Abstract:
Local efforts in global health are a rising area of focus as multigenerational immigrant communities continue to grow in the United States. Immigrant and refugee children are at risk for poor health outcomes due to environmental, social, economic, and individual factors that contribute to inequities in participation within the health care system. This case-based reflection brings to light specific manifestations of the aforementioned factors. Addressing these barriers will promote health equity and allow children, regardless of background, to reach their full potential.

Keywords:
health equity; immigrant children; refugee children; social determinants of health

Glocal health refers to the rapidly growing multigenerational immigrant communities that reside in the United States (US). In 2017, the foreign-born population comprised 13.7% of the total US population, and 1 in 4 children is the child of immigrants or is an immigrant himself or herself. We begin this spotlight on local efforts in global health with a vignette of a patient who frequently requires emergency care services and then use this example to discuss various challenges in caring for this unique population of immigrants and the children of immigrants.

VIGNETTE
Ahmed is a 10-year-old male with poorly controlled asthma who immigrated with his family 3 years ago. He has had multiple asthma exacerbations since moving to the US that have required emergency department (ED) visits and inpatient admissions. His mother reports that he did not seem to be as “sick” when they lived in Afghanistan. Because of multiple school days missed related to illness, he falls behind in his school work and lacks a social connection with his peers. He steadily gains weight and ultimately develops obesity, likely a result of prolonged steroid courses and decreased activity level.

As emergency medicine providers, we see a young man who frequently presents with significant respiratory distress despite continued education and multiple referrals to subspecialists to manage his chronic illness. Could his significant morbidity burden be related to something other than the disease itself, such as...
social, environmental, and economic factors influenced by his immigrant status? Below we will examine some of these factors and suggest a framework for how they impact the health of Ahmed and the millions of immigrants living in the US.

**SOCIAL DETERMINANTS**

Environmental, social, and economic conditions influence health status throughout the life cycle and can lead to health inequities. The World Health Organization has proposed a conceptual framework (Figure 1) for evaluating social determinants of health in which factors are divided into structural and intermediary determinants. Structural determinants include government, policies, and societal values which directly influence socioeconomic position. Policies include macroeconomic, social, and public policies including the labor market, opportunities for educational attainment, and social protection. Intermediary factors refer to living conditions, behavioral and biologic factors, and psychosocial factors.

There are complex, bidirectional interactions between all of these factors that ultimately impact health equity and well-being. The elements of social capital and social cohesion play a role in these interactions. Stigma and social marginalization are examples of toxic stress that contributes to poor social cohesion. Toxic stress has surfaced as a risk factor for poor birth outcomes as well as educational attainment, social mobility, chronic disease, and disability adjusted life years. Poor social cohesion, lack of social capital, and toxic stress can stifle the growth of communities regardless of the thoughtful implementation of structural and intermediary changes.

**POLICY**

Undocumented immigrants are particularly vulnerable to health disparities due to stigma, limited social mobility, and poor access to societal supports. This subpopulation often works in low-wage jobs, leading to housing insecurity and poor access to affordable, healthy food choices. The Russel Sage Foundation, a social science research group out of New York City, found that older children of undocumented immigrants completed fewer years of formal education than their counterparts from families with legal status. Lack of educational attainment limits potential for social mobility.

Deferred Action for Childhood Arrivals (DACA) began in 2012 and provided protection from deportation and opportunity for work permits for those who entered the US unlawfully before the age of 16 years. Researchers at the Stanford Immigration Policy Lab compared the children of mothers who were born just before and after the cutoff date for DACA. They found that the children born to mothers who were DACA eligible had a significantly lower rate of childhood anxiety or adjustment disorder (7.8% vs 3.3%), indicating that providing stability to families positively impacted childhood well-being.

Minority children experience more morbidity and mortality from injuries than their white counterparts. This is due to limited access to health care and educational opportunities, as well as systemic barriers to social mobility.
counterparts, but little is known about immigrant children in particular. One study out of Canada indicated lower rates of unintentional injuries among immigrant children from 2008 to 2012, indicating immigrant status was protective. They also noted that immigrant children who suffered from unintentional injuries were more likely to be younger, whereas those who were Canadian-born were more likely to be adolescents. A US study by Chang and colleagues also found a lower prevalence of unintentional injuries in first- and second-generation immigrant children than in US born children. The etiology of these findings is unclear; they could be related to underreporting of injuries, or they could be a result of an immigrant health disadvantage. This area requires further exploration.

Gun control laws have done little to stifle the growing morbidity and mortality from shootings over the past decade, with minorities disproportionately affected. The Centers for Disease Control and Prevention report that 81% of firearm homicides are clustered in urban areas, often in areas of concentrated poverty. Witnessing gun violence and proximity to violence contribute to toxic stress and can lead to poor health outcomes, mental health disorders, and substance misuse. Although some claim that the influx of immigrants, particularly teens, contributes to the frequency of shootings and violent crimes, there is a paucity of data to support these claims. Evidence continues to support the correlation between violent crimes and poverty irrespective of immigration status.

ACCESS TO HEALTH CARE

Children who are insured are more likely to receive preventive care services, therefore decreasing the incidence of delayed illness presentation in the ED. Immigrant children who are not citizens are more likely to be uninsured than their citizen counterparts. Citizen children with at least 1 noncitizen parent are more likely to be uninsured than children with 2 citizen parents, but the highest rates of lack of insurance are found among undocumented children. These higher rates of uninsured are likely related to lower rates of employer-sponsored coverage and eligibility restrictions for Medicaid and Children’s Health Insurance Program. There is also growing fear among immigrants that utilization of public aid, including Medicaid, will have potential negative effects on obtaining a green card or citizenship. Bustamente et al found that among adult Mexican immigrants in California, those who were undocumented were significantly less likely to have seen a primary care provider in the previous year. Although insurance status is a large predictor of health care utilization, language barriers and health literacy also moderate family’s engagement with the health care system.

HEALTH CARE DELIVERY

Federally qualified health centers play a huge role in providing primary care and preventive health services to immigrants and their children. The prevalence of emergency care service utilization by immigrants has been a politically charged debate, with imagery of overcrowded EDs flooded with uninsured immigrants. However, studies have shown that noncitizens are significantly less likely to visit EDs than foreign-born or US born citizens. These studies evaluated general emergency departments and did not specifically examine pediatric emergency care utilization.

Language barriers can contribute to disparities in health care delivery, as high-quality interpreters can be expensive and limited to more common dialects. Low parental health literacy can influence late presentation to care, resulting in potentially preventable morbidity.

When patients require subspecialty referrals, there is often a long wait time because some practices have a cap on the number of Medicaid patients accepted. A prime example is mental health services, as there is a lack of pediatric mental health providers overall, and only a small proportion offer ready access to pediatric patients with Medicaid. This can contribute to the overuse of emergency care services for subspecialty problems.

Lastly, implicit bias in health care providers is a factor in quality of health care delivery and is a growing area of research. Goyal et al found that among children with viral respiratory infections in the ED, non-Hispanic white children were more likely to be prescribed antibiotics than their non-Hispanic black or Hispanic counterparts. Furthermore, Johnson and colleagues found that nonwhite children with abdominal pain in the ED were less likely to receive analgesia and had a longer length of stay than white children. Although different patient expectations play a significant role, implicit provider bias may also contribute to these differences in practice pattern.

PATIENT VIGNETTE REVISITED

For Ahmed, many of the factors discussed above are likely to influence his health outcomes and interactions with the health care system. Structural
determinants include the labor market, rules and regulations surrounding Medicaid, his school district, and the public transportation system. His father drives a taxi, and his mother stays at home with his 2 younger siblings. The labor market directs his father’s contract with his employer, which does not allow him to take time off to take Ahmed to physician’s appointments. Therefore, his mother gathers all 3 children to take public transportation. His mother’s limited English proficiency contributes to difficulty navigating the public transportation system. As a result, Ahmed is frequently late to his appointments, at times resulting in cancellations. These structural determinants may contribute to his declining health status since immigrating to the United States.

Intermediary constructs include their public housing complex, the limited availability of healthy food options in their neighborhood, Ahmed’s intrinsic asthma, and feelings of being unwelcome at school. The public housing complex contains many triggers of his asthma: examples include cockroaches, mold, and poor air quality related to dust and vehicle emissions. Convenience stores are the only source of groceries in his neighborhood; the nearest store with fresh fruits and vegetables requires a bus ride across town. At school, classmates ask if his family will be deported soon, or if his mother is hiding something under her hijab. Social cohesion is affected by these interactions with his peers as well as his role of helping his mother navigate detailed conversations in English with teachers, public bus drivers, and at the front desk of hospitals.

Ahmed’s family had difficulty accessing the health care system due to transportation, language barriers, and limited health literacy. They qualified for various social services but were unable to take the steps necessary to obtain those services. On multiple occasions, Ahmed’s Medicaid and enrollment in a subsidized prescription drug program lapsed despite his parents’ efforts to complete the appropriate paperwork. Community-based preventive health services went untouched because of fear and a poor understanding of how to take part in these services. A lack of health literacy contributed to late presentation to health care when he became symptomatic.

Health care delivery impacted Ahmed’s experience by the limited availability of quality interpreters, providers who accept Medicaid, and implicit bias. All of these factors combined with his behavioral and biologic factors have worked together to result in a young child with poorly controlled asthma, obesity, and adjustment disorder.
controlled asthma, obesity, and a mood disorder as displayed in Figure 2.

AREAS OF FOCUS

Diversity among many immigrant populations poses a challenge to meeting the needs of those who are marginalized and disenfranchised. The following represent opportunities for physician advocacy:

- Promote the use of patient navigators to assist immigrants in using the health care system and public aid services appropriately. Early studies have shown the efficacy of patient navigators in reducing disparities in access and utilization of services.
- Advocate for policies that expand health care coverage and support stability of families.
- Support policies and initiatives that promote educational attainment of immigrants and minorities to promote social mobility.
- As emergency medicine physicians, communication with primary care physicians is key to promoting long-term health maintenance and limit preventable ED visits.
- Physician education regarding implicit bias and its potential ramifications.

SUMMARY

Improvements in pediatric global health require a collaborative approach that involves physicians, community organizations, and local policy makers. The interaction between societal structures, policy, access, and health care delivery has put immigrant children at risk for worse health outcomes than their peers. As the pediatric immigrant population continues to grow, the diversity within this group of children grows as well. Emergency medicine physicians often serve as a safety net and are posed with the challenge of meeting this population's unique needs. Ongoing advocacy, physician training, and monitoring and evaluation of existing interventions are necessary to meet the needs of this quickly growing, multigenerational immigrant population.

REFERENCES


