the pervasive trauma problem. Efforts to adopt and implement such a broad-scale approach are extremely complex and require a paradigm shift that is coordinated across all disciplines and for all ages. A successful public health approach requires that all systems that touch the lives of children and families work together. To achieve population-wide reductions in traumatic symptomatology and increase resilience in those affected, those working in the field must work collaboratively.

Essentially, public health approaches to improving children's mental health and preventing violence and substance use need to address all forms of trauma. Collaboration among professionals in the field can start by adopting a common language that emphasizes the central role that trauma plays. Current parallel prevention programs that are defined by narrow topic areas lead to duplication of effort, poor coordination of resources, and diminished effectiveness. Professionals from all fields must begin transitioning to a public health approach to trauma, but progress will depend on strong partnerships. The cost of failing to embrace a public health approach to trauma, in terms of dollars and societal impact, is extremely high, whereas the potential benefit of a public health approach to trauma is extremely high.

What Is the Cost of Trauma?

A public health approach is rooted in epidemiology and understanding the scope of a problem. Data provide crucial information on the cost of a particular health challenge and allow tracking of progress. For example, routine child immunizations have saved $295 billion in the United States from 1994 to 2013.[5] Tracking the prevalence and incidence of trauma is more challenging because typical surveillance tools are segregated by systems and because trauma is often not recognized as the cause of other problems. Considerable data are available from the child welfare system to estimate the cost of child maltreatment.[6] Studies estimate that child abuse costs the United States $220 million every day.[7] Likewise, data are also available to calculate the cost of placing youth in juvenile justice facilities; states spend $5.7 billion each year.[8] In 2009, the Institute of Medicine provided extensive epidemiological data on youth experiencing mental, emotional, or behavioral disorders.[9] However, accurate data are not available to determine the cost of trauma because, as discussed previously, it is often not identified as the underlying factor bringing youth into child-serving systems. Many youth experiencing trauma are served by several systems but often are not carefully tracked among systems because information is not shared. Yet, the data that are available provide a strong foundation to build on as systems become increasingly astute in identifying youth with trauma histories.

In George's case, failing to prevent trauma and intervene early had high costs in terms of dollars spent in various systems to support his family. As with childhood immunizations, trauma prevention with a population-based approach can save millions of dollars in direct costs (hospitalizations, child welfare, and adult corrections systems) and make possible corresponding savings in improved productivity (staying in school, keeping a job, and contributing to the community).

Moving to a Public Health Approach to Treating Trauma

Control over traumatic events such as natural disasters and war is limited, but the trauma that children and youth experience in their homes and communities is amenable to prevention,

early intervention, and treatment if there is a will to facilitate change, especially through a public health approach. Numerous steps can be taken to develop and enhance a public health approach to trauma. The examples below illustrate needed conceptual shifts and important federal actions that can provide opportunities for broad-scale design and expansion.

Paradigm Shifts

- Recognize the central thread of trauma in disparate issues such as poverty, physical and behavioral health ailments.
- A shared understanding across systems can facilitate the integration or coordination of data that are currently kept separate; for example, gathering data on child maltreatment and community violence can improve the accuracy of epidemiological data.
- Trauma prevention and treatment require unified thinking and collaboration across systems.
- A broad population and community health focus is more constructive than the current individual disease model.
- Emphasis on the resilience of individuals and families is extremely important.

Healthcare Financing

- Moving toward population-level and preventive health interventions is effective for improving outcomes and decreasing costs.
- The Affordable Care Act has created and furthered opportunities to support trauma prevention and treatment (e.g., the U.S. Preventive Services Task Force A and B recommendations,[10] coverage of all Bright Futures services[11]).
- In June 2014, the Centers for Medicare and Medicaid Services (CMS) released *EPSDT: A Guide for States*.[12] The goal of Early and Periodic Screening, Diagnosis, and Treatment is to ensure that all Medicaid-enrolled children younger than age 21 receive the health care they need. EPSDT covers not only medically necessary treatment to correct or ameliorate identified conditions, but also prevention and maintenance services.
- CMS continues to offer information bulletins and data on EPSDT's benefits.[13]
- The healthcare system is moving away from unit-based payments and toward performance- and outcome-based payments.

Program Development

- Many federal agencies award grants to address trauma and prevention, such as the Children's Bureau trauma grants through the Administration for Children and Families (ACF), Community Transformation grants through the Health Resources and Service Administration, grants from both the National Center for Child Traumatic Stress and the National Child Traumatic Stress Network, and awards for the Children's Mental Health Initiatives through the Substance Abuse and Mental Health Services Administration (SAMHSA), among many others.

- Place-based initiatives bring economic development, housing, transportation, physical health, behavioral health, education, policing, and other relevant systems together to create positive communities.[14]

Policy Improvements

- ACF, CMS, and SAMHSA have issued guidance to state child welfare, Medicaid, and mental health directors on screening for trauma.[15]
- Many states have established opportunities and continuing education for child-serving professionals, medical personnel, and educators about what trauma is and steps to prevent and treat it.

References

[1] Copeland, W.E., Keeler, G., Angold, A., & Costello, E.J. (2007). Traumatic events and posttraumatic stress in childhood. *Archives of General Psychiatry, 64* (5), 577–584.

[2] Frieden, T.R. (2010, April). A framework for public health action: The health impact pyramid. *American Journal of Public Health, 100*(4), 590–595. Retrieved from https://www.idph.state.ia.us/adper/common/pdf/healthy_iowans/health_pyramid.pdf

[3] Bradshaw, C.P., Reinke, W.M., Brown, L.D., Bevans, K.B., & Leaf, P.J. (2008). Implementation of school-wide positive behavioral interventions and supports (PBIS) in elementary schools: Observations from a randomized trial. *Education and Treatment of Children*, *31*(1), 1–26.

[4] Sklad, M., Diekstra, R., Ritter, M.D., Ben, J., & Gravesteijn, C. (2012). Effectiveness of school-based universal social, emotional, and behavioral programs: Do they enhance students' development in the area of skill, behavior, and adjustment? *Psychology in the Schools*, *49*(9), 892–909.

[5] Centers for Disease Control and Prevention. (2014, April 25). Benefits from immunization during the Vaccines for Children Program era: United States, 1994–2013. *Morbidity and Mortality Weekly Report, 63*(16), 352–355. Retrieved from http://www.cdc.gov/mmwr/preview/mmwrhtml/mm6316a4.htm

[6] Fang, X., Brown, D.S., Florence, C.S., & Mercy, J.A. (2012). The economic burden of child maltreatment in the United States and implications for prevention. *Child Abuse & Neglect*, 36(2), 156-165.

[7] Gelles, R.J., & Perlman, S. (2012, April). *Estimated Annual Cost of Child Abuse and Neglect.* Retrieved from https://www.preventchildabusenc.org/assets/preventchildabusenc/files/cms/100/1299.pdf

[8] Justice Policy Institute. (2009, May). *The Costs of Confinement: Why Good Juvenile Justice Policies Make Good Fiscal Sense.* Retrieved from http://www.justicepolicy.org/images/upload/09_05_rep_costsofconfinement_jj_ps.pdf

[9] O'Connell, M.E., Boat, T., & Warner, K.E. (Eds.). (2009). *Preventing Mental, Emotional, and Behavioral Disorders Among Young People: Progress and Possibilities*. National Academies Press.

[10] U.S. Preventive Services Task Force. (2014, June). *USPSTF A and B Recommendations*. Retrieved from http://www.uspreventiveservicestaskforce.org/uspstf/uspsabrecs.htm

[11] American Academy of Pediatrics. (n.d.). *Achieving Bright Futures: Implementation of the ACA Pediatric Preventive Services Provision*. Retrieved from http://www.aap.org/en-us/professional-resources/practice-support/Periodicity/BF%20Introduction%20F010914.pdf

[12] U.S. Centers for Medicare & Medicaid Services and the National Health Law Program & NORC at the University of Chicago. (2014, June). *EPSDT—A Guide for States: Coverage in the Medicaid Benefit for Children and Adolescents.* Retrieved from http://www.medicaid.gov/Medicaid-CHIP-Program-Information/By-Topics/Benefits/Downloads/EPSDT_Coverage_Guide.pdf

[13] Medicaid.gov. (n.d.). *Early and Periodic Screening, Diagnostic, and Treatment*. Retrieved from http://www.medicaid.gov/Medicaid-CHIP-Program-Information/By-Topics/Benefits/Early-and-Periodic-Screening-Diagnostic-and-Treatment.html

[14] Center for the Study of Social Policy. (2012). *Place-Based Initiatives*. Retrieved from http://www.cssp.org/community/neighborhood-investment/place-based-initiatives

[15] Sheldon, G.H., Tavenner, M., & Hyde, P.S. (2013, July 11). *Dear State Directory Letter*. Retrieved from http://medicaid.gov/Federal-Policy-Guidance/Downloads/SMD-13-07-11.pdf