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Institute for Healthy Communities

STATE OF CHILD AND ADOLESCENT HEALTH IN THE CITY OF CHICAGO, AND OPPORTUNITIES TO IMPROVE YOUTH WELL-BEING

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Introduction: Challenges and Opportunities Regarding Health of Children and Adolescents in Chicago

Approximately 540,000 children and adolescents <18 years old, and another 210,000 young adults 18-24 years old, call Chicago their home. Together, these youth are 28 percent of the city's population today and 100 percent of its future.

To have a healthy future, it is essential to promote the health and well-being of Chicago's youth, and to work together to address their needs in comprehensive, continuous, contextual, and collaborative ways:

Comprehensive approaches to health and well-being emphasize the connectedness of physical health with mental and behavioral health and development. Fragmented systems of care and support do not serve youth needs well. Instead, comprehensive approaches deliberately link efforts to improve children's physical health and well-being with their mental and behavioral well-being, emphasizing the importance of healthy development in each child's life.

Continuous approaches to health and well-being for youth recognize that the building blocks for lifelong health are laid in the first 3 years of life. Every 3-year period after that in a young person's life must build on the previous period, amplifying their strengths and addressing their needs as they grow into adulthood. Otherwise, as a city we put our youth at risk and bear the consequences along with them.

Contextual approaches recognize and celebrate that the health and well-being for youth are highly dependent on the emotional, economic, and environmental contexts in which they live, learn and play. Family (in all forms), (pre)schools, and neighborhoods matter greatly for every child and adolescent in supporting their healthy development. When these contexts are aligned with what a child needs, they thrive. But when the contexts clash, youth can experience profound challenges in their lifelong health and well-being.

Collaborative approaches to health and well-being for youth ensure that individuals and organizations and City departments work together to support children and adolescents across the continuum of health promotion, preventive/public health, and treatment for health problems. Collaborative approaches are particularly impactful for youth because existing assets (e.g., schools, parks, health care systems, public health) have great potential for positive impact, and can multiply their effects when they align their efforts.

At Lurie Children's Hospital and our Patrick M. Magoon Institute for Healthy Communities, our teams pursue a wide array of initiatives designed to help every child and adolescent have a healthier future. We do so in concert with the City of Chicago and through partnership with dozens of community-based organizations across many sectors – who share the same vision of promoting health and well-being for youth.

In this report, we highlight several challenges to youth health and well-being that we believe must be addressed successfully to safeguard the futures of Chicago's children and adolescents – and thereby ensure a brighter future for our city. We also emphasize initiatives that Lurie Children's is already undertaking to confront these challenges, leveraging the medical and public health expertise of our team members in partnership with the experience-driven excellence of many organizations across the city. For all these challenges, and for others beyond the scope of this report, Lurie Children's and the Magoon Institute stand ready to collaborate with the City of Chicago to achieve better health and well-being for Chicago's children and adolescents, their families, and their communities.

Mental Health, Trauma Exposure, and Resilience of Chicago's Youth

The American Academy of Pediatrics, American Academy of Child and Adolescent Psychiatry, and Children's Hospital Association have declared a national emergency in child and adolescent mental health. Rates of youth mental health problems have been steadily rising over the past decade, and these trends were accelerated by the COVID-19 pandemic.ⁱ Most children do not have access to treatment, and barriers to access disproportionately impact children of color.ⁱⁱ Exposure to violence and adversities such as food and housing insecurity are a significant contributor to poor mental health. Pre-pandemic prevalence of youth trauma exposure was estimated at 68 percent,ⁱⁱⁱ with COVID-19 increasing risk of family violence,^{iv} gun violence^v and exposure to other adversities such as loss of a loved one. Consistent with national trends, data from the 2021 Youth Risk Behavior Survey shows that 43 percent of Chicago high school students reported persistent sadness, with female and LGBTQ+ students at particularly high risk.

Strengthening comprehensive school mental health systems can support youth mental health and increase access to services.^{vi,vii} The Lurie Children's Center for Childhood Resilience (CCR) partners with Chicago Public Schools (CPS) to expand mental health and trauma awareness, increase evidence-based mental health interventions, and expand Behavioral Health Teams that identify, refer, screen and match students to school- and community-based interventions. CCR is positioned to continue work that has already begun to increase strategic collaboration across CPS, the Chicago Department of Public Health, and other City of Chicago agencies to enhance access to comprehensive, coordinated and sustainable mental healthcare that will elevate equity and wellbeing for the young people of Chicago.

Access to Mental and Behavioral Health Care

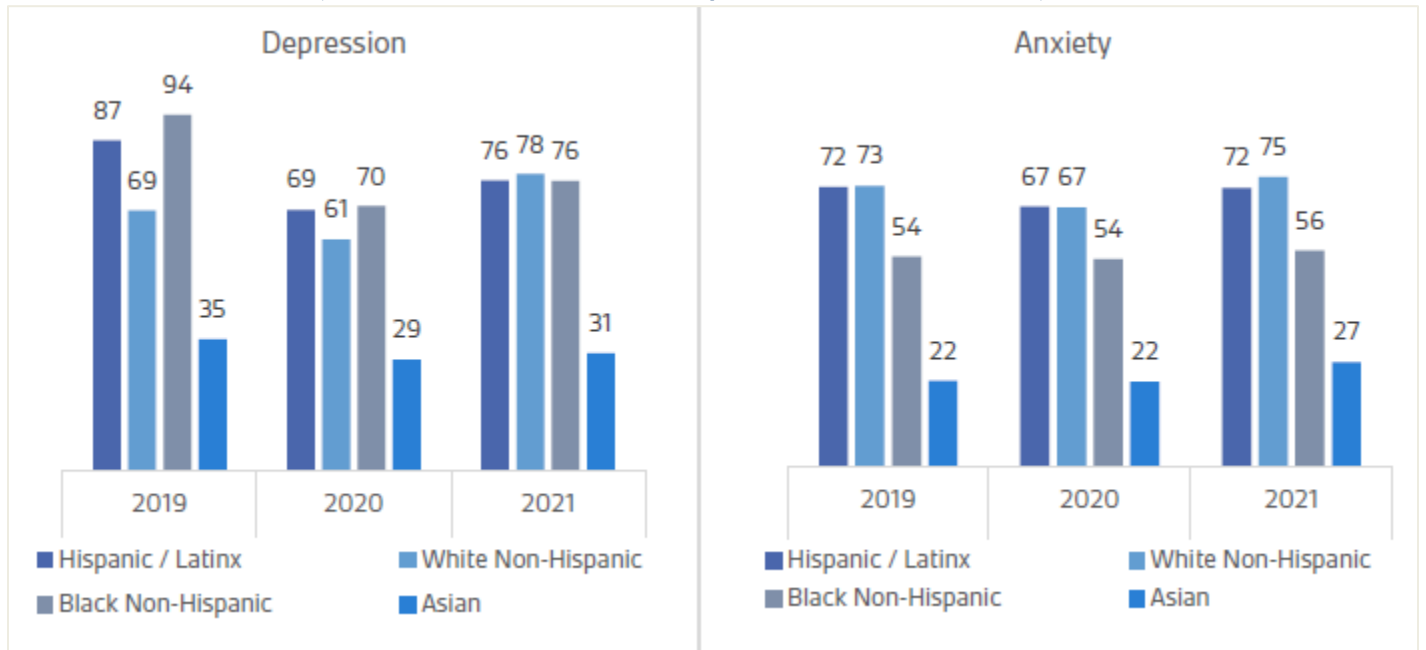
Prior to the pandemic, the prevalence of severe mental health problems among youth had already been rising. COVID-19 stretched an already fragmented and under-resourced system to the breaking point. Locally, closure of psychiatric units (>80 beds taken offline in the two years prior) and restricted availability of care more generally led to a crisis of

access. As youth lost access to existing resources, we saw 20 percent more emergency room visits and increased psychiatric acuity in those patients that needed help. Those most vulnerable have suffered the most harm. The high mortality rate among Black and Hispanic/Latinx adults in Chicago, and the trauma imposed by that bereavement, is an often-underappreciated burden experienced by youth in Chicago.

At Lurie Children's, we recognize the critical importance of serving diverse communities across Chicago. Over half of the children served in our mental health programs are Latinx or Black. Lurie Children's is one of the top five providers of pediatric outpatient mental health services for the 7-county Chicagoland Area and is the only multispecialty pediatric Medical Center among top 15 mental health service providers.

At Lurie Children's Pritzker Department of Psychiatry and Behavioral Health we are committed to increasing access to equitable care. Over the past 5 years, we have developed novel strategies and creative systems of care to meet the increased demand. Our programs are focused on the community and involve engaging with and training pediatric providers to deliver basic mental health care. We are also developing system-wide suicide screening and prevention efforts that will lead the way in building creative solutions to the mental health crisis.

Figure 1 | Rates of Emergency Department visits and hospitalizations for depression and anxiety among youth 0-19 years residing in Chicago per 10,000, by race and ethnicity. (COMPData database, Illinois Hospital Association, 2019-2021)



Risk of Suicide Among Youth

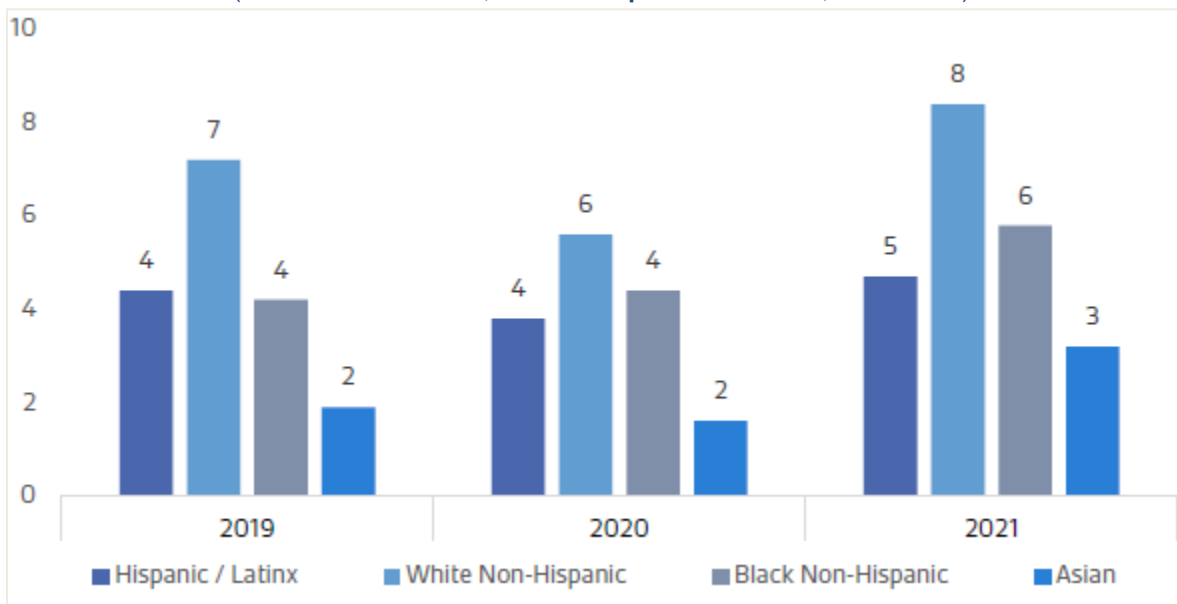
Suicide is the 3rd leading cause of death among youth 10-24 years old in Illinois. About half of youth suicides are completed with firearms. During the COVID-19 pandemic, a *Voices of Child Health in Chicago* report conducted by Lurie Children’s found nearly half of children experienced increased mental health symptoms. According to CDC data, U.S. emergency department visits for suicide attempts among adolescent girls increased 51 percent in 2021 compared with 2019. Hospitalizations for suicide or self-injury among U.S. youth have risen 163 percent from 2009 to 2019.

Health inequities and systemic discrimination have led to disparate impacts among specific populations. Suicides among Black youth are rising, particularly among adolescent females. Homosexual and transgender youth are respectively 4 and 6 times more likely to attempt suicide than youth who identify as heterosexual. Additional groups at risk include youth in child welfare and juvenile justice systems.

Effective suicide prevention strategies are available for families, health systems, schools and communities. Families can ensure firearms in the home are stored safely. At Lurie Children’s, we distribute gun locks donated by the Chicago Police Department and Cook County Sheriff’s Office. Mental health care can be integrated into pediatric clinics and schools.

Communities and schools can implement evidence-based programs such as “Signs of Suicide,” which utilizes peer and adult leaders to increase awareness and promote help seeking, decreasing suicide attempts by 40-64 percent.

Figure 2 | Rates of self-harm related emergency department visits and hospitalizations among youth 0-19 years residing in Chicago per 10,000 by race and ethnicity. (COMPData database, Illinois Hospital Association, 2019-2021)

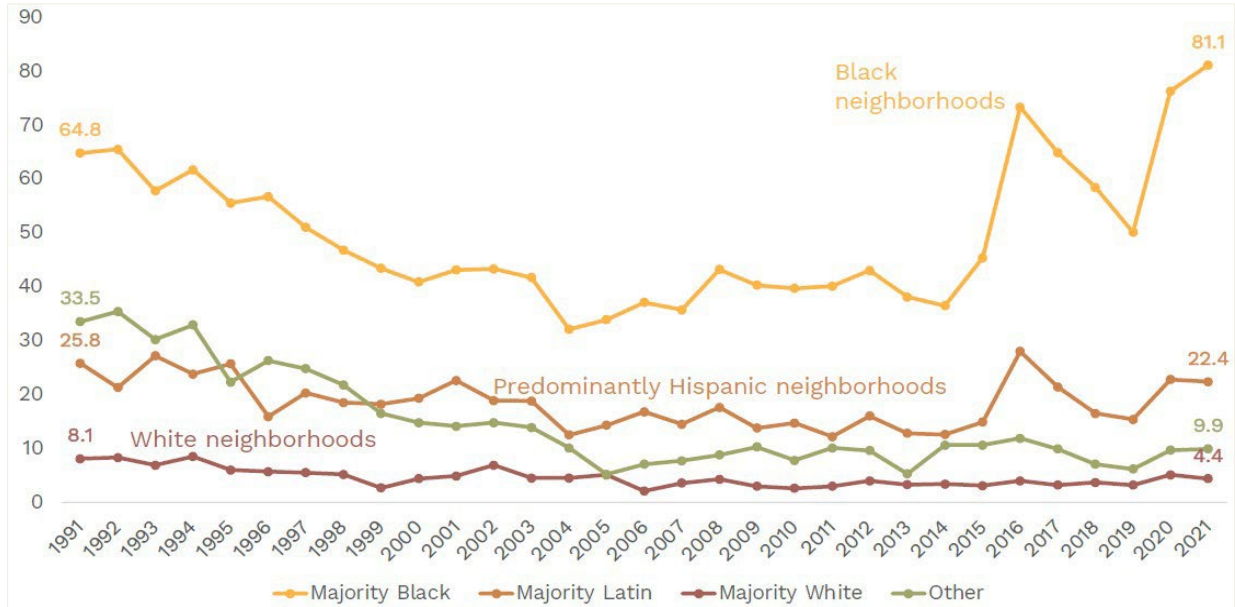


Firearm-Related Violence

Community exposure to violence is a substantial threat to the health, safety and wellness of Chicago youth. Violence is consistently cited as one of Chicagoans top concerns,^{viii} and the city saw a spike in homicides during the COVID-19 pandemic.^{ix} Youth who are exposed to violence are more likely to have significant negative repercussions, including mental health and substance use concerns and challenges with school performance.^x We also know that low-income communities of color are disproportionately affected by violence and justice system involvement, due to historical and sustained disinvestment and punitive approaches to youth delinquency.^{xi} Though we know that firearms are used in over 90 percent of homicides, access to nonfatal firearm injury data is limited.^{xii} This concern could be remedied using syndromic surveillance data which collects health record information in nearly real time through Emergency Department visits and is available through the Chicago Department of Public Health.

Strengthening Chicago's Youth (SCY), a violence prevention collaborative led by Lurie Children's, works to increase collaboration and coordination among Chicago's violence prevention stakeholders. Positive Youth Development programs, such as SCY's partner, Chicago Youth Programs, are a primary strategy to prevent youth violence. SCY also convenes the Juvenile Justice Collaborative (JJC) which aims to minimize further involvement of arrested youth in the justice system and to reduce racial disparities by facilitating and coordinating access to comprehensive support services within the community that meet adolescents' developmental needs. Since its inception, the JJC has connected 739 youth to positive social services, with 81% of youth successfully completing the program.

Figure 3 | Chicago homicides per 100,000 residents by racial demographics of community area, 1991-2021. (University of Chicago Urban Labs Crime Lab, 2022)



Risk of Infant Mortality

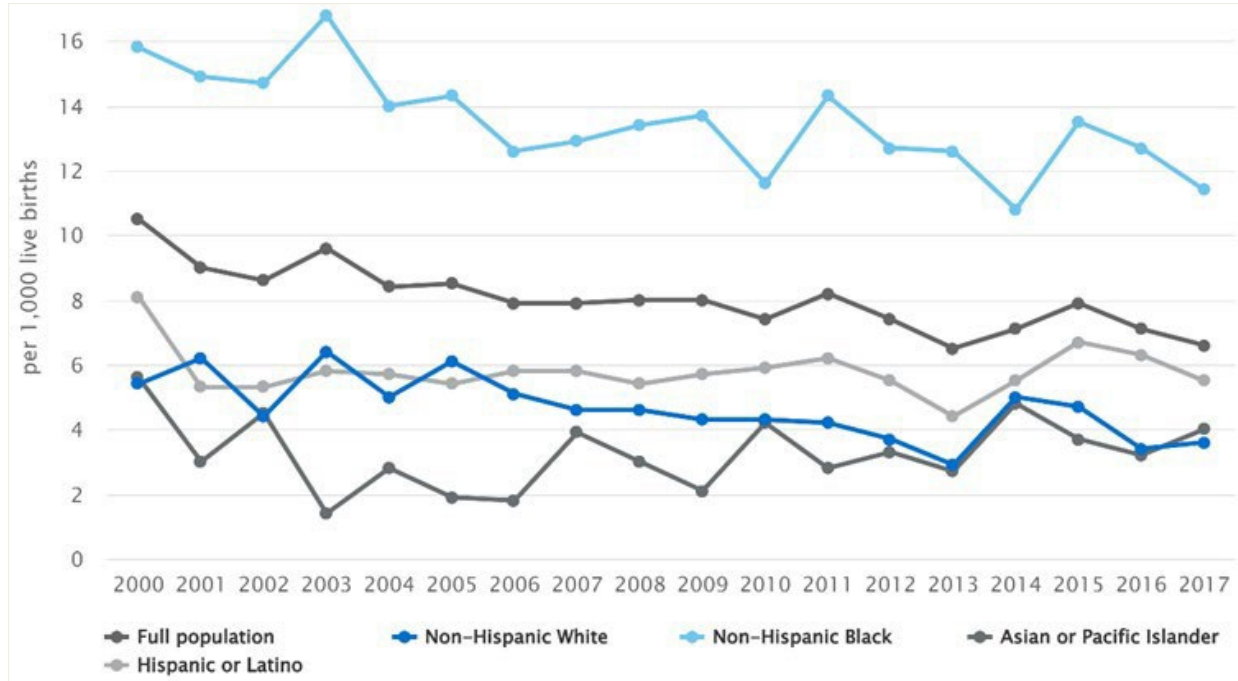
Infant mortality in the United States, and in Chicago, has two striking characteristics: it is very high compared to similar countries, and the overall mortality rates for non-Hispanic Black infants are double those of non-Hispanic white or Hispanic infants. Non-Hispanic Black infants have significantly higher mortality rates for all 10 leading causes of death compared to non-Hispanic white or Hispanic infants. Preterm birth (<37 weeks of gestational age; abbreviated PTB) is one of the most common causes for all three racial/ethnic groups, but the rate is highest for non-Hispanic Black infants. Illinois trends are worse than the national trends: non-Hispanic Black infants die from PTB more than three times more frequently than non-Hispanic white infants. Unfortunately, PTB rates are increasing, and PTB disproportionately impacts Black infants who are more than twice as likely to be born <34 weeks compared to non-Hispanic white infants.

In addition, many infant deaths (~33 percent) occur among lower risk full-term infants. Sudden infant death syndrome (SIDS) and unintentional injuries are leading causes of infant deaths. The racial/ethnic disparity for these causes is profound. For example, SIDS mortality rate has not improved across the last decade for Hispanic infants, but it decreased by 40 percent for non-Hispanic white infants.

The Chicago community areas with the highest rates of infant mortality and preterm birth cluster on the South and West Sides of the city, while the cluster with the lowest rate is on the north side. The infant mortality rate in the Englewood neighborhood is 17.6/1,000 live births, compared to 1.3/1,000 for the Lakeview neighborhood, highlighting the disparity within Chicago. Although infant mortality rate data are available for each community area in Chicago, an important current gap is that hyper-local data are not available by race and ethnicity.

Specific interventions are known to reduce the risks of infant mortality related to preterm birth. Pregnant persons' access to and utilization of prenatal care, and access to home visiting programs before, during and after childbirth lowers the risk of preterm birth and consequent first-year mortality. In addition, adoption of safe sleep practices reduces the risk of SIDS and deaths due and accidental suffocation in the first year of life.

Figure 4 | Infant mortality rate in Chicago by race and ethnicity.
(Chicago Department of Public Health, 2000-2017)



Related Risks for Maternal and Child Health

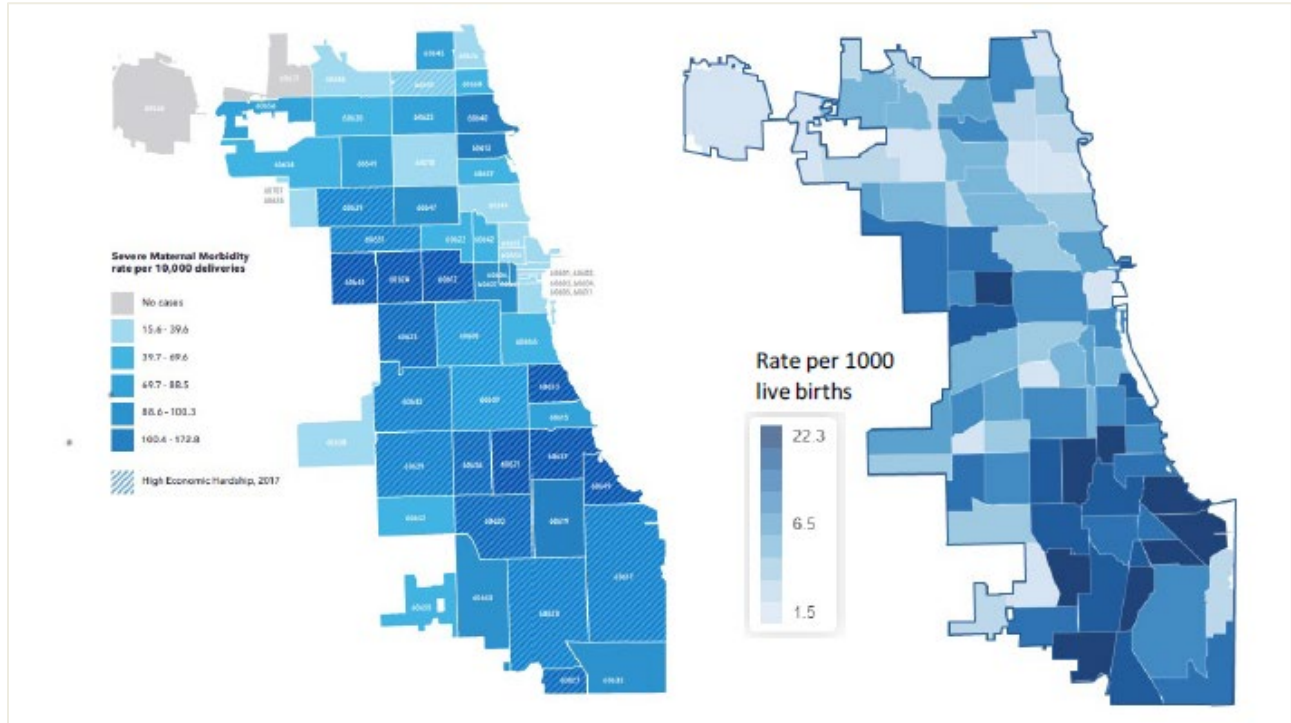
The prenatal period and the first 1000 days of life, when a child’s brain is developing at its fastest rate, and when the foundational relationships with caregivers first form, can set the stage for better long-term health and wellness. This is also a time of great importance for the health of women as they carry their pregnancies and in the postpartum period. Of great concern, there are simultaneous and related risks for women and their babies. Women in Chicago die from pregnancy-related causes at higher rates than in any other region in Illinois, and infants born to Black women die at rates more than double that of infants born to white, Hispanic/Latinx, or Asian women.^{xiii} Prenatal care in the first trimester is associated with a reduced risk of infant mortality, and the far North, West and South sides of the city have the lowest rates of prenatal care. Of note, teen births are the highest on the West and South Sides of Chicago and these infants are at greater risk for poor social and health outcomes such as low birth weight and infant mortality.^{xiv}

IDPH and CDPH have recognized evidence-based home visiting models as an effective intervention to improve maternal and infant outcomes. Studies demonstrate that home visiting improves medical follow-up,^{xv} increases community connections,^{xvi, xvii} reduces child abuse and neglect, and decreases unnecessary ED visits.^{xix} However, service gaps exist, particularly in under-resourced neighborhoods.

Lurie Children’s Connect Home Visiting Chicago (formerly known as ConnecTeen) is a program that increases access to home visiting services by working within Chicago Public Schools and in partnership with many other health care and community-based organizations and has served individuals and parent-child dyads from over 90 ZIP Codes. In addition, the City of Chicago’s Family Connects Chicago works through birthing centers to provide a nurse home visit at 6 weeks postpartum. Both programs work together to avoid duplication and amplify reach for families at risk. Based on success to date through Connect Home Visiting Chicago, the program became the highest-volume intake office for home visiting referrals in the State of Illinois and is now

taking on the leadership role for the new Healthy Parents and Babies home visiting initiative as part of West Side United.

Figure 5 | Severe maternal morbidity by ZIP Code and high economic hardship, 2016-2017 (left) and infant mortality rates per 1,000 live births by Chicago community area, 2013-2017 (right). (Chicago Department of Public Health)



Drug Use by Youth, Including Opioids

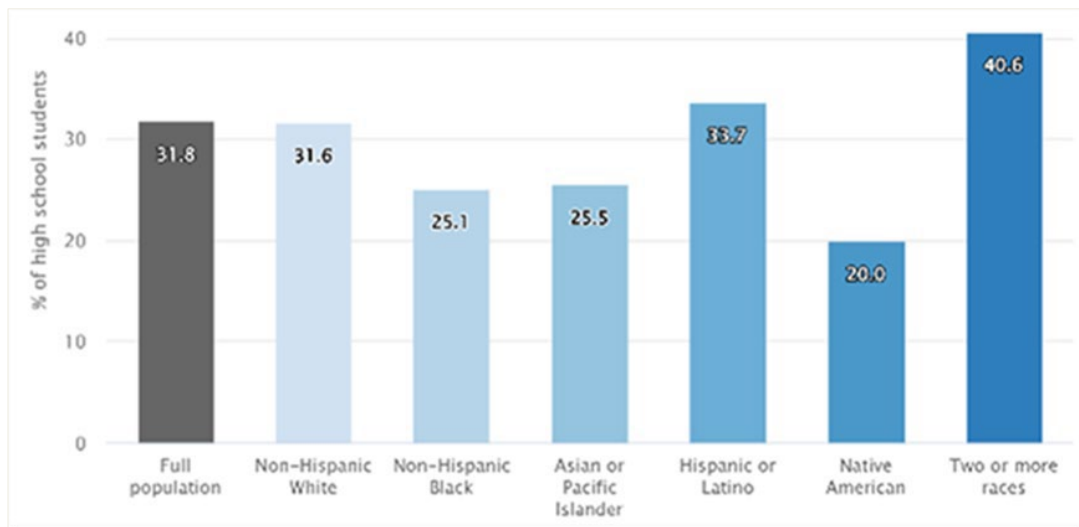
According to the most recent data on students in Chicago from the 2018 Illinois Youth Survey, 46 percent of 8th graders, 49 percent of 10th graders and 54 percent of 12th graders reported using substances within the past year.^{xx} The most common substances used by Chicago high school students were alcohol, cannabis and vaping/tobacco products.^{xxi} Although opioid use is not frequently reported, by 12th grade 3 percent of Chicago students reported heroin use in the past year and 3 percent report prescription painkiller use; these data likely underestimate the annual prevalence of opioid use among Chicago youth since this the survey is conducted in school and many youth engaged in opioid use may disengage from the school system.^{xxii} More recent statewide data from the 2021 Youth Risk Behavior Survey confirm that substance use is still prevalent among Illinois youth.

Though most youth are not using opioids, they are affected by overdose deaths in their families and communities. Overdose deaths disproportionately impact Black communities in Cook County. Furthermore, overdose deaths among adolescents in the US are rising at a faster rate compared to all ages.^{xxiv} Fentanyl is driving the rise of overdose fatalities. In Illinois, deaths involving synthetic opioids, such as fentanyl, among adolescents rose 367% from 2020 to 2021.^{xxv}

Fortunately, there are evidence-based interventions for adolescents that Lurie Children's and community partners are pursuing to combat the negative outcomes that many experience as a result of substance use:

- Adequately funded accurate and harm-reduction substance use prevention education.
- Increased capacity for screening, brief interventions and referrals to appropriate substance use treatment services within school and primary healthcare settings.
- Access to developmentally appropriate and evidence-informed treatment modalities, including medications for opioid use and other substance use disorders.
- Improving availability of lifesaving and disease-preventing harm reduction services for youth, including overdose education & naloxone distribution, fentanyl test strips and other resources that also improve connection to treatment/recovery services.

Figure 6 | Students reporting being offered, sold or given an illegal drug on school property in Chicago by race and ethnicity. (Youth Risk Behavior Surveillance System, CDC, 2019)



Nutrition, Food Security, Physical Activity and Risks of Obesity

Youth with obesity are at a higher risk of chronic diseases such as type 2 diabetes, hypertension and fatty liver disease. In addition, personal experiences with weight and obesity can lead to poorer quality of life as well as mental health challenges. Many youths with obesity encounter weight stigma and bias, which impacts their well-being.

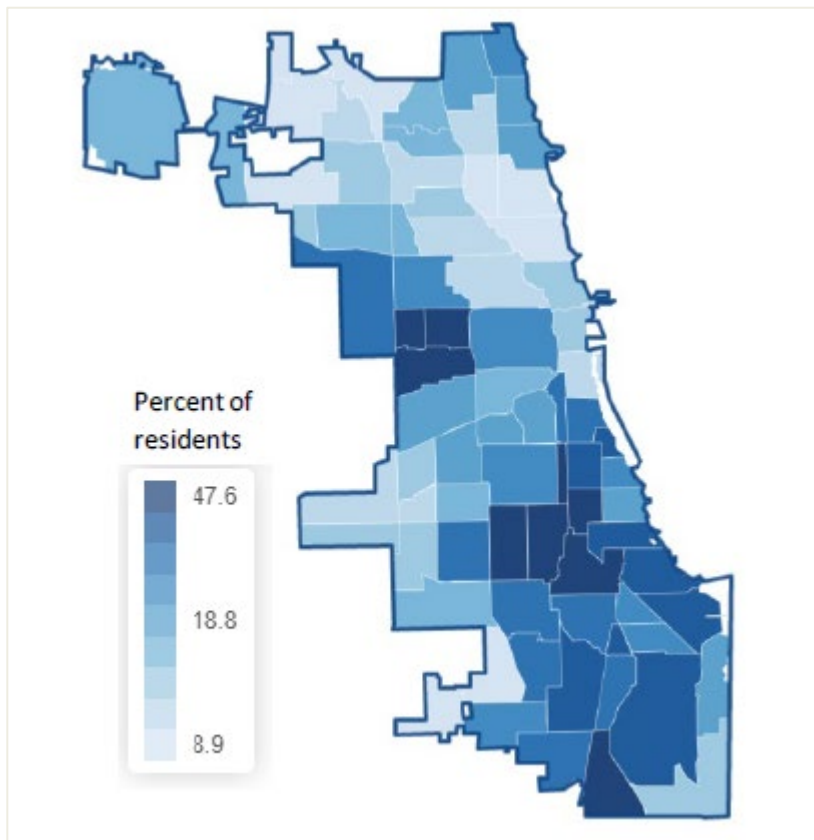
In Illinois, childhood obesity surveillance is inconsistent, but available data indicate that levels of obesity are among the highest in the United States. Data from the Chicago Public Schools (CPS) in 2017-2018 showed obesity among kindergarteners was 17.9 percent, and 25.1 percent among all 9th graders. Rates of obesity were highest in Hispanic/Latinx students, and second highest in Black students. Environmental inequities, structural racism and poor access to care drive these disparities.

Effective obesity prevention requires a focus on upstream root causes and social influencers of health. This includes addressing nutritious food access as well as safe opportunities for physical activity where children and adolescents live, learn and play. The City of Chicago would benefit from building on and improving past efforts

to address environmental inequalities, including more consistent analysis of available data; the strategies put forward by the Chicago Food Equity Council; and implementation of the Good Food Purchasing Policy, Healthy CPS, and Vision Zero. Efforts such as these have been the focus over the last two decades at Lurie Children's through its leadership of the Consortium to Lower Obesity in Chicago Children (CLOCC), now known as our Food, Activity and Nutrition (FAN) initiatives.

Once a child or adolescent has obesity, they deserve equitable access to evidence-based clinical care and treatments including lifestyle modification, anti-obesity medications, and/or bariatric surgery such as are provided at Lurie Children's. These treatments must be appropriately covered by Illinois Medicaid.

Figure 7 | Percentage of Chicago's population experiencing food insecurity at some point in 2020. (Feeding America)



Unintentional Injuries – Motor Vehicles, Ingestion, Drowning and Sudden Unexpected Infant Death

Each year in Illinois, 295 children die from unintentional injuries.^{xxvi} For each childhood unintentional injury death, there are approximately 29 hospitalizations and 1000 emergency department (ED) visits.^{xxvii} Childhood injuries from motor vehicle traffic (MVT), drowning and unintentional poisoning increased during the COVID-19 pandemic, with widening inequities for MVT and drowning-related deaths.

In Cook County, Sudden Unexpected Infant Death (SUID) occurs 16 times more often in Black infants and 4 times more often in Hispanic/Latinx infants when compared with white infants.^{xxviii} Tracking of non-fatal injuries is challenging. ED-based syndromic surveillance systems are a potential solution. As an example, recently the Chicago Department of Public Health used such data to track motorized scooter injuries.

Lurie Children's has a long history of addressing common unintentional injuries, a leading cause of death in childhood that is largely preventable. Lurie Children's is the only hospital-based car seat distribution program in Chicago, providing 1,000 car seats annually through a city-wide partner network. We deliver car seat education through weekly classes and electronic health record messages sent to Lurie Children's patients under 11 years old.

Lurie Children's is also the lead organization for the multisector Metro Chicago Water Safety Taskforce, bringing together partners to promote safe recreation in pools and along Chicago's Lake Michigan shoreline. In addition, Lurie Children's has been an Urban Pediatric Satellite of the Illinois Poison Center since 2003. Each year, we train 25 community-based safe sleep ambassadors and distribute 400 cribs to families to prevent SUID. Window fall prevention and playground safety have been key initiatives for over 20 years.

Limited Youth Development Opportunities Outside of School

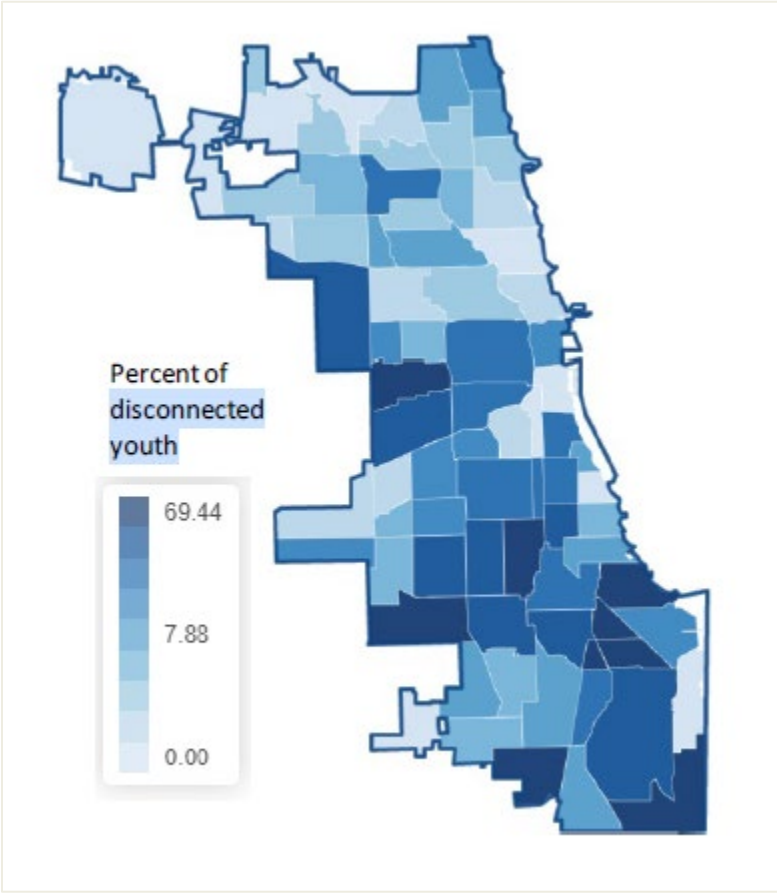
Youth development opportunities promote short-term success and long-term opportunities for youth by supporting critical education in life skills and employment-relevant experiences and exposure, as well as providing structured out-of-school time in a post-COVID era. A study conducted by the University of Illinois at Chicago shows that more Blacks are out of work and out of school compared to any other racial group in the city of Chicago. Among youth between the ages of 16-19 years, 11.5 percent of Blacks are out of work and not enrolled in school, compared with 7.9 percent of Hispanics/Latinxs and 5.4% of whites.^{xxix} High unemployment puts Black and Hispanic/Latinx youth at increased risk of arrest, incarceration, dangerous police encounters and informal labor markets.

Mentorship and workforce development programs – like the nearly two dozen programs we offer at Lurie Children's in partnership with 64 CPS schools for children as young as middle school age – serve youth from neighborhoods facing economic inequity and long-term disinvestment. These young people come from families with lower socioeconomic status and educational attainment. We remove barriers to participation by providing competitive wages, transportation stipends, onsite meals and free educational materials.

Participation in these programs has been shown to reduce crime, violence, and improve academic achievement and graduation rates. Increased and sustained financial investment for youth mentorship and workforce development

programs offers great opportunity reduce the social and economic burdens associated with historical youth disinvestment in our city and can unlock the phenomenal potential of our youth to create a better future for all residents of the city of Chicago.

Figure 8 | Proportion of residents aged 16-19 years who are neither working nor enrolled in school ('disconnected youth').
(American Community Survey, five-year estimates, 2015-2019)



Subject Matter Experts

Our experts at Lurie Children's are prepared and eager to assist the City of Chicago in addressing the needs of youth in our city. Please see the list of experts below related to the topics we have addressed in this report. Mary Kate Daly, Vice President of the Magoon Institute for Healthy Communities, would be pleased to facilitate conversations and partnerships with any of our experts; she can be reached by email at mdaly@lurechildrens.org.

- *Mental Health, Trauma Exposure, and Resilience of Chicago's Youth*
 - Colleen Cicchetti, PhD; Tali Raviv, PhD; Nell McKittrick, MBA
- *Access to Mental and Behavioral Health Care*
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- *Limited Youth Development Opportunities Outside of School*
 - Maria Rivera; Renee Walker, DrPH

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Endnotes

- ⁱ (Racine N 2021)
- ⁱⁱ (Whitney DG 2019 Apr 1)
- ⁱⁱⁱ (Copeland WE 2007 May)
- ^{iv} (Letourneau N 2022 Nov)
- ^v (Sun S 2022)
- ^{vi} (Cummings JR 2022 Jun 1)
- ^{vii} (Services 2021)
- ^{viii} (MacArthur Foundation n.d.)
- ^{ix} (Masterson 2023)
- ^x (Panchal 2022)
- ^{xi} (Chicago Department of Public Health 2016)
- ^{xii} (Chicago Health Atlas n.d.)
- ^{xiii} (Illinois Department of Public Health 2021)
- ^{xiv} (Illinois Department of Public Health, Division of Vital Records n.d.)
- ^{xv} (K. G. Dodge 2014)
- ^{xvi} (K. G. Dodge 2019)
- ^{xvii} (K. G. Dodge 2014)
- ^{xviii} (K. G. Dodge 2019)
- ^{xix} (K. G. Dodge 2013)
- ^{xx} (Center for Prevention Research and Development 2018)
- ^{xxi} (Center for Prevention Research and Development 2018)
- ^{xxii} (Center for Prevention Research and Development 2018)
- ^{xxiii} (Centers for Disease Control and Prevention (CDC) 2021)

xxiv (Friedman J 2022)

xxv (Data presented as part of the by Epidemiologist, Leslie Wise. Ph.D., Division of Emerging Health Issues Office of Health Promotion n.d.)

xxvi (Centers for Disease Control and Prevention 2023)

xxvii (Centers for Disease Control and Prevention 2023)

xxviii (Rush University Medical Center, Chicago Cook Country Medical Examiners Office 2019)

xxix (Wilson 2019)