Addressing Social Determinants of Health in Childhood Cancer

Health Equity

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As a pediatric oncologist—and as someone with a family member who was affected by pediatric cancer—Childhood Cancer Awareness Month is a special month to reflect on the advances made in therapies and the challenges that remain in ensuring all children receive the best care. One of those challenges is the continued disparities in outcomes by racial and ethnic groups, as well as by socioeconomic status, that are driven by social determinants of health.

Childhood cancer affects more than 17,000 children a year in the United States and is the leading cause of death by disease in children. Like many of the families I've cared for, I never thought this disease would affect my family until my cousin was diagnosed with leukemia in 2012. Her treatment course was long and complicated, however, eventually a bone marrow transplant cured her leukemia.

Still, what stands out in my mind are all of the non-clinical challenges she and her family faced throughout her treatment. Her parents, like mine, were immigrants and had limited English proficiency. And they lived below the federal poverty line. They did not own a car and although the hospital was only 30 miles from their home, I saw how stressful this was for them as they had to rely on the availability of different family members and friends for transportation. I also saw the medical team struggle with multiple pressures and, as a result, many times they used family members to communicate important and often complicated medical information, hindering trust and honest communication. Finally, I noticed how my family's limited education contributed to their low health literacy and how this complicated their understanding of my cousin's treatment course.

Almost ten years later, now as a physician, I still see how social determinants of health, like those my family members faced, affect patient care. Non-clinical social factors play an important role in outcomes for children with cancer and these factors need to be further investigated.

Social determinants of health (SDOH) are the conditions in the environment where people are born, live, learn, and age that affect a wide range of health outcomes and can result in health disparities. There are five determinants or domains: economic stability, education access and quality, neighborhood and built environment, social and community context, and health care access and quality. Adverse SDOH can include poverty, lack of access to high-quality education and unhealthy housing, among others. Although disparities by racial/ethnic groups and insurance status have been well documented in children with cancer, more research is needed to explore how SDOH affect children with cancer and how we can intervene to improve outcomes for vulnerable patients.

Laws like the Childhood Cancer Survivorship, Treatment, Access and Research (STAR) Act, which was initially passed by Congress in 2018 and is currently up for refunding, are steps in the right direction. This law funds expanding the collection of clinical, biological and demographic information on all children with cancer enrolled in National Cancer Institute clinical trials. Additionally, it funds research on late effects of childhood cancers.

Both efforts help in documenting and identifying where continued disparities exist.

As a pediatric oncology fellow, my research uses a social determinants of health lens to investigate disparities in the risk of life-threatening infections in children undergoing treatment for leukemia. Using a large national database, I am investigating how income, education level, unemployment and neighborhood poverty increase risk of septic shock. Once I identify which factors contribute the most to serious infections, my next steps are to develop and implement sustainable interventions to eliminate these disparities.

If we are to care for patients' and their family's well-being while also treating their cancer, then innovative patient-centered interventions focused on health literacy, limited-English-proficient populations, income supplements and community organization partnerships, for example, need to be further investigated. We need to prioritize changing the systems that continue to put these patients at a disadvantage in order to eliminate socioeconomic disparities in childhood cancer. These types of interventions will support many families similar to my cousin's and will optimize care and outcomes for all children with cancer.

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