The Affordable Care Act, Science, and Childhood Adversity
A Call for Pediatric Nurses and Physicians to Lead

Donna M. O’Malley, PhD, RN

The Patient Protection and Affordable Care Act aims to increase access to many who were previously uninsured, to increase the quality of health care, and to decrease costs. Accountable Care Organizations are a manifestation of these new health care reforms. A proactive approach focused on primary prevention to address modifiable determinants of health holds the promise of a healthier population while being cost-effective. Exposure to toxic stress in childhood places many children on a trajectory for poor immediate and long-term health outcomes. A life course approach to disease prevention offers opportunities at every age and stage to build resilience, which buffers and protects children from the effects of adversity and toxic stress. The American Academy of Pediatrics, recognizing that many adult diseases are rooted in experiences in early childhood, has proposed an ecobiodevelopmental framework that expands the role of pediatricians and embraces a preventive lifecourse approach to health and well-being. Exposure to adversity and toxic stress in childhood is a serious public health problem. A new kind of leadership is required to address these issues. Pediatric nurses and physicians are trusted healers and in a position to seek solutions skillfully and intentionally. **Key words:** adversity, ecobiodevelopmental framework, lifecourse, pediatrics, toxic stress

**T**HE PATIENT PROTECTION and Affordable Care Act of 2010 aims to decrease the number of uninsured Americans and the cost of health care and increase positive health outcomes and access to care. It is the most comprehensive change to the US health care system since the creation of Medicare and Medicaid in 1965.1 Accountable care organizations (ACOs) are a logical manifestation of the recent act and serve as a model to improve quality and decrease costs. Typically, ACOs are responsible for a defined population and use either a capitated or a fee-for-service payment model. Quality measures are embraced in this model, and care delivery is ideally patient-centered, cost-effective, and evidence-based. The ACO views health protection and promotion as an investment in the current and future health of individuals and is focused on value as the outcome.

**SCIENCE**

The health of individuals and communities is determined by the complex interaction
of biological, environmental, social, and economic factors. In 2011, life expectancy in the United States ranked 34th among other developed nations despite spending 17.9% of the gross domestic product for health care; this equates to $8362 per person. While advances in science have led to sophisticated laboratory tests, vaccines, and cutting edge treatments for many life-threatening diseases and injuries, there is debate on the value of these advances to the overall health of the US population. Value is often jeopardized when patients receive treatments that do not help them, when there is a lack of coordination of care, and when the complexity of institutional processes and requirements becomes onerous for frontline caregivers.

No doubt those fortunate enough to have received state-of-art treatments and procedures have experienced cures and great relief from disease and disability, but the fact remains that modifiable social determinants of health have received little parity. Modifiable social determinants are those that can be altered or controlled. Modifiable causes of childhood adversity include exposure to family and community violence, harsh physical punishment, maternal depression, and living in poverty. Nurturing family relationships, quality schools, safe neighborhoods, and meaningful employment also likely have a powerful influence on health for both resource-poor and resource-rich individuals, communities, and populations.

Never before have we understood so much about the negative effects of exposure to adversity in childhood. The social and environmental circumstances in which children are born and live have a profound influence on their immediate and future health. The Adverse Childhood Experiences (ACE) study found exposure to adversity in childhood was predictive of health in adulthood. The ACE questionnaire asked participants, if prior to their 18th birthday, they had experienced emotional abuse or neglect, physical abuse or neglect, sexual abuse, witnessed intimate partner violence, lived with a family member with substance abuse, lived with a family member with mental illness, experienced parental separation, or had an incarcerated family member. Participants with higher ACE scores were more likely to suffer poor physical and mental health in adulthood. Many of the leading causes of mortality and morbidity in the United States, such as heart disease, diabetes, and cancer, likely have root causes that begin in early childhood. Efforts aimed at creating better access to health care or encouraging individuals to adopt healthy lifestyles may prove inadequate if the origins of disease and disparity are not addressed.

Recent advances in the behavioral and neuroscience fields identify a “biology of adversity” that is toxic to normal human development. Childhood experiences such as short separations from parents and anxiety related to new experiences like daycare or preschool cause positive or tolerable stress. This type of stress is a normative experience in childhood. Toxic stress occurs when exposure to adversity such as family violence is intense, prolonged, and frequent in the absence of nurturing and protective adults in a child’s life. Toxic stress can change the architecture of the brain; thus, many children exposed to childhood adversity are at risk of negative physical, behavioral, and mental health trajectories. Unfortunately, many children are exposed to multiple forms of adversity.

LIfeCourse FRAMEWORK FOR FAMILY VIOLENCE PREVENTION

The holistic, comprehensive philosophy of nursing seems a natural fit for inclusion of a lifecourse approach to health and wellness. The lifecourse framework embraces a positive view of the human capacity to cope and adapt when exposed to adversity and seeks opportunities to decrease risks and increase protective factors to buffer children from negative health effects. Adversity and family violence exists on a continuum that stretches across the lifespan. The framework, Family Violence Prevention: A Lifecourse Approach includes collective parental, child, and family capacity...
and respects the individual strengths and challenges of all family members (Figure 1). The framework provides for primary, secondary, and tertiary prevention at every age and stage across the lifespan. The framework depicts that individuals and families navigate challenges and opportunities in relationship to their individual and collective capacity. Collective capacity refers to the sum of risks and protective factors for both parental and child domains. The first 2 years of life are a particularly vulnerable and sensitive time period in which the potential for both positive and negative health consequences exists. The opportunity to influence health and well-being is greatest during these early years; the potential for harm is also great. Increasing resources and limiting exposure to adversity for children and families during this critical time period may provide a buffer, an inoculation of sorts, which is essential for disease prevention and health protection.

**AMERICAN ACADEMY OF PEDIATRICS ECObiodevelopmental Framework**

The proposed American Academy of Pediatrics framework represents the convergence of ecological, biological, and developmental domains to better identify and address toxic stress in childhood (Figure 2). This model has the potential to address root causes of adult

---

**Figure 1.** Family violence prevention: A lifecourse approach as conceptualized by O’Malley.

Collective Capacity = Risk + Protective factors

Critical Time Period = Time window in which potential for negative or positive consequence exists due to adaptation of organism or system to stressor

Adaptive response = Nonviolence/absence of family violence

Maladaptive response = Family violence (Child Abuse, Intimate Partner Violence, Elder Abuse)
Figure 2. The basic science of pediatrics. An emerging multidisciplinary science of development supports an Emotional Behavioral Disorder framework for understanding the evolution of human health and disease across the life span. In recent decades, epidemiology, developmental psychology, and longitudinal studies of early childhood interventions have demonstrated significant associations (hatched arrow) between the ecology of childhood and a wide range of developmental outcomes and life course trajectories. Concurrently advances in the biological science, particularly in developmental neuroscience and epigenetics, have made parallel progress in beginning to elucidate the biological mechanisms (solid arrows) underlying these important associations. The convergence of these diverse disciplines defines a promising new basic science of pediatrics.

Disease and set children on a trajectory for optimal physical and mental health in adulthood. The lifecourse approach is represented in the ecobiodevelopmental framework and elevates the importance of identifying both risks and protective factors during the critical early years of life. There is growing awareness among leading pediatric health care organizations that the health of a child is nested within the family along a lifecourse continuum. Front-loading resources in the critical infancy and childhood years should be viewed as the most important investment of health care dollars. The return on investment could be substantial and not only improve current health outcomes but lead to a healthier population for future generations.12,15,16

The necessity of including parents, particularly mothers, when caring for infants and children makes pediatrics by design a 2-generation practice. The family is the building block of society. Human beings are immediately engaged in reciprocal relationships at birth. These early relationships can influence both positive and negative health trajectories. Relationships within the family, particularly the mother/baby relationship, should be viewed as an important vital sign in pediatric nursing and medical practice.

UNIQUE OPPORTUNITY AND MANDATE FOR PEDIATRIC NURSES AND PHYSICIANS TO LEAD

Preventing and reducing children’s exposure to adversity and toxic stress will likely take a unique approach that is not yet clearly defined. Much of what will be needed lies outside the walls of health care institutions. Nurses and physicians traditionally use their expertise to provide patients with solutions to address a health care problem. For this particular work, protocols and checklists simply do not exist. Learning new ways of approaching these problems will demand the professions of nursing and medicine join together in a new paradigm that supports the common good and places the most vulnerable among us, infants and children, first.

Recognizing technical solutions as opposed to adaptive solutions will take new leadership skills.17 Technical issues are those for which we already have knowledge and skills to solve. For instance, when a child comes to the emergency department with a fractured arm the health care team knows exactly what to do. However, getting all team members to follow the same clinical practice guideline (CPG) to treat a fractured arm requires a different approach, an adaptive approach, in which new learning is needed to understand the attitudes and beliefs of the health care team toward the
CPG, the potential barriers to adopting the CPG, and identification of department champions to promote the use of the CPG for successful implementation.

Learning new ways of approaching problems requires authentic interest in allowing those most affected by issues to inform the health care team and be equal partners in identifying solutions. Exercising leadership in which we openly admit that we do not have answers threatens our sense of competence. The reality is there are no easy solutions for preventing childhood exposure to adversity. Experimentation is necessary in that it is as important to know what does not work as to know what does work. Viewing leadership as an activity in which every nurse and physician participates could change the dynamics of health care institutions. Disposing of the notion that only those in authority or with a prestigious title can lead has the potential to unleash energy needed to seek solutions for daunting issues like childhood adversity. Every nurse, physician, and social worker has an opportunity in their daily interactions with children, families, and peers to demonstrate such leadership.

While politicians debate how to implement the Affordable Care Act for years to come, pediatric health care providers have opportunities to address exposure to adversity as they intersect with children and families every day. The leadership skills needed include an appreciation for the loss that change often visits upon well-intentioned but uninformed individuals and institutions, a willingness to take risks and to experiment, and most importantly the courage and perseverance to hold true to this purpose of preventing and reducing childhood adversity.

The founder of the nursing profession, Florence Nightingale, in her vision for the profession projected that educated and experienced nurses would someday transform the health care system. In 1893, she wrote, "Hospitals are only an intermediate stage of civilization, never intended, at all events to take in the whole sick population." As the largest of the health care professions, nursing has an opportunity to take a leading role as champions and agents of change to transform the health care system. Decreasing childhood adversity may be the single most important health care issue of our day. The importance of discovering ways to decrease childhood adversity, as well as how to increase buffers and protective factors, may be as important as the discovery of penicillin in 1928 or the polio vaccine in 1954. As a mandate for healing professions, addressing violence and adversity will most likely create uncertainty and discomfort for many stakeholders. This is as it should be; for it is precisely where the status quo and the disequilibrium created by change intersect that productive energy can be harnessed for the hard work ahead.

As health care reform is implemented, health protection and promotion, both areas in which nurses excel, will take on greater importance. Health care initiatives aimed at prevention of childhood adversity might provide the impetus for a proactive rather than reactive health care model. Pediatric nurse and physician champions, trusted by families and community partners, are in a position to influence the health of the nation.

REFERENCES


