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Shedding Light on the Long Shadow of Childhood Adversity

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There is overwhelming evidence that early childhood adversity—related to parental psychiatric disorder, poverty, abuse, loss, neglect, or trauma have protean effects on children’s physical and mental health, and ultimately on their ability to become competent and productive adults. While there are stories of heroic youth who overcome the most disadvantageous of backgrounds, for most, early adversity casts a long shadow into adult life and even into the next generation. We review the strong link between early adversity and chronic physical and mental disability, and offer some recommendations for research, practice and policy.

Early child adversity, defined as child maltreatment, exposure to domestic violence, or living with a household member with serious mental illness has been linked to a myriad of chronic conditions associated with premature mortality: smoking, substance abuse, obesity, cardiovascular disease, depression, and attempted suicide.¹ These findings have been replicated many times, and the causal pathways between early adversity and these multiple outcomes are thought to be mediated by changes in stress responsivity, via the hypothalamic pituitary axis (HPA), and subsequently through an inflammatory process that contributes to risk for depression, cardiovascular disease, and metabolic syndrome.^{1,2} Animal models have demonstrated epigenetic effects rendering the glucocorticoid receptor sub-sensitive, which in turn leads to both a hypercortisolemic state, an inability to mount a potent stress response, and attendant deficits in attention, memory, and persistence.² What is most concerning is that these animal models show that these effects are transmitted from parent to child through epigenetic mechanisms.² While the pathways by which adversity exerts its effects have not been as elegantly elaborated in humans, it is posited that these epigenetic changes can contribute to immune dysfunction, insulin resistance, and cognitive difficulties that in turn lead to risky behavior and predispose to emotional lability and depression.²

Early adversity not only contributes to the pathogenesis of disease, but also has a negative impact on its management. Due to the putative cognitive effects of prolonged exposure to early stress, individuals are burdened not only with a greater risk for chronic illness, but also

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with an impaired ability to self-manage their condition, engage in collaborative management, and to form trusting relationships with health care providers. Patients with a history of abuse show higher overall health care costs³ and parental depression and poverty adversely affect morbidity in child chronic illnesses such as diabetes.⁴

The good news is that if detected early enough, the impact of family adversity on child health outcomes can be reversed, or at least, attenuated. For example, if maternal depression is treated to remission, their children show symptomatic and functional gains.⁵ Economic interventions that provide local employment and pull parents out of poverty have been shown to be temporally related to a decreased risk for behavioral disorders in their children.⁶ Earlier foster placement can, to some extent, reverse the deleterious neurobiological and cognitive effects of extreme deprivation in infancy.¹

These findings about early adversity and its sequelae have important implications for research, practice, and policy. With regard to research, a better understanding of the pathoplastic effects of early adversity, definition of the critical periods when such effects are particularly deleterious, and identification of effective approaches to their remediation or prevention are warranted. In addition, the shared roots of leading causes of world disability (such as cardiometabolic disease and depression) suggest opportunities for synergy, since interventions that would prevent the development of these conditions would have a huge impact on public health worldwide. More specifically, a better understanding of the metabolic cascade set in motion by exposure to adversity could frame approaches for interrupting or reversing this cascade through direct manipulation of the stress response or inflammatory pathways or via the augmentation of resilience through individual, family, and community interventions. It is also important, in order to improve outcomes and contain costs, to understand the circumstances and mechanisms that explain why individuals with histories of chronic adversity do not respond as vigorously to conventional treatment or prevention strategies; and if so, to find better ways to better engage and care for them.

For clinicians, given the potent and long reaching effects of family adversity on health outcomes, knowledge can be empowering. First, physicians must be taught about the effects of adversity, how to detect it, and what steps to take once identified. Screening, referral, and monitoring of the presence of adversity and its effects early in the child's lifetime may prevent or attenuate the destructive multigenerational effects of dysfunctional parenting that occurs as a consequence of untreated psychiatric disorder. Clinician awareness of the burden of mistrust that comes from family adversity can result in attempts to build rapport, provide education, and engage in assertive follow-up to improve adherence to recommended care. Collaborative care models, including evidence-guided interpretations of the patient-centered medical home, that provide social and mental health services on the same site as primary medical care may help to improve the likelihood of adherence and the chances of success.¹

As physicians, we must also be advocates for social policies that can help families achieve what all parents want—a secure environment for their children to develop into competent adults. Home visitation programs for at-risk families of infants have been shown to have long-term positive effects on physical and mental health, education, employment, and family stability.⁷ Access to quality pre-school education can help to buffer the deleterious effects of

poverty.² We must speak out against the widening gap between the underclass and the wealthy, and the many barriers in the United States that interfere with upward mobility for poor families. The economic cost—in excess health care utilization, non-response to treatment, incarceration, loss of employment, productivity, and human suffering, weigh heavily on families burdened with adversity, but ultimately are borne by our society as a whole. In our drive to improve quality of healthcare and contain costs, we cannot neglect the huge price tag to society of early adversity. Through research, clinical care, and advocacy, we can shine a light on the dark shadow of adversity, and diminish its reach from generation to generation. We can either invest in combating the impact of adversity on families now, or pay later.

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