JAMA | Original Investigation

Trends in US Children's Mortality, Chronic Conditions, Obesity, Functional Status, and Symptoms

Christopher B. Forrest, MD, PhD; Lauren J. Koenigsberg, BA; Francis Eddy Harvey, BA; Mitchell G. Maltenfort, PhD; Neal Halfon, MD, MPH

IMPORTANCE Recent scientific and policy statements suggest that child health may be worsening in the US.

OBJECTIVE To determine how US children's health has been changing from 2007 to 2023 using multiple data collection methods and a comprehensive set of health indicators.

DESIGN, SETTING, AND PARTICIPANTS Repeated, cross-sectional analyses using mortality statistics from the US and 18 comparator high-income nations from the Organisation for Economic Co-operation and Development (OECD18), 5 nationally representative surveys, and electronic health records from 10 pediatric health systems (PEDSnet). The populations included individuals younger than 20 years old. Unweighted denominator sample size ranges were 1623 to 95 677 across the surveys, 1 026 926 to 2 114 638 for PEDSnet, 81.9 million to 83.2 million in the US, and 118.4 million to 121.1 million in the OECD18 for mortality statistics.

EXPOSURE Calendar time.

MAIN OUTCOMES AND MEASURES Rate ratios (RRs) and annual incidence for mortality and prevalence for chronic physical, developmental, and mental health conditions, functional status, and symptoms.

RESULTS From 2007 to 2022, infants (<1 year old) were 1.78 (95% CI, 1.78-1.79) and 1- to 19-year-old individuals were 1.80 (95% CI, 1.80-1.80) times more likely to die in the US than in the OECD18. The 2 causes of death with the largest net difference between the US and OECD18 were prematurity (RR, 2.22 [95% CI, 2.20-2.24]) and sudden unexpected infant death (RR, 2.39 [95% CI, 2.35-2.43]) for infants 12 months or younger, and firearm-related incidents (RR, 15.34 [95% CI, 14.89-15.80]) and motor vehicle crashes (RR, 2.45 [95% CI, 2.42-2.48]) for 1- to 19-year-old individuals. From 2011 to 2023, the prevalence of 3- to 17-year-old individuals with a chronic condition rose from 39.9% to 45.7% (RR, 1.15 [95% CI, 1.14-1.15]) within PEDSnet, and from 25.8% to 31.0% (RR, 1.20 [95% CI, 1.20-1.20]) within the general population. Rates of obesity, early onset of menstruation, trouble sleeping, limitations in activity, physical symptoms, depressive symptoms, and loneliness all increased during the study period.

CONCLUSIONS AND RELEVANCE The health of US children has worsened across a wide range of health indicator domains over the past 17 years. The broad scope of this deterioration highlights the need to identify and address the root causes of this fundamental decline in the nation's health.

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Supplemental content

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JAMA. 2025;334(6):509-516. doi:10.1001/jama.2025.9855
Published online July 7, 2025.

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Child health sets the foundation of the overall health and prosperity of the nation. Healthy children are more likely to become healthy adults who lead meaningful and productive lives.[1] Recent scientific and policy statements have raised concerns that child health in the US may be declining. A 2024 report by the National Academies of Sciences, Engineering, and Medicine stated that "the United States faces a major crisis with the poor and worsening health and wellbeing of children and youth."[2] The Presidential Commission to Make America Healthy Again issued a May 2025 report that called out the need to better understand the root causes of the declining health of US children.[3]

Prior studies provide important insights into child health but are limited by using single data sources or by focusing on a small set of health problems. For example, the National Center for Health Statistics, a division of the US Centers for Disease Control and Prevention (CDC), routinely monitors child health statistics for health issues such as mortality, substance use, and high-interest health conditions (eg, asthma, HIV).[4] These reports typically assess one health condition at a time, such as childhood obesity,[5] youth mood disorders,[6] childhood mortality,[7,8] and neurodevelopmental disorders.[9]

Research that addresses health domains (eg, emotional health) one by one rather than all together leaves a gap in knowledge. Focusing on one domain at a time may result in policy responses in which single programs target single outcomes. However, if children's health is declining across multiple health indicators as derived from diverse data sources, a more effective response may be to address underlying systemic factors that are influencing the health of children more broadly, ie, improving the developmental ecosystems where children live and grow.

This study aimed to address this knowledge gap by comprehensively evaluating temporal trends in a wide range of children's health indicators, including mortality; chronic physical, developmental, and mental health disorders; obesity; functional status; physical symptoms; and emotional symptoms. Using data from 5 nationally representative surveys, national mortality statistics, and a large database of pediatric electronic health records (EHRs), changes in children's health from 2007 to 2023 were assessed.

Key Points

Question How has US children's health—ie, mortality, chronic conditions, obesity, functional status, and symptoms—changed from 2007 to 2023?

Findings Temporal trends from 2007 to 2023 have significantly worsened for child mortality; chronic physical, developmental, and mental health conditions; obesity; sleep health; early puberty; limitations in activity; and physical and emotional symptoms.

Meaning US children's health has deteriorated across a broad spectrum of indicators, highlighting the need to identify the root causes of this fundamental decline in the nation's health.

Methods

The research reported in this repeated cross-sectional study used deidentified data and was designated as nonhuman subjects research and exempt from review and the requirement for informed consent by the Children's Hospital of Philadelphia Institutional Review Board. Reporting followed the Strengthening the Reporting of Observational Studies in Epidemiology (STROBE) guidelines. eAppendix 1 in Supplement 1 provides additional details on the study's methods: data sources, variables, and statistical analyses.

Mortality Data

Mortality was the only health indicator that could be comparably contrasted with statistics in other high-income nations. Rates were compared between the US and other high-income nations that participate in the Organisation for Economic Co-operation and Development (OECD). Of 20 countries, 2 were excluded because of small population size (Iceland and Luxembourg). The remainder constituted the OECD18: Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Ireland, Italy, Japan, the Netherlands, New Zealand, Norway, Spain, Sweden, Switzerland, and United Kingdom. The Human Mortality Database (HMD)[10] was used to compute all-cause mortality rates and the World Health Organization (WHO) Mortality Data[11] to evaluate causes of death.

PEDSnet: EHR Data From Pediatric Health Systems

There are no publicly downloadable large pediatric EHR databases. However, access to the PEDSnet EHR database was obtained on request. PEDSnet is a multicenter network with 10 children's hospital health systems located in 10 states. The network aggregates and standardizes data from health systems' EHRs to a common data model.[12] This study included EHR data with dates of service from January 1, 2010, to December 31, 2023. Diagnosis codes from outpatient (primary care, specialty care, and emergency departments) visits and hospitalizations were assigned to the Expanded Diagnosis Clusters in the Johns Hopkins Adjusted Clinical Groups System.[13] Expanded Diagnosis Clusters were used to identify 97 chronic conditions and 27 physical symptoms.

Nationally Representative Surveys

To identify nationally representative surveys on child health, 38 datasets highlighted in a National Academies of Sciences, Engineering, and Medicine report on child health were reviewed.[14] Next, federal websites that aggregated publicly available health-related datasets were reviewed, which revealed the following numbers of datasets: 54 on the US Census Bureau,[15] 45 on the Health Resources & Services Administration,[16] 37 on the *Eunice Kennedy Shriver* National Institute of Child Health and Human Development,[17] and 142 on the CDC[18] websites. There were 279 unique datasets from these sources.

Several selection criteria were applied. First, the dataset was required to be national, publicly accessible, nonproprietary, and primary data. Second, it had to include repeated, cross-sectional data collections supporting annual prevalence calculations separated by a minimum of 10 years with

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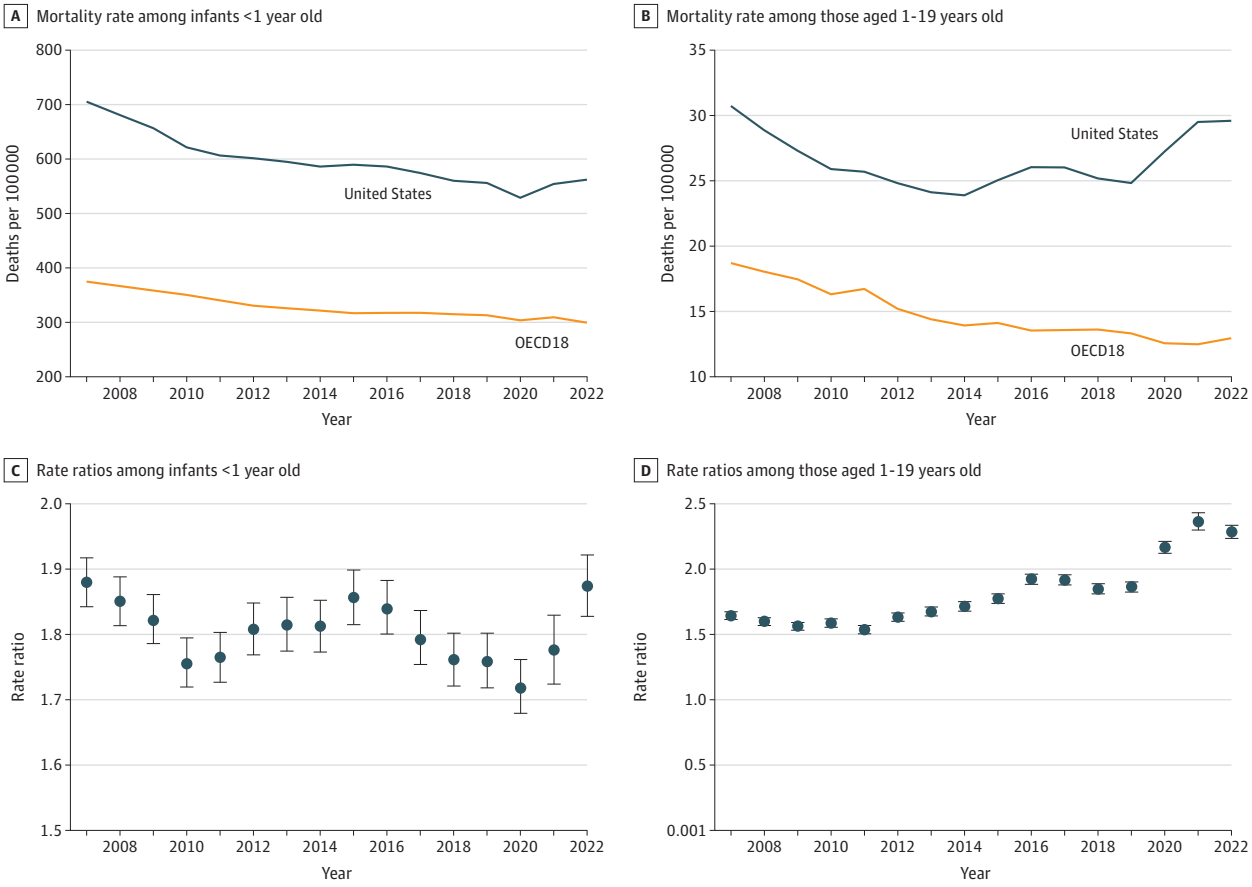
Figure 1. All-Cause Mortality Rates per 100 000 in the US vs OECD18 for <1-Year-Old Infants and 1- to 19-Year-Old Individuals, 2007-2022



Data are from the Human Mortality Database (HMD). From 2007 to 2022, deaths among infants younger than 1 year old declined in both the US and 18 comparator high-income nations from the Organisation for Economic Co-operation and Development (OECD18) (A), but infants were 78% more likely to die in the US (C). B, Although deaths among 1- to 19-year-old individuals declined in the OECD18, they rose in 2015 and again in 2020 in the US. D, During the 2020 to 2022 interval, 1- to 19-year-old individuals were more than twice as likely to die in the US. Vertical lines through dots in panels C and D represent the 95% CIs for the rate ratios.

at least one time point before and one after 2015. Third, the dataset had to include at least one measure of child health, ie, chronic conditions, functional status, or symptoms. Fourth, the health indicators needed to be the same across the observation period or so similar that they could be harmonized without altering their meaning. Using these criteria, 5 nationally representative datasets were identified: National Health and Nutrition Examination Survey (NHANES),[19] National Health Interview Survey (NHIS),[20] National Survey of Children's Health (NSCH),[21] Panel Study of Income Dynamics (PSID),[22] and Youth Risk Behavior Surveillance System (YRBS).[23]

Health Indicators

Mortality statistics came from the HMD and WHO with annual denominators (2007-2022) for 0- to 19-year-old individuals in the US ranging from 81.9 million to 83.2 million and in the OECD18, 118.4 million to 121.1 million. PEDSnet was used for chronic condition and physical symptom estimates. NHANES provided information on obesity, pubertal status, and sleep function; NHIS provided chronic conditions and limitations in activity; NSCH provided chronic conditions; and PSID and YRBS provided emotional symptoms.

The annual prevalence rate denominators for PEDSnet analyses included 3- to 17-year-old individuals with at least 1 visit with a recorded diagnosis code in a given year. Encounters for laboratory and imaging studies were excluded to avoid inclusion of rule-out diagnoses. Annual PEDSnet sample sizes spanned from 1 026 926 to 2 114 638. The unweighted sample sizes (and age range in years for the samples) for the survey-based health indicators were 1878 to 2998 for NHANES (ages 2-17 years), 16 666 to 43 676 for NHIS (ages 0-17 years), 21 599 to 95 677 for NSCH (ages 3-17 years), 1623 to 2590 for PSID (ages 12-18 years), and 15 303 to 16 232 for YRBS (9th-12th graders).

Statistical Analysis

Using the HMD, annual all-cause mortality rates were calculated as the ratio of death counts to population counts occurring within a calendar year. Age-specific rates per 100 000 population were estimated for infants (<1 year old) and children and youth (aged 1 to 19 years). OECD18 rates for 1- to

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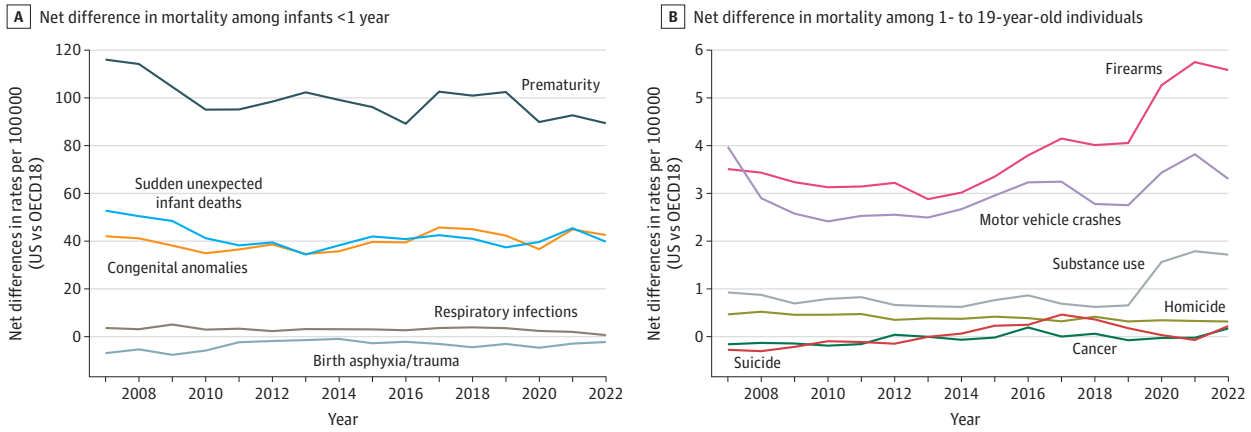
Figure 2. Net Difference in Cause-Specific Mortality Rates in the US vs OECD18 for <1-Year-Old Infants and 1- to 19-Year-Old Individuals, 2007-2022



Counts of cause-specific deaths were obtained from World Health Organization data while the Human Mortality Database provided population counts. *International Statistical Classification of Diseases and Related Health Problems, Tenth Revision* codes were clustered according to World Health Organization guidance.[24,25] The net difference in rates was obtained by subtracting those of the 18 comparator high-income countries from the Organisation for Economic Co-operation and Development (OECD18) from the US rates. A, US infants younger than 1 year had higher death rates than OECD18 infants for prematurity, congenital anomalies, sudden unexpected infant deaths, and respiratory infections, but lower rates for birth asphyxia/trauma. B, Deaths among 1- to 19-year-old individuals were higher in the US than the OECD18 for firearms, motor vehicle crashes, substance use, and homicide. The difference between the US and OECD18 among 1- to 19-year-old individuals in the firearm and substance use categories increased markedly from 2020 to 2022.

19-year-old individuals were age-adjusted using the US as the standard population. The annual US mortality rate divided by the OECD18 rate constituted the rate ratio (RR). Excess childhood deaths were computed by applying the OECD18 rates for each year to the US population and then subtracting this product (an expected number of deaths) from the actual number of US deaths.

The HMD (population counts) and WHO (cause-specific death counts) data were used to compute annual cause-specific death rates. For the infants (<1 year old), causes of death were grouped, based on *International Statistical Classification of Diseases and Related Health Problems, Tenth Revision* codes,[24,25] into prematurity, sudden unexpected infant deaths, congenital anomalies, respiratory infections, and birth trauma/asphyxia. For the 1- to 19-year-old age group, causes were grouped into motor vehicle crash, firearm, suicide, homicide, cancer, and substance use categories. For each cause of death, the OECD18 rate was subtracted from the US rate to obtain a net difference in rates.

Using data from both the HMD and WHO, age-adjusted population-weighted RRs were computed by comparing the sum of total deaths divided by the sum of population sizes across all years for the US and the OECD. To compute 95% confidence intervals (CIs) for mortality rate RRs and excess deaths, bootstrap estimation with 10 000 resamples was used.

For annual prevalence rates using PEDSnet data, the number of children with a given health indicator was calculated, as determined by Expanded Diagnosis Clusters, by the denominator of health system users for a given year. RRs and their 95% CIs were obtained for comparisons between 2023 and 2011.

For national survey datasets, population weights were applied to generate nationally representative estimates. Survey design effects were used to adjust standard error estimates for the complex survey design. Standard errors for annual estimates were derived using the Taylor series approximation method to account for stratification, clustering, and weighting. Wald 95% CIs with log transformation were obtained and pooled standard errors for survey-based relative risks. The R survey package was used for survey data analysis (R Project).

Results

For additional details of study results on mortality, chronic conditions, functional status, and symptoms, see eAppendix 2 in Supplement 1.

Mortality: US vs OECD18

From 2007 to 2022, infants (<1 year old) in the US were 1.78 (95% CI, 1.78-1.79) times as likely to die as infants in the OECD18 (**Figure 1**A and C). During the same period, 1- to 19-year-old individuals were 1.80 (95% CI, 1.80-1.80) times as likely to die in the US, although the RR increased to more than 2.0 from 2020 to 2022 (Figure 1B and D). Across the 16-year period, the US experienced 315 795 excess deaths compared with the OECD18, which is equivalent to 54 excess child deaths per day.

Among infants in the US vs the OECD18, prematurity (RR, 2.22 [95% CI, 2.20-2.24]), congenital anomalies (RR, 1.48 [95% CI, 1.47-1.50]), sudden unexpected infant deaths (RR, 2.39 [95% CI, 2.35-2.43]), and respiratory infections (RR, 1.69 [95% CI, 1.62-1.76]) were more common, while death due to birth asphyxia/trauma was a less common cause of death in the US (RR, 0.78 [95% CI, 0.76-0.80]) (**Figure 2**A). Among 1- to 19-year-old individuals, cause-specific death rates in the US exceeded those in the OECD18 for firearms (RR, 15.34 [95% CI, 14.89-15.80]), motor vehicle

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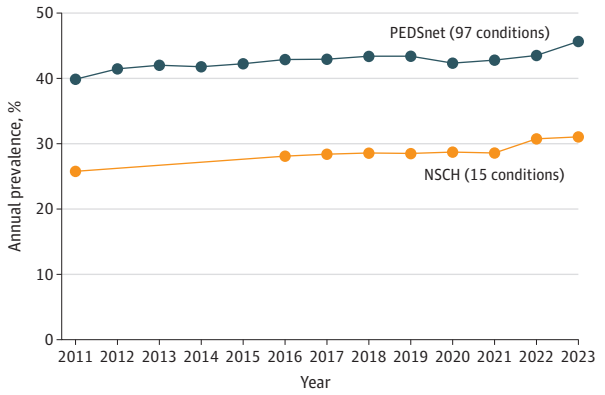
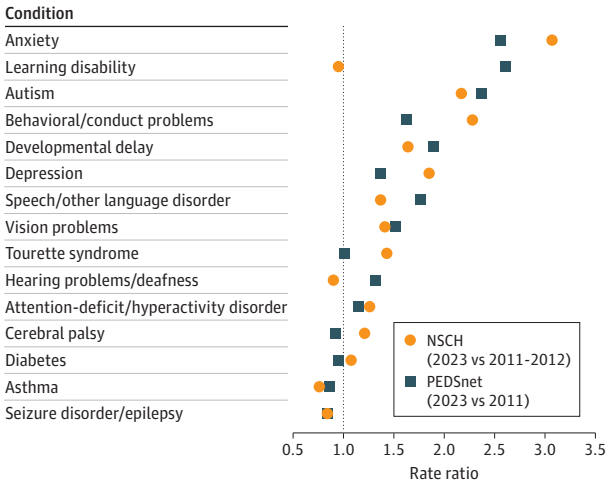
Figure 3. Annual Prevalence Rates of Chronic Conditions Based on Parent Report of 15 Conditions (National Survey of Children's Health [NSCH]) and Clinical Diagnoses for 97 Conditions (PEDSnet), 3- to 17-Year-Old Individuals, 2011-2023



The chronic conditions in the NSCH available in multiple years beginning in 2011-2012 were attention-deficit/hyperactivity disorder, anxiety, asthma, autism, cerebral palsy, conduct disorder/behavioral problems, depression, developmental delay, diabetes (diabetes in 2011-2021 but type 2 diabetes in 2022 only), hearing problems, learning disability, seizure disorder, speech problems, Tourette syndrome, and vision problems. Data on these conditions were not obtained in the NSCH from 2012 to 2015. The PEDSnet chronic health conditions were selected from the list of Johns Hopkins Adjusted Clinical Groups System's Expanded Diagnosis Clusters based on the likelihood that they would affect a child for at least 12 months.

Figure 4. Temporal Trends (2023 vs 2011-2012) for 15 Chronic Conditions Among 3- to 17-Year-Old Individuals Assessed Using the National Survey of Children's Health (NSCH) and PEDSnet Data



The NSCH used parent-reported information to identify children with a chronic condition, while PEDSnet was based on clinician-recorded diagnoses in electronic health records. The annual prevalence of 15 conditions was computed by dividing the 2023 rate by the 2011-2012 (NSCH) or 2011 (PEDSnet) rates. The 95% CIs for these rate ratios were so small that they are not shown because they were included in the size of the dots. A rate ratio of 1.0 means that the rate between the 2 time periods did not change. Anxiety had the largest increase, while asthma decreased in both data sources.

crashes (RR, 2.45 [95% CI, 2.42-2.48]), substance use (RR, 5.25 [95% CI, 5.07-5.44]), and homicide (RR, 5.32 [95% CI, 5.04-5.63]), while rates for suicide (RR, 1.02 [95% CI, 1.00-1.04]) and cancers (RR, 0.99 [95% CI, 0.97-1.00]) were similar (Figure 2B).

Chronic Health Conditions

Overall, a child in the US in 2023 was 15% to 20% more likely to have a chronic condition compared with a child in 2011. Annual prevalence rates of 15 chronic conditions for 3- to 17-year-old individuals increased from 25.8% to 31.0% (RR, 1.20 [95% CI, 1.20-1.20]) for parent-reported data from the NSCH, and from 39.9% to 45.7% (RR, 1.15 [95% CI, 1.14-1.15]) for 97 chronic conditions for clinician-recorded data from PEDSnet (**Figure 3**).

Prevalence rates of 15 chronic conditions for 3- to 17-year-old individuals in 2023 vs 2011-2012 were compared using the NSCH and PEDSnet (**Figure 4**). Asthma rates significantly decreased, while the prevalence of several conditions significantly rose in both data sources: anxiety (which had the highest level of increase), autism, behavioral/conduct problems, developmental delay, depression, speech/language disorder, vision problems, and attention-deficit/hyperactivity disorder.

Within the PEDSnet data, among the 29 most common chronic conditions (overall prevalence of ≥0.5%), 22 significantly increased from 2010 to 2023 by 10% or more, 1 significantly decreased by 10% or more, and 6 did not change. The 8 conditions with the largest increases were major depression (RR, 3.30 [95% CI, 3.16-3.44]), sleep apnea (RR, 3.22 [95% CI, 3.15-3.28]), eating disorder (RR, 3.20 [95% CI, 3.02-3.39]), anxiety (RR, 3.06 [95% CI, 3.01-3.12]), autism spectrum disorder (RR, 2.62 [95% CI, 2.57-2.67]), obesity (RR, 2.37 [95% CI, 2.34-2.41]), disorders of lipid metabolism (RR, 2.06 [95% CI, 2.00-2.13]), and developmental disorder (RR, 2.05 [95% CI, 2.03-2.07]).

Obesity, Functional Status, and Symptoms

From 2007-2008 to 2021-2023, childhood obesity rates for 2- to 19-year-old individuals significantly increased from 17.0% to 20.9% (RR, 1.23 [95% CI, 1.23-1.23]) (**Figure 5**). Early onset of menstruation (before 12 years of age) rose from 9.1% in 2007-2008 to 14.8% in 2021-2023 (RR, 1.63 [95% CI, 1.63-1.64]), while trouble sleeping for 16- to 17-year-old individuals increased from 7.0% in 2007-2008 to 12.6% in 2017-2020 (RR, 1.80 [95% CI, 1.80-1.81]). Limitations in activity due to a chronic disease rose from 7.7% in 2008-2009 to 9.1% in 2018 (RR, 1.21 [95% CI, 1.13-1.29]). In 2018, 71.7% of the children with limitations in their activity had developmental disorders as the chronic disease to which the limitations were attributed.

Annual rates of 27 physical symptoms diagnosed by physicians were examined, eg, abdominal pain, fatigue, cough, and constipation (Figure 5). In 2010, 31.2% of 5- to 17-year-old individuals experienced at least 1 physical symptom rising to 41.2% by 2023 (RR, 1.39 [95% CI, 1.39-1.40]); 22 of the 27 symptoms significantly increased by 10% or more over the time period. The 3 symptom categories with the largest increases were dermatological symptoms (RR, 4.84 [95% CI, 4.70-5.00]), pain (RR, 3.68 [95% CI, 3.58-3.77]), and menstrual disorders (RR, 2.99 [95% CI, 2.90-3.08]).

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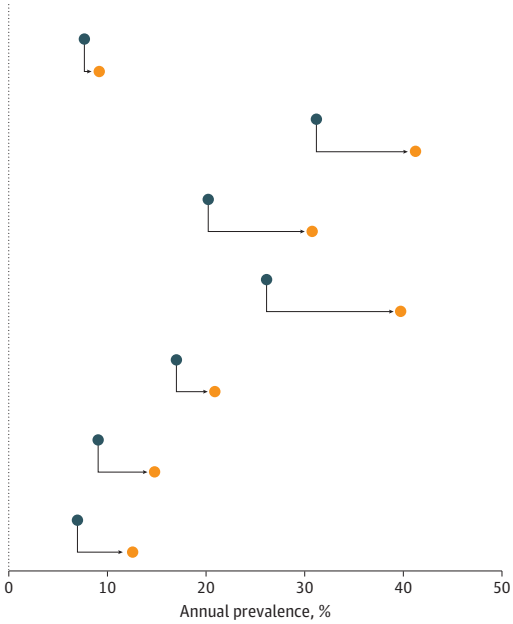
Figure 5. Change in Annual Prevalence for Obesity, Onset of Menarche, Limitations in Activity, Physical Symptoms, and Emotional Symptoms in US Children, 2007-2023

Indicator	Rate ratio (95% CI)
Activity limitations due to chronic conditions, 0- to 17-year-olds (NHIS)	
2008-2009	1.21 (1.13-1.29)
2018	
At least 1 of 27 physical symptoms, 5- to 17-year-olds (PEDSnet)	
2010	1.39 (1.39-1.40)
2023	
Feeling alone, 12- to 18-year-olds (PSID)	
2007	1.52 (1.48-1.57)
2021	
Feeling sad/hopeless almost every day, 9th-12th graders (YRBS)	
2009	1.51 (1.46-1.57)
2023	
Obesity assessed by physical examination, 2- to 17-year-olds (NHANES)	
2007-2008	1.23 (1.23-1.23)
2021-2023	
Onset of menstruation, 8- to 11-year-olds (NHANES)	
2007-2008	1.63 (1.63-1.64)
2021-2023	
Trouble sleeping reported to physician, 16- to 17-year-olds (NHANES)	
2007-2008	1.80 (1.80-1.81)
2017-2020	



The time trend comparisons showing declines in health are significantly different for all the health indicators. Obesity was assessed by physical examination. Parents' reports were used for early onset of menstruation, trouble sleeping, and activity limitations. Youth self-reports were obtained for feeling sad/hopeless and feeling alone. Physical symptoms from PEDSnet data relied on physicians' diagnoses recorded in electronic health records. For each outcome, blue dots represent the earlier time point and orange dots, the later. NHANES indicates National Health and Nutrition Examination Survey; NHIS, National Health Interview Survey; PSID, Panel Study of Income Dynamics; and YRBS, Youth Risk Behavior Surveillance System.

Depressive symptoms (feeling sad or hopeless) significantly increased from 26.1% of 9th to 12th graders in 2009 to 39.7% in 2023 (RR, 1.51 [95% CI, 1.46-1.57]). Loneliness feelings (feeling alone) among 12- to 18-year-old individuals significantly rose from 20.2% in 2007 to 30.8% in 2021 (RR, 1.52 [95% CI, 1.48-1.57]) (Figure 5).

Discussion

From 2007 to 2023, children's health in the US has steadily declined across mortality; chronic physical, mental, and neurodevelopmental conditions; functional status; and physical and emotional symptom domains. This conclusion is supported by this study's systematic analysis of 8 datasets that had multiple data collection methods and a comprehensive set of 172 pediatric health indicators. Data sources included national mortality statistics, EHR data, and nationally representative surveys. The survey datasets selected were national in scope, covered at least a decade of data, and included indicators of chronic conditions, obesity, functional status, or symptoms.

From 2007 to 2022, infants born in the US were 78% more likely to die when compared with their counterparts in other high-income countries. Similarly, US 1- to 19-year-old children and youth were 80% more likely to die. In addition, more recent mortality rates in this age group seemed to be rising faster in the US than in the OECD18. The causes of death that appeared to be driving the excess deaths in the US were prematurity, sudden unexpected infant deaths, and congenital anomalies for infants and firearms, motor vehicle crashes, substance use, and homicide among the 1- to 19-year-old age group. In 2020, firearm deaths became the leading cause of death among children and youth in the US.[26] This study's results indicated that US children were 15 times more likely than their counterparts in the OECD18 to die by a firearm.

Nearly half of all children receiving care in the PEDSnet multicenter network had a chronic health condition, while one-third of children in the general population experience from 1 of 15 parent-reported chronic conditions. Furthermore, obesity now affects 20% of children, and early puberty is increasingly common among girls, with 1 in 7 beginning menstruation before age 12 years. Temporal trends also showed deterioration in sleep health and increasing limitations in activity, alongside worsening of an extensive range of physical and emotional symptoms.

This study aimed to overcome limitations seen in prior research by conducting a more integrated analysis of diverse data collection methods and encompassing a broad array of health indicators. Notably, the identified deterioration in children's health is not restricted to a single method of data collection or limited to a single indicator or health domain. Some of the worrisome adverse trends in this study began during the 20th century and have persisted into the current

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era. For instance, childhood mortality rates in the US were comparable with those of OECD nations during the 1960s, but became consistently higher in the early 1970s.[6] According to CDC data, obesity rates among 2- to 19-year-old individuals increased from 5.2% in 1971-1974 to 19.3% by 2017-2018.[27] Additionally, sleep duration among US children declined at an average annual rate of 1.1 minutes between 1905 and 2008, contrasting with increased durations of sleep observed in the United Kingdom, Scandinavia, and Australia.[28] Data from the NHIS indicate that activity limitations due to a chronic condition rose from approximately 2% in 1960 to 8% by 2009.[29] Similarly, autism prevalence increased markedly from fewer than 3 per 10 000 children in 1970 to greater than 30 per 10 000 by the 1990s.[30]

Limitations

This study has a few important limitations that should be considered when interpreting its findings. First, a stratified analysis by socioeconomic status or other socially determined characteristics was not performed, rendering these results applicable to the total pediatric population. Nonetheless, it is probable that many of the negative health trends in the US are being driven by race and ethnicity[31] and socioeconomic disparities. Second, the mortality and survey data were nationally representative while PEDSnet included EHR data from 10 health systems located in 10 US states.[32] Third, because PEDSnet is a sample of users of health care, the findings from those data may be due to changes in practice patterns, increases in diagnostic coding, or health care seeking. Fourth, this study did not investigate the underlying causes for these extensive and consistent declines across multiple dimensions of children's health, leaving these explanations an open area for future inquiry.

Conclusions

This study found that child health in the US has been declining in multiple domains over a 17-year period from 2007 to 2023. This comprehensive evidence of deterioration highlights the importance of identifying and addressing the root causes of this fundamental decline in the nation's health.

ARTICLE INFORMATION

Accepted for Publication: May 29, 2025.

Published Online: July 7, 2025. doi:10.1001/jama.2025.9855

Author Contributions: Drs Forrest and Koenigsberg had full access to all of the data in the study and take responsibility for the integrity of the data and the accuracy of the data analysis.
Concept and design: Forrest, Koenigsberg, Eddy Harvey, Halfon.
Acquisition, analysis, or interpretation of data: Forrest, Koenigsberg, Eddy Harvey, Maltenfort.
Drafting of the manuscript: Forrest, Eddy Harvey, Maltenfort, Halfon.
Critical review of the manuscript for important intellectual content: Koenigsberg, Eddy Harvey.
Statistical analysis: Forrest, Koenigsberg, Eddy Harvey, Maltenfort.
Obtained funding: Forrest.
Administrative, technical, or material support: Forrest, Eddy Harvey.
Supervision: Forrest.

Conflict of Interest Disclosures: Dr Forrest is a co-developer of the Johns Hopkins Adjusted Clinical Groups System, which was used in this study. The copyright for this software is owned by the Johns Hopkins University. Dr Forrest receives royalties in accordance with the university's technology transfer policy. No other disclosures were reported.

Funding/Support: This study was supported by institutional funds managed by the Applied Clinical Research Center at the Children's Hospital of Philadelphia.

Role of the Funder/Sponsor: The funder had no role in the design and conduct of the study; collection, management, analysis, and interpretation of the data; preparation, review, or approval of the manuscript; and decision to submit the manuscript for publication.

Data Sharing Statement: See Supplement 2.

Additional Contributions: We thank the PEDSnet institutions that contributed electronic health record data to this study: Ann & Robert H. Lurie Children's Hospital of Chicago, Children's Hospital Colorado, Children's National Hospital, Children's Hospital of Philadelphia, Cincinnati Children's Hospital Medical Center, Nationwide Children's Hospital, Nemours Children's Health, Seattle Children's Hospital, Stanford Medicine Children's Health, and Texas Children's Hospital.

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