A Report from the New York City Department of Health and Mental Hygiene

NYC Vital Signs

New York City Department of Health and Mental Hygiene | May 2016 | Volume 15, No. 2

Understanding Child Injury Deaths: 1999-2013 Child Fatality Review Advisory Team Report

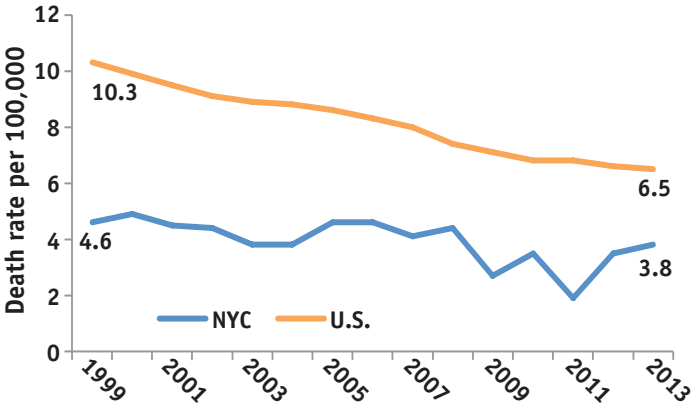
Injuries continue to be the leading cause of child death in New York City (NYC) and in the United States. Injuries are often inaccurately seen as a result of accidents that cannot be anticipated or avoided. However, most injuries can be prevented by building safer environments, educating communities about the risks, and enacting and enforcing policies to protect children.

This report describes trends in injury deaths among children aged 1 to 12 years in NYC through a review of death records from 1999 to 2013. Trends by demographic characteristics and cause of injury were analyzed by combining deaths into three five-year periods (1999-2003, 2004-2008, and 2009-2013). This report examines trends for deaths classified as unintentional or "accidental" (page two) and for deaths classified as intentional (homicides and suicides, page three).

From 1999 to 2013, the NYC child injury death rate was approximately half the national rate (4 vs. 8 deaths per 100,000, see supplemental table 1). The rate of death from injuries has declined both in NYC and in the United States. In NYC, the overall decline in child injury death rates stems from declines in unintentional injuries, while intentional injury death rates remained relatively constant. In general, about two-thirds of injury deaths are unintentional, with motor vehicle-related injuries predominating, followed by fire. Homicides account for the majority of intentional injury deaths. Recommendations for reducing child injury deaths are provided on page four.

Child injury death rates have declined

Injury death rates among children aged 1-12 years, New York City vs. United States



Note: Fluctuations in NYC rates are due to small numbers of deaths per year

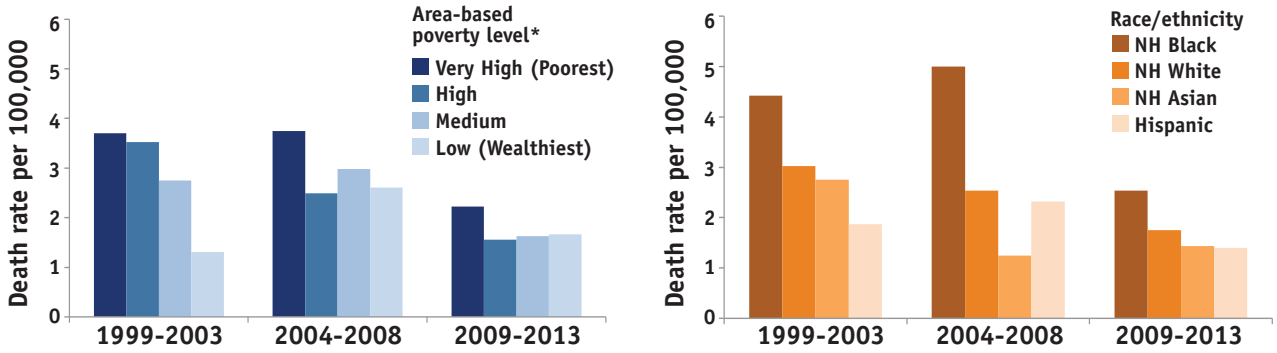
Source: NYC DOHMH Bureau of Vital Statistics and CDC WONDER, 1999-2013

- From 1999 to 2013, there were 723 injury deaths among NYC children, with 61 deaths in 1999 and 46 deaths in 2013.
- The majority of child injury deaths in NYC are due to unintentional injuries. However, unintentional injury death rates have fallen more than rates of intentional injury deaths or undetermined injuries. The proportion of child injury deaths from unintentional injuries dropped from 70% in 1999 to 57% in 2013.
- NYC's child injury death rate was consistently lower than the national rate. However, the national rate declined faster than NYC's rate during this 15-year period.

Data Sources: NYC DOHMH Bureau of Vital Statistics death certificates. Intent and cause of injury deaths were classified following the National Center for Health Statistics ICD-10 external cause of injury matrix. Methods Note: 18 deaths from a single plane crash event in 2001 were excluded from all analyses. National data were obtained from CDC's Wide-ranging Online Data for Epidemiologic Research (WONDER). Data were accessed May 2015 at http://wonder.cdc.gov/. More information on data sources and complete tables of data presented in this report can be found at: www1.nyc.gov/assets/doh/downloads/pdf/survey/VS1502tables.pdf

Unintentional injury death rates remain highest among children living in very high-poverty areas and among non-Hispanic Black children

Unintentional injury death rates among New York City children aged 1-12 years



* Area-based poverty (based on ZIP code) is defined as the percent of residents with incomes below the federal poverty threshold per American Community Survey (2009-2013): Low: <10%, Medium: 10 to <20%, High: 20 to <30%, Very High: ≥30%.

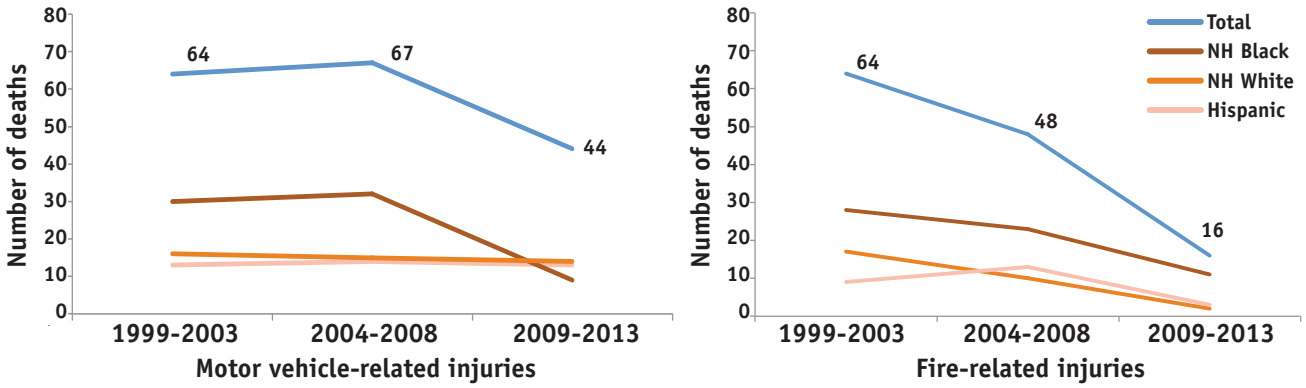
NH = Non-Hispanic

Source: NYC DOHMH Bureau of Vital Statistics, 1999-2013

- The rate of unintentional child injury deaths was lowest during 2009-2013, at 1.8 deaths per 100,000 children, compared with 3 per 100,000 children in 1999-2003 and 2004-2008.
- While rates declined over time among virtually all demographic groups, rates remained highest among boys, non-Hispanic Black children, and children living in very high-poverty areas across all time periods (see supplemental table 7).

Deaths from motor vehicle and fire-related injuries have declined

Number of deaths for the top two causes of unintentional injury among New York City children aged 1 to 12 years, by race/ethnicity



NH = Non-Hispanic

Source: NYC DOHMH Bureau of Vital Statistics, 1999-2013

- Motor vehicle-related injuries were the leading cause of unintentional child injury deaths (see supplemental table 4).
- The decline in motor vehicle-related deaths occurred primarily among non-Hispanic Black children between 2004-2008 and 2009-2013.
- Fire-related deaths declined from 64 deaths in 1999-2003 to 16 in 2009-2013, yet remained the second leading cause of unintentional injury deaths.
- The number of fire-related deaths remained highest among non-Hispanic Black children.

This report uses the following terms to describe the intent of actions that lead to injury deaths:

Unintentional – Injury death that occurred without intent to cause harm, also known as "accident."

Intentional – Injury death that occurred with the intent to cause harm. Intentional deaths are further classified as:

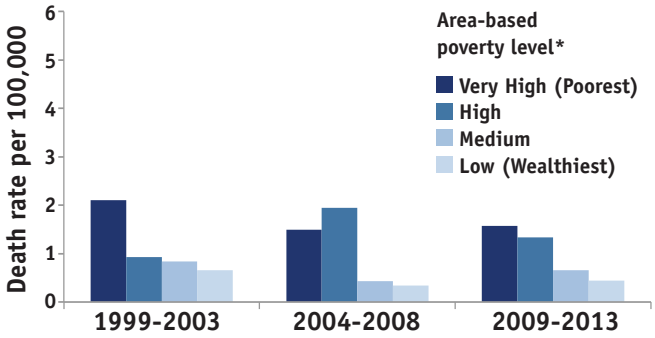
Homicide – Intentional death resulting from injuries inflicted by another person.

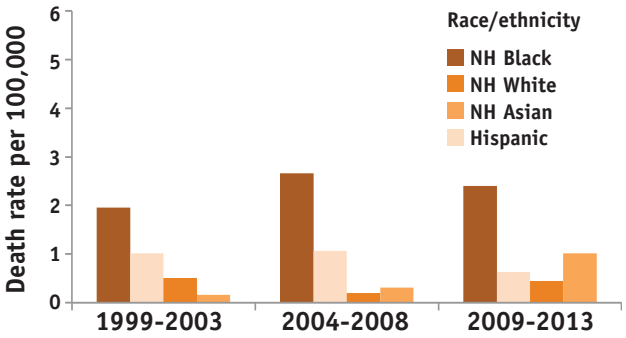
Suicide – Intentional injury death resulting from self-harm.

Undetermined – Injury death for which the intent cannot be determined.

Intentional (homicide and suicide) injury death rates remain highest among children living in higher-poverty areas and among non-Hispanic Black children

Intentional injury death rates among New York City children aged 1-12 years





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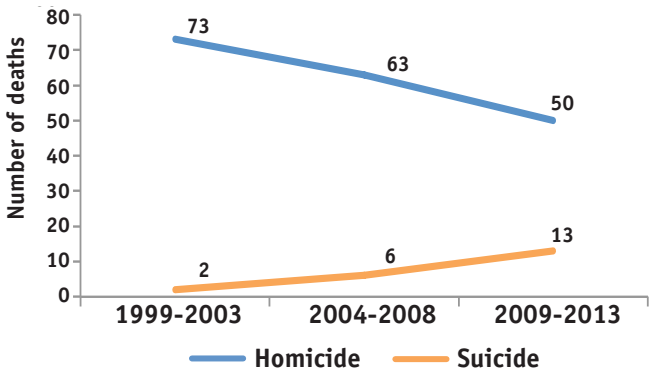
NH = Non-Hispanic

Source: NYC DOHMH Bureau of Vital Statistics, 1999-2013

- Although the overall rate of intentional child injury deaths remained relatively constant during the 15 years (1.2 deaths per 100,000 children in 1999-2003 and 2004-2008 and 1.1 deaths per 100,000 children in 2009-2013), rates by demographic subgroups were more variable.
- Rates among children living in high- and very high-poverty areas were consistently higher than rates among children living in low- and medium-poverty areas.
- Intentional injury death rates increased among non-Hispanic Black and non-Hispanic Asian children. Rates among non-Hispanic Black children (2.4 per 100,000 children in 2009-2013) were two to five times the rate among other racial/ethnic groups.
- Homicide rates were consistently higher among children aged 1 to 2 years compared with other child age groups (see supplemental table 8).

Child homicides have decreased and child suicides have increased

Homicide and suicide injury deaths among New York City children*



* Homicides occurred among children aged 1-12 years, suicides occurred among children aged 9-12 years.

Source: NYC DOHMH Bureau of Vital Statistics, 1999-2013

- Ninety percent of intentional injury deaths among children were homicides.
- While the all-age homicide rates have declined dramatically in NYC,[1] child homicide rates showed only a modest decline, from 1.1 per 100,000 children in 1999-2003 to 0.8 per 100,000 children in 2009-2013. This represents a drop from 73 homicide deaths in 1999-2003 to 50 in 2009-2013.
- Suicides occurred among children aged 9 to 12 years. Similar to a citywide trend among all ages,[1] the number of suicides among children increased, from two in 1999-2003 to 13 in 2009-2013. Suicides among children also increased nationally during this time period.[2]
- Rates of suicide were highest among non-Hispanic Black children during 1999-2013; nationally, non-Hispanic Black children also had the highest child suicide rate (see supplemental table 10).[2]

1. NYC DOHMH Bureau of Vital Statistics. Data available from EpiQuery at www.nyc.gov/health/epiquery
2. CDC Wonder. Data available from http://wonder.cdc.gov/

Recommendations

Parents and caregivers

- Invite your children to talk to you or other trusted adults anytime they feel anxious, worried, or hopeless. Listen to your child. If you notice changes in mood along with signs of sadness, talk with him or her about it. If you have concerns, contact your child's pediatrician or mental health provider.
- Being a parent can be hard and every parent needs support. Learn about tips and strategies to handle common parenting challenges.
- If you or your child is living with violence at home, call 311 for the Domestic Violence Hotline or call direct: 1-800-621-HOPE (1-800-621-4673).
- Be role models for safe walking. Teach children to cross the street at crosswalks or at the corner instead of midblock, following pedestrian and traffic signals, and look both ways and listen for cars before and while crossing the street. Visit NYC's Vision Zero web site to learn more.
- Be sure your household has working smoke alarms, carbon monoxide detectors, and an evacuation plan.

Educators, health care providers, and clergy:

- Call 1-800-635-1522 or 311 to report suspicions of child abuse or neglect. Mandated reporters are legally required to report, but anyone can report suspicions of child abuse or neglect.
- Recognize risk factors for mental health problems in parents, caregivers and children and make appropriate referrals. Consider training in Mental Health First Aid or call 1-800-LIFENET.
- Health care providers should conduct mental health screening as part of well-child visits using a standardized tool and make referrals for services where appropriate. Medicaid, other insurance programs, and community organizations provide or cover a variety of behavioral health services.

Policy makers:

- Expand social, emotional, and mental health supports for children in child care, preschool, elementary, and middle schools, as described in ThriveNYC: A Mental Health Roadmap For All.
- Support home visiting programs such as the Newborn Home Visiting Program and Nurse-Family Partnership that assist parents in building healthy relationships and nurturing homes.
- Champion school-based programs like Respect for All to prevent bullying and cyberbullying.
- Promote policy and program initiatives for safer streets, such as street re-designs and focused enforcement to deter hazardous driving.

The New York City Child Fatality Review Advisory Team (CFRAT) — a multidisciplinary committee of representatives from City agencies as well as child welfare and medical experts appointed by the Mayor, the City Council Speaker, and the Public Advocate — was formed in 2006 by Local Law 115 to review and report on injuries as preventable causes of death among NYC children under the age of 13.

NYC Health NYC Vital Signs VISION ZERO
New York City Department of Health and Mental Hygiene May 2016 Volume 15, No. 2
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